

AS/400 to SAP Business One migration

How a leading British motor manufacturer used CoolSpools as the key to its AS/400 migration strategy.



The Client:

A UK Car Manufacturer

A top manufacturer of vehicles in the UK, with a reputation for high performance and exquisite craftsmanship.

Business Sector:

Automotive Industry

The vehicle brand with a hundred-year heritage, backed by a global network of dealerships.

Background

The client used a bespoke management system on their IBM i to control parts stock inventory and ordering processes, with basic online access for dealerships. The viability of this legacy system was uncertain, with concerns over performance, functionality, cybersecurity, and long-term support.

The Challenge

When modernization of their online parts portal became a priority, the company identified SAP Business One as the solution. But AS/400 to SAP migration can be a complex and laborious process, especially when it involves huge data volumes.

How much longer can legacy software support your business?

This was the uncomfortable question for a leading British motor manufacturer, for whom quality, precision and availability were paramount.

The bespoke system had served them well for many years, but that was precisely the problem: they were using a product that was designed in the 1980s, with all those attendant concerns that can haunt older systems:

- Patchy performance
- Limited functionality
- Inflexibility
- Cybersecurity threats
- Lack of long term support

All signs that a system may be nearing 'end of life'.

A tough decision had to be made.

After much soul-searching, the client opted to move from their AS/400 / IBM i platform to SAP Business One. No one was under any illusion about the scale of the task: it would mean the migration of huge volumes of highly sensitive data.



With those kinds of volumes, the risk to data integrity was considerable.

A complex data mapping task lay ahead as Kevan Cooke, Support Consultant at Ariadne Software discovered.

“SAP Business One is very template driven, for each area of the database you have a specific template - specific field labels that have to be mapped - it is a laborious task of mapping the actual data out of the old system to where it fits into SAP Business One.”

With new field names, business workflows, tables and triggers, mapping was a painstaking operation. And the import process itself presented several new problems:

“In order to import the data into SAP, they had a particular tool called Data Transfer Workbench, or DTW, which is part of the SAP Business One solution. It requires the data to be in a very specific format - columns in the right order, with the right headings, in a tab-delimited file - translated or reformatted where necessary, so it's in the format DTW expects. Really all the onus on getting the data in the right format is on the IBM i side.”

For this customer famed for its hundred-year heritage, there could be no room for error. A robust, reliable tool was needed to meet the challenge.

Fortunately, the solution was right on their doorstep.

CoolSpools.

A highly flexible data extraction tool, CoolSpools automates the distribution of data and documents for IBM i users, their customers, and their suppliers. Now its powerful functionality made it the obvious choice for the client's data conversion from AS400 to SAP.

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For Kevan, though, there were compelling reasons for choosing CoolSpools for this project.

The CoolSpools Database module was the perfect tool for:

- data extraction
- data conversion
- data validation
- data reconciliation



By automating the whole process, it saved Kevan literally days of time. Another great timesaver was the CoolSpools email module, which he made regular use of to distribute:

- migration status updates
- reconciliation reports.

Kevan expands on the theme. “Because CoolSpools can use SQL to source the data, we were able to write a series of SQL Select statements to select the data we needed from their database tables on the IBM i server, and apply any new formatting or cross-referencing to get that data into the values that were expected on the SAP side. It made the process quite straightforward.”

It also met the many other challenges presented by DTW head on.

“With the larger files, we needed to break down the extracted data into chunks - so 5,000 or 10,000 records - because of a restriction on the SAP/DTW side. This is where CoolSpools was really useful, as its parameters for converting data to text files include the option to specify From and To records, so it was very easy to split up the files, to break them down into chunks.”

And there was no need to keep a manual record of progress.

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All of which eliminated the risk of data loss or duplication.

But there were further complications, as Kevan explains.

“For at least one of the files that we were splitting into chunks there was a header and detail file, and we needed to make sure that all of the header records corresponded with all of the detail records.”

Each time, however, CoolSpools and SQL came to the rescue.

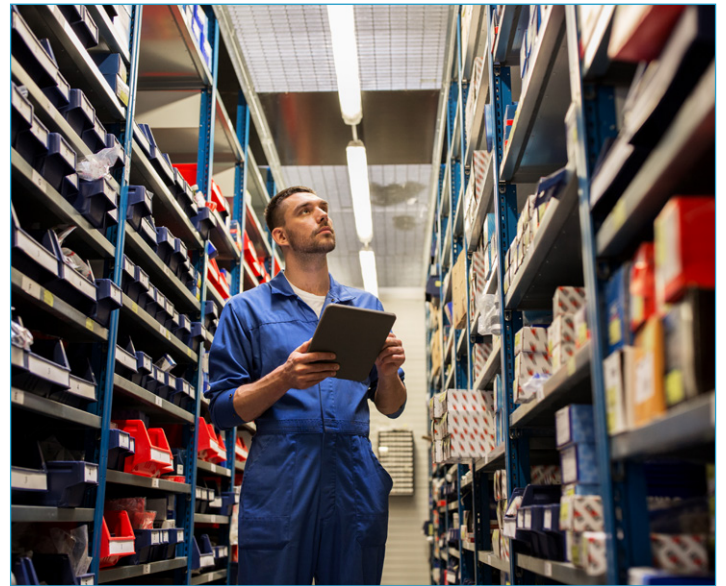
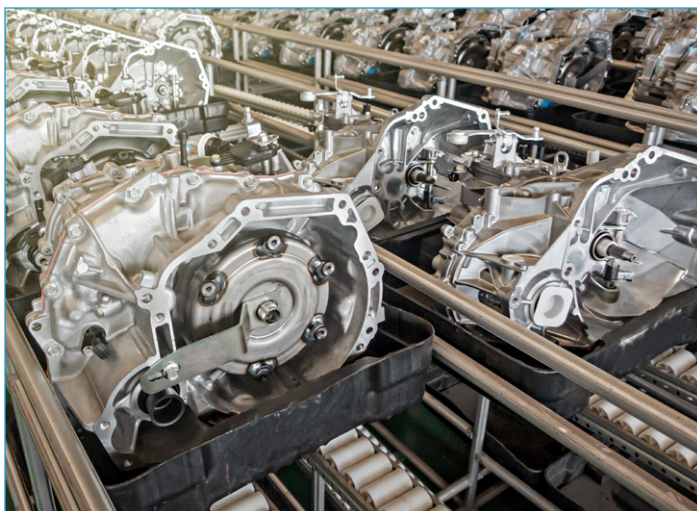
Testing was critical in proving data integrity, as Kevan explains. “Along the way we were running extracts and loading them into a test environment, so that the SAP team could then run a parallel test to make sure the order processing and stock processes worked effectively. And then we were making further refinements to the extract, based on any findings from the test. It was quite an iterative process.”

This painstaking process exposed other fault lines.

Kevan elaborates: “The DTW tool would sometimes reject records and report an error, but sometimes it would just not load records because there was something in the record it didn’t like - and it wouldn’t even notify you. So, by running this reconciliation against the IBM i server we could be sure that all of the data we’d extracted had gone into SAP.”

One such curved ball was due to COBOL’s handling of empty fields.

“COBOL files use a concept called ‘high value’ and ‘low value’. Rather than leaving the field blank if it’s not populated, it will fill it with hex FF or hex 00 characters. And the presence of those control characters seemed to cause the DTW process to fail - but to fail silently, without advising anyone!”



Frequent changes to the SAP design by the development team were another challenge, demanding a swift response from both Kevan and the customers IT Department.

“We were constantly revising the extract - but each extract took less than an hour to test. So it was a fast process, which CoolSpools certainly helped with.”

“As they changed the definitions of the tables within the SAP database, we were then having to go back and revisit the data extracts to make sure they still aligned with any changes they had made to the database. We were constantly revising the extract - but each extract took less than an hour to test.

So, it was a fast process, which CoolSpools certainly helped with.”

In keeping with the rest of the project, go-live presented yet another challenge.

“It had to be a big bang.”

Kevan Cooke describes the operation; “It was done as a two-phase process, with the more static data like the list of parts and the customers and suppliers coming across first; and then, at the actual cutover, more dynamic data - so the stock positions within the warehouse and any current orders - they went across as a second phase. And the main reason for that was that to upload all the static data in one go would have taken somewhere in the region of three days. Whereas the extraction of the data from the IBM i by CoolSpools was complete within an hour.

So, did all that exhaustive testing finally pay off?

“Our part of the process, extracting the data, was done very quickly. And then we were obviously on hand to provide support if the SAP technicians found any issues.”

Kevan Cooke used CoolSpools one final time. “We ran a reconciliation at the end, which involved extracting data from the SAP database and then comparing it to what we had extracted from the IBM i side. CoolSpools generated a report which was sent by email, and an additional extract file containing any differences.”

“CoolSpools made it easy to create the extracts from the AS/400, and it was just as easy to put them into the different templates that SAP Business One requested - you know, with the right labelling on it. So, at the push of a button, the outputs were done. The data migration was a success.”

The discrepancies were minimal. But perhaps a truer measure of user confidence in the data migrated by CoolSpools is that they have rarely looked back:

“They kept the IBM i server around in case they needed to check anything, any data fields they wanted to check what the value was, for example. But I think it’s hardly used at all.”

The final word, though, must go to the customer.

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Try CoolSpools FREE for 30 days!

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CoolSpools for IBM i (AS400, iSeries) is an Information Management Solution which converts spool and database files to PDF, Excel and other formats, enabling you to move away from paper-based documents and save time and money by distributing information automatically in electronic formats.

Download the software free for 30 days.

At the end of your trial, you will be able to purchase a license with 12 months maintenance included for free. Please see our pricing page for more information.

About CoolSpools

CoolSpools automates the sharing of data and documents for employees, customers and suppliers using the IBM i / AS400 platform. It's highly flexible, allowing end-users and ISVs to build seamless integration with both standard and bespoke software.

It's reliable too. Whether for email, intranet or EDI, CoolSpools is precise and robust, converting database and spool files into a range of formats, including:

- PDF
- XML
- HTML
- Text
- Excel
- CSV
- ...and more.

CoolSpools provides the genuine means to go paperless, making internal processes more efficient, increasing productivity and saving time and money. And all that functionality comes at an incredibly low cost.

Many of the world's most trusted brands have been using our software to gain competitive advantage for more than a decade. Our solutions span a diverse set of industries including Finance, Retail, Government, Pharmaceuticals, Manufacturing and Distribution.

CoolSpools' creators are Ariadne Software, a team of IBM i / AS400 specialists with Silver Business Partner status and a combined experience of over 200 years in product development and support. We have more than 900 customers in 50+ countries and are regularly commended by our customers for the quality of our products and customer service.