

Data and Systems Management

Problem:

A client embarked upon an ambitious programme of projects to replace a large and complex obsolete work management and compliance system across geographically diverse sites, each with bespoke data configurations with a single distributed server system. This system also included a complex integrated reporting system and interfaces to external finance and procurement systems.

Solution:

Overview

Caski provided business analysis expertise to not only guide the client in the vendor selection process to enable the adoption of the most fit-for-purpose technical solution, but also to isolate the critical problems and bring to bear specialist resource in a short timescale to manage manual and automated data transfer between multiple systems whilst keeping data in step.

Data Analysis and Scoping

The first step in understanding what data needed to be migrated was to carry out a detailed analysis of the existing data in the system, and to determine what was required of the new system. This was started at a high level with counts of rows in particular tables, then narrowed down to specific data types within these tables. The requirement to keep history records was discussed at each site. Caski were able to provide analysis and recommendations based on their extensive knowledge of the system in question, and experience of previous data migrations. The following list was drafted to help site's decide what to do:-

- keeping all history data would improve the ability to carry out a full audit of migrated data
- keeping history data would enable analysis of previous work to be carried out
- keeping history data would enable previous jobs using Work Instructions to be reworked and used again (keeping a large amount of data in a live system could slow down searches)
- keeping all history data would require a larger disc storage array

Caski performed in depth data analysis each site's data and were able to provide advice on each site's configuration and the best options. With this information, each site was able to make an informed decision based on the detailed analysis provided by Caski personnel.

Data Mapping

Once the scope of data to be migrated had been defined and agreed for each site, an analysis was performed to clearly determine new field locations in the new system, with verification techniques.

Caski was confident in the provision of business analysts with both system and data knowledge to provide guidance to the site specialists about the location in the new system for their existing migrated data. Caski personnel spent time on each site with a set of standard mapping templates to give a consistent start to ensure a standard approach and outcome. Each site's data was mapped from existing fields to the new fields in the new system, including any translations for field length or type and data for look-up tables.

Data Migration

The look-up table data (codes) specified above, was managed by Caski personnel in a separate area of the database (codes region) under strict change control as each site would share some of the common data, which had to be protected as each site added their own specific data. The data migration business rules documented in the mapping documents were translated into extract and convert programs by the developers to ensure a fully documented solution.

Data Verification

At the end of each site load, a set of reconciliation and verification data checks were run and analysed by Caski personnel. The output of these runs provided the analysts with two different report formats:-

- reconciliation - data table counts, that enabled global checking of rows in tables against those expected from the load.
- verification – detailed reports, written by Caski personnel, to check that the business rules written into the extract and convert programs have been implemented as per the mapping documents.

Due to the safety significance of some of the data in the system, special in-depth reports needed to be written to ensure that this data had been migrated correctly. It was essential that these reports were able to show to that this safety critical data had been migrated correctly to satisfy external inspectors.

Client Benefit:

The client received a complete independent data migration analysis service that gave them the assurance that the physical data migration process carried out by the application vendors' technical data team had been carried out to the specification of the clients. The independent role Caski played was critical to the success of the system migration process and ensured regulatory compliance was not jeopardised during the migration process. It also provided assurance to the client that their migration had been carried out correctly and consistently across all sites within the UK.

