

Northdoor Actuarial Application Industrialisation

The need for insurers to execute aggregation, reporting and modelling for areas like reserving, pricing, catastrophe and capital management often leads to complex, highly customised, spreadsheet-based applications that rely on extensive manual intervention from highly skilled (and costly) personnel such as Actuaries and Underwriters. Improving the structure, process, automation and controls can enhance the application “industrialisation”, reliability, effectiveness and performance so the data can be used quickly, confidently and consistently across the business.

Transforming applications – a case study

Businesses turn to Northdoor to transform business critical spreadsheet and desktop-database applications into robust, performant, supportable systems.

A Northdoor insurance client developed its compliance-related application (Solvency II Technical Provisions) using a combination of Microsoft Excel workbooks and Access databases. This worked in a limited way, but required huge manual intervention and would not scale as the organisation required.

Challenge

This client's application process involved a large number of manual steps and significant allocation processes in order to produce the final data. Data was manually copied and pasted between workbooks and critical information, such as rates of exchange, keyed manually. Considerable time was spent executing the process in batches then manually checking the results. Initial quarterly runs took days to complete; re-runs would take a full day to execute. The process was prone to user error and there was little automatic control or verification that each step in the process had completed successfully.

Solution

Northdoor industrialised the process by replacing the current Microsoft Excel/Access solution with a series of Microsoft SQL Server Integration Services (SSIS) packages executed from a set of SQL Server Reporting Services (SSRS) reports. All source data (Excel workbooks) was loaded into a SQL Server database. Copying and pasting of information between workbooks was replaced by the implementation of data links from Excel workbooks to SQL Server. Control process were deployed to ensure that all steps are run in the correct order.

Outcome

The entire reporting process can now be completed in less than an hour. The new process is executed by running three SSRS reports and applying minimal processing to data in two workbooks. Re-runs of individual steps can be completed in minutes. Northdoor also greatly improved the performance of the Excel workbooks by rewriting inefficient sections of macro code.

Because calculations are still completed in Excel, the Actuarial team retain the ability to make amendments easily as needed (to accommodate any future changes in solvency regulatory requirements).

The final application output is now stored in SQL Server where it is easily accessible from any approved department/business function and can even be reused for other purposes. The client is delighted with the results.

Original application

> 20 Excel workbooks

2 Access databases

> 50 manual steps

Processing time
> several days

Northdoor-transformed application

2 Excel workbooks

SQL Server and 3 SSRS Reports

3 manual steps

Processing time
< 1 hour

Additional enhancements through industrialisation

Northdoor was able to further to enhance and extend the industrialised application to accommodate a more granular level of data. This granularisation was simply not possible with the original model because the final data output execution would have taken days to complete. This enhancement was added to the new model and the final output still completes in less than 90 minutes.

The SQL Server database stores all data on a processing month basis. This basis gives the business the facility to compare data across processing periods for analysis and sanity checks.

Northdoor's credentials

Since our formation nearly 30 years ago in the City of London to provide data solutions to the insurance industry, Northdoor has built up a reputation for delivering business-enhancing IT projects for the London Market.

Our skilled consultants bring extensive insurance industry experience and will quickly assimilate your specific business requirements to deliver the best solution that works for you.

Our services cover the entire data journey; through our Store IT, Protect IT and Use IT offerings we help clients ensure their data is effectively and efficiently stored, secure and able to be used effectively.

Our Applications specialism helps clients build and maintain the systems that run the business, and create and acquire the data needed to manage the business.

Reference Clients

- Ark Syndicate Management
- Canada Life
- Faraday
- Managing Agency Partners
- Markel
- MunichRe
- Starstone
- Vibe
- WR Berkley

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