

HM Treasury Case Study

MICRO SIMULATION MODELLING

The Challenge

Tax Benefit Modelling - HM Treasury use their Inter-Government Tax Benefit Model (IGOTM) to produce comprehensive analyses of potential reforms to the UK tax and benefit system. The model is used to determine which categories of the population benefit or lose from changes in government policy.

The IGOTM system was originally written in C and run under Unix. It was converted to SAS in the mid 1990's and a SAS/AF interface developed.

HM Treasury required an upgrade to improve the usability of IGOTM and provide a Windows look and feel to the interface, while maintaining the robustness of the model runs using SAS.

IGOTM2 was developed by Amadeus Software using Visual Studio and SAS. Visual Studio was used to develop a true Windows application incorporating features such as no-touch deployment, intuitive look and feel, and fast, flexible performance providing users with a rich, powerful application. SAS is used to run the calculations for model runs and create reports on the results.

The Solution

The existing SAS/AF system was migrated to a standard Windows application and the usability of the interface was much improved. Users are instantly familiar with the system, due to the look-and-feel of a standard Windows application. Future demands from users are now addressed including much greater flexibility and the ability to automatically update the system using new technologies.

Users can now compare the impact of any changes between two model runs. IGOTM2 reduces the amount of time taken over tasks and provides a system that is much faster to navigate and locate information. Production of repeated reports is incorporated as part of a model run. SAS is maintained as the robust and flexible analytic engine.

The Results

IGOTM2 Benefits - New features are provided which make modelling simpler to report on and easier to understand for all users. Dynamic presentation of costing parameters in local categories or groups is included. IGOTM2 is a future-proof system built on a rock solid foundation: the .NET Framework and SAS. All of the Government Departments who used IGOTM2 said that it is much more powerful, easier to use and a vast improvement on the original system.

HM Treasury now has a system that will accommodate all their existing requirements and easily copes with all their future needs

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