Virtua Consulting and Development
Cost effective online 360 appraisals

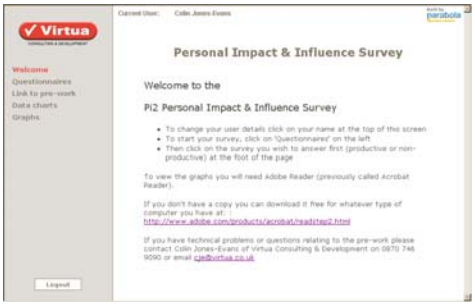
Background – Virtua Consulting and Development

Virtua Consulting and Development are specialists in business skills training and development.

They work with large organisations providing a wide range of coaching, consultancy and training to develop people, teams and organisations.

Part of their offering is the 360 degree evaluation which is the process of gathering and reporting the views of a wide range of people on the behaviours (and their impact) of an individual. These assessments are often run by outside organisations and the process can be lengthy and delayed while the surveys are constructed, sent out, collected and analysed.

Virtua wanted to produce a tool which would allow HR departments and consultancies to run 360 degree evaluation assessments online. Most importantly they wanted to put the power into the hands of the organisation running the assessment thereby eliminating the need to rely on expensive survey houses.



The business challenge – web-based solution to provide sophisticated set up and analysis within a tight budget

Although Virtua were our contracting client, they had sold access to the survey tool to two other HR consultancies who were going to be using it immediately, so that costs could be recouped as the project unfolded. The solution had to suit each of their business needs as well as provide scope for the software to be marketed as a service to other consultancies and HR departments.

The final solution had to offer at least the same functionality as the best existing survey software on the market. This included online completion of questionnaires and the ability to invite other individuals to complete a questionnaire about the participant. We had to also create an easy to use maintenance side. Once the survey had been set up, the complete cycle of the survey from issuing of invitations to participate, registering, completion of the questionnaire and data analysis had to be performed over the web with no need for any administrator input.

Our approach – the project

Initial meetings with Virtua enabled us to gain a full understanding of what was involved in the 360 degree survey process and the kind of statistical analysis that was required.

We managed the project by splitting it into two phases. The first phase would provide the essential elements to provide the on line survey and service each of the 3 consultancies' needs. The second phase could be commenced once the delivered solution started to generate income, and Virtua gained confidence in the software.

Because the project potentially had to take account of the input of 3 separate companies it was imperative to go through a formal analysis and design process. The details were documented, confirmed and well communicated to each of the partner companies. The functional requirements specification went through 4 revisions. Some of the revisions resulted from peer evaluation – input from other Parabola developers not directly involved with the project. This is a very good way of picking up any problems which the client focus would not identify.

Following the system build Virtua were invited to review a test version of the solution and to give feedback. This again produced positive improvements before delivery of the final product and picked up on the omission of an important analysis tool which had not been clearly documented previously.

At the implementation stage we provided training to the companies who were ready to start using the system. The training enabled the users to start entering their data and so they were ready to go live within days.

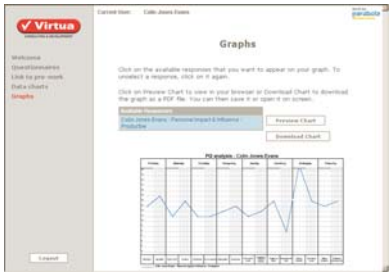
The project was delivered in 6 months and successfully implemented on our web hosting facility at Telehouse.

The resulting system – a bespoke Parabola Solution

The system had to not only cope with the slightly varying needs of 3 different companies but also the future acquisition of client users. To meet this need we created a flexible and intuitive maintenance back end. The pages which an individual participating in a questionnaire sees are largely configurable. The text and styling can be determined by the administrator using a Word-like editor and stylesheets.

Any amount of surveys, questionnaires and questions can be input. There can be any number of different responses to the questions which are all scored and assigned to analysis groups. All of the scoring and preparation of analysis groups is completely flexible.

The online analysis required graphs to be produced in a PDF format. They had to be constructed "on the fly" from potentially ever-changing data so we sourced and installed specialist software components. A number of alternative components were evaluated, but we found that TallPDF from Tall Components best met our requirements. We made use of this in generating both the graphs and PDF versions of the questionnaires.



Having knowledge of what Phase 2 might involve we were able to build the initial system to allow these additions to be made cheaply and without affecting the integrity of the data or making the interface between code and pages cumbersome.

Security was always extremely important with this solution. Each survey participant would need to be assured that their own data was secure, but of equal importance was the need for

each client company's survey data to be available only to their own Administrators. Sentinel – Parabola's highly successful security system – enabled these needs to be met with ease.

The main benefits of the system Parabola developed for Virtua are:

- secure system for administrators and survey users
- web-based for surveys to be set up and answered anywhere
- instantly generated PDF reports for HR or end user

The survey software can also be used for other purposes: post course feedback for trainers, customer care feedback, product surveys, organisation climate surveys and exit surveys.

Technology – a scalable robust solution

The Parabola 360 online survey solution was built from the ground up as an ASP.NET solution. It was designed to make the most the .NET advances in reusability, security and robustness.

The ASP.NET software design has a separate data access layer to enable any database backend. In this case SQL Server 2000 was adopted as the most secure and scalable solution with purpose built data providers from Microsoft .NET.

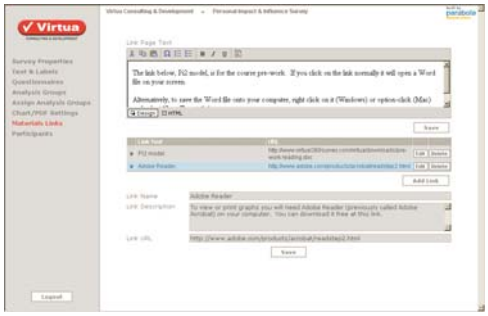
A middle tier builds on the business logic incorporated into the database. This presents the data as a coherent object model and provides the majority of the functionality, allowing the UI applications to be very thin and developed rapidly.

TallPDF was licensed to enable the production of the graphical representation of survey results and PDF versions of the questionnaires.

The site is hosted on a dual Xeon processor server, at our Telehouse hosting facility. The hosting includes access to DeepMetrix LiveStats which is currently the best log analyser available.

Conclusions - The business benefits

The primary objective of delivering a product that can be used immediately to attract clients for our 3 client companies has been achieved. The product was being used for live surveys within 2 weeks of going live.



Phase 2 is already underway with ideas for further enhancements being generated now that Virtua can see how well the system is working and what kind of data is being collected.

References/Links

Virtua site – http://www.virtua.co.uk
TallPDF – http://www.tallcomponents.com
DeepMetrix LiveStats web log analyser – http://www.deepmetrix.com

Further information

For further details and a quote based upon your particular requirements please contact Richard Gray + 44 (0) 20 8399 5920, rg@parabolasoft.co.uk