DT ALM SUCCESS STORY 16TH JANUARY 2009

DUNSTAN THOMAS HELPS MAJOR INFRASTRUCTURE PROVIDER STREAMLINE ITS SOFTWARE DEVELOPMENT LIFECYCLE AND SIGNIFICANTLY REDUCE RISKS ASSOCIATED WITH KEEPING SOFTWARE DEVELOPMENT IN-HOUSE

MISSION

Dunstan Thomas Consulting has been working with one major infrastructure provider for over the last four years. Initially, DT provided training and consultancy to enable the organisation's growing IT team to migrate to Universal Modelling Language (UML) as it was being adopted as its modelling language of choice in 2005. The company also adopted Sparx Systems' Enterprise Architect Version 6.5 at the same time and uses Version 7.1 today.

UML was principally used by both this company's business analysis and architecture teams, notably for high-level technical design. However, the company was acutely aware that it could be used much more widely to help articulate requirements, model and design systems, with a view to directing and steering the entire software development lifecycle.

Once the company's business analysis team fixed on UML and Enterprise Architect it hired people with these skills and demanded uniform usage of these tools across the entire team of 20 people.

In early 2008, the company began investigating wider adoption of UML and Enterprise Architect to help drive its entire software development lifecycle. It called in Dunstan Thomas to provide support in three key areas:

1. To evaluate all the processes and tools being used by all teams within the 130-strong software development team
2. To make recommendations on which processes and tools to standardise on
3. To help configure, customise and ultimately optimise the company's chosen tools and processes so that it can create significant efficiencies in the software development lifecycle.

EVALUATION AND REQUIREMENTS GATHERING

During the summer of 2008, the company called in Dunstan Thomas to ask them to review and evaluate the range of development methodologies being used by different IT teams from business analysis to testers, developers and deployment specialists, prior to fixing on specific methods and stimulating the company's whole software development lifecycle team of 130 people to use the same processes. Dunstan Thomas helped the organisation's business analysis team to fix on optimising the use of Enterprise Architect and UML whilst all other IT teams fixed on the RUP (Rational Unified Processing) methodology.

Both Dunstan Thomas and the company's business analysis team came to the agreement that Enterprise Architect offered strong business and technical advantages over competitor offerings. These included:

1. Ease of access to skills on both EA and UML both within and outside the organisation
2. Intuitiveness of the product which made adoption and returns rapid
3. Cost effectiveness
4. Flexibility

OPTIMISING USE OF ENTERPRISE ARCHITECT

Over a three month period, from June to August 2008, Dunstan Thomas carried out requirements gathering and demonstration work before the client took Dunstan Thomas recommendations and called on it to begin the configuration of Enterprise Architect to meet the company's specified requirements. All this work was completed by November 2008 before Dunstan Thomas ran training workshops to ensure full and rapid adoption.

The company's Software Development Lifecycle Programme Manager said:
"What we liked about Dunstan Thomas is they offered consultancy in all areas not only on EA configuration improvements but also on practical standards and systems advice that sit around EA to really help us fine-tune the processes which support it. This way we can guarantee the efficiencies we were looking for.

" The company's Business Analysis Manager, added:
"Dunstan Thomas can be thrown in the middle of something and we know they can do it. They are capable of gathering requirements, they are great at optimising EA because they know it so well and they know the UML practices that fit around it. They are good on practical, down-to-earth, highly usable advice on how to get these tools working well for companies. Analysts like Gartner could not get close to the top flight practitioner capabilities which Dunstan Thomas offered us on this project."

DESIGN & DEVELOPMENT

The company then identified some key requirements that it needed help with and engaged DT Consulting to achieve them. These were:

1. Enabling traceability of requirements to actual functionality that the company describes in UML use cases
2. Asserting standardisation on usage of UML and EA across different teams
3. Establishing a uniform system for exporting requirements from EA into other teams – notably into the software development team in Microsoft Word Rich Text Format (RTF) customised template documents.

For Dunstan Thomas' client it was very important to standardise and improve consistency in the application of systems and processes across the software development lifecycle team, so that it could realise the efficiencies it was looking for. Dunstan Thomas helped to find and recommend those standards and also make recommendations for improvement of processes around them. Its consultants also acted as a sounding board as these processes were implemented.

The company's Business Analysis Manager explains the wider implications of Dunstan Thomas' work at this stage: "This isn't just about high level design or business analysis it is about streamlining our whole software development lifecycle and using it to provide better, more cost effective service to the business community in terms of both the quality and functionality of our outputs."

SOLUTIONS

Dunstan Thomas analysed the key requirements and the following solutions were developed:

1. Enabling traceability of requirements to actual functionality that the company describes in UML use cases
   Creation of customized Enterprise Architect requirements elements and types that are re-usable across all projects.

2. Asserting standardisation on usage of UML and EA across different teams
   Creation of a Template Base project which contains a structure and the customized artefacts referred to above. This template can be applied retrospectively to existing projects in addition to being used for new projects.

3. Establishing a uniform system for exporting requirements from EA into other teams – notably into the software development team in Microsoft Word Rich Text Format (RTF) customised template documents.
   As the client already was using Word Documents for documentation, Dunstan Thomas created re-usable Word Templates from sample documents. These templates were then used to create standardised documentation from any Enterprise Architect project. This was achieved by the creation of a bespoke Add-in that extracted data from an Enterprise Architect project and inserted it into the Word Templates thereby creating standard documentation in Word format. This Add-In also provided functionality to specify the level of detail in the documentation and filter options for the project data.

RESULTS

Sparx Systems' Enterprise Architect 7.1 is now being actively used by some 60 users across the company's business analysis, development and testing and architecture teams. DT Consulting's enhancements went in during December and all solution tasks were completed during January 2009. Now that Dunstan Thomas' enhancements to processes and add-ins to Enterprise Architect are all in place, developers can code directly from specifications that the business analysis team provide them in Enterprise Architect. Less development resource is needed. The client is able to move faster and ultimately it can deliver more with less money.

The Business Analysis Manager, again:
"If we make fewer mistakes, less rework is needed. Ultimately we know we can now get much more software right first time. This generates the efficiencies that we need to achieve our business objectives whilst working within shrinking IT budgets which are now a fact of life across many organisations.

"If we develop software in-house it must be demonstrably cheaper and higher quality than buying it off-the-shelf or outsourcing the development work. It is a lot easier to import somebody else's solution or framework than build your own from the ground up so if you are opting to go it alone you must make it work – we now know we have the processes and systems to do this."

The Business Analysis Manager summarises:
"UML, and EA by extension, now drive everything we do. If you get the business case, scope and requirements gathering processes right and then follow this with correct UML models then you eliminate a great deal of the risk of IT failure. You can never take 100% of the risk out but you can get very close with this approach."

This company invested a total of £17,000 with Dunstan Thomas covering all training, consultancy, requirements gathering, configuration, design and template creation. The project was completed in six months.