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Hotels.com



How one of the world's leading accommodation booking sites, Hotels.com, is using Agile software development to be more disciplined about return on investment as well as improving productivity.

Background

Many people think that an Agile approach to software development is just a way of delivering IT.

“Absolutely not”, according to Hotels.com’s vice president of technology, Stuart Silberg. “To be truly Agile, you have to get the whole business behind you. It is as much about business transformation as reducing development times. Agile shines the spotlight on issues and enables the business to see a direct cause and effect quickly. Did this new feature on the website convert into more business or not?”

With more than a year of Agile development behind them, Hotels.com has dramatically increased the speed at which it can bring the best product ideas into production quickly and has transformed a 26-week traditional waterfall development cycle into one where a new release goes live every two weeks. With the help of Covent Garden, London-based managed services provider dsp, Hotels.com has adopted and executed ‘purist’ Agile principles.

Hotels.com is a multi-billion dollar business and one of the world’s largest hotel booking websites, receiving millions of visitors every day to its 85 localised sites supporting 34 languages. The in-house technology team is responsible for project management, development, quality assurance & testing and operations - the latter on call to provide

24/7 support. Traffic patterns roller coaster up and down as different time zones come into play.

The mantra for the business for 2011 was “go faster”. Ultimately, this meant improving the speed to market for new products and the development life cycle. “Although our business is totally technology-based, we don’t do technology for technology’s sake,” said Silberg. “It has to serve the business.”

Requirement

When he joined the company, Silberg, who had experience of using Agile techniques for offshore developments, inherited a waterfall systems development life cycle (SDLC) which was delivering one code release into production every 12 weeks. In reality, that meant that the elapsed time from someone having a product idea to release was closer to 26 weeks, taking into account the waiting time and the 12-week overlapping cycles for developing, testing and production. In other words, the creative team only had two chances a year. “The problem was that this created enormous pressure to put everything into that idea, not just a few features, because opportunities were fairly limited,” Silberg commented.



Initially, Hotels.com reduced the elements of the cycle to four weeks each which, with parallel developments, lowered the time to release to eight weeks, moving from the usual waterfall cascade to a Scrum within Agile development, where small teams or pods sprint forward with bite-sized new features. But this was still more “fast waterfall” than Agile, according to Silberg, and the goal was to go faster still.

Going faster

There were two ways to improve the speed - one was to attack the SDLC again, which they did to make it more efficient. The second way lay in splitting up or re-architecting the application into logical parts - bookings, search, property details and landing pages - so that releases to one area could be made independently of another.

Solution

Location, location, location.

With space running out at Hotels.com’s Covent Garden office, Silberg looked for a software house to provide experienced development resources to work in-house with them as a means of expediting the in-sourcing and tackling the splitting up of the applications. “Geography was *the* major criteria - you just cannot overestimate how important close proximity is to Agile development,” said Silberg. “It was vital that the software house was within walking distance.”

And that is how Hotels.com found dsp- an Oracle, E-Business Suite, Microsoft and software development specialist. dsp offers an IT partnership to

organisations supporting everything from custom developments to storage and operating systems, databases and E-Business Suite applications. What attracted Hotels.com to dsp, in addition to location, was their collaborative spirit and quality of their architecture people.

Silberg’s brief to dsp was that they needed to build an Agile team for the project - Agile depends upon a close relationship between the business and the developers. Two week sprints of activity are made by small teams or pods of developers, with a critical member of that team being the ideas person from the business - a product owner at Hotels.com. They are responsible for fleshing out the ideas so that the developers understand what is required and the number of features that can be completed during the sprint. A physically close interface between the developer and business manager is essential to improving speed. Daily stand ups are also a feature where progress and issues are shared to ensure every development is on track.

“Agile doesn’t suit all developers,” said Rick Anthony, Males and Marketing Director at dsp. “They have to be committed team workers and, because teams are small with between five and nine people, there is nowhere to hide. We understood the requirements and were able to call upon in-house talent, putting known teams together. We went through a very vigorous process to ensure that new people were committed and true believers in the Agile approach and not just paying lip service.”

dsp’s first task was to split the application. The project kicked off in the summer of 2011. An



aggressive timeline was set by Silberg as they also had to keep delivering new business functionality during that time.

A Swat team was created that could be attached to an existing team so that the app split could go ahead in parallel with regular feature development. The aim was to move the Swat squad from one group to another. “In reality, we split the first piece of the application and then the demands of the business to deliver some extensive functionality in Q1 took priority,” explained Silberg. “Between then and Q2, the Swat team had created the underlying shared services and the foundation work needed to simplify future splits.”

dsp prescribes the Agile methodology.

There are a number of dsp people on the project and their role is significant. “They’re not just with us as developers to help split the application but are helping us to improve the SDLC and prescribe the methodology to make us more Agile,” said Silberg.

A close, frank relationship between Hotels.com and dsp was also a vital success criteria. dsp took their role as Agile enablers very seriously and, when they felt that progress was not as rapid as expected and they needed to improve the Agile performance in the team, they were able to voice their concerns and gain a greater commitment to Agile principles from the business.

dsp also has a new mission in 2012 to advise Hotels.com on a move to a virtual environment with

provisioning taking place on demand in the cloud. Silberg said: “dsp is helping us to take away the hurdles and friction of development - environments, testing stubs and tools, etc. - to make developer’s lives easier and, of course, more productive. The goal is to reduce the three weeks it takes to provide a new developer with his environment down to 90 seconds.”

Agile development is also having an impact on the business. Now that product managers have more opportunities to release their ideas to the website, they are being encouraged to reduce the number of features at any one time so they can be implemented faster. For example, being more selective about which features are needed for different points of sale reduces the coding required for localisation. “We can see how something goes and make corrections before rolling it out more widely,” said Silberg. “Agile makes it easier for the business. By rolling out a smaller number of tweaks or changes, a direct cause and effect result is seen, which is not possible when a whole host of features is rolled out simultaneously. Prioritisation becomes much more important now, because it is easier to detect and pinpoint the return on investment by small change, which also puts pressure on the business to deliver the most beneficial features.”

Business Results

As a result of Agile, Hotels.com can now carry out much more ideas testing - does a change of colour to this box, moving this field or this new landing page design result in more conversions and sales? What percentage of visitors sees the changes can be controlled, with comparisons made and decisions



taken about which of them to roll out. It is a way of ensuring that only the best ideas win.

Hotels.com is making new releases every two weeks and whichever team is ready with their new development goes first. The process increases the pressure on developers but reduces it on the product managers as they do not have so long to wait for their ideas to come to fruition. It is a faster pace for everybody.

Return on investment

Measuring the return on investment for the Agile project is very dependent on the product managers giving IT the right thing to do at the right time. “We’ve quadrupled the number of releases in a year and expect to see efficiencies of around 20-25 per cent,” Silberg disclosed.

This is a pivotal moment for Hotels.com. Over the next 18 months to two years, the aim would be a move to virtual IT environments around the world to be closer to customers to improve response times. Hotels.com will be using dsp’s skills in this area to help.

Commenting on the relationship with dsp, Silberg said: “At the end of the day, it’s all about relationships with individuals. The evidence is that the people from dsp really do care and have a sense of ownership and responsibility, which is quite rare. The integrity shines through, they play fair and communicate very well and I feel like I am getting value for money.”

“A welcome side effect of the project has been to get the bug deficit reduced, largely thanks to the increased bandwidth dsp afforded us. The number of off-shore developers has also reduced.”

The big benefits though come from the improved SDLC and plans for relieving developers of the administration frustrations and improving their environment. The role of Agile in contributing to the business is easy to overlook. As Silberg says: “Agile is more than a way of delivering IT. It started in IT but it’s the way the company has to think. Hotels.com is one of the most advanced examples of Agile within Expedia and seen as a flagship. I believe that, when you are Agile, there has to be a way of seeing rapid and pinpointed results for cause and effect. Why stick to a plan when actual results are pointing to success lying in another direction?”

The Agile experience can also place more pressure on the ideas’ people. “As we get faster in delivering capabilities, the business has to be stricter on measuring the ROI. And we in IT need to be more disciplined about choosing where to devote resources. Natural selection happens - if one person’s ideas frequently deliver a better business result, then priorities must come into play.”