Pioneers

How Adaptavist built a groundbreaking JIRA Agile plugin that predicts future software release dates up to two years in advance.

CLIENT NEEDS:

✓ A tool that accurately predicts when new features will be ready for release to their websites

✓ A way to have greater visibility and predictability of sprints, making their software development process more efficient

ADAPTAVIST SUPPLIED:

✓ **Consultancy services** that understood the client's business in context and defined their true needs

✓ **A groundbreaking plugin** that augments the functionality of JIRA Agile and predicts when new features will be ready for release

✓ **A range of supplementary tools** that make feature development very visual, track-able and better organised

✓ **A close relationship with Atlassian** that ensures future development plans won't 'break' the plugin

THE CHALLENGE

Our client is a major player in the online travel sector. They have a very large number of significant product developments in progress at any one time. They wanted a way to predict, based on previous performance, when a particular new feature would be available for release to their production websites.

A great deal of marketing effort and planning is contingent on when new features can be released. Having a timetable they could have confidence in would make their planning much simpler and eliminate wasted effort and cost. What the client wanted was something really quite new and untried, something that had only ever been talked about as possible in theory. We now had to make it work in practice.

WHAT WE DID

The client initially approached Adaptavist because they'd found us listed on Atlassian's website. We are both Atlassian Platinum Experts, and Atlassian Enterprise Partners, a rare distinction shared by only around 20 companies worldwide.

A couple of phone calls between ourselves and the client helped establish what they had in mind. These discussions were pretty technical and as such were enough to persuade the client that they'd found the people who could help them achieve their aims. Resultantly, no bidding process took place.

Ahead of our involvement, the client had been holding discussions in-house and had formed ideas around what they wanted. We initially had discussions with the lead programme manager on the project. Subsequently we did a series of interviews and workshops with a number of their other programme managers, and extensively sketched out ideas on whiteboards. This brought together a number of threads and gave us an overall view of what we needed to develop.

At this point we could see that the solution the client wanted was very much beyond the realms of what JIRA Agile can do. It became clear we were going to be writing extra functionality to augment JIRA Agile.

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>
> *Gareth Llewellyn | Adaptavist*

We also worked to understand how the client structured their development processes and how they were using the Atlassian toolset (JIRA and JIRA Agile) already. This was because it was important that we didn't just develop the plugin in isolation. As Gareth Llewellyn, Adaptavist's project manager puts it, "Rather than them saying, 'we want this feature' and us saying, 'okay', we wanted to help them understand the whole thing in context, making sure that what they were asking for in terms of software would actually make sense in terms of their business."

Building the solution

Our client develops software in 'sprints' (or 'iterations'), each lasting two or four weeks. So each sprint has a deadline, by which time all the functionality in that particular sprint should have been completed. In reality, however, not all the work gets done and this then goes into a backlog. Our task was to write a plugin that would estimate – based on how much any one development team achieved in any particular sprint – which parts of the backlog would go into which future sprints, and how long they would take to be completed. This was the way to predict when a specific piece of functionality would be available for release.

In writing the plugin we developed a couple of different approaches to estimating sprint productivity. The client had a number of ideas as to how these numbers could be calculated effectively at the beginning of the engagement, and consolidating those ideas was one of our first tasks.

Some of the time we just took the average of previous sprints. At other times, we looked at a particular development team and how much they typically achieved within a particular iteration. We also used an algorithm to increase what we called the 'sprint velocity' – to take into account that, for example, the development process speeds up as the teams gets more experienced with the work they're doing.

Adding detail to JIRA Agile

In addition to making predictions, it was important to the client that the information be readily accessible and easy to interpret, both for programme managers and developers. So we built some sophisticated new tools in the JIRA Agile interface that both displayed the prediction information very clearly, and enabled people to work with it.

When the Prediction Mode is enabled in 'rapid board' – the planning view of JIRA Agile – colour-coded Sprint Prediction Markers replace the default sprint marker and provide a very visual way of breaking down each sprint so it's easy to see when a particular task is going to be done. The plugin also enables tasks to be dragged around and hence prioritised.

Sprint details are also editable and sprints are user-configurable. So for example at the start of a project, when no historical data is available to work with, users can input different estimated levels of productivity and thereby generate different scenarios of how the project might run.

A 'Minimum Viable Product' field has also been added. This is asking, for any particular feature, 'What is the minimum functionality we need to launch this?' So for example, a loyalty scheme needs to keep track of each customer's 'points', but the intricate reporting behind the scheme doesn't necessarily need to be ready on launch day. The Minimum Viable Product field, then, differentiates between the different functionalities within a feature, and identifies which are release-critical and which are not.

ATLASSIAN'S STAMP OF APPROVAL

As soon as it became clear we were going to be writing extra functionality to augment JIRA Agile, it was equally clear we ought to talk to Atlassian. The main thing was making sure that our plugin wouldn't conflict with any future planned developments of JIRA Agile.

Fortunately, Adaptavist has a strong and close relationship with Atlassian, so early on we had discussions with the JIRA Agile product manager about what we were doing. He in turn let us know what was in Atlassian's development roadmap for JIRA Agile so we were able to make sure that nothing we did would be inconsistent with future JIRA Agile functionality.

Atlassian personnel were also in Europe at the time, on a roadshow, so we took the opportunity to introduce our client to Atlassian's JIRA product manager. It was a powerful way of reassuring our client that our JIRA Agile plugin had the Atlassian stamp of approval.

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WHAT THE NEW PLUGIN DELIVERS

The client's key driver was to gain a tool that would allow them to plan their releases better and predict when releases would be ready. The plugin supplies this. Additionally, given that there are up to a dozen development teams and nearly 200 developers, it's also necessary to coordinate work between the teams where cross-dependencies arise. The plugin enables the client to 'see' development better, and plan more effectively to eliminate clashes and delays. All-in-all the plugin is improving collaboration. It's also reducing the risk that the client spends time and resource developing redundant features.

It's also worth mentioning that from initial talks to delivery this engagement took less than two months. That is in part because both we and the client work in a very agile way. We were able to show them ongoing developments on a weekly basis for their input. In turn the client could check, refine and reprioritise requirements along the way. It meant they got the functionality they actually required very cost-effectively and it led to a quick, efficient project that was delivered within budget and the client's deadline.

HOW ADAPTAVIST MADE A DIFFERENCE

Adaptavist did a number of exceptional things in this engagement. One was getting the participation of Atlassian.

"I think it would have been very difficult for anyone else to get Atlassian involved like we did," says Gareth Llewellyn. Additionally, this was a real technical challenge. Llewellyn adds, "It would have been quite difficult for a lot of others to come up with the initial concept and develop it in the way we did, and as quickly."

Adaptavist also made a difference by executing this project in a very collaborative and agile way. Adaptavist's people made themselves very accessible to the client so that ideas could be easily bounced back and forth and concepts refined in a short timeframe. This resulted in a very successful project.

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See how we can help you, talk to our experts today ❯

ABOUT ADAPTAVIST

Adaptavist, established in 2005, is a London-headquartered IT services company providing premium professional services, support, hosting and licenced products to a wide range of national and international clients including over half of the Fortune 500 companies.

Adaptavist, an 'Atlassian Platinum and Enterprise Partner', is widely recognised as the most technically advanced Enterprise Partner in the Atlassian ecosystem.

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