Why Agile Methodologies?

# Introduction

JustHealth have elected to use an agile development methodology for producing our application. An agile approach lets us focus on rapid, iterative development of our application with the objective of producing working software taking precedence over exhaustive documentation or following an explicit plan, as per the Agile Manifesto.(Appendix 1)

Research conducted The Standish Group has shown that possibly three times as many projects fail when the waterfall method is utilised when compared with those using agile methods: (Standish Group, 2011)

# Analysis

All of JustHealth’s members have much greater experience in Agile and believe it to be superior to the traditional methods in most cases, particularly those involving small projects with a small, close-knit development team like ours.

Agile development also perfectly suits the iterative requirements of the project, such that we have to produce working software to present every 2-3 weeks. There are also a number of other agile practises we will be using, including a number take from Extreme Programming (XP), a specific example of an agile methodology. These include:

| Practise | Benefit |
| --- | --- |
| Pair Programming | Pair programming has been shown to reduce the number of errors in code by 15%. It also has the added benefit of increasing developer satisfaction and designs. (Williams et al, 2000) |
| Test Driven Development | Having easily repeatable and automated tests written before functionality is implemented allows us to easily ensure that our functionality works and is of an appropriate standard. By focusing on writing code to pass those tests we are encouraged to write cleaner code that implements our designs. (Beck, 2002) |
| Triweekly Team Meetings | Keeping the developers in close contact allows us to keep on track and focused as best as possible. Here we can examine the work that has been done, what we are going to doing moving forward and discuss anything that is hindering our progress. |
| Collective Code Ownership | With all team members actively contributing and owning all of the project code and documentation we can ensure that issues are much more readily spotted and fixed, and that each developer has another who is ensuring that they are sticking to the agreed practises and methods. |

# Appendix 1

**Manifesto for Agile Software Development**

We are uncovering better ways of developing

software by doing it and helping others do it.

Through this work we have come to value:

Individuals and interactions over processes and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiation

Responding to change over following a plan

That is, while there is value in the items on

the right, we value the items on the left more.

|  |  |  |
| --- | --- | --- |
| Kent Beck | James Grenning | Robert C. Martin |
| Mike Beedle | Jim Highsmith | Steve Mellor |
| Arie van Bennekum | Andrew Hunt | Ken Schwaber |
| Alistair Cockburn | Ron Jeffries | Jeff Sutherland |
| Ward Cunningham | Jon Kern | Dave Thomas |
| Martin Fowler | Brian Marick |  |

© 2001, the above authors

this declaration may be freely copied in any form,

but only in its entirety through this notice.

# References

Mike Cohn, (13/02/12). Agile Succeeds Three Times More Often Than Waterfall. [Online] Available at: <http://www.mountaingoatsoftware.com/blog/agile-succeeds-three-times-more-often-than-waterfall> [Accessed: 07/10/14].

The Standish Group, (2011). Chaos Manifesto. [Online] Available at: <http://www.versionone.com/assets/img/files/ChaosManifest\_2011.pdf> [Accessed: 07/10/14].

Williams, L.; Kessler, R.; Cunningham, W.;Jeffries, R. (2000). Strengthening the Case for Pair Programming. [Online] Available at: < http://collaboration.csc.ncsu.edu/laurie/Papers/ieeeSoftware.PDF> [Accessed at: 07/10/14].

Beck, K (2002). Test Driven Development by Example. Addison-Wesley.

Beck, K.; Beedle, M.; van Bennekum, A.; Cockburn, A.; Cunningham, W.; Fowler, M.; Grenning, J.; Highsmith, J.; Hunt, A.; Jeffries, R.; Kern, J.; Marick, B.; Martin, R. C.; Mellor, S.; Schwaber, K.; Sutherland, J. & Thomas, D. (2001), 'Manifesto for Agile Software Development’. [Online] Available at: <http://agilemanifesto.org/> [Accessed: 07/10/14]