# Introduction

The following case study is of a share portfolio management software, released in 2004. Currently it is used only in New Zealand by 11 companies all belonging to a sole investment management franchise. The large body of code making up the software has deteriorated and does not support mobile platforms with only 3 people to maintain and support it.

The software is due for redevelopment by an in-house development team of 15 but the franchise group are looking to expand this to 18 by the end of 2017.

The purpose of this report is to identify and look into any beneficial practices/approaches with regard to these five areas: collaboration and communication, requirement engineering, project planning and tracking, managing change and lastly quality assurance. We will be looking at practices under the agile methodology.

Agile has been shown to perform better on average in comparison to traditional methodologies (i.e. Waterfall, sequential and well defined approach). In a quantitative study, Serrador & Pinto found that not only did agile outperform waterfall in terms of project success but it was observed to be by a large margin in spite of project complexity or experience of a project team [2].

While agile is most suited for teams 4-9 it has been found to have observed benefits when used within larger teams and projects, Lagerberg found that agile (even single practices) had obvious benefits in comparison to a traditional waterfall methodology and practices regardless of the proportion of practices adopted [1]. The mid-size nature of the end development team means that they can be split into 2 teams of 9 to better align with the general recommendation of the ideal agile team size. Lastly due to agile being shown to be practical in a large scale environment the investment management franchise have the option to scale up this project/development team should they decide.

# Recommended Practices

## Collaboration and Communication

## Requirements Engineering

## Project Planning and Tracking

Although sprint backlogs are a practice of scrum, being that scrum is under the agile umbrella I feel it is still a relevant and beneficial practice to this case study.

From my research I was unable to find any empirical papers to support the benefits of specific scrum/agile practices again more traditional methodologies, however what I found was [2].

## Managing Change

## Quality Assurance

# References

1. **Lagerberg, L., Skude, T., Emanuelsson, P., Sandahl, K., & Stahl, D. (2013). The Impact of Agile Principles and Practices on Large-Scale Software Development Projects: A Multiple-Case Study of Two Projects at Ericsson. *2013 ACM / IEEE International Symposium on Empirical Software Engineering and Measurement*. doi:10.1109/esem.2013.53**
2. **Serrador, P., & Pinto, J. K. (2015). Does Agile work? — A quantitative analysis of agile project success. *International Journal of Project Management,* *33*(5), 1040-1051. doi:10.1016/j.ijproman.2015.01.006**