

# Hannan I.T.

## Application Development Services



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## Objective

The objective of this document is to provide information regarding Hannan I.T.'s software development capabilities and strengths as well as provide examples where these have been used to successfully deliver the required outcomes for our clients.

## General

We realise that taking on an IT provider for a software development project can be a risky decision for many companies. We believe there are a number of key factors that can lead to a successful outcome and as such these are core concepts to the way we operate.

The major reasons for project failures are:

- Lack of clarity around requirements
- Inappropriate skills of project members
- Lack of cooperation between client and vendor

We employ the following strategies in order to ensure risk mitigation and successful delivery:

Lack of clarity around requirements is often cited as a key factor leading to project failures. Some people argue that the solution is to ensure the requirements are complete and precise before any development work commences. Unfortunately this ignores the fact that in most cases it is simply too difficult to state requirements to that level of preciseness at the onset of a project. We believe that a far better approach is to make use of an Agile development methodology which aims to build the solution in an iterative fashion providing the client with information and feedback regarding the solution as it is gradually developing. The Agile methodology requires the scope of the project to be determined up front as well as high level requirements. However, the exact definition of how the application will look and function develops over time by the development team and the users working in conjunction. As the project progresses so does the understanding of what is required. Since the solution is forming as part of the process, and the users get an insight into the solution, it makes it far easier for these users to comment about the fit of the solution to their needs and expectations.

We understand that technical expertise is an important aspect to a successful delivery. However, quite often the personal capabilities such as team work, client relationship, communication skills etc are not given the appropriate weighting when forming the project team resources. At Hannan I.T. we view these skills to be just as important as the technical abilities. Furthermore, we believe that technical abilities can be learnt through a proper work environment. However, personal skills are far more difficult to learn and as such our recruitment process ensures that our candidates are not only evaluated for their technical knowledge but for their soft skills as well.

Another important factor contributing to project success / failure is the relationship between the client and vendor both before the project starts and far more important as the project progresses and challenges need to be met. In order to ensure a good relationship is maintained throughout the project, Hannan I.T. makes use of an Account Manager who has come from a project delivery background. This type of individual understands the difficulties faced by the software development team but at the same time understands the business drivers of the project and the challenges and constraints faced by the client. This person is able to mediate between different agendas and ensure the project stays on course.

## Case Studies

The following are cases where Hannan I.T. has used their capabilities to successfully deliver applications to their clients. The success of this project is contributed to the factors described previously.

### Rider Levett Becknall

Rider Levett Bucknall is a global property and construction practice with over 2,000 people in more than 80 offices across Asia, Oceania, Europe, Middle East, Africa and the Americas. Services provided include Cost Management, Project Management and Advisory Services.

Hannan I.T. was requested to assist RLB with the development of their quotation system. Initially contracted only to provide resources and technical consulting, RLB have come to the realisation that they can achieve more success by allowing Hannan I.T. to take more control over the project delivery aspects of the system.

Working directly with staff to completely understand the problem domain - Hannan IT developers used their communications skills and were able to work with the client to understand the client's problem domain and ensure an effective solution is developed.

One of the main challenges of the project was the complex reporting requirements. Hannan IT developers were able to meet the challenges and develop complex reports to suit the business requirements of the organisation. The problems that have been overcome include:

- Dynamic depth hierarchies - With standard reporting development tools reports can normally only be generated for a defined number of levels in a hierarchy, however Hannan IT developers, through the use of data extensions and report manipulation, were able to overcome this problem.
- Dynamic data output - A requirement of some of the reports were to have a paging system in a report that related to the data and is able to be exported out of the report for future reference. Hannan IT was able to develop a system for the exporting of specific information within the report to ensure that this is possible.
- Data extensions and separation - A consistent problem with direct access reporting tools is the lack of ability to join complex bits of data together easily within the reporting tool, this leads to another problem, which is future maintenance of the reports. By separating the data from the reports, Hannan IT developer are able to ensure that future updates to the data model do not adversely affect the reports that have been developed.
- Working with high value data, whilst ensuring integrity - Hannan IT developers understand that data within a client organisation is of the utmost importance, it is integral to the day to day activity and long term strategy of the organisation.

## PPMP work

PPMP is Australia's leading practice management program. The PPMP practice management system is used by physios, psychologists, podiatrists and many other medical specialists.

Hannan I.T. was contracted to assist in fixing and enhancing existing systems - the Hannan IT development team was able to quickly understand the architecture and functionality of the existing systems and get on with the job of fixing bugs, improving performance and ensuring compatibility with newer systems. Hannan IT developers were able to achieve this in several ways:

- Extension - Hannan IT developers were able to work with the existing code base to resolve issues; they also made sure that any changes applied were traceable and highly maintainable.
- Interoperability - Hannan IT developers were able to develop extensions in newer frameworks and integrate into existing code bases, allowing for a clean separation of functionality and giving the application the ability to complete functionality that it could not previously, such an example is a scanning library developed to work with the Windows Image Acquisition libraries not available to older frameworks.
- Rejuvenation - Hannan IT developers were able to completely rewrite functionality in the existing framework as well as utilise new frameworks in order to have the functionality perform better or meet the original requirements of the functionality.

Extending complex functionality and reports for existing data - Hannan IT were able to work with existing reports adding functionality to meet new business requirements that have arisen during the life of the current software system.

Modernisation of existing software - Hannan I.T. developers were able to modernise older software through the development of new user interface libraries and re-architecting of systems towards web access.

PPMP were exceptionally happy with the results achieved and contracted Hannan I.T. to take full responsibility of the development of the next generation practice management system of PPMP.

## Fable Music

Fable Music is a major provider of production music to film, TV and advertising studios around Melbourne and greater Australia.

Fable Music was facing the challenge of effectively distributing their ever increasingly large collection of music to their end users in a convenient, portable and searchable fashion. Their requirements had outgrown traditional distribution methods such as DVDs and the Internet, and the size of their library was such that manual browsing of their track collection had become impractical.

HannanIT was brought in to develop a solution to the portable music catalogue problem. In developing the solution, HannanIT worked closely with Fable staff in a continuously iterative fashion, to ensure that the evolving solution continued to meet Fable Music's specific goals.

Notable points on the final solution and development process include:

- Focused attention of delivering solutions to core customer needs such as; exceptional performance, an intuitive user interface, and complete portability across many platforms and operating systems.
- An iterative development process, working closely with select Fable Music staff to collaboratively develop the solution that they wanted – this involved regular communication, feedback and discussion to guide and polish the end product whilst it progressed from prototype to delivery.
- The need for a strong understanding of Fable Music's business model and the general characteristics of their client base, in order to design a solution that was both functional and aesthetically appealing for both parties.

Fable Music was very happy with the solution provided by HannanIT, and went on to commission further extensions to the delivered application at later dates to serve their ever growing needs.

## Silcar

Silcar is a multi industry, multi site national organisation, that is currently working with Blue Chip clients involved in heavy and light manufacturing, metals processing, pulp and paper, telecommunication energy systems, power protection and distribution, mining, automotive and the power stations.

Silcar is a large organisation that is rapidly growing, and as such has discovered that it is outgrowing an increasingly large number of its' disparate internal systems and business process software. They are faced with the need to rapidly transition a variety of legacy systems to modern and scalable web or SAS solutions.

HannanIT was brought in via their business partner Synergistics to rewrite one of Silcar's legacy tools, which was based in an old single-user desktop application framework. The requirement was to turn it into a modern web application suitable for a much greater audience. The existing tool that was being replaced interfaced with a variety of other 3<sup>rd</sup> party and legacy applications, as well as a multitude of database back-ends. As such, much of HannanIT's effort was spent in business analysis tasks – assessing the existing systems and their interactions before designing the new solution.

The following are some of the key challenges and characteristics of the Silcar project that HannanIT staff successfully dealt with:

- A lack of documentation and understanding of the existing system and its interactions. HannanIT staff spent considerable efforts doing analysis, talking with Silcar staff and analysing the existing systems, to produce a comprehensive 'As Built' documentation for the legacy system. This was used as a base to design the future solution.

- A major area of complex business logic in the existing system had gone unnoticed and was thus not accounted for in the cost/time budgets put to HannanIT/Synergistics before commencement of the project. This deficiency was uncovered in the analysis stage of HannanIT's work, and the massive extra un-scoped functionality threatened to put the project over time and budget. However, HannanIT was able to encapsulate, contain and bridge to the legacy business logic code in a way that prevented costly duplication and allowed the other legacy systems that depended on the rewrite target to continue to function unchanged.
- HannanIT was able to drastically improve the end-users' workflow in the new tool, streamlining or removing many laborious or non-intuitive steps present in the old tool.
- The project was delivered on time, and on budget despite the un-scoped challenges that arose along the way, after successfully completing extensive User Acceptance Testing with internal and external users.

Silcar has deployed the new web based tool into their production environment, and it currently successfully services hundreds of users across the country.