# Atech Computers

# Project System Proposal

### Executive Summary

#### Why

Atech Computers has been run for more than ten years. For several reasons, the business has reached its bottleneck via retail shop only. For Wellington citizens, there is not many online shops available for buying computers accessories, and it will be the opportunity of Atech to pursue increase in the turnover by building its own.

In addition, the shop will change to a new location in April. In one or two months after moving, the shop will lose many of the returning customers, and the number of people visiting by foot will drop dramatically. Online shopping can help to maintain the old customers and attract the new.

Actually, the administration backend system has been used for a long time. But the platform used is old and also several bugs are found, the UI needs to be refined using recent and more efficient techniques as well. It is estimated that the new website helps increase the turnover by 40% rather than currently 1% ~ 5%.

#### When and What

As the first stage of the website, the project will build a new website interface with functionalities like browsing the products and product information management.

The project will last three months. The features are documented in the “Requirements” section of this proposal. At the end of this trimester, the client will get a project and a vitual machine disk with installation of the necessary OS and web server software, along with documents explaining what has been done, how to deploy the application package, and so on.

##### Cost and Risk

##### Since we develop under the VMware, there is no hardware investment in the initial one to two months. After the client sorts out all his new shop stuff, he will setup the server machine in his shop. There will be no cost in the development of the project.

##### The team is not experienced in this area, and nobody has ever participated in building a website from the very beginning, so there are still a lot to learn before the real work starts. The project scope is produced as small as possible and buffers are set to avoid delays.

##### 

### Project personnel

|  |  |  |  |
| --- | --- | --- | --- |
| **Role** | **Name** | **Phone** | **Email** |
| Team Member | Xiaochen Li | 022 351 7537 | neteasy1210@gmail.com |
| Vineet Joshi | 022 309 7606 | vineet.rosevin@gmail.com |
| Advisor | Chalinor Baliuag | 04 830 0713 | chalinor.baliuag@weltec.ac.nz |
| Project Co-odinator | Robert Sutcliffe | 04 920 2585 | robert.sutcliffe@weltec.ac.nz |
| Client | Kidd Liang | 021 048 5766 | kidd.liang@gmail.com |

### The Opportunity Context

In a general scope, online shopping has been a must-have lifestyle for our modern society. Big online shopping and service providers, like Amazon, eBay and Alibaba, have been getting explosively-increasing profit in recent years. Customers have developed a habit of searching desired products online rather than visiting shops door to door.

In computer hardware market, people who buy computers or accessories tend to order on the provider's website more frequently than going to retail shops because they think they can have more choices and the prices are cheaper.

The client is a personal computer retailer. He has been running a small retail shop for more than 10 years in the centre of city, witnessing the ever-rising number of retail shops and the fierce competition of market.

Auckland has the biggest market and the most shops selling computers. Online prices, according to our client, are much more misleading than we think. The prices are not updated in time, often much cheaper than the actual market prices, and thus attracting customers to go to the online shops among which are mostly in Auckland. He hasn’t heard of any Wellington small retail shop selling computer parts has ever run successful business online, only with a few one-man websites which are hosted on a personal local computer and their owners phones the providers to mail the products once someone has made an order. The customers often feel being ripped off or cannot get sufficient customer support.

Our client has decided to expand his business using a new online shop. He knows that he cannot profit much from it because, based on the online prices, the net profit would be $10 ~ $20 out of $1000 which is not really acceptable. Rather, he takes it as the advertising tool for his retail shop, attracting local residents to visit the shops, letting them enjoy customer support in person. In addition, other selling gimmicks like upselling can be employed.

Actually he has an original version of an online management website, which has been running for a long time under asp .net framework. The website is too old and needs maintenance and bug fixes. It can be a good opportunity to rework the whole system using currently well-liked front-end and back-end web framework to improve the UI design and response speed.

Furthermore, the shop has to be moved to a new place in city for some reason. During this time, his returning customers probably are not to be formed in a month or two, and the business environment must be different. He hopes that his new website can help contribute attracting customers and promoting the sales from 1%~5% to 40%~50%.

### Requirements

#### Website functionality

1. **Customer side:** browsing, ordering the product;
2. **Administrative side**: user management (registering, authentication), automatic operation of providers’ .scv files for updating product local database;

#### Hardware

The client provides server and networking hardware in his shop.

#### Software

1. VMware Workstation Pro;
2. Server operating system;
3. Web server software;
4. Development environment (Operation System, development framework, IDE, unit test framework and runner, third-party SDK, and potentially some others).

#### Deliverables

1. System proposal;
2. Database design explanation;
3. Server-side development document;
4. Unit testing document.

#### Internal constraints

1. **Time constraint** we must complete this project before 08/06/2016;

2. All of our team members are not experienced in building a website systematically from the scratch. Although some of us have joined in a real development team, we only wrote html/css pages and possibly interactive programming on the server side using php or .net framework for only part of the whole project.

### Requirement Analysis

#### VMware

Client requires that we create a VMware virtual disk compatible to version VMWare Workstation 8.x which he is currently using. It is a reasonable suggestion. Virtual machines free us all of determining which exactly server operating system to use, and therefore we can go further to discuss the website-related facet of the project.

#### Operating System

While it is quite easy to switch between different OS using vmware, the performance of the server hardware matters more. As the client said, the server hardware specification is quite old, so we think a lightweight version of Linux would be much better, as well as the fact that Linux is more flexible and has more tools to use.

#### Web Server and Development Framework

There are already multiple web server software and server-end programming languages in use, and all of them have high usage rate among developers. As we are running under Linux, the .net framework, only runs under Windows, is firstly excluded. Now the options are PHP + Apache HTTP server, JSP + Apache Tomcat, and ExpressJS + AngularJS + Node.js. For a quick start, there are several frameworks particularly for e-commerce purposes, and that is what we are aiming at. A framework called “reaction commerce” is the one we use.

#### IDE

But deciding the framework is just the beginning. A bunch of developing tools are waiting ahead. The first one is IDE (Integrated Developing Environment). The most popular javascript IDE should be WebStorm. ReactionCommerce has a built-in unit test framework called jasmine, which can be run in WebStorm.

#### Open Source Framework

Reaction commerce is an open source javascript platform for today’s premier ecommerce experience. Its built-in components like user management and shopping carts are customized very well. It is based on Meteor framework and Node.js.

Meteor is a pure javascript web framework, run as a component in Node.js.

### Proposed System Outline

#### Primary deliverables and their features

##### 1. Database structure design

Including database dictionary, table relations and the actual database. Database dictionary is an excel table containing the metadata of the entire database schema, including table names, column names, types, value ranges, primary/foreign definitions and so on. Table relation is a diagram showing relations between tables. And the actual database is the MySQL database file that can be used and shared.

##### 2. Server VMware virtual disk and environment configuration document

A VMWare virtual disk that is configured and installed the necessary server software, including operating system, web server software, and possibly the database engine. This virtual disk can be directly installed on the client’s server computer. The configuration document should explain the steps to build and configure the production running host, and how to deploy packages to the host server.

**3. Server-side document**

As mentioned, server-side in our project is in charge of database connection, REST api and base page template support. This document gives the details in how to configure and use those features.

**4. Unit test document**

It explains briefly the fundamental of unit test for Reaction and the plans for what, how to test. Then a document is provided for the unit test data and the results, as well as the defects found and the corresponding solutions.

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### Approach

#### Software Processes (Life Cycle)

The website is built on Reaction Commerce, which is an open source platform on Node.js and Meteor framework. It facilitates the development by providing functionalities particularly for e-commerce purposes, like user management and shopping cart.

Incremental development means that the software evolves based on the initial implementation. Functionality is enriched gradually via releases of versions of the software, each version built on top of the last one. Every release cycle includes an entire set of activities leading to the production of the requirements, and examples of such activities are requirement analysis and definition, system and software design, implementation and testing.

In order to control the scope, we were conservative when analysing and defining the requirements with the client. We know that we are not experienced in this area, and every little piece of achievement would result from extensive research and tests. Thus, our requirements are quite predictive and the incremental development applies to this situation well.

There might be a chance that we complete the incremental part of the project successfully and we still have plenty of time for another development cycle, we can plan an adaptive stage in which a more flexible approach is employed, investigating the specification and introducing fantastic new features.

### Organization of Project

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Work | Xiaochen | Vineet | Chalinor | Kidd |
| Write System Proposal | R, A |  | C | I |
| Development | R, A |  | C |  |
| Web UI Analysis and Design | A | R |  |  |
| Database Analysis and Design | A | R |  |  |
| Documentation | A | R | C |  |
| Client communication | R, A |  |  |  |
| Testing | A | R | C |  |
| Deliverables | R, A |  | C, I | I |

**R** ---- responsible, who does the work;

**A** ---- accountable, who is ultimately answerable for the correct and thorough completion of the work;

**C** ---- consultant, whose opinions are sought, typically subject matter expert, the person who is an authority in a particular area or topic;

**I** ---- informed, who is kept up-to-date on progress, who is informed and receives the information.

### Management

#### Meetings

1. **Weekly meeting**  Once a week, one hour maximum for each meeting. The time for it is usually on Fridays and agreed by team members. Main topics are the progress made by each person, any problems that may affect the completion of tasks planned, and if there is any risk to meet our time and scope. The weekly meeting is for the administrative purpose, no details are discussed in the weekly meeting.
2. **Advisor meeting** Once a week, usually on Mondays. Chalinor checks the team’s document and records the progress of each member. Also the advisor gives her comment and advice on the project.
3. **Team meeting** Once a week, usually at the end of weekdays.
4. **Workshops** Scheduled on demands. The goal is to let the team discuss, reach to agreements on the implementation details, or the “able” students teach others how to write certain piece of code, or use some tools, and so on. The time needed is subjected to the content included, usually not more than three hours.
5. **Meeting with client** Once a month at least. Main purpose is to let the client know the current progress of the project, the commencement of the next stage, or to communicate with the client formally for their acceptance. Initial contact will be made via WeChat, and the meeting will be held at the shop. Records of the meeting will be sent via email within 3 days. Informal inquiries will be made via WeChat or text messages, and Kidd should be available for that at working time.

#### Change control

1. All changes must be agreed by all parties and documented appropriately before they are actually performed, using the Change Request Form attached in appendix II;
2. All changes must be addressed and recorded by the project manager, and they will be merged into the requirement list of the next development cycle;

### Plans and Procedures

#### Phase 1 ---- Week 1 ~ 2 (29/02/2016 - 12/03/2016)

* Meet with the advisor;
* Approval of the project;
* Preparation of System Proposal.

**Phase 2 ---- Week 3 ~ 6 (13/03/2016 - 09/04/2016)**

This phase involves the research of frameworks used, and build the fundamental architecture of the project for further development:

* Review javascript programming;
* Read docs to get to know how Meteor and Reaction commerce work and how can I customize them;
* Search online the best practice of the frameworks;
* UI design research.

**Phase 3 ---- Week 7 ~ 8 (10/04/2016 - 23/04/2016)**

* Design the UI and user interaction;
* Finish main page UI;
* Unit test.

**Phase 4 ---- Week 9 ~ 10 (24/04/2016 - 07/05/2016)**

* Production information input database design;
* Develop information scanning function;
* Unit test.

#### Phase 5, Phase 6 ---- Week 11 ~ 14 (08/05/2016 - 04/06/2016)

* Adaptive phases in which plans are to be defined before each phase begins;
* Work content can be iterations for other functions or customer training, subjected to the progress of previous phases.

#### Project closing ---- 05/06/2016 - 08/06/2016

Note: For more detailed description of project plan, please reference to Appendix III.

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### Staff

#### The Client

Atech computers

#### Client Staff

The owner, Kidd Liang.

The formal meeting with client will happen once a month. Each of the meeting usually lasts no more than two hours.

### Deliverables

**Milestone 1: 11/03/2016**

* System Proposal;

**Milestone 2: 08/04/2016**

* Study report;
* Workable project with basic function;

**Milestone 3: 22/04/2016**

* Main page design document;
* Test plan and result.

**Milestone 4: 06/05/2016**

* Database design document;
* Production Information input function is available on production host;

**Milestone 5: 08/06/2016**

* Production is delivered to client along with all the documents provided

**Note:**

1. There may be one or two milestones inserted between milestone 4 and 5;

Please refer to the project plan in Appendix III for more milestone details.

### Resumes

**Name:** Xiaochen Li

**Mobile:** 022 351 7537

**Email:** neteasy1210@gmail.com

#### Education

Bachelor, Electronic and Information Engineering (English intensive), Dalian University of Technology, 2009

#### Skill Set

* Web development: Html&CSS, javascript, jQuery, Bootstrap, MySQL;
* Android development;
* Project Management.

#### Work Experience

1. Eyede Solutions Ltd 01/11/2015 - 29/02/2016

* Using Visual Studio, C# language under MVC framework;
* Mainly responsible for the responsive design of the Fish&Game licence purchase website;
* Utilizing Bootstrap responsive library and CSS media query, changed the original web pages into the ones compatible with multiple mobile devices, especially iPads and iPhones.

2. Shijikunpeng Technology Ltd 20/07/2011 - 06/03/2015

* Be responsible for Android QQ adaptation;
* Proficient in many aspects of Android app development;
* Cooperated remotely and locally with teams to insure the quality of the product;
* Worked over 400 models of Android smart phones from the most popular vendors in the market; more than 50 defects were found due to model differences;
* Traced bugs to find the appropriate solutions;
* Worked for a simplified version of QQ based on the trunk code for devices with low hardware specifications;
* Resized the product package from 25MB to 8MB;
* Worked with a small group under Scrum methodology, familiar with details of behaviour in the development period.

**Name:** Vineet Joshi

**Mobile:** 022 309 7606

**Email:** Vineet.rosevin@gmail.com

#### Education

* Weltec Institute of Technology Wellington, New Zealand

Grad. Diploma in Information Technology pursuing and will be completed in June 2016.

* Mahatma Gandhi University, India

**B.Sc in Hardware and Networking Technology** with 75% overall in Jun-2011 to Jun-2014.

#### International Professional Certification

* Microsoft Certified Solution Associate **(MCSA)**
* Microsoft Certified Specialist with Hyper-V Technology **(MCS)**
* Microsoft Certified Professional **(MCP)**
* Cisco Certified Networking Associate **(CCNA)**
* Hardware and Networking Technician
* Pursuing Microsoft Certified Solution Expert in Exchange 2012 Server last paper **(MCSE)**

#### Skill Set

* Software Database : MS SQL
* Platforms : Windows 7, windows 8, windows 2003/2008 R2 Server
* Networking : Routing, Switching, LAN, Server Management and configuration
* Virtualization : Hyper-V, VM Ware, System Center 2012, Virtual Server
* Others : Server Operating Systems, Hardware, Networking, DNS, DHCP, Web Server configuration, IIS, SAN Server, Nagios Network Monitoring System.

#### Work Experience

* **Designation : Network Engineer** Dec-2013 to Sept-2014 and Mar-2012 to Aug-2012

**Company** : **Dev IT.** Maintenance of Exchange server, SAN storage, Application server.

* **Designation : Customer Dialog Executive** Mar-2008 to Sept-2009

**Company : Magus Customer Dialog.** Provided assistance in maintenance and monitoring Networking security issues.

* **Designation : Network Administrator** May-2005 to Jun-2008

**Company : Aakar Expocomm Pvt. Ltd.** Solving Network issues and providing networking security Maintaining AD DC Server, Exchange Server, ISA server.

### Relevant Background Information

1. Client Briefing -------------------------------------- Appendix I

2. Change Request Form ---------------------------- Appendix II

3. Project Plan ----------------------------------------- Appendix III

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### Resources

#### 1. Hardware

|  |  |  |
| --- | --- | --- |
| **Name** | **Who provides** | **When** |
| Server computer | Kidd Liang | 07/05/2016 |
| Development machines | Self-owned PC / Lab computers | 29/02/2016 |

#### 2. Software

|  |  |  |
| --- | --- | --- |
| **Name** | **Who provides** | **When** |
| VMware workstation pro 12 & Licence | Kidd Liang | 29/02/2016 |
| Ubuntu 14.04 | Xiaochen Li | 01/03/2016 |
| WebStorm 11.0.2 & Licence | Kidd Liang | 29/02/2016 |
| Reaction Commerce Project | Xiaochen Li | 09/03/2016 |

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### Client Acceptance

All parties agree that this project is conducted on a best efforts basis, and the Project Team or WelTec do not accept liability for the performance of this agreement. The project client agrees that they have read and understood the ‘Client Briefing’ document with regard to responsibilities and obligations.

It is agreed and undertaken that all Parties:

* Will hold in confidence all “confidential information” and,
* Will not disclose the “confidential information”, or permit it to be disclosed to an external party and,
* Agree that disclosures to other project participants will occur only with the written permission of the other party, and,
* Will not use, or permit the use of, the `confidential information' for any purpose other than for joint operations without first obtaining written permission to do so from the other party, and,
* Will upon request of the other party return all Confidential Information (together with all copies) in its possession or control or in the possession or control of any of its officers, employees, agents or advisors, and,
* May choose to mark information as ‘confidential’ where necessary.
* The Client also agrees to allow the Project Team to use project materials for academic purposes, with due regard to confidentiality.

The client agrees that, in cases where the project concept, process, specification or any other proposal was devised by WelTec staff or students, and the implementation or extension of the results of the project are expected/speculated to generate commercial returns (IP, trademarks, licenses, etc), an agreement covering benefit sharing is required, in all other situations the Client owns the Intellectual Property of the work undertaken. This agreement will be made between WelTec and the industry partner. The Student and supervisor of the project will bring this to the notice of the R and E office.

**By signing below, you agree to commence this project and proceed to phase 2.**

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Signed Signed

**Project Team Atech Computers**

Dated  Dated

### Appendix I Client Briefing

**Summary**  
To give our students ’real life’ experience in developing systems, we need projects from industry. Our students are in the third year of the degree and have been trained in a wide range of development software or networking systems and will adhere to any methodology specified. The students develop the system or audit to your requirements, test it, document it, train your staff and implement it on your system.  
  
Your commitment is to provide the challenge, the time to explain the requirements, and provide the hardware and software. On completion the system is generally yours to do with as you please unless some other agreement regarding intellectual property is reached.  
  
**Introduction**  
The School of Business and IT at WelTec is currently seeking clients for Information System (IS) development projects on behalf of our final year Bachelor of Information Technology (BIT) students. As the system Development project is the final practical experience on the BIT programme, we aim to develop modern effective business computing systems for organisations.  
   
The BIT is a three year, full time degree programme, aimed at producing graduates who are competent to assess, plan develop and implement solutions for employers in a wide range of New Zealand commercial, industrial, community and non-profit making organisations. In the final year of the Degree, students spend a third of their total scheduled time on a practical project, which is, as far as possible, representative of real-life business conditions. The project requires that students demonstrate their ability to deal with the significant aspects of:

* Understanding and analysing the information needs of the organisation;
* Developing solutions for the system, people and organisational problems;
* Negotiating requirements and reaching acceptable compromises;
* Dealing with clients throughout the development and installation phases;
* Coping with unplanned events in a real life environment;
* Setting themselves targets and deadlines and achieving the significant targets;
* Dealing with all the constraints of real-world projects as opposed to classroom exercises.

You will readily appreciate, as we do, that many of these learning objectives cannot be conveyed effectively in classroom discussion or computer laboratories.

The School at WelTec sees the project as a culmination of the student’s three years of systems development training and the opportunity for a student to demonstrate the technical knowledge and skills acquired during the course. It is also becoming increasingly important especially in the IT industry that the students have acquired good ‘people skills’. The project is seen as a very effective way for them to enhance their interpersonal and people skills to achieve results even when faced with ‘personnel’ issues.

The School at WelTec has run student projects for well over a decade, and in that time, our students have successfully implemented a range of information systems including:

* Bespoke single user applications and networked multi-user systems;
* Extended a Decision Support system;
* Technical Programming – data communication/ transmission, engineering and science applications;
* Interfacing Data Warehousing, Manipulation and Mining with Web Browser technology
* Developing World-Wide-Web sites for Commerce and Education;
* Developing Administration, Management Information Systems and Decision Support Systems for a range of organisations;
* Testing, assessing and implementing network systems;
* Designing, testing and undertaking systems upgrades for network, software applications, database systems, etc;
* Systems audits.

The majority of WelTec students achieve worthwhile and effective systems, enjoy the experience and learn a great deal in the process. Whilst WelTec cannot guarantee a successful result, we do assign staff to monitor the process in an advisory role, and we perform internal audits.   
  
The systems chosen for development should not generally be business critical, or at least not time critical to the business, though several development efforts of core business systems in the past have been very successful. The role must provide the student significant self-determination opportunities – so a relatively independent piece of work should be assigned for the student to undertake – including all the planning and management of that. You may require certain standards, practices or systems to be used, but the student is expected to manage around these limitations. It is helpful to consider the student an independent contractor providing a solution. They are not here for work experience in the traditional sense, or to do work on demand, busy-work or jobs like data-entry. They are here to add value to your business.  
  
In general, even 450 hours per student is not enough to develop full, polished, commercial applications and systems for all but the smallest of projects. Most clients seek a well developed prototype in order to assess an opportunity, prove feasibility, or explore a concept before undertaking significant development projects.

**Project types and profiles**

For the BIT degree projects, we aim to accommodate several different project types. Below are examples of the broader project types, which we believe can be included in the BIT environment.

Design and build a Conventional Transaction Processing System

* Conventional application systems analysis and development;
* Select an application package and adapt it to the client’s requirements;
* Additions/modifications to an existing system.

Evaluation & Prototyping of New methods and resources

* Use and Evaluate new equipment and application areas;
* Evaluate new techniques and methodologies;
* Develop systems when the client cannot provide requirements or specifications because they have no experience of the issues involved;
* Research-type studies into evolving IT applications and their possible application to NZ conditions.

System/Technology Problems and Solutions

* Develop procedures for system audit and correction programmes
* Develop a prototype for a WEB site supported by server processing or database
* Systems for E-Commerce transaction processing

Significant system feasibility study

* Study the requirements, evaluate options, propose and specify a system for a significant IT application.

System Audit

* Conduct computing audits to national standards;
* Identify issues and propose solutions, policies, and practices in line with accepted best practices.

Generally, we are willing to look at any proposal which will develop a useful and effective client solution to an information handling problem. For a client, this programme offers some significant advantages:

* the project is conducted to professional standards, including a complete document set;
* the client gained useful experience of the calibre of WelTec BIT graduates;
* the BIT project offers an opportunity to develop applications, which might otherwise be stalled for lack of funding, profitability or resources.

**The Client Role**

Projects can vary so widely that the client involvement can range from just a briefing at the start and signing off after acceptance tests at the finish, to frequent reviews, detailed problem solving discussions and testing of the new system. Students are expected to manage their own time effectively and so, therefore, a client's time is regarded as a valuable resource and the client’s wishes in its use will be respected. A general outline of suggested client involvement is (indicative dates only, for a project running July to November):

* The first idea - discussion with a WelTec staff member - about 40 minutes;
* Complete some form of project brief (attached);
* Agreement in principle and to proceed, usually by about late July ;
* Project commencement - 2 or 3 client meetings during August;
* Solution Proposals, discussion and agreement - 2 to 3 meetings in October;
* Development Resources (July to October): necessary equipment, working space and say a meeting approximately each two weeks;
* Client Staff Training and hand-over - several hours for each staff member who will use the system, to make sure that the project meets all objectives - say 10 to 25 staff hours during October;
* Project review and acceptance early November - one meeting to conclude the project.

Projects can be run at other times, using a similar timescale, in November to February, or March to June, or special arrangements are possible where student and client needs coincide that allows more flexibility.

While clients are not obligated to meet student costs such as those incurred through travel they may wish to assist students financially, or alternatively provide a prize that might be awarded to a suitable category of graduating BIT student. Any of the contact people listed below would be very happy to discuss any such proposals.

The project terms of reference are:

* No charge is made for team member's time;
* The client is responsible for working space and equipment needed for the project. Where appropriate, WelTec will assist if equipment is available;
* WelTec cannot provide performance guarantees or accept liability for any damages suffered by the client during or after the project development;
* Ownership of the project rests with the Client unless some other agreement is made prior to commencement.

We strongly prefer projects using current technology and techniques. While we will examine any project, our chances of successful outcomes are greatest when the equipment and techniques are modern and current.

**Conclusion**

WelTec firmly believes that this programme not only provides mutual benefits for our clients, students and WelTec, but it is in the interests of the community and local organisations as our neighbours, partners and employers of our graduates. The first step is to contact the Course Coordinator to discuss your project in confidence and without obligation. Alternatively, both the Head of School and Associate Head would be happy to provide further information on the BIT project process.

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| --- | --- | --- |
| **Contact Person** | **Title** | **Contact detail** |
| Robert Sutcliffe | Course co-ordinator | [robert.sutcliffe@weltec.ac.nz](mailto:robert.sutcliffe@weltec.ac.nz)  04 - 9202 585 |
| Mick Jays | Head of School | [mick.jayes@weltec.ac.nz](mailto:mick.jayes@weltec.ac.nz)  04 - 9202 670 |

**Appendix II Change Request Form**

|  |  |
| --- | --- |
| **Change Request** | |
| **Project:** | **Date:** |
| **Change Requestor:** | **NO.** |
| **Change Category (Check all that apply):**  𑂽 Schedule 𑂽 Cost 𑂽 Scope 𑂽 Requirements/deliverables  𑂽 Testing/Quality 𑂽 Resources󠀤 | |
| **Does This Change Affect (Check all that apply):**  𑂽 Corrective Action 𑂽 Preventable Action 𑂽 Defect Repair 𑂽 Updates  𑂽 Other | |
| **Describe the Change Being Requested:** | |
| **Describe the Reason for the Change:** | |
| **Describe the Alternatives Considered:** | |
| **Describe the Cost, Resources Needed and Risks:** | |
| **Technical Changes Required for the Change:** | |
| **Disposition:**  𑂽 Approve 𑂽 Reject 𑂽 Defer | |

|  |  |  |
| --- | --- | --- |
| **Approval By All Parties** | | |
| **Name** | **Signature** | **Date** |
|  |  |  |
|  |  |  |

**Appendix III Project Plan**

