



System Proposal

Client: ABC Widgets Limited

Project Title: ABC Demonstration Application

Proposal Number: 1234

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Executive Summary

The Client

ABC Widgets are a fictional company used for demonstration purposes. The core business is the manufacture of widgets which are distributed across the UK. ABC is based in Leicester, with another factory based in Maidstone, Kent.

The Brief

The brief is to create a bespoke database system to manage the main business process of ABC Limited. As well as managing the day to day tasks and customer relationship management, the application should also allow management reports to be produced. Currently this data is managed with a mixture of paper-based systems and Microsoft Excel spreadsheets, but as the company has expanded this is not a viable solution moving forward.

The main issues the proposed system should look to address are:

- Only one person can have a spreadsheet open for editing at one time, where as multiple users need to access and edit information simultaneously.
- There is no security in place.
- Data is often duplicated in multiple systems, leading to extra work and mistakes being made.
- It is very difficult to get meaningful reports to aid management in decision making.

The Solution

We propose building a Windows-based Information Management System using SQL Server and .NET. These technologies are better suited to a multi-user environment, fulfilling the current needs and allowing the scope for expansion in the future. The solution presented in this proposal will fulfil the needs set out in the brief, creating a robust, secure and easy to use application.

The proposed solution will look to address the key issues raised in the brief in the following ways:

- A relational database means that multiple users can access records at once. You do have the potential that two people will try to edit the exact same record at the same time, which can cause issues. To handle this, record locking functionality will be built in so that only one person can edit a record at any one time, but others will be able to view this record still, and edit any other records in the database.

- The proposed system will integrate with Windows Active Directory to provide a very secure system. This Windows Authentication means users are granted access to the system based on their Windows log in. Groups will be created and specific permissions granted to each group.
- All the spreadsheets and paper-based systems will be consolidated into a single system. Data will be 'normalised' to ensure it is stored in the most efficient way so that data is not duplicated in the database. Also, validation will be added to data entry forms to ensure the accuracy of data being entered.
- A full reporting module will allow a number of KPI reports to be produced at the touch of the button. There is the potential to easily add more reports in the future, or to use a third-party reporting tool such as Crystal Reports to produce ad-hoc reports yourself.

Your Investment

Development

The investment required for development of the system, based on the features set out in this proposal, will be a fixed cost of **£10,000 + VAT**. Details of what this price includes are covered in the Deliverables section later in this Executive Summary.

Payments will be due based on the delivery of the following key stages of development:

Delivery and approval of specification.....	£1,500 + VAT
Delivery of ALPHA-1 version.....	£3,000 + VAT
Delivery of ALPHA-2 version.....	£3,000 + VAT
Delivery of BETA version	£1,500 + VAT
Completion of project.....	£1,000 + VAT

The quotation above has been based upon the information provided to us and subsequently detailed in this proposal. If any significant features or requirements have not been presented to us at this time please ensure you make us aware of them now so they can be added into this proposal and a revised quotation given at this stage. If this information is presented to us at a later stage, either at specification or during development, then while we try to be accommodating as possible, additional charges may be applicable.

In some cases, our clients have seen fit to budget for a contingency to cover additional features they may not have anticipated at the time of producing the proposal. Others, because of the nature of the projects, have been happy that everything required had been thought of at this stage. At Hero Solutions we will try and give all the assistance you need at this stage so if you are in any doubt whether something is included or not, then please contact us and we will be happy to clarify this.

Hardware & Software

The current Windows 2003 server will be adequate to run the database on, and SQL Server is already installed on this so no additional investment required on this front. For optimum performance, a dedicated server just for the database would be preferable, but this is something that could perhaps be considered at a later date.

Workstations already available to end-users will be capable of running the application.

Ongoing Support (Optional)

3 months support is included as standard and the system comes with a lifetime bug warranty. As well as this you have the option of taking out a support contract with us for the ongoing maintenance and development of the system, which ensures guaranteed response times and a number of other benefits. The cost of a standard support contract is **£185 + VAT per month**. Please see Ongoing Support section for more details.

Timescale

The project is anticipated to be **8-10 weeks** total development time, including drawing up of specifications, development, testing and approval. This timescale estimate is based on certain assumptions on how quickly you will be able to get back to us with feedback on specifications and versions delivered for testing. We will work with you to put together a detailed project plan before development begins so you are aware of key dates, as well as required commitments for your time (i.e. meetings, testing and approval).

Time estimates are based upon the information provided to us and subsequently detailed in this proposal. If any significant features or requirements have not been presented to us at this time please ensure you make us aware of them now so they can be added into this proposal and a revised timescale given at this stage. If this information is presented to us at a later stage, either at specification or during development, then this will usually affect delivery time.

Availability

Current workload means we will be available to begin the specification process in approximately 1 month's time. Please note, this is based on current workload at the time of writing this proposal, and is subject to change. We can only guarantee availability at the time of placing an order.

Deliverables

Hero solutions will deliver the following materials and services as part of the project:

- Production of a detailed specification before development. This ensures any major issues are caught at an early stage.

- The completed system configured and installed on the designated server.
- A Windows Installer Package to install the front-end application on client PCs.
- 3 months free subscription to our support scheme for all users and administrators of the system. This will provide direct phone and email support for users (both technical and end-user queries).
- Full source code and technical documentation for the application, vital for the ongoing maintenance and development of the system.
- Lifetime bug warranty – any bugs found within the software caused by Hero will be fixed free of charge for the lifetime of the product.
- The Intellectual Property Rights of the application will be owned by you.

Previous Projects and References

Our case studies section on our website details of some previously selected projects. Visit www.hero-solutions.co.uk/casestudies.asp for more details.

If you require references, please contact the names given below:

Name: Company A

Phone: XXXXX XXXXXX

Email: joe.bloggs@abc.com

Name: Company B

Phone: XXXXX XXXXXX

Email: sue.smith@xyz.com

Introduction

The following document outlines the main requirements of the proposed system and recommendations on how those requirements can be satisfied. The proposal is not meant as a detailed specification (which will come as part of the documentation produced if you decide to go ahead) but gives a more general outline of the different elements of the system and the proposed technologies to be used. The screenshots used in this document are only meant as a guide to illustrate certain functionality and are not necessarily a representation of the exact finished look of the application.

If there are any errors or omissions in this proposal then you should notify us of these so we can revise the proposal if necessary.

System Overview

The proposed system is to be a Windows-based application used to manage the main business process of ABC Limited. As well as managing the day to day tasks and customer relationship management, the application will also feature a number of KPI reports for management purposes. Onscreen lists will aid workflow, allowing users to see jobs as they move through the various stages of manufacture.

Users, Access & Security

Users

The proposed application will be used by approximately 20 users in total, with on average 10 users accessing the system at any one time. All users are IT literate, with experience in using Microsoft Office applications.

The proposed technologies ensure that the application is able to handle this number of users, whilst still allowing the scope for expansion in the future.

Access

Most users will access the system through a Local Area Network. The application will follow the client-server model, which is the best infrastructure for shared database applications.

A couple of users will, from time to time, connect to the system using a VPN connection. The proposed application will run quite happily through a VPN connection, although obviously will operate slower when used in this way based on connection speed of the VPN.

Security

Security will be handled using Windows Authentication in the proposed system. This means users are authenticated based on their Windows log in, and are not required to log in separately. This method is both very secure and easier to manage, as users can be maintained directly in Active Directory on the server.

Users will be placed in one of three security groups – System Administrators, who will have access to everything, Supervisors who can add/edit/delete data, and Users who will have read-only access to specific areas only.

The security groups can also be used as part of the workflow – for instance a task is assigned to another person and it appears in their list preventing anyone else carrying out certain changes until they have completed theirs.

Data Entry & Storage

Information to be Stored

The data in the proposed system will be normalised based on industry-standard concepts to ensure data is stored in the most efficient way possible. The list below summarises the key areas of data the system will store:

Customer

- Company Name
- Address Details
- Notes
- Web Address
- Phone

Customer Contacts

- Name
- Contact Details
- Position

Communications

- Subject
- Date Completed
- Date Due
- Notes
- Out Come
- Type of Communication

Invoices

- Customer
- Address
- PO Number
- Invoice Number
- Item Descriptions
- Date Paid
- Invoice Amount

Product History

- Product Code
- Product Name
- Product Desc
- Quantity
- Price
- Date Of Purchase

Products

- Product Code
- Product Name
- Product Desc
- Stock Location
- Stock Level
- Re-order Level

Key Features

Key features to assist users with data entry and ensure the integrity of data entered will include:

- Dropdowns and other controls to aid data entry and ensure valid options are entered.
- Validation of business rules during data entry (e.g. setting mandatory fields) and also at key points such as status changes for a claim.
- Automatic calculation of data and assignment of ID codes where applicable. This will include calculating total benefit amounts for periods based on weekly amounts entered.

Anticipated Volume

It is anticipated that approximately 100-200 records will be added per day. The proposed technologies ensure that the application is able to handle a very large number of records, meaning the system will be able to cope with the current anticipated volume, whilst still allowing the scope for expansion in the future.

Reporting & Outputs

Letters

The proposed system will integrate with Microsoft Word to generate 3 different letters by a simple click of a button. Relevant data will automatically be inserted by the system into the Word documents, which will be based on Word template files. This means that you will be able to edit the standard text within these letters by simply editing the template in Word. These letters can then be saved and printed as required, and can also then be attached by the user to the claim record.

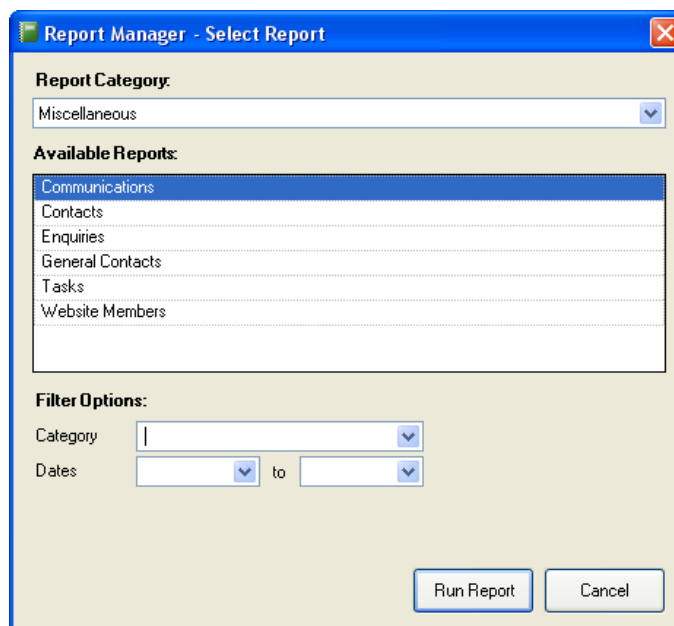
The letters that are required to be produced are:

- New contact introduction letter
- Order confirmation letter
- Invoice chase letter

KPI Reports

All reports will be access via the Report Manager, which gives a common interface for the user to select the report, enter parameters (such as date range) and run the report. The user can view the results on screen, as well as print or export the report (e.g. export to Excel for further analysis). The reports produced will be fairly standard tabular reports.

This common interface means reports can be added to the system in the future with minimal changes. The screenshot below shows how this Report Manager may look (the reports available would differ from those in the screenshot)



The quotation given allows for the development of the following reports:

- Call Stats Report for Given Period Broken down by Employee
- Invoice Report
- Product Purchase Report
- New Customer List
- Customers Not Purchased in last x Months
- Customers Not Contacted in Last x Months
- Stock Level Report

Users will be able to view and navigate through the reports on screen, print them or export them in a variety of formats (e.g. Excel) for further analysis or to email to customers or other interested parties.

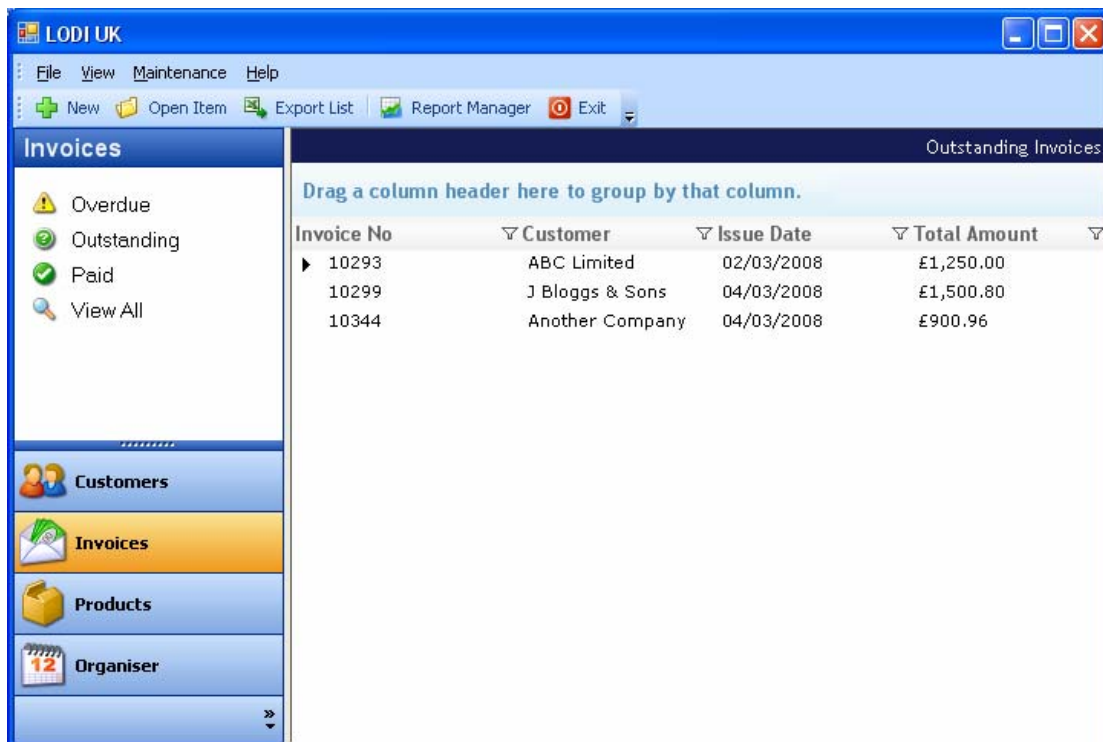
User Interface

The main UI will be divided into some key sections to view/edit data relating to the different areas. There are many possibilities for the layout of the application and we would work with you to design an interface that best suits your needs. However, the screenshots below demonstrate some possible concepts that could be implemented.

Example Screenshots

Main Interface

The proposed application will feature a central area that acts as the hub of the application, and this will be the first screen that the user is presented with after they have been logged on. This form will contain the main navigation options and menus to allow access to the main functions of the system, and access the required record lists. The screenshot below shows how the main interface might look for the proposed application.



Record Lists

The proposed application will feature a number of record lists to display a summary of specific records within the database. For each of the record lists the user will be able to specify sort order and search criteria if required. The user will then be able to double-click on a record which will open up the record in the corresponding Details Form for viewing/editing. The screenshot below shows an example of a Record List in the proposed application.

Outstanding Invoices				
Drag a column header here to group by that column.				
Invoice No	Customer	Issue Date	Total Amount	
10293	(All)	02/03/2008	£1,250.00	
10299	(Custom)	04/03/2008	£1,500.80	
10344	(NonBlanks)	04/03/2008	£900.96	
	ABC Limited			
	Another Company			
	J Bloggs & Sons			

Details Forms

Once a record has been selected, the corresponding Details Form will show the record in detail and allow the user to edit the record. Details Form will feature a variety of controls to aid data entry (see following section), and validation checks will be built in to ensure the data entered matches business rules and requirements. The screenshot below shows an example of a typical Details Form.

The screenshot shows a web application window titled "Hero Solutions". At the top, there is a toolbar with icons for "Save and Close", "Delete Customer", "Schedule Call", "Add Contact", "Add Communication", and "Attach Doc". Below the toolbar are several tabs: "Customer Details" (selected), "Contacts", "Communications", "Documents", "Order History", and "Notes". The main content area contains a form with the following fields:

- Company Name: Hero Solutions
- Address: 123 North St
- Town/City: Leicester
- County:
- Postcode: LE2 9UN
- Tel No: 0845 6120620
- Fax No:
- Web Address: <http://www.hero-solutions.co.uk>

Common Features

The UI will include a number of screens for entering and viewing data. The proposed system will utilise a library of standard controls within the User Interface. These controls are adopted by many other common applications, and so offer familiarity to users. Examples of these common controls are detailed below.

Data Grid

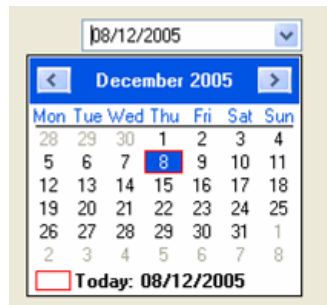
The proposed system will feature feature-rich grids which will allow the user to sort, group and filter the records based on their own requirements.



Type			
Type : Car Hire (1 item)			
Company Name	Contact Name	Tel No	Web
Jacks Cars	Tom Jones	020 656 2323	
Type : Caterer (2 items)			
Company Name	Contact Name	Tel No	Web
ABC Catering	Joe Bloggs	020 123 4567	www.abc-catering.co.uk
Yummy Catering	Sue Smith	020 987 6543	

User-friendly Input Controls

Controls such as pop-up date pickers and input masks (which only allow the user to enter certain characters in a certain format, such as a currency field) will be utilised to make the process of entering data as quick and easy as possible.



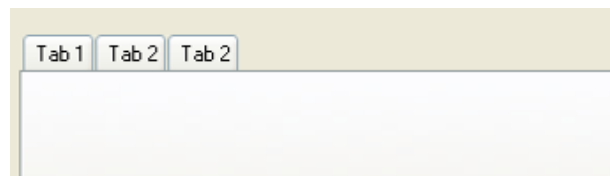
Toolbars

Toolbars will be used to group all the functions needed in one place, meaning the user doesn't have to hunt for buttons and everything can be accessed without having to flick between screens.



Tabs

Tabs are a popular way to group information into logical sections within forms.



Standard Components

To ensure a robust, secure and efficient application, Hero Solutions include standard components in all applications they develop. These components can be dropped into any project with minimal customisation, thus reducing development timescale and cost.

The standard components that will be utilised in the proposed application are as follows:

Record Locking

In any multi-user system there is the potential for two users to try and access and save changes to the same record at the same time, which can cause a number of issues.

To help deal with this issue the system will have a record locking facility. When a user opens a record it will lock the record until they close out of it. When another user opens a locked record they will be allowed to view the record, but not save changes.

The proposed system will also include a maintenance form to manually remove locks from records should an issue arise where a record is locked when it shouldn't be (e.g. the user's PC crashes before they close out of the record and remove the lock).

Error Handling

The proposed system will include full error handling routines which will log errors or crashes in the system and help to identify and fix possible unforeseen problems. This is particularly useful during the development and testing phases of the project. An Error Log form will be included within the Maintenance section to view these errors and, if remote access is not possible for our developers, export the error log as an Excel file so it can be emailed to our consultants for analysis.

Installation, Configuration & Maintenance

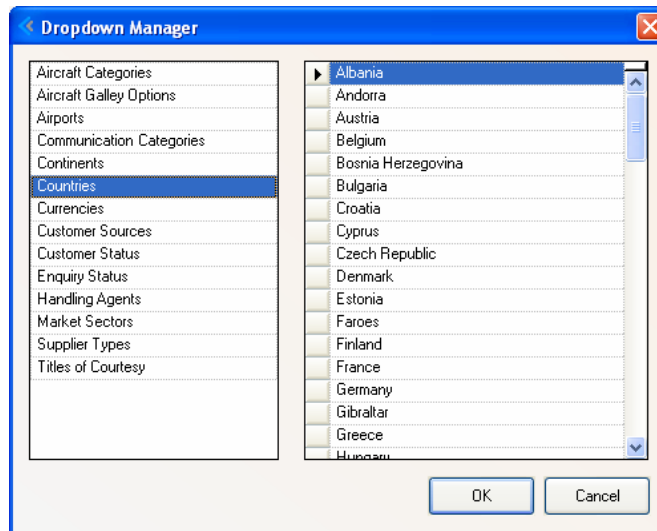
Installation & Configuration

A standard Windows Installer package routine will be built to install the application and necessary supporting files on client PCs. This can be run by following a simple wizard. Here we will install and configure the database on the database server allocated for the system.

Basic Maintenance Tools

The proposed system will be built so that simple maintenance can be performed in-house, rather than relying on external consultants. Basic maintenance includes tasks such as updating the options that appear in dropdown boxes. Tools to perform these common maintenance tasks will be built directly into the system, through easy-to-use maintenance forms.

An example of a maintenance form is the Dropdown Manager, which can be used to edit the options that appear in various dropdowns in the proposed system.



Data Backup

A procedure will be set up to automatically backup the database at a period of low usage (e.g. 1am each morning).

Technologies to be used

Microsoft .NET will be utilised for the front-end of the system (version 2.0). This provides the power and flexibility needed to build a user-friendly interface as depicted in the screenshots within this proposal. .NET is also optimised to work in conjunction within SQL Server.

SQL Server 2005 will be used for the backend of the system, providing a secure and robust data store. This technology has the capability to cope with the anticipated workload, as well as allowing for expansion in the future.

Hardware / Software Requirements

Server

A machine will need to be designated as the database server. As part of the installation SQL Server will be installed on this machine. A recommended specification for the database server would be a Pentium 4, 3.0 Processor with 3GB of RAM and 2 SCSI Hard Drives. We do recommend RAID for optimum recovery and stability as well as a tape back up drive. Better performance would be obtained from a dual Xeon Processor machine.

Client Machines

We would recommend the minimum specification for client machines running the system be a 1Ghz processor with 512MB RAM, although the application will run on less. The .NET Framework 2.0 would have to be installed on each client machine. The application will be designed and tested to run on Windows XP and Vista operating systems.

Project Management

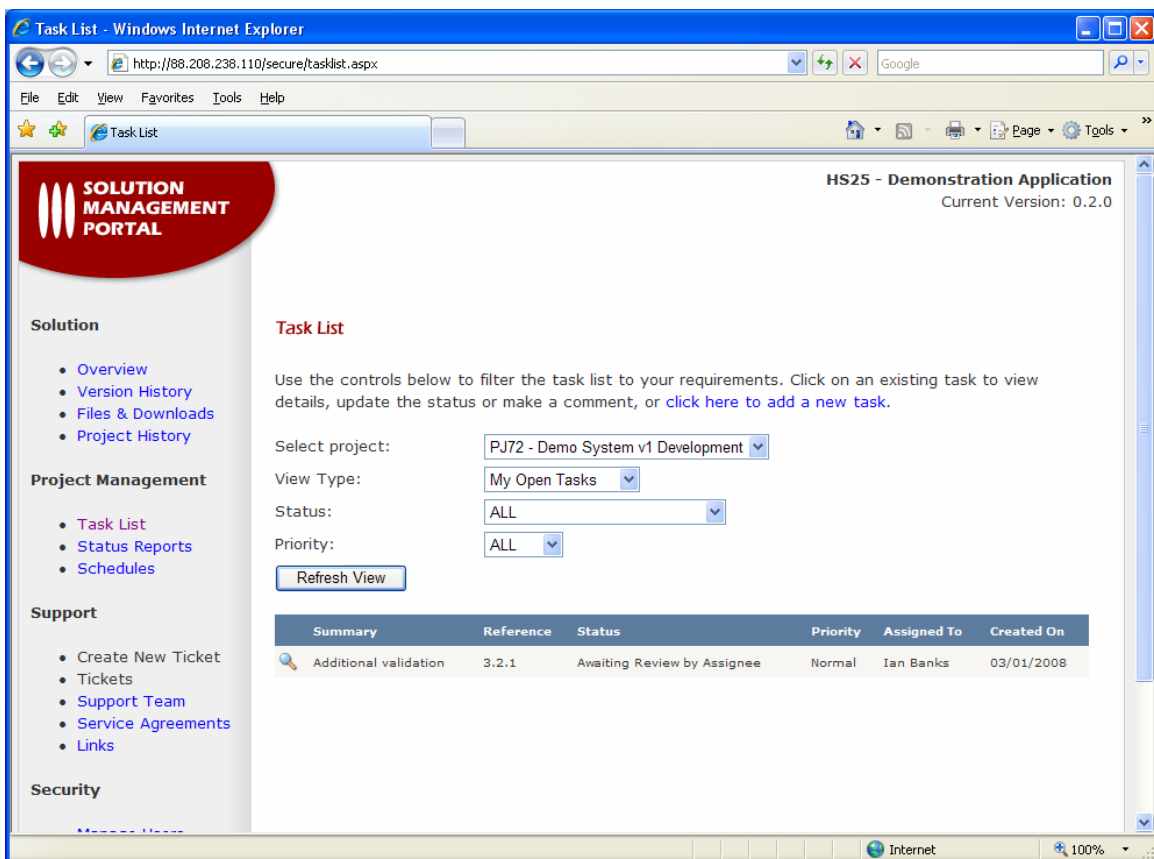
Overview

Hero Solutions will work with you to develop a comprehensive project plan outlining the key development tasks and deadlines for the project. This will show the scheduling of deliverables, as well as when your time will be required during the project (e.g. for testing and approval).

A project manager will be assigned to provide a single contact for you to deal with any issues or questions you may have. A direct mobile number to the project manager will be supplied to ensure you can always reach them.

You will be given access to our dedicated Solution Management Portal which will allow you to post and track issues, view status reports, download files and generally keep up to date with the progress of the project and communicate with your project manager. If you would like to try out the Solution Management Portal, please use the login details below to access a demonstration account:

URL: http://88.208.238.110
Username: smp@hero-solutions.co.uk
Password: smphero



At Hero Solutions we understand that not every minor detail can be thought of during the preparation of the specification and we aim to take changes on board with the minimum of fuss. We would suggest that all change requests come through nominated personnel to the Project Manager to prevent changes being made that are then reversed because they were not approved. If required we can issue change request forms.

Key Stages of Development

Below outlines what you should expect in each of the main versions which will be delivered. If appropriate, there will be interim versions delivered for testing as tweaks are made and bugs fixed. Also it may be agreed if more appropriate that certain portions of the system be constructed first. This can be the case if it a large development with clearly identifiable modules.

Delivery of Approved Specification

This will include a detailed meeting to discuss requirements and the creation of a detailed specification document, outlining both functional and technical details of the system. This is then approved by you before development begins.

Delivery of ALPHA version of the system

The first version we will deliver (ALPHA version) will contain all the major elements of the system to allow you to follow through your business processes as they would be on the final version. What is not usually included in the ALPHA version is:

- Majority of the reporting: We need to make sure we have got the rest of the system right and all the relevant data fields before doing these.
- Security: Again we need to make sure the main features are there and working as they should before locking the system down.
- Record Locking: Preventing more than one user accessing a form.
- Maintenance areas: Updating drop down lists, managing users etc.

Delivery of BETA version of the system

The BETA version will contain all the features and functionality as outlined in the agreed specification. At this stage the system is ready for final user testing to iron out all the bugs and pick up any thing that may have been missed. Once you are happy with the BETA version the system can then go live.

Completion and sign off of project

In most cases at this point the system has now gone live and the initial teething issues and bugs have been ironed out in the first week or so. Then the project can be signed off and your free support period will begin, as well as the start of the free bug warranty.

On the odd occasion the client delays going live with the system for internal reasons, when all the development has in fact been completed, we will invoice for the final amount at the point at which the work was completed. We are, however, happy to delay the signing off of the project, which marks the start of the free support period, until the system has gone live.

Testing Procedures

Hero Solutions understands the importance of exhaustive testing to ensure quality. Working with you, appropriate test strategies will be formulated for all areas of the system, based around the needs of the system and the availability to staff, and these strategies will be built into the project plan.

We will create testing sheets for you own testing of the system as well as bug reporting spreadsheets so you know if a bug has been reported, fixed and double checked.

Ongoing Support

Hero Solutions can provide comprehensive support for your system once it has been developed for peace of mind that there is always somebody available either to simply answer questions or deal with any unexpected issues that fall outside of our standard bug warranty. A support contract also offers guaranteed response times and a number of other benefits.

Our standard support package includes:

- Support for technical and end-user queries. This includes phone support during office hours (09:00 – 17:30 Mon-Fri) and email support, with a guaranteed response time of just 10 minutes.
- Issues classed as critical will be dealt with immediately.
- An annual SQL Server Health Check, which ensures the SQL Server is operating in optimum condition, and includes testing backups to ensure they restore correctly, running traces to identify bottlenecks and improve efficiency etc.
- Customers signed up to a support contract are also entitled to a 10% discount on our standard daily rate for any additional development work on the system (e.g. ongoing tweaks and improvements).
- Queries must only come from up to two nominated personnel (not directly from end-users), although we can offer direct end-user support as well if required.
- Up to 2 hours support per month, which from experience we find is adequate for most clients. However, should you go over this in a month you pay a flat rate of £80 + VAT per hour (compared to £120 + VAT per hour without a support contract)
- Access to your own dedicated Solution Management Portal to keep track of your support usage.
- As well as the standard package, we can also provide out of hours support (e.g. weekends), direct support to end-users and more frequent SQL Server health checks if required.