

Standard non-functional requirements Report

No.	Feature	Category	Standard	Applicable (Y/N)	Effort	Comment	Guidance
1	All GUI's will have a standard look and feel of the target Operating System (i.e. they will have a consistent look & feel)	User Interface	Y				only for one target OS
2	All 'grids' (lists) of data shown on screen will not have the functionality to be sorted and filtered by clicking on the appropriate column of that grid.	User Interface	Y				
3	All deletions to have a confirm (Y/N) for the delete. For web application, confirmation dialog shall be the browser default one.	User Interface	Y				

4	When navigating away from added/updated data, the system will prompt a confirm (Y/N) to save the data. For web application, confirmation dialog shall be the browser default one.	User Interface	M				need more effort to handle dirty data if any
5	All error messages should try to give suggestions of what the error is and if possible solution(s) to rectify the problem.	User Interface	Y				
6	When validating input files and importing data users will be supplied with the relevant details to diagnose issues i.e. what data is invalid and why it is incorrect.	User Interface	M				need effort to implement validation rules and relevant details to diagnose issues
7	All error messages of the system should be defined uniquely and maintained in a seperate file eg. in Resource file, conf file, etc.	User Interface	Y				not cover testing It mentions about system error logging.
8	Vertical scrolling is allowable (but paging should be used for search results etc.) Horizontal scrolling should be avoided.	User Interface	Y				

9	All controls or group of controls will have a text label	User Interface	Y				Can use placeholders instead of labels
10	Tab order on the GUI should flow from left to right, top to bottom by default but can be changed by localization if required (Please note that localization is not a NashTech Standard non-functional requirement).	User Interface	Y				Only apply for standard controls.
11	Use confirmations only when:	User Interface	Y				
12	There is a clear reason not to proceed and a reasonable chance that sometimes users won't.	User Interface	Y				
13	The action has significant consequences or cannot be easily undone.	User Interface	Y				
14	The action has consequences that users might not be aware of.	User Interface	Y				
15	Proceeding with the action requires users to make a choice that doesn't have a suitable default.	User Interface	Y				

16	Given the current context, users are likely to have performed an action in error.	User Interface	Y				
17	For desktop applications and websites: default support will be to a resolution of 1024x768 pixels.	User Interface	Y				suggest change resolution to 1366x768 pixels by default, HvN only support testing on 1 screen resolution
18	Where it is possible to calculate then Progress Bars / waiting indicators (depending on the system) should be used for lengthy processes to give the user an idea of what has completed – if not then the standard waiting indicator in the shape of a circling ring will be shown.	User Interface	M				Simplest implementation is selected. And additional effort will be added when any complex progress bar needed.
19	Any drop down lists will be in alphabetical or numerical order (if not stated otherwise within the functional requirements).	User Interface	Y				
20	Where a style guide is provided for the system then the UI will follow those guidelines.	User Interface					It just a guidance, no further action required

21	Where screen mock-ups, wireframes are provided for individual screens, these will be used in conjunction with the style guide.	User Interface					It just a guidance, no further action required
22	If nothing is provided than the NashTech Standard UI guidelines wil be applied.	User Interface	Y				need to define NashTech Standard UI guidelines(Web & Mobile)
23	The standard for all interfaces going out (from) the system will be via XML or JSON. The programming interface and all data items will be documented.	External Interfaces	M				Additional effort is added when several and complex interfaces needed to be documented.
24	For programming interfaces coming in to the system, the standard process will be to parse the data, report any errors at this point, then process the data and report on any errors at this point, unless there's explicit requirement that the system does not need to check because of performance reasons.	External Interfaces	Y				only handle error messages, excluding analysing/invetigating interfaces

25	Each programming interface (including data items) is expected to be documented to a level that design can commence.	External Interfaces	Y				
26	The GUI will contain 'plain English' (therefore spell checked) and not 'jargon' that only certain staff can understand	Usability	Y				
27	No auto-completion of fields will be developed.	Usability	Y				
28	The system will try to minimise the number of clicks per GUI/transaction and increase the input capabilities per window.	Usability	Y				
29	Unknown system errors should be captured relevant to the failure part. Log trace should also be captured.	Usability	Y				

30	<p>Where two requests are updating the same data. The first to commit will be successful and the conflicting update will be lost with the user informed the request failed.</p>	Usability	M				Need additional effort to handle conflicting issue properly(e.g. roll back transaction or refresh data)
31	<p>For all website developments we assume that a 'responsive design' is required but it should be noted that this is not a commitment to support and validate all platforms/devices/browsers.</p> <p>Each device / browser that the system needs to be supported on and tested for must be explicitly listed in the clients requirements and therefore used to estimate.</p>	Usability	M				<p>don't use UI Common lib: 30% (UI effort) for one iphone version, 20% (UI effort) for one ipad version, 30% (UI effort) for one Android phone version.</p> <p>Use UI Common Lib: 15% (UI effort) for one iphone version, 10% (UI effort) for one ipad version, 15% (UI effort) for one Android phone version.</p>
32	<p>The system will need to comply with the Data Protection Act. This act gives individuals the right to know what information is held about them. It provides a framework to ensure that personal information is handled properly; the Act has 2 main areas:</p>	Usability	Y				

33	1. Anyone who processes personal information must comply with eight principles, which make sure that personal information is:	Usability	Y				
34	Fairly and lawfully processed	Usability	Y				
35	Processed for limited purposes	Usability	Y				
36	Adequate, relevant and not excessive	Usability	Y				
37	Accurate and up to date	Usability	Y				
38	Not kept for longer than is necessary	Usability	Y				
39	Processed in line with your rights	Usability	Y				
40	Secure	Usability	Y				
41	Not transferred to other countries without adequate protection	Usability	Y				
42	2. Individuals have the rights to find out what personal information is held on computer and most paper records.	Usability	Y				

43	This section is added as a reminder to the client about their responsibilities for the Data Protection Act; NashTech will not specifically write any code for the Data Protection Act requirements	Usability	Y				Not relevant to development
44	All normal data input, data output and content presenting application screens need to be ready to be interacted with within 3 seconds during normal load and normal client/server connection with following definitions	Performance	Y				
45	-Normal data input screen: screens with under 30 fields, interact directly with back end without complex data calculation, not interact with external systems and optionally save data directly into database, normal data input screen will not have big contents such as big image, video, audio files (less than 200KB in total size)	Performance	Y				

46	<ul style="list-style-type: none"> - Normal data output screen: query directly from database without complex animations, without lookup, not go thru complex data processing or external server interaction, to display less than 50 rows and 10 columns and each row less than 100 character, without big contents (maximum content related size less than 200KB in total) - Data volume is not big 	Performance	Y				no third party component involved, no chart calculation
47	-Normal load: 30 concurrent user for non-load balanced normal server	Performance	Y				
48	-Normal server/workstation: Intel Core i5, 8GB RAM, 500GB hard disk.	Performance	Y				upgrade to memory of 4GB RAM to 8GB RAM to adapt with company's standard.
49	-Normal client/server connection: 500KB/s	Performance	Y				bandwidth for 1 concurrent user

50	By default we will not do performance testing.	Performance	Y				For larger systems application load testing must be undertaken and included by default with an additional cost. This testing needs to validate within the limits of the offshore development environment and focus on application bottlenecks and contention. It is not a system test.
51	For other cases (complex processing, seeking, calculation, big report) there will be specific agreement after doing real benchmarking, although we will seek to optimise the code.	Performance	Y				
52	No single process shall consume inappropriate CPU usage. (Eg: a common request leads 100% CPU workload)	Performance	Y				

53	<p>For a Web interface (if applicable), it will be able to be accessed via standard PC/Laptops running the latest MS Windows OS and will be supported to run on the below three browser.</p> <ul style="list-style-type: none"> - Chrome on Windows 8/10 - MS Edge on Windows 10 - Firefox on Windows 8/10 <p>Note that supporting more than the 3 browsers stated will require additional effort and cost. (which would be added to the estimate)</p>	Supportability	M				<p>Default is to support three listed browsers. The effort is adjusted based on the specific need of each system.</p> <ul style="list-style-type: none"> - The effort will be reduced in case of less than three browsers required. - Additional effort will be considered for additional browser on top of the listed ones. <p>To support different browsers, we need to consider the below aspects:</p> <ul style="list-style-type: none"> - Break Layout - Don't recognize some JS functions or JS Objects. - <p>Visit http://caniuse.com / site to check whether the newest features of JS, HTML, CSS supported by Chrome, Firefox, MS Edge.</p> <p>Guidance to calculate additional effort needed for additional browsers</p> <p>Don't use UI Common lib:</p> <ul style="list-style-type: none"> - 40% (UI Effort) for one old IE(11) version. - 30% (UI Effort) for each one modern browsers: Safari on
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							<p>MAC, Chrome on MAC, Firefox on MAC, Opera on Windows/MAC.</p> <p>Use UI Common Lib: - 35% (UI Effort) for one old IE(11) version. - 15% (UI Effort) for each one modern browsers: Safari on MAC, Chrome on MAC, Firefox on MAC, Opera on Windows/MAC.</p>
54	For a Web interface (if applicable) and if we are required to support mobile browsers, by default we will support the following mobile browsers:	Supportability	M				Need additional effort for testing and adaptation in development
55	Safari Mobile for iPad (latest official iOS version at the project start date)	Supportability	M				We assume the UI layout for iPad is the same layout with layout on desktop
56	Android stock browser for Tablet 10 inches with Android OS (latest official version at the project start date)	Supportability	M				

57	Note that supporting mobile browsers is to provide a touch friendly UI only and a consistent view across desktop and mobile browsers, not to provide different screen layout or behaviour except differences that are inherited from the OS(s) (such as behaviour for form elements, date time pickers, dropdownsetc)	Supportability	M				
58	There is no requirement to be able to port the software onto additional Operating Systems or hardware platforms beyond an agreed single platform.	Supportability	Y				
59	All application code shall be documented so that it can easily be maintained and enhanced. (This may be by in-line code comments and/or separate documentation to the code).	Supportability	Y				

60	All code (Java, .NET, JS, PHP, Node, Swift, Objective C) will be written to the Nash Tech coding convention and standards (for which copies are available).	Supportability	Y				add to the list some more programming languages which have already had Coding convention and standards such as JS, Node, Swift, Object C
61	The system will try to 're-use' existing services if possible. So as new Services are commissioned and introduced they will benefit from re-use of standard operations and architectural patterns utilised by the Solution. This reduces development and deployment time as well as significantly reducing risk.	Supportability	Y				
62	All interfaces shall have a supplied test harness to load and simulate all successful (just within boundary values) as well as failure events.	Supportability	M				Need significant additional effort to write this harness test
63	Interfaces supplied by the client they are required to be provided with a test harness.	Supportability	Y				If they need to test harness for specific system/requirement, we can add the task and effort into the WBS

64	<p>If there are client dependencies then the application shall test / diagnose whether these are in place when it first executes and provide appropriate identification to the end users as well as creating an event in the server side logs for IT investigation.E.g. a smart client app within the system detects the .net framework is the wrong version, or browser detects an incompatible browser version of browser setting.</p>	Supportability	M				<p>It should be scope of the deployment package (install files, scripts,...) and what can do should be written in assumptions.</p>
65	<p>All Software applications will be delivered along with the relevant installation package and guideline document, without automated installation scripts and error trapping. There will be no automated update / upgrade for applications thru network. There will be no automated scripts for production deployment completely.</p>	Supportability	Y				

66	The system can be required to be installed or upgraded locally via automated installation scripts or programs to avoid potential for human error; and these scripts need to contain the error trapping to aid installation diagnostics.	Supportability	M				Simplest implementation is selected. However, we need to consider the additional effort when any complex installation scripts or program to cover the automated installation.
67	There shall be no version correction checking across servers	Supportability	Y				
68	Client installations shall be centrally manageable as far as possible.	Supportability	M				Base on item 9
69	The system shall be able to be uninstalled completely.	Supportability	M				Base on item 9
70	Where ever possible the systems shall be centrally configurable (e.g. to avoid editing ini files on multiple application servers)	Supportability	M				Simplest implementation is selected. However, we need to consider the additional effort when any complex configuration needed

71	As a standard, the target unit test is 70% (50% coverage by automated unit test and 20% coverage by manual unit test). This is applied at the discretion of NashTech and not formally recorded.	Supportability	Y				
72	The system will log every key function call.(NB: There are free open source pieces of software available for this e.g. Log4J)	Supportability	Y				
73	Client internal systems software should be designed to be available 12 hours x 7 days per week *	Reliability	Y				
74	Web systems software shall be designed to have an annual availability from unplanned outages of 99.9%; that will handle errors without the system/process crashing – excluding all other external components (eg database management systems, hardware, file storage etc)	Reliability	Y				

75	Pure batch systems software shall be designed to have a successful run rate (i.e. full completion to end) of 99.9% that will handle errors without the process crashing.	Reliability	Y				
76	No on-line User Documentation or contextual (hover) Help will be provided.	On-line User Documentation and Help System Requirements	Y				
77	If required by client then a help button will be provided on each page that will link to a help text file (The text will be provided by the client).	On-line User Documentation and Help System Requirements	M				In case of several and/or complex help needed.
78	As a standard we will use open source and freeware modules (with clear approval from client) within the development and these will be documented in the :	Purchased Components and Licensing	Y				
79	Design Documents	Purchased Components and Licensing	Y				
80	Installation Notes	Purchased Components and Licensing	Y				

81	Release Notes	Purchased Components and Licensing	Y				
82	We will not use any purchases or licensed modules without the explicit consent from the client.	Purchased Components and Licensing	Y				
83	All Intellectual Property Rights (IPR) subsisting in or relating to the Deliverables and any other works or materials created by NashTech as a result of the Services, shall be owned (as between the parties) by the customer.	Legal, Copyright, and Other Notices	Y				