

**Strategy Development to guide the  
User-Centred Design of a new website**

**for**

**NHS QIS**

**Strategic Recommendations**

**4<sup>th</sup> May 2007**

## INTRODUCTION

This document represents the final element of optimum.web's work to establish a strategy to guide the development of a new NHS QIS website. It is based on the cumulative results of the following work:

1. Expert review, usability testing and accessibility audit of current live site
2. Internal research amongst key NHS executive staff to determine
  - Key target audiences for each operating unit within NHS
  - Key topics / messages that each unit needs to communicate to those audiences
  - Views on how a new website could assist the communications process and generally enhance each unit's interaction with its external audiences
3. External research to determine the needs and wants of the key external target audiences – i.e. what would they like to be able to see and do on their ideal NHS QIS website.

Following each of the three stages described above, detailed findings reports were produced.

This document does not, therefore, set out to reproduce those, but rather to provide a concise summary and set of clear strategic principles to guide the remainder of the user-centred development process.

As agreed in optimum.web's strategy development proposal, this summary document covers the following areas:

- Key user profiles / 'personas' and their usage drivers (goals)
- Key content requirements and navigational approach
- Look and feel, plus functionality / features felt to be valuable at early release stage
- Accessibility
- Overall summary presented as strategic guiding principles to guide the completion of the UCD process

The objectives of QIS as an organisation and the important role a new website can play in their fulfilment, have been key to driving our strategic recommendations.

Finally, we must point out that the user needs research exercise has delivered extremely rich data. We have drawn conclusions based on criteria described in the findings document, but we strongly advise these findings are studied in detail by NHS QIS in order to ratify or amend those conclusions and associated priority recommendations.

## 1. EXISTING AND TARGET USER PROFILES / 'PERSONAS'

The user needs focus research has been extremely valuable in creating a much clearer understanding of the NHS QIS audiences and their associated user needs, in both the NHS Professionals and Lay Users categories.

Each 'persona' is described below.

They are shown in descending order of priority, according to the rankings developed by optimum.web which are based on:

- **NHS professionals:** relative importance of the persona to the fulfilment of QIS's quality delivery role combined with the degree to which an enhanced website can assist them to do this.
- **Lay audiences:** whether the persona is *actively* interested in NHS Scotland quality issues or not, bearing in mind that, notwithstanding media influence, actively interested individuals are more likely to visit the site proactively.

**NB1:** As stated in the focus groups full findings document, all audiences are important. *Relative* importance only has been established, simply to guide the inclusion of website features or facilities that are *unique to* individual audiences as opposed to features that meet the needs of a number of audience groups.

**NB2:** Age and the usual demographics (social class, geographic location, ethnic origin, etc.) are not pertinent to user needs in respect of NHS QIS. User needs are driven either by the role of the audience (professional groups) or the individual's active or passive interest in healthcare quality issues (public groups).

Ranking	Persona	High Level User Needs
1	<p><b>Liaison Coordinators</b> NHS Professionals Close working relationship with NHS QIS. E.g.: Quality &amp; Accreditation Managers, Directors of Clinical Effectiveness, Clinical Governance Leads.</p> <p>Important 'first-link' in external chain of quality implementation. Responsible for dissemination of QIS information within own organisation. Interests span all practice areas.</p> <p>Have access to hardware and software in varying levels of sophistication.</p> <p>Highly committed to completion of the 'quality circle' through to implementation.</p> <p>High workload; keen to ensure no vital information is missed; keen to learn from peers and adopt proven best practice in both communication and implementation.</p>	<p>Access all <i>relevant</i> QIS documentation - i.e. spanning all practice areas and operational levels.</p> <p>Be aware of latest updates.</p> <p>Pinpoint implementation support materials, in right format, for lower level colleagues.</p> <p>Access best practice information to eliminate duplication of effort and ensure highest standards.</p> <p>Simplify document creation and submission process to maximise available time.</p> <p>Share experience and ideas with peers.</p>

Ranking	Persona	High Level User Needs
2=	<p><b>Health Board Partners</b> NHS Professionals Close working relationship with NHS QIS. E.g.: Head of Clinical Governance, Charge Nurse, Clinical Librarian</p> <p>Key links in the early chain of conception &amp; implementation. Interests span all areas of operation.</p> <p>Have access to hardware and software in varying levels of sophistication.</p> <p>Highly committed to completion of 'quality circle' through to implementation and continual improvement.</p> <p>High workload. Keen to demonstrate that public money is being wisely spent.</p>	<p>Access only relevant information – i.e. spanning all practice areas and operational levels.</p> <p>Provide feedback in order to reduce time otherwise spent in meetings.</p> <p>Access tools to assist quality implementation at all operational levels.</p> <p>Share experience and ideas with peers.</p>

Ranking	Persona	High Level User Needs
2=	<p><b>Occupational Partners</b> NHS Professionals Close working relationship with NHS QIS. E.g.: Clinical Risk Managers, Head Clinician, Clinical Effectiveness Facilitator.</p> <p>Key links in the early chain of conception &amp; implementation. Interests specific to areas of specialism.</p> <p>Have access to hardware and software in varying levels of sophistication.</p> <p>Highly committed to continual improvement in NHS Scotland services.</p> <p>High workload. Keen to eliminate duplication of effort and learn from peers through sharing of best practice.</p>	<p>Be aware of all new but only <i>relevant</i> information – i.e. specific to area of specialist expertise.</p> <p>Have quick and simple access to all materials related to specific projects.</p> <p>Access best practice information to eliminate duplication of effort and ensure highest standards.</p> <p>Share experience and ideas with peers.</p>

Ranking	Persona	High Level User Needs
4	<p><b>Lower Level Professionals</b>  NHS Professionals  No direct link to NHS QIS.  E.g.: Occupational Health Nurse, Senior Staff Nurse, District Nurse</p> <p>Critical to quality implementation.</p> <p>Have access to hardware and software in varying levels of sophistication.</p> <p>Interests specific to areas of specialism and / or practice.</p> <p>Highly committed and highly conscious of accountability.  Less confident than more senior colleagues and frequently required to treat secondary conditions that do not reflect specialist area of expertise.</p>	<p>Access aspects of latest guidelines and standards that are relevant to specialist / practice area and level of operation.</p> <p>Access easy to understand material to help with provision of treatment for conditions where user is not expert.</p> <p>Ensure no vital, relevant information is missed.</p> <p>Access other, condition-specialist websites that can be trusted.</p> <p>Keep up to date with relevant news and events.</p> <p>Share experience and ideas with peers.</p> <p>Simplify document creation and submission process to maximise available time.</p>

Ranking	Persona	High Level User Needs
5	<p><b>Registered Public Partners</b>  Lay and Retired NHS Professionals  Close working relationship with NHS QIS.  E.g.: Former Company Directors, Retired Clinical Effectiveness Leads</p> <p>Key links in quality delivery chain.</p> <p>Varying levels of internet literacy.</p> <p>Provide lay perspective to clinical reviews, audits, etc.  Highly committed ambassadors for the NHS QIS cause.</p> <p>Highly committed to building public awareness of QIS's work.  Highly concerned that QIS should be seen to be accountable to the public.</p>	<p>Understand the full role and remit of QIS, its objectives and status of its performance against those objectives.</p> <p>Access information to build knowledge of special projects &amp; conditions in advance of QIS project participation.</p> <p>Learn more about the wider QIS PPN network.</p>

Ranking	Persona	High Level User Needs
6	<p><b>Higher Level Professionals</b> NHS Professionals No direct link to NHS QIS. E.g.: GPs, Consultants, Registrars, Clinical Directors.</p> <p>Key to quality implementation, but more confident than LLPs.</p> <p>Have access to hardware and software in varying levels of sophistication.</p> <p>Keen to play own parts in quality enhancement including through new project initiation. Interests specific to areas of specialism / practice.</p> <p>Keen to learn from peers and share best practice. Focused entirely on their areas of specialism. Keen to increase efficiency of patient consultations.</p>	<p>Ready access to condition and practice-area specific guidelines, standards, general information, etc.</p> <p>Source examples of exemplary best practice and implementation.</p> <p>Refer patients to lay-friendly information that explains the treatment and care standards they should expect in the relevant disease area.</p> <p>Refer patients to lay-friendly 'lifestyle' information to assist self-help aspects of treatment.</p>

Ranking	Persona	High Level User Needs
7	<p><b>Affiliate Organisations</b> NHS Professionals Close links with NHS QIS E.g.: Lecturers, Head of Risk Management, University Deans</p> <p>Important role in QIS quality delivery within own organisations or as teachers.</p> <p>Have access to hardware and software in varying levels of sophistication.</p> <p>Interests can span a broad area or can be practice area specific depending on role. Very interested in safety and sharing of best practice.</p> <p>Keen to see the quality circle closed from inception through to implementation.</p>	<p>Access information by condition and / or practice area.</p> <p>Quickly identify <i>all</i> new information -i.e. covering all areas.</p> <p>Access new information within a specified timeframe.</p> <p>Access tools to assist with high quality implementation.</p> <p>Simplify document creation and submission process to maximise available time.</p>

Ranking	Persona	High Level User Needs
<p><b>Arguably of equal importance with any professional group based on the QIS requirement to 'report to the public'</b></p>	<p><b>Actively Interested Public</b> Lay audience No direct links to NHS QIS</p> <p>Wide age range of mixed gender, social group and occupation.</p> <p>Varying levels of internet literacy.</p> <p>E.g.: Members of voluntary organisations; expert patients with long-term conditions (cancer, asthma, diabetes, etc.); close friends / family of those with long-term conditions.</p> <p>Interested in treatment and care of specific conditions and keen to see more people taking an active interest (especially younger people).</p> <p>Hospital waiting times a key concern.</p>	<p>Access <i>all</i> information relating to <i>specific</i> conditions and associated treatment / care.</p> <p>Share experiences and information with peers.</p> <p>Obtain information on local patient and support groups.</p>

Ranking	Persona	High Level User Needs
<p><b>Arguably of equal importance with any professional group based on the QIS requirement to 'report to the public'</b></p>	<p><b>General Public</b> Lay audience No direct links to NHS QIS</p> <p>Wide age range of mixed gender, social group and occupation.</p> <p>Varying levels of internet literacy.</p> <p>Interested in broad topic of treatment care and the standards that should be expected. Most likely to seek information proactively as result of media focus (e.g. waiting times, hygiene standards, making complaints) or if circumstances propel them to 'actively interested' status.</p> <p>Those with children have greater interest in issues pertinent to their young families.</p>	<p>Access <i>all</i> information relating to <i>specific</i> conditions and associated treatment / care that should be expected.</p> <p>Obtain clarity on issue of patient choice in Scotland.</p> <p>Obtain information on individual hospitals and primary care centres – from the treatments offered to location, transport, parking, waiting times, etc.</p> <p>Share experiences and information with peers.</p> <p>Learn how to complain if treatment or care experience does not meet recommended standards.</p>

## 2. NEW SITE FIRST RELEASE PRIORITIES

### 2.1. Content / information requirements

The internal and external research results delivered an extremely encouraging level of synergy in terms of the messages QIS would like to convey to its outside audiences, the information those audiences wish to obtain from QIS and ways in which audience interaction can be enhanced.

In terms of pure information provision, a significant proportion of what is required – particularly with reference to NHS professional audiences – is already available on the live site. What does require a new approach, however, is the way that information is presented and organised along with the range of special site features and interactive facilities to support the user experience.

Drawing on the findings of the internal and external research (professional and lay) the key information requirements for the new site can be summarised as follows:

- **All about QIS** – what it is, how it is structured, strategic plan summaries, progress against plans, how the full quality process works (from project conception through to implementation), what is meant by ‘standards’ and ‘guidelines’, who’s who in the organisation, key contact information. Presented both in writing and in diagrammatic form.
- **Full suite of publications** (drafts, guidelines, standards, revisions, etc.) organised by disease area, presented in date sequence (latest first) with clarity on document history / changes / latest versions.
- **QIS project information:** projects in progress; forthcoming projects; project specification documentation, project implementation tools.
- **New project initiation support:** guidance on case building and application form completion for new quality improvement and practice development projects.
- **Implementation best practice examples.**
- **Safety alerts.**
- **Minutes of meetings.**
- **Events (& courses) information:** advance calendar, event summaries, downloadable presentations (PDF format).
- **Reviews and reports:** All-Scotland review summaries and all-UK agency reports with Scottish position.
- **Risk management guidance.**
- **About the PPN Network:** what it does, how it is organised.
- **PPN network support materials:** member details, role training pack, conditions and treatments training pack, pre-review briefing documents.

- **Hygiene standards and waiting times:** hospitals ' relative performances vs. national average.
- **Latest news stories:** summaries with links through to full stories.
- **How to become involved:** options available to lay volunteers.
- **A-Z of illnesses:** condition descriptions plus associated treatments, standards and guidelines.

## 2.2. Navigation and information organisation requirements

The user needs focus groups findings supported the findings from optimum.web's earlier expert review and usability testing on the current live site.

Both exercises found that the current information architecture does not support the way users look for information.

Nearly all users expect to find information grouped by condition / disease area, rather than by project or publication type. Indeed in the original usability test, all users preferred the 'Our Findings and Advice' approach to organising information where a list of medical conditions was presented.

Accordingly, our recommendation is to create the new site with a condition-led IA (but to support this with a sophisticated search function that would allow information to be sourced by different criteria when required) and certain topic repositories for key information groupings.

Key requirements are:

- **Use of plain English** throughout striking a careful balance between simplicity and potentially patronising information.
- **Lead by condition** for top level navigation.
- Provide **additional top level tabs** for other key 'generic' topics such as information about QIS, its function and structure.
- Ensure **label headings remain consistent** through the different levels of the site to avoid any confusion during user journeys.
- Provide **professional and lay audience entry points** on the home page leading to appropriately designed landing pages that provide tailored introductions to the communications objectives and facilities of the site in relation to the known needs and wants of these two key audience groupings.
- Provide **introductory summaries for all documents** (i.e. at landing point) to provide an opportunity for users to determine relevance at the earliest possible stage.
- Ensure documents are **sectioned to cater for professional role and level of operation** (and tag to enable searching by these criteria).

- Provide a **series of special topic repositories** - best practice repository; project specification, documentation & implementation tools repository; all-UK agency reports with Scottish position repository; risk management guidance repository; all-Scotland reviews repository.

### 2.3. Interactive and other feature requirements

- **Features guide** – provide a guide to ensure users are able to derive maximum value from the new site.
- **Glossary** – for optional use by individual users.
- **PDF default for document downloads** – ensure users are not required to use paid-for software. Include guidance on use of PDFs including impact of closing PDF windows. Provide alternative options for users with dial-up connections.
- **Contact QIS by email** – including option to request document hard copies if required.
- **Sophisticated search facility** – that is reliable and capable of delivering granular results, thereby enabling users to pull together easily much of the specific data they require and omitting that which they do not need. Facility to be capable of searching by: disease area, date, operational level and document type. Results to deliver a short synopsis for each item found.
- **Secure working and feedback areas** - for project groups and Liaison Coordinators.
- **Secure RPP area** - containing PPN membership details, member training pack, review visit introduction briefings; advance calendar of project reviews / visits.
- **Personally relevant email alerts** - based on registration and with links to full documentation.
- **News / information filter tool** – that retains universal critical data irrespective of filter fields applied.
- **Safety alerts summary matrix** - with links to full notices.
- **Online events registration & acknowledgement.**
- **Online documentation creation and submission** –including applications for new quality improvement and practice development projects.
- **External links** – comprehensive and ideally searchable to related / trusted sites, including specialist organisations and patient support groups.
- **QIS umbrella links** - to all organisations in the QIS community.
- **New document summary matrix** - with links through to full documents.

### 3. INTERACTIVE AND OTHER FEATURES RECOMMENDED FOR SECOND STAGE RELEASE (OR EARLY AS POSSIBLE)

- **Interactive forums:** in view of the high level of interest in interactive forums as a further means of exchanging ideas, learning from peers and accessing best practice information, the initial build should take account of the demand for such facilities and release should be planned as early as possible in the site's iterative development.
- **Patient self-help guides:** practitioners, in particular HLPs are very keen for patients to pay as big a part as possible in the quality and *effectiveness* of care process. Accordingly, a series of patient guidelines, covering key lifestyle issues related to specific disease area treatments (e.g. diet, exercise, etc) should be available to doctors via the site. Development and release should be planned as early as possible in the site's iterative development.
- **Local waiting times checker** – usable by treatment area and providing local hospital performances against standards and national average.
- Either a **personalised home page facility** – to allow regular users to focus only on areas of interest; **or an intelligent registration facility** that remembers the user's previous online activity. In the case of the latter, however, registration should not be a requirement of the site, simply an option to make use of this advanced facility.

### 4. LOOK AND FEEL

Achieving the right look and feel to accommodate the needs of both professional and lay users will be a design challenge. Whilst separate entry points are recommended for professional and lay audiences, any unique pages are likely to operate only at high level with deeper level pages needing to work for both audience types.

- 'Authority', 'improvement' and 'excellence' need to be conveyed to both audiences.
- Lay users need to feel that QIS is providing a service for them as well as for professionals.
- Care must be taken with any use of visuals to avoid the site appearing 'lightweight'.
- All design treatments must be tested with user samples at the earliest stage.

## **5. ACCESSIBILITY**

optimum.web's accessibility audit of the existing site found it to meet a good standard of accessibility against the W3C guidelines priority levels 1, 2 and 3 checkpoints with some shortcomings identified.

By developing a new website, NHS QIS is in the ideal position to ensure the highest possible standards of accessibility by taking all the necessary steps from the start of the development. Namely, ensuring that:

- Web content upholds W3C's Content Accessibility Guidelines (WCAG).
- Any non-W3C formats used on the site incorporate accessible design elements or follow accessible design guidelines applicable to that format.
- Authoring tool products (CMS) produce web content that upholds WCAG.
- Advice is provided to disabled people on how to optimise their computer set up.
- Testing with disabled users is carried out during the design and development stages.

To assist this process we have attached a copy of the DRC's Publicly Available Specification (PAS) 78: 2006.

## **STRATEGIC GUIDING PRINCIPLES**

Based on all of the research undertaken to date, optimum.web has established the following strategic principles to guide the development of the new NHS QIS website through to completion of the UCD process.

### **Throughout development**

- Ensure that all content, features and interactive facilities address the needs of the identified needs of the relevant user personas.

### **Pre-build phase**

- Review full research findings / recommended prioritisation and incorporate any amendments.
- Ratify agreed user needs prioritisation using a cross-section of users drawn from the original sample.
- Review metadata strategy in order to develop the required search facility.
- Review approach to web analytics to maximise data value.
- Draw up IA approach(es) based on the identified condition-led format and test with a cross section of users (basic, clickable HTML).
- Organise core information content along recommended / agreed lines, undertaking any necessary editing, re-writing and sectioning.

- Undertake content testing, checking for comprehension, required 'take-out', impact of tone and style.
- Develop wireframes adhering to accessibility requirements and test for usability
- Apply design treatments to wireframes and test for impact of look and feel.

### Build phase

- Develop interactive tools and features in line with agreed prioritisation and test prior to incorporation.
- Audit and test prototype for accessibility and undertake iterative usability testing with full cross-section of users.
- Review SEO options as activity is complementary to accessibility requirements.
- Test live site.

The full UCD process is illustrated by the generic diagram below. As specified in optimum.web's original proposal we are able to develop full proposals for all aspects of this process apart from those inputs required from NHS QIS's digital design agency.

