



Website Design & Development

Testing Phase





How do we check that our finished websites are correct?

From N5, we should know that we check ...

- Pages match the given designs
- Pages have a consistent layout
- Navigation / links work properly
- Media displays correctly
- Spelling errors have been corrected

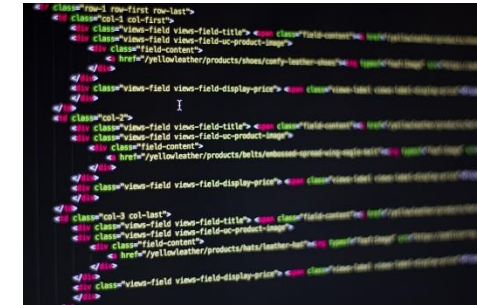




Final Testing

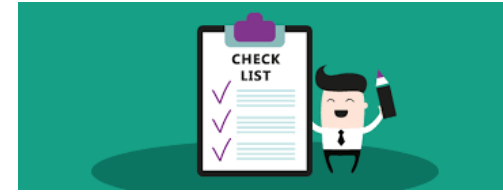
Once a site has been built, the testing phase is the last chance to check that it *meets the agreed specification*

- *Coding errors* from the implementation can be identified (HTML, CSS & JavaScript)
- Errors in the *understanding* of the specification and design can be found



Specification
The horizontal tabs at the top of the page provide access to all enterprise content and functionality. These include: • Value Center / Functional Area name – When the user logs in, the homepage displays basic user's Value Center / Functional Area. The name of this VC / Functional Area will be prominently displayed. Users can mouse over this area to display a dropdown that will allow navigation to all other VCs / Functional Areas. • Communities – provides a directory listing of general communications spaces that can be aligned with program, interest, practice, etc. • News and Events – Displays enterprise-wide news and events. • Tools and Resources – A consolidated listing of enterprise tools and resources. • About ITT – Company-wide information for all employees.
Tab dropdowns – When user mouses over one of the above described tabs, a dropdown is displayed showing level categories of information allowing quick access. These dropdowns should be able to be configured to display multiple levels of the site hierarchy with the ability to control order and amount of links.
Uses OOB breadcrumb/functionality.
My Information section displays personalized information for the user. This section is customizable by the user.

Testing is often carried out in **several stages** ...



Testing

Early de-bugging and quality assurance work is done by the *development team* responsible for *building* the site

- ***Use Cases & Scenarios*** identified at analysis stage may be used

Why do we need *more* testing than this?

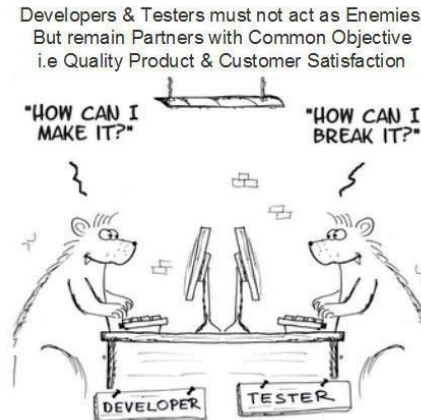
- Sometimes errors are *overlooked* because the team are familiar with the project
 - Someone unfamiliar with the project is more independent and will look carefully at how the site performs
- If a requirement is misunderstood by a team during building, it will still be misunderstood by that team during testing



Alpha Testing

Alpha Testing is the *next* stage after the development team have finished their own testing

- Normally done by teams with technical expertise
- Often another development team NOT directly involved with the site being tested
- Expert users can help to accurately identify problems and their causes

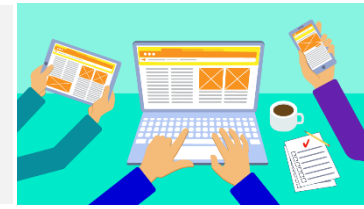
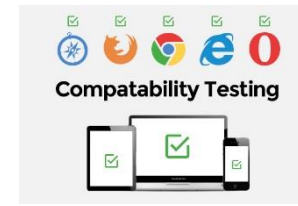




Beta/Usability Testing

- Carried out by people *outside* of the developer's business
- Will be selected members from the target audience
- Limited release
 - Access only given to selected users
 - Feedback from users helps to understand how the intended audience will experience the site
- Beta releases to the public carry the risk of reputation damage if the product is found to have many errors
 - might become known for poor quality before fully released
 - most errors should have been found and corrected BEFORE beta testing starts

Beta/Usability Testing

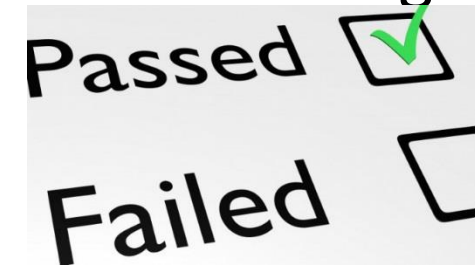


- Site will be used on a variety of *devices* and *browsers*
- Can reveal problems that the development team had not seen – ***compatibility problems***
- What factors might affect website compatibility?
 - Although HTML, CSS & JavaScript are standardised, there are sometimes differences in how browsers display pages
- Users can access sites on a variety of devices ...
 - Desktop, Laptop, Tablet, Smartphone ...
- These devices have different components ...
 - Processors, Graphics, Memory, Storage, Display Screens, Input Devices
- Users will also have a variety of ways to connect to the internet ..
 - Broadband, Fibre, Wireless (3G/ 4G)
 - Connection type affects download speeds & data usage limits

What is tested?

Testing can focus on two main aspects of the website's design ...

- Usability
- Functionality



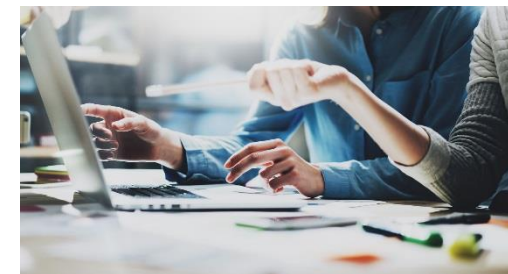
Most of the testing we have already learned about in N5 focuses on the *functionality* of a website

Usability Testing

We have seen that a lot of effort is involved in planning & refining usability at the analysis and design phases

At testing of the completed site, usability is evaluated based on ...

- The consistency of the user interface
- Functioning, identifiable and clear navigation
- Ease of locating the required information (structure)
- Suitability for the target audience
- Page loading times





Usability – Measuring Success

Evidence may be gathered of ...

- How long users take to complete specific tasks
- Timed navigation
- Evaluation of loading times

Data that involves measurements is known as *Quantitative Data*

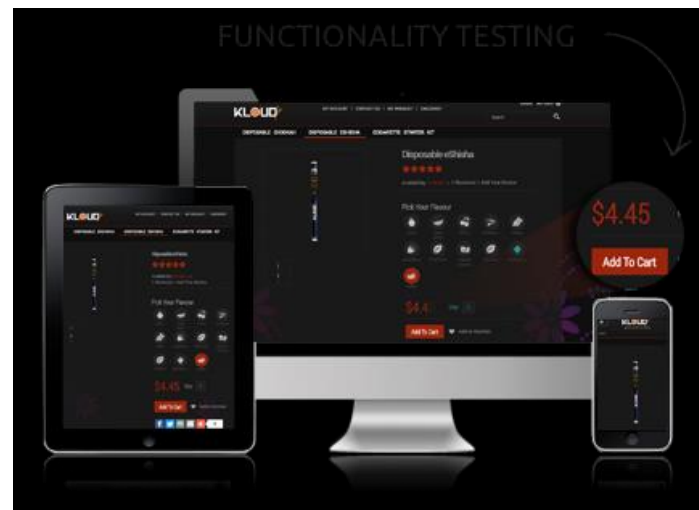
- Clarity of information and navigation structure
- Verbal or written feedback about how users achieved the given tasks

Data that involves thoughts or opinions is known as *Qualitative Data*

Functionality Testing

Testing that the website content works as intended

- Navigation / Links
- Content displayed correctly





Functionality Testing – Navigation

Pages usually contain a variety of navigation mechanisms

- Navigation bars
- Hypertext and Image links in main content
 - Internal links
 - External links
- Search boxes

Websites can contain a large number of hyperlinks

- Effective testing requires *all* links to be checked



Test Tables - Navigation

We need to be sure that nothing is missed during navigation testing

- Testing must be planned / structured

Test tables are used ...

- To list the items to be checked
- To document the results of testing
 - the faults to be corrected
 - which links worked when tested





Test Tables – Navigation

Each page of the site will have its own test table

- Table identifies the site name and page

A test table will typically contain columns showing ...

Position of link on page e.g. NAV, MAIN, FOOTER	Written BEFORE the testing begins
URL of hyperlink	
Type of link	
Expected Result	
Actual Result	Written DURING testing
Pass / Fail	
Date of Test	
Actions needed to correct the error	



Functionality Testing - Content

Checks that all content appears correctly

- **Text**
 - Position, colour, font, size, background, spelling
- **Media**
 - Position, size, displaying / playing properly
- **Interactivity features**
 - JavaScript functions work as expected
- **Form validation**
 - Form input validation restricts input as expected

Finished pages are evaluated against the agreed wireframes from the design phase





Test Tables - Content

Most sites are multimedia and have a lot of varied content

Test tables are used again to ensure that thorough testing is carried out

- So each page will have at least two test tables for functionality testing (navigation & content)



Test Tables – Content

Each test table will identify the site & page name

- Table identifies the site name and page

Type of content (Text, Headline, Image, Video, Audio, Interactivity)	Written BEFORE the testing begins
Position of content on page	
Expected appearance or behaviour	
Pass / Fail	Written DURING testing
Date of Test	
Actions needed to correct the error	