



Website Design & Development

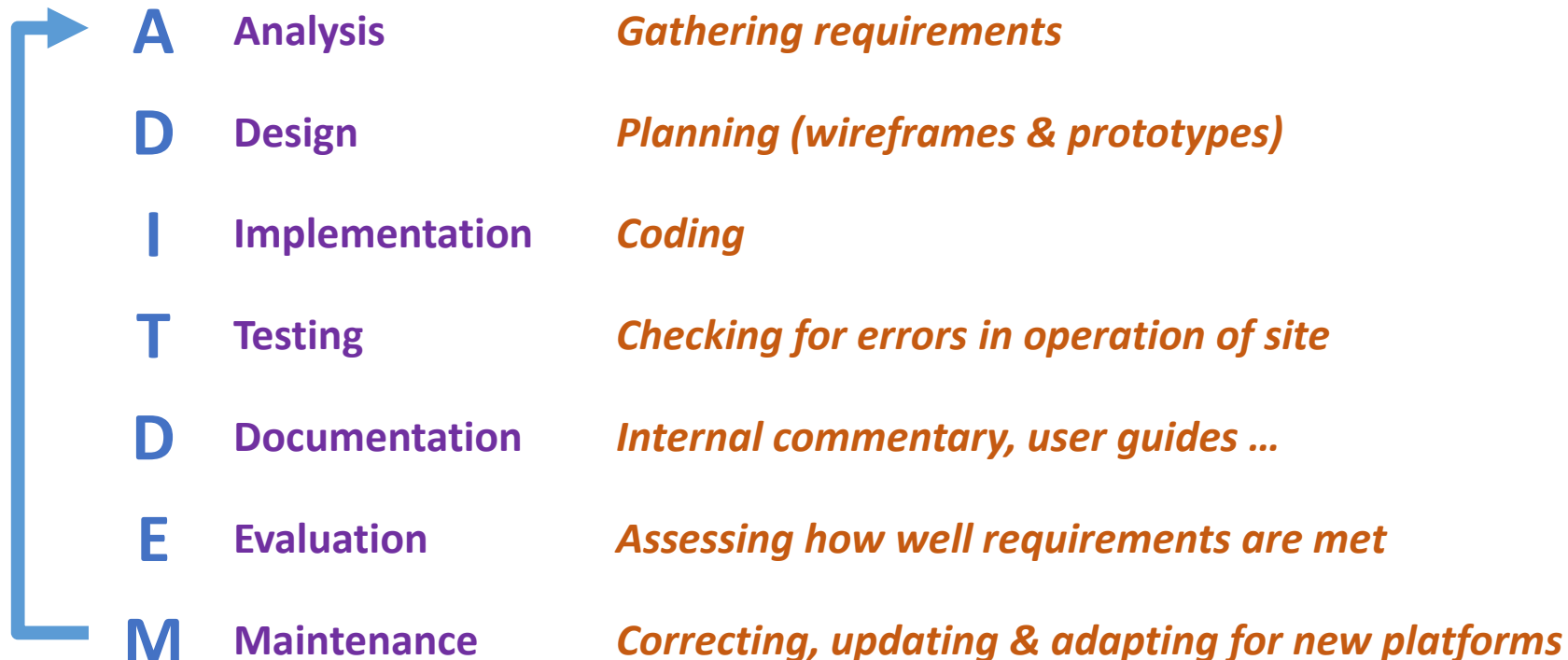
Analysis Phase





Iterative Development (reminder)

Remember from N5, that websites, programs (and other products) are developed in an **iterative** (i.e. repeating) process -



What makes a website successful?

To be successful, any website must ...

- Meet the end **users' needs**
- Achieve all of the necessary **functional requirements**



Developers must plan and create their websites with the aim of meeting all of these requirements

- Time must be invested in **clearly** understanding what the website **must do** and **how it will be used**



What are user requirements?

User requirements identify key information about the target audience, including ...

- Age
- Experience & Skills
- Gender
- Interests
- Level of Education



What are functional requirements?

Functional requirements relate to how the website will be used

- The **environment** in which the site will be used
 - Work / Leisure, Mobile / Fixed Location
- **Devices** used to access the site (*platform*)
 - Affects display size, bandwidth usage, etc
- **Features** to be included
 - Forms, media, security, interactivity, user interface ...





Meeting the known requirements

At the beginning of the development process, a lot of effort is made to

- Analyse **what is required**
- Identify what the website must achieve to **meet these requirements**

Fully understanding the user and functional requirements –

- Helps to ensure the finished site is **successful first time**
- Reduces the need to go back and make changes

The further along the development process, the greater the cost of making even a simple change.





Meeting the known requirements

Failing to fully understand requirements at an early stage leads to ...

- Time wasted while building the site incorrectly
- More time being needed to correct problems

Any wasted time has a significant cost attached

- Paying development team for additional work
- Loss of possible income due to delayed launch of
- Client penalties / fines due to late delivery



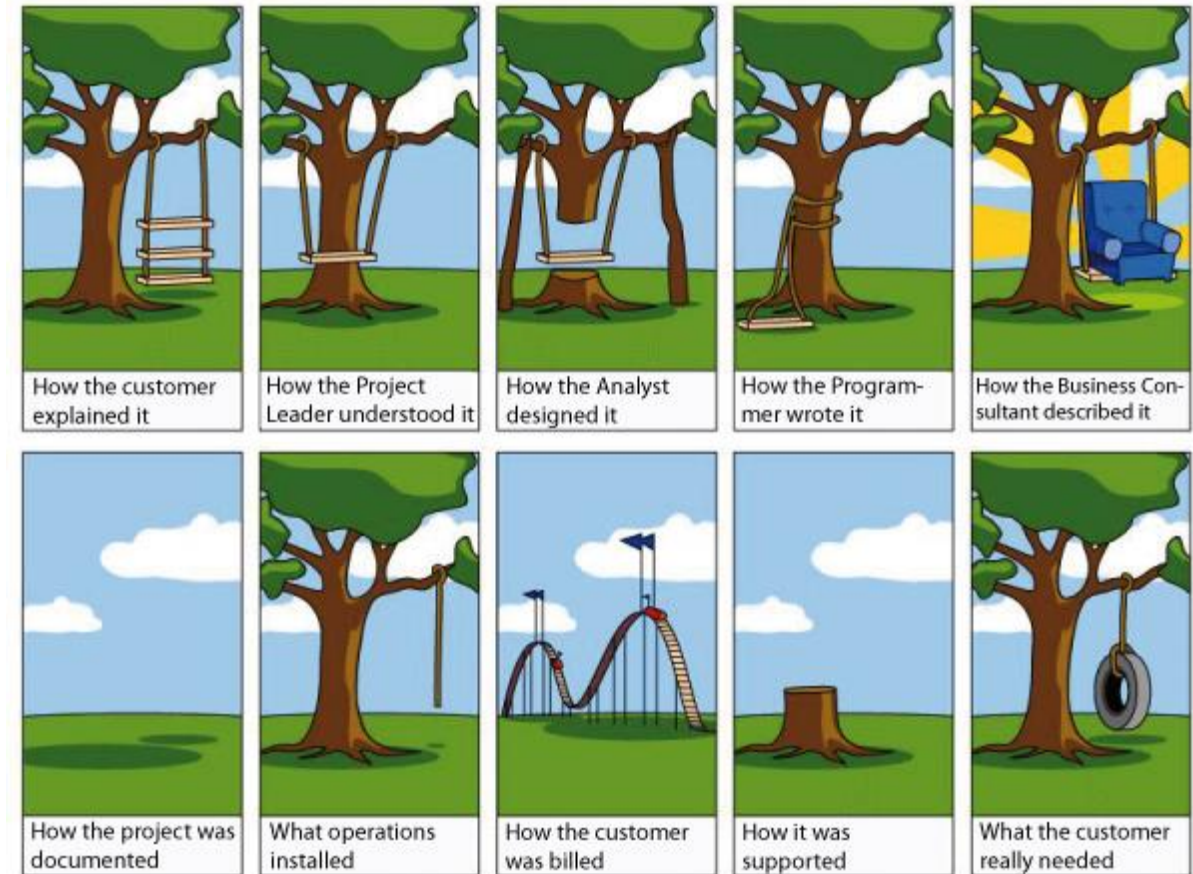
Investing time on good analysis at the early stages of a project can save time and money later on

User Centred Design

In the past, developers focused **only on function** and often expected users to **learn** and **adapt** to new sites or programs

To help ensure that developers have a good understanding of user *and* functional requirements, **User Centred Design (UCD)** methodologies are followed

This places the focus of the development process on the **needs, wants** and **abilities** of the **end-users**



Planning for the User



Effective websites meet their users' needs

Design teams need to have a good understanding of **how the site will be used** (the ***context of use***)

This requires an understanding of ...

- **Who** the users are (*user requirements*)
- What the users expect to be able to **see** or **do** while using the website (*functional requirements*)
- **Where** the website will be used

Knowing the Target Audience

Websites are *not* usually made for use by a specific group of *known* people – *how do developers meet the needs of unknown users?*



Developers need to make **assumptions** about the needs of **typical users**

Information is gathered from **focus groups** and **interviews** with groups of people considered to be *representative* of the *target audience*



Web analytics tools are used to gather information about *website traffic* and how users *interact* with site content





User Profiles

Data gathered from interviews and focus groups allows development teams to create **profiles of their typical users**

From the profile data, they can create user **personas**

- Invented users who have the characteristics of typical users

User scenarios and **use cases** will be developed for the invented personas

- These contain details of the tasks that the target audience are likely to try to use the website for



User Personas

A website will normally be used by a **range of people** with different needs and skills

Development teams will aim to use **more than one persona**, but probably no more than four

- The personas should be **representative** of the main audience
- It will never be possible to plan for all possible users

The personas used will identify the **important characteristics** of the target audience

- Characteristics that occur most often in focus groups & interviews**
- Identify characteristics that relate to the site & its use**



User Personas

Main types of users are then identified based on shared characteristics

A **persona** is then developed for each of the user types identified

Detail is then added to make each persona more realistic

Busy Student
Doohickey Company, Inc.



Jack Williams
Undergraduate Student

Quick Stats
Age: 21
Occupation: Student
Location: Miami, FL
Status: Single

About Jack
Jack is the an undergraduate student at the University of Miami (Florida) where he's studying international business. He holds a part-time job plus is preparing for a summer internship and needs a doohickey to help him study during his busiest times. Maximizing his efficiency will help Jack graduate a semester early so he can jump into the real-world and score his dream job faster.

User Behavior

Goals:
Find a credible doohickey
Take a demo of the doohickey to assess its effectiveness
Buy a doohickey

Actions:
Read about Doohickey Company's core products
Scope price and cost-effectiveness
Take a demo on the Doohickey Company's site
Read reviews
Purchase the doohickey via PayPal

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User Personas

A finished persona will identify ...

- Persona / User **Group** (*type of user*)
- Invented **Name**
- **Job** Title / **Role** Description
- **Age, Education, Marital Status, Gender, Ethnicity**
- Physical, Social and Technological **Environment**
- **Goals** that this “person” has while using the website
- **Quote / statement** of what matters most regarding the site
- **Photo** representing a typical member of the Persona Group



Example persona *(from Usability.gov)*

Persona: USDA Senior Manager Gatekeeper

Fictional name: Matthew Johnson

Job title/major responsibilities: Program Staff Director, USDA

Demographics:

51 years old

Married

Father of three children

Grandfather of one child

Has a Ph.D. in Agricultural Economics.

Photo:



Goals and tasks:

He is focused, goal-oriented within a strong leadership role. One of his concerns is maintaining quality across all output of programs.

Spends his work time:

- Requesting and reviewing research reports,
- preparing memos and briefs for agency heads, and
- supervising staff efforts in food safety and inspection.

Environment:

He is comfortable using a computer and refers to himself as an intermediate Internet user. He is connected via a T1 connection at work and dial-up at home. He uses email extensively and uses the web about 1.5 hours during his work day.

Quote:

“Can you get me that staff analysis by Tuesday?”

Persona developed by the U.S. Department of Agriculture's (USDA) Economic Research Service (ERS).





Example persona

Kevin Bailey

AGE 53

OCCUPATION Entrepreneur, Business Owner

LOCATION On site & Remote

TIER Daily use - Overview

ARCHETYPE Leader

Decisive

Value Orientated



"Up to date data is imperative for effective decision making."

Motivations

Incentive

Achievement

Growth

Power

Social

Goals

- To receive a product of high standard, willing to pay for it
- Needs to know whether he is receiving value for money
- Would like to have 27/4 overview of current projects and ow resources are distributed

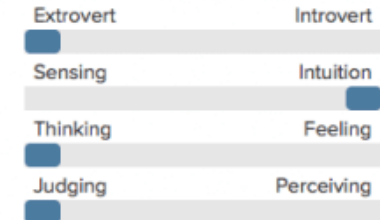
Frustrations

- Not being able to get a clear answer
- Not being able to access up to date data no matter where he is located
- Not knowing factors why a product or service he is funding is not progressing

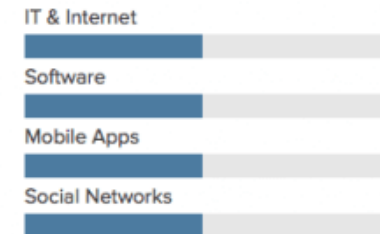
Bio

A self made business person who knows how important time is to a business. Have different interests in multiple ventures. Believes that technology assist in growth.

Personality



Technology



Brands

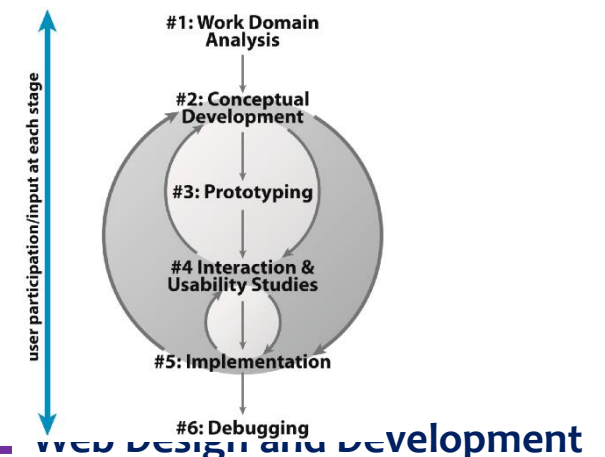
Brands which inspire



Focus Group Involvement

Focus group members may be consulted at various stages of the website development process to help check that the work closely matches user needs

- Creating the specification (*analysis phase*)
- Discussion of early plans and wireframes (*design phase*)
- Testing of prototypes (*design phase*)
- Testing of finished website (*testing & evaluation phases*)

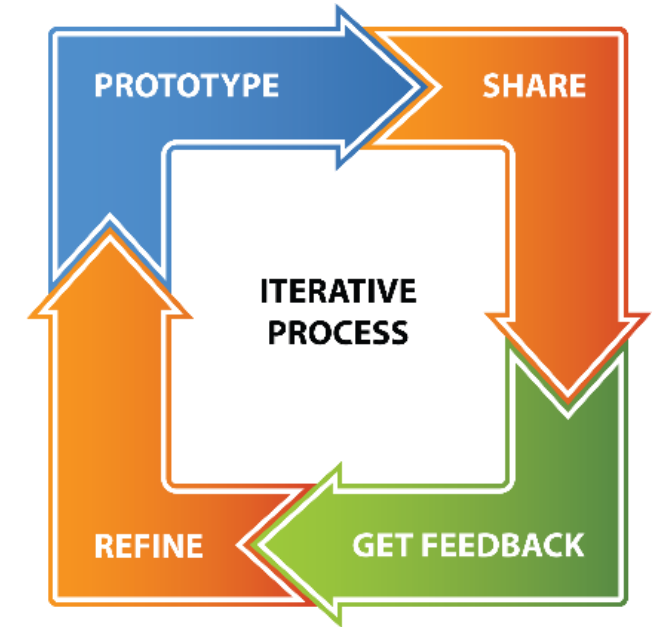




Focus Group Involvement

Regular “user” involvement during development helps to identify and fix usability problems quickly

- Developers can gather and use feedback about the overall user experience , including the “look and feel” of the site as the site is built
- Often easier to correct problems at an earlier stage





Creating the Design Specification

When the development team has a good understanding of the requirements for the website, a written **specification document** is produced

A specification document will detail ...

- User and functional requirements
- Requirements for usability to be acceptable
- Test methods
 - o How the finished site will be tested to ensure that the stated requirements have been met

F2 » Menu

Navigation between the major functions of the mobile application will be performed with the Menu button in the masthead.

- 1 The menu button is described iconically and with a text label, in the right side of the masthead bar, at the top of almost every page.
- 2 When selected, the page contents (not to include the masthead) are grayed out; a black overlay with 50% alpha transparency blocks the current area and items on the page cannot be selected.
- 3 The menu animates down from the masthead as though it lives in a layer behind the red masthead background, but above the page contents.
- 4 Each item occupies one line, with an arrow to the right indicating it is a selectable item. Selecting any item in the menu will load that page immediately.
- 5 Selecting any content outside the menu, including the Menu button in the masthead, will collapse the menu.
- 6 For Android devices with a hardware menu button, selecting the button will load the Menu as described above, and not a default Android menu.

Items in the menu are options available to that specific page or section. There is no indicator for being within that menu item as the menu item is not available when on that page. Items designated as "All" on the table below are removed when on that page, such as Settings.

Menu Item	Present on	Target
• Latest Snapshot	All, except when viewing latest snapshot on G2 - Whenever latest snapshot exists	G2
Equipment History	All - When any history exists	C10
About	All	A1
Settings	All	E1
Contact Customers	All	C1
Clear Device Fault Codes	C1	Pagep F1a
• Clear All Fault Codes	C1	Pagep F1b
Name Your Equipment	C2, C2a	Pagep C7
• Change Equipment Info	C2	Pagep C7a
Switch to Metric (U.S. Units)	C1, C4, C9	Change display as selected
Share	C1, C4, C9	ACTION: MND insert chooser
Delete This History	C1a, 4a, 5a in history view	Pagep F1a
• Delete All History	C2a, 4a, 5a in history view, C1	Pagep F1b

F2 - Expanded Menu

