Developing prototypes

Creating a more detailed design

Once there is a direction to pursue, we can go into more detail:

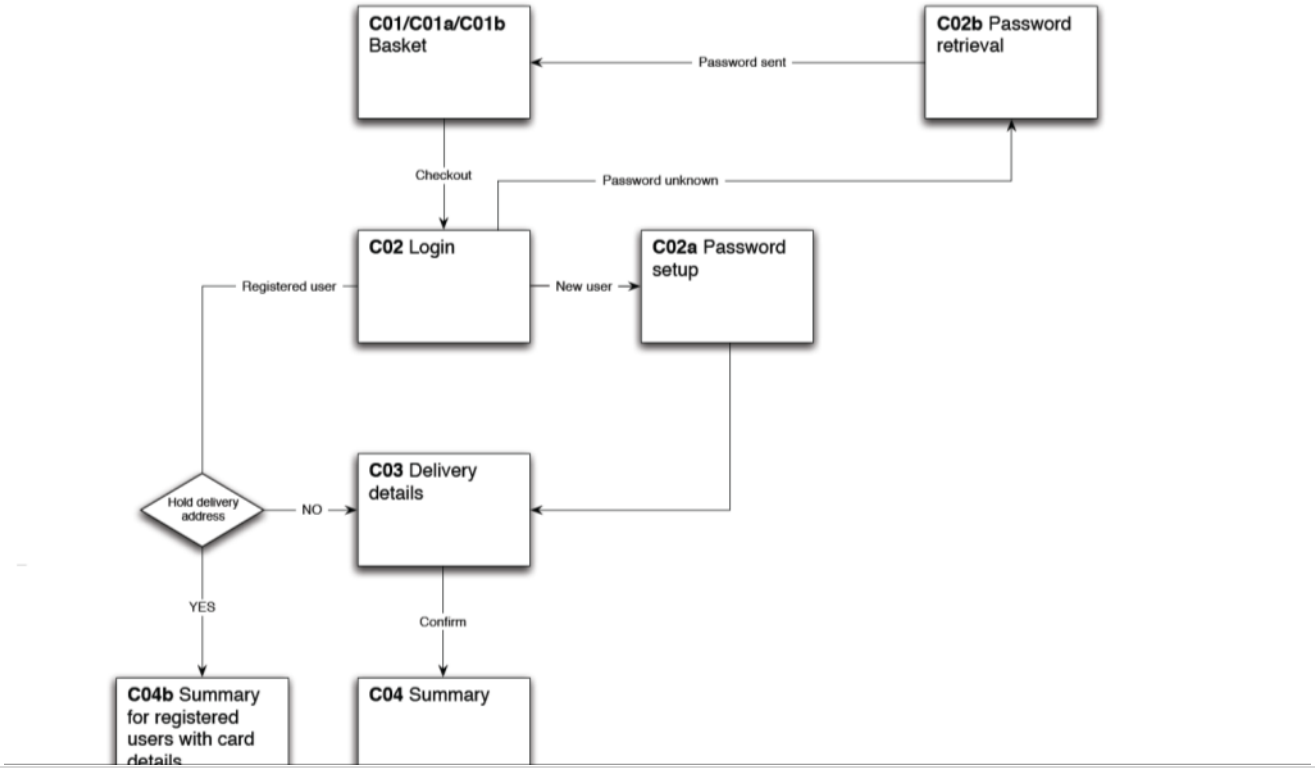
- Create more detailed use scenarios to work out the different pieces of **functionality** and **information** user will require
- Turn them into **flow charts** and **site architecture diagrams** to describe flow and structure
- Finally, we create **prototypes** at varying levels of fidelity

Throughout the process we evaluate and iterate the design

Site architecture diagrams

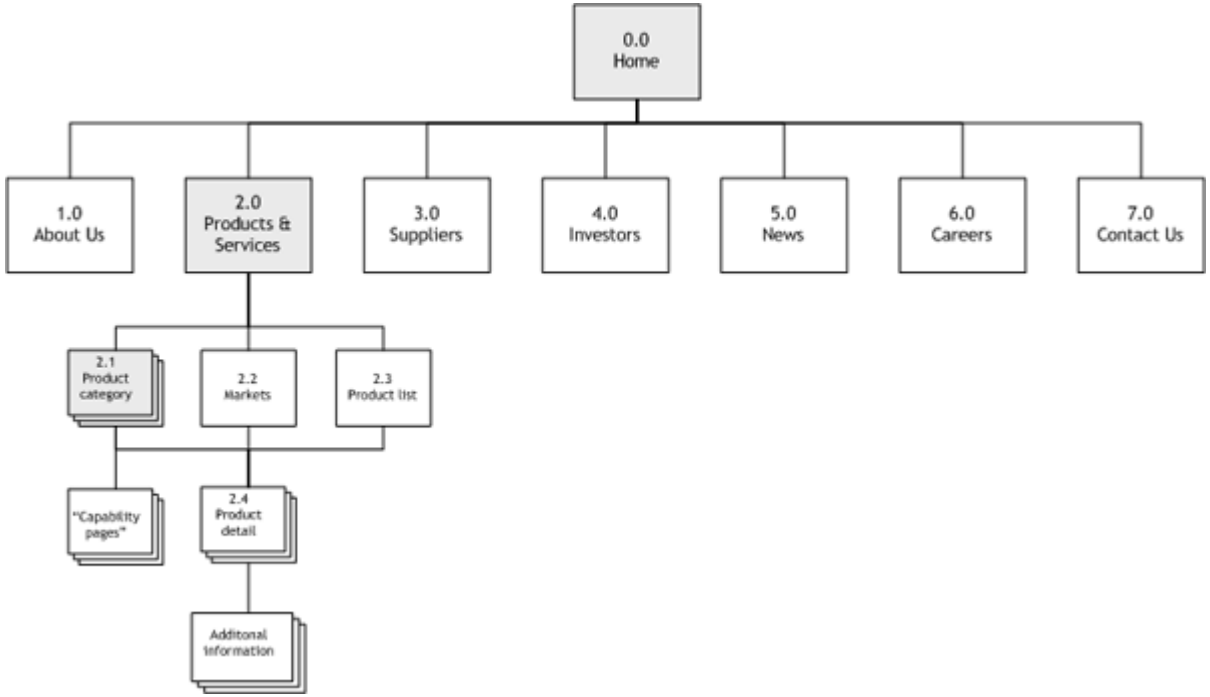
- **Flow charts** are a way to describe how users interact with a system in a **sequential** way
- **Site architecture diagrams** are a way to describe the content structure of a website in a diagrammatic format and a **hierarchical** way
  - Each page has a unique number
  - Represent each level on its own row

Flow chart



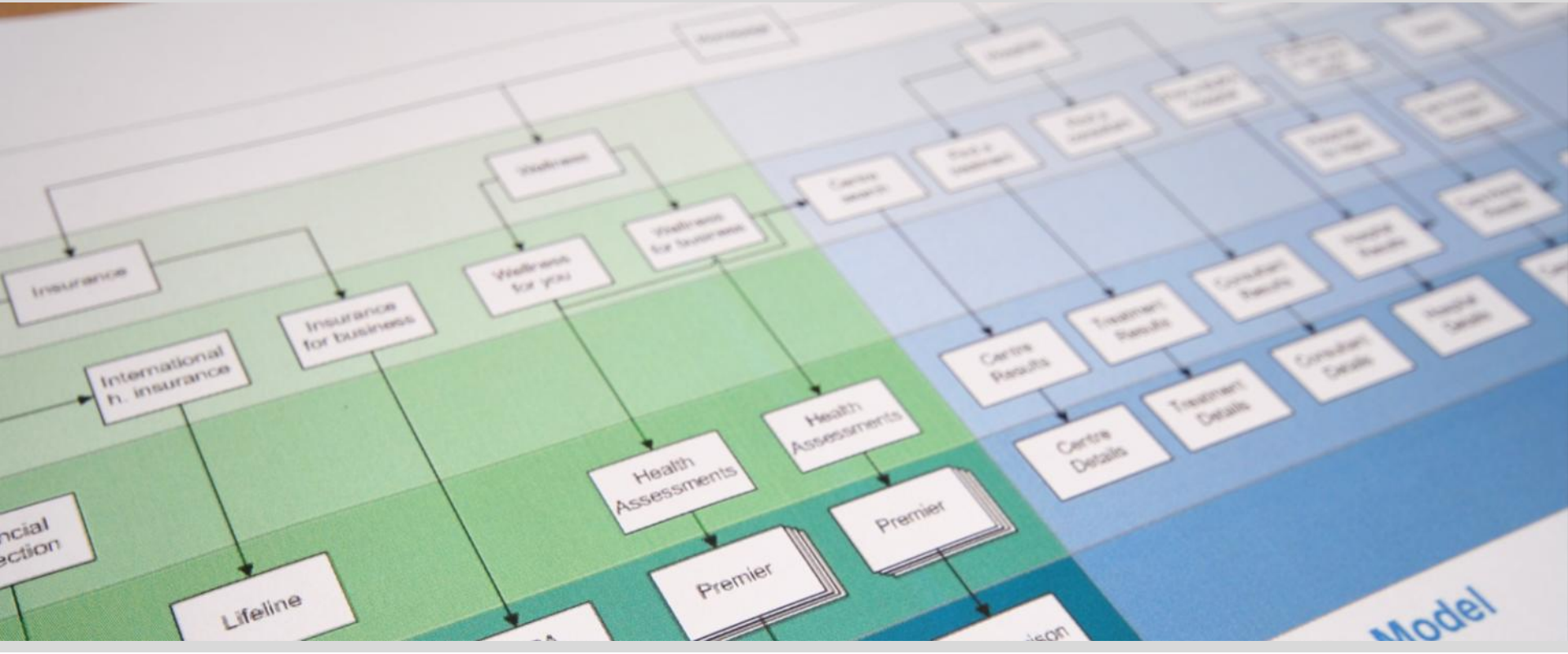
This flow diagram shows part of a e-commerce checkout flow

Site architecture diagrams



The structure of a website is usually shown in a site architecture diagram

Site architecture diagrams



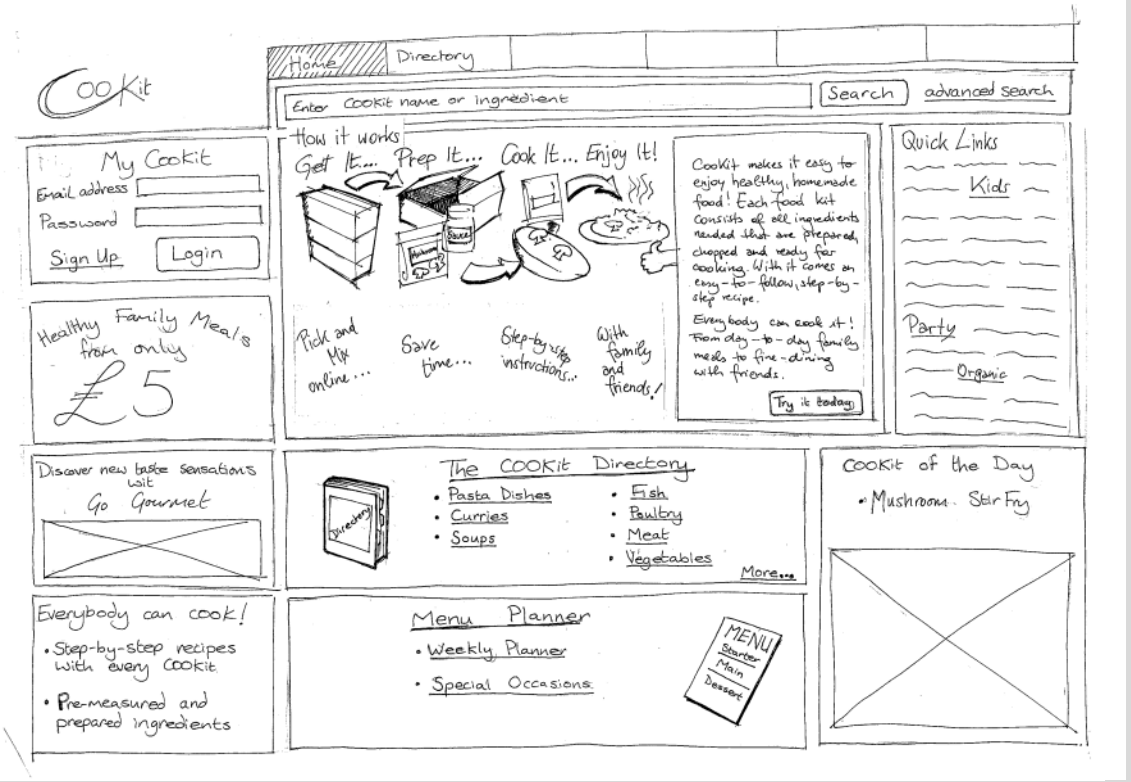
This diagram show clearly how many levels exist in the page hierarchy

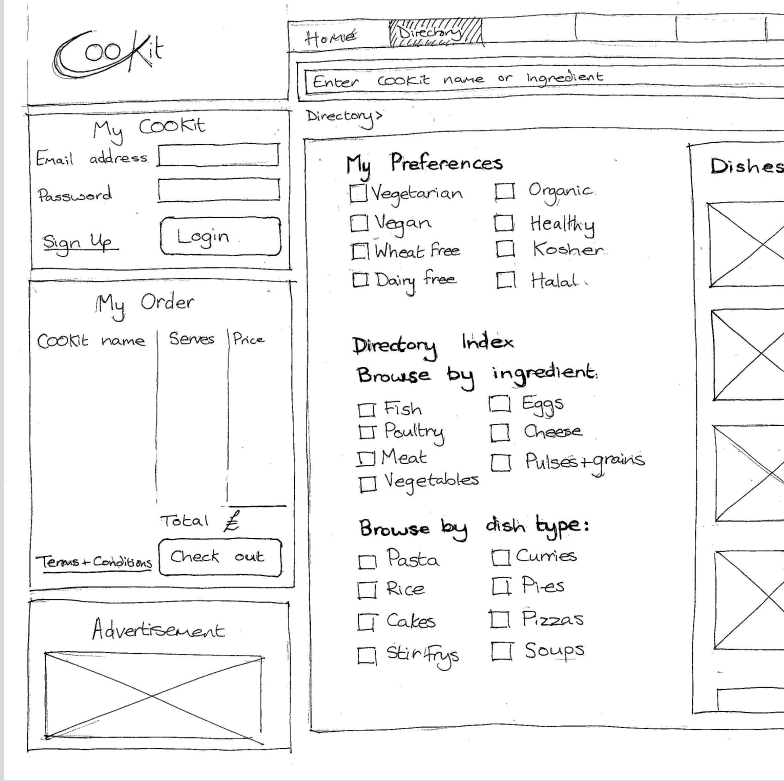
Wireframes

Wireframes are low to medium fidelity prototypes of interfaces

- They describe **structure** and **types** of content
- They normally show **navigation** and form part of a **bigger prototypes**
- Normally, before visual design commences, the interaction design or information architect(s) create a wireframe specification outlining **page structures, content, task flows** and **site structure**

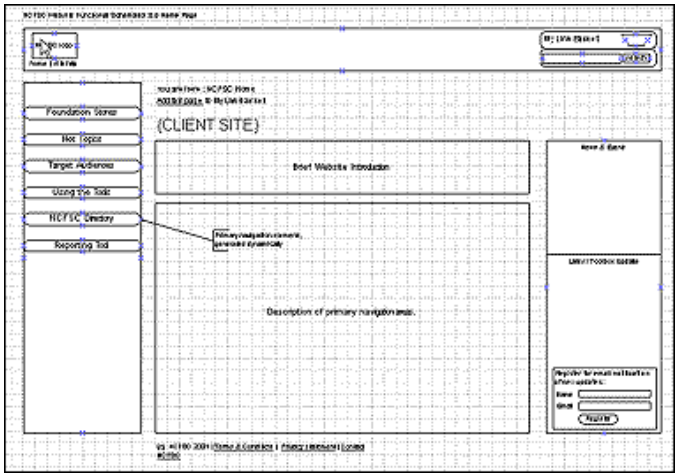
Hand-drawn wireframes

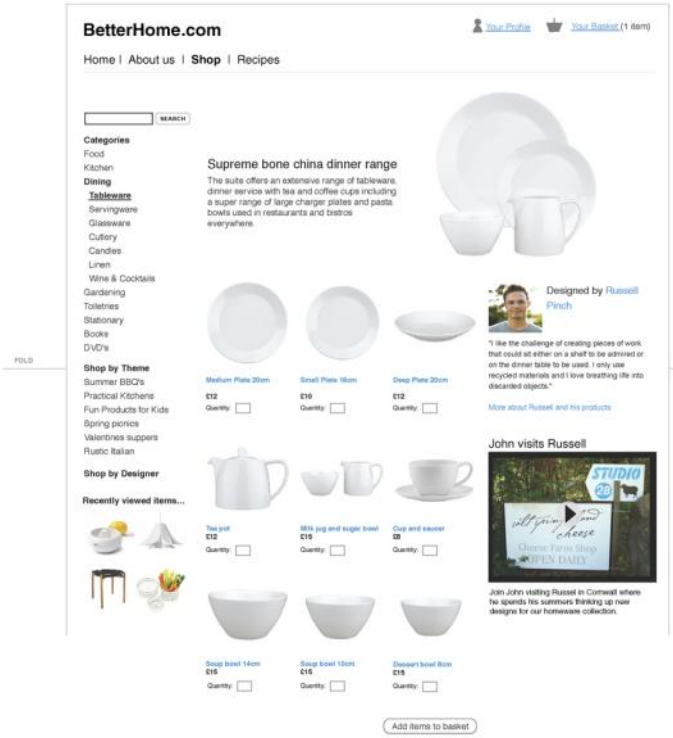




These are examples for hand-drawn wireframes

Wireframes

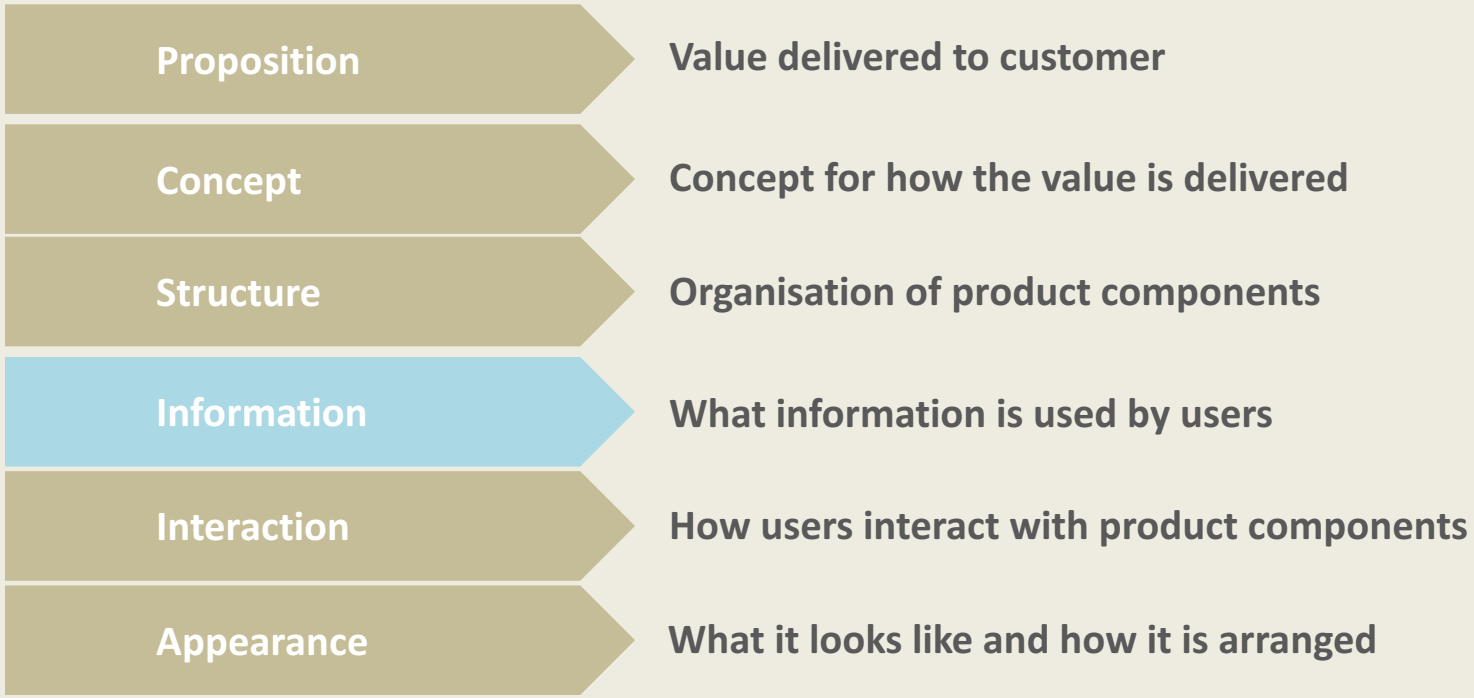




These wireframes have been produced in Visio. The one on the left is high-level and describes key areas of the page, the one on the right has been filled with example content to make it more meaningful for user testing.

Producing content

The elements of user experience



…one view of it. Here's another one

Identifying content needs

- Now you've got a rough structure, you can start thinking about **what content you require** for the site for example: an "About us" page, product information, contact details
- If you're dealing with an existing site, of have lots on pre-written material, you need to conduct a content audit
- You can often do this automatically with tools like Screaming Frog or Xenu Link Sleuth
- See also: Doing a Content Inventory (Or, A Mind-Numbingly Detailed Odyssey Through Your Web Site), How to do a content audit

What to look out for

On the web, these things matter most about content:

- **Quality** – users need to see quality content to gain trust in your site
- **Relevance to user goals** –the content needs to match what users are looking for
- **Succinctness** – don’t waste your site visitor's time!
- **Scan-ability** – the ability of users to quickly scan the page to relevant information
- **Legibility** – reading from a screen is tiresome, don’t make it harder than it needs to be
- **Authenticity and Credibility** – if your content doesn’t come across as credible, visitors will leave

Make sure the content is of high quality

- **No spelling errors or typos** – use a spellchecker
- **Good grammar**
- Provide **engaging,** well-written text (be creative!)
- **Avoid jargon & acronyms**

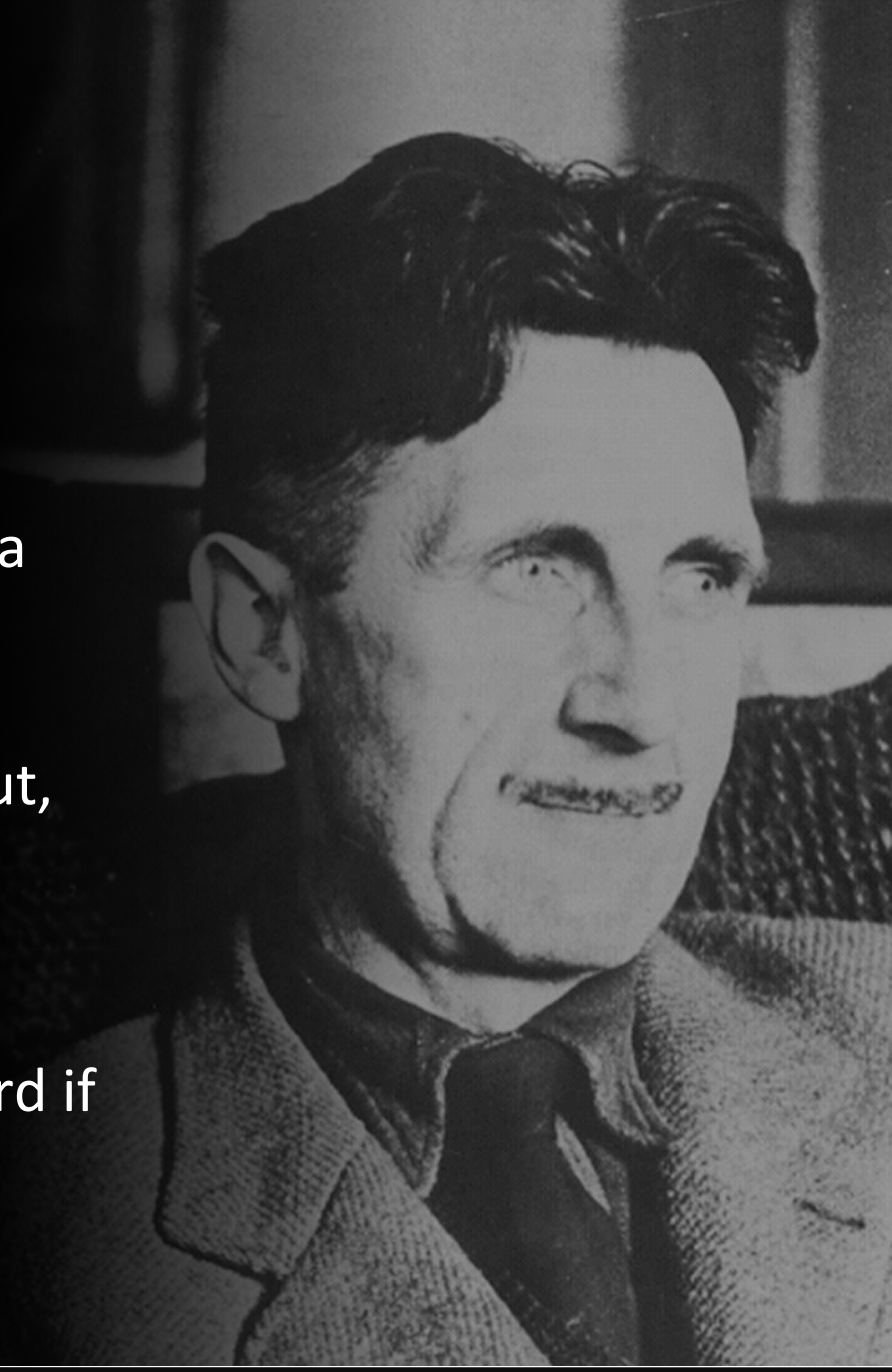
Be succinct!

George Orwell's tips:

1. **Never use a long word** where a short one will do.

2. If it is possible to cut a word out, then always **cut it out.**

3. **Never use a foreign phrase,** a scientific word, or a jargon word if you can think of an everyday equivalent.



Make pages scan-able

- **On the web, people scan-read** looking for salient words and the next hyperlink that seems to be the closest match to their goal (the 'scent of information')
- This process is also called **'information foraging'** Jakob's alert on this topic
- This is very similar to the way we read newspapers. Why? What are the design implications?

Make pages scan-able

Allow users to scan-read the page to find relevant content:

- Use **meaningful headlines**
- Split text into paragraphs with **sub headings**
- **Bullet points** are useful
- **Highlighting** and *emphasis* where appropriate
- Good **visual hierarchy** of text, e.g. Boxes and arrows
- **"Inverted pyramid"** style of writing: summarise first, e.g. BBC
- Compare these pages: HROD Consultancy, Craig's list, The Guardian

Make pages scannable

- **Avoid pages becoming too long**
- Generally users don't have a problem to scroll a little if they think they will find what they are looking for
- **However, try to split up very long pages** (but provide printable versions of the full text)
- **It's 25% slower to read from screen** than paper
- **Avoid horizontal scrolling**
- **Be concise** – avoid waffle
- **Avoid** scrollstoppers

Make it legible

- **Use plain backgrounds**
- **Don't write in uppercase**
- **Avoid small font sizes** for key content
- **Avoid long paragraphs** of text
- **Avoid wide fixed column widths**

IT'S VERY DIFFICULT TO READ FROM A SCREEN ANYWAY. PUTTING EVERYTHING IN UPPERCASE MAKES IT EVEN HARDER BECAUSE IT REDUCES THE SPACING BETWEEN LETTERS. IT ALSO MAKES IT SOUND LIKE YOU ARE SHOUTING ALL THE TIME. SO THE BEST THING TO DO IS AVOID IT UNLESS YOU REALLY NEED TO.

Links

- Writing for the Web (from Jakob Nielsen)

Designing effective homepages

A bad example…

A bad example…

- Overwhelming number of links
- No clear path for eye to follow
- Every department has their share of space so they are politically “satisfied”
- No clear sense of proposition, brand or any clear calls to action.

“The opportunity lost by increasing the amount of blank space is gained back with enhanced attention on what remains.”

Prof. John Maeda MIT

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Some recommendations for designing effective homepages:

- Show a clear **proposition message:** “What is this site for?”
- Show a clear **Unique Selling Point:** “What makes this site better than the alternatives?”
- **Call to action:** for priority tasks – make it clear what the user can do
- Create **clear entrypoints** into the site that consider different user needs (remember four modes of information seeking)
- **Actual content:** don’t provide abstract description of what the site will offer – provide excerpts of the actual content
- **Search box:** if you can provide a high-quality search do so: some users just want to search

Discuss: *Review this homepage*

Have a look at the next page

- What does this company offer?
- What questions do you have?

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WE LOVE YOUR OPERATOR

Home | How it works | Rates | Get help | Log in

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We love your operator

Because they give you inclusive minutes with your contract

Free your minutes!

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Rebtel Countries

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Your mobile

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Name

Your friend's mobile

Afghanistan

+93

Name

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I can't find my country | We promise not to sell your info to anyone | Calling destinations

What they're saying about Rebtel

RED HERRING 100 WINNER 2004 | USA TODAY | NBC NEWS | International Herald Tribune THE WORLD'S DAILY NEWSPAPER | FORTUNE

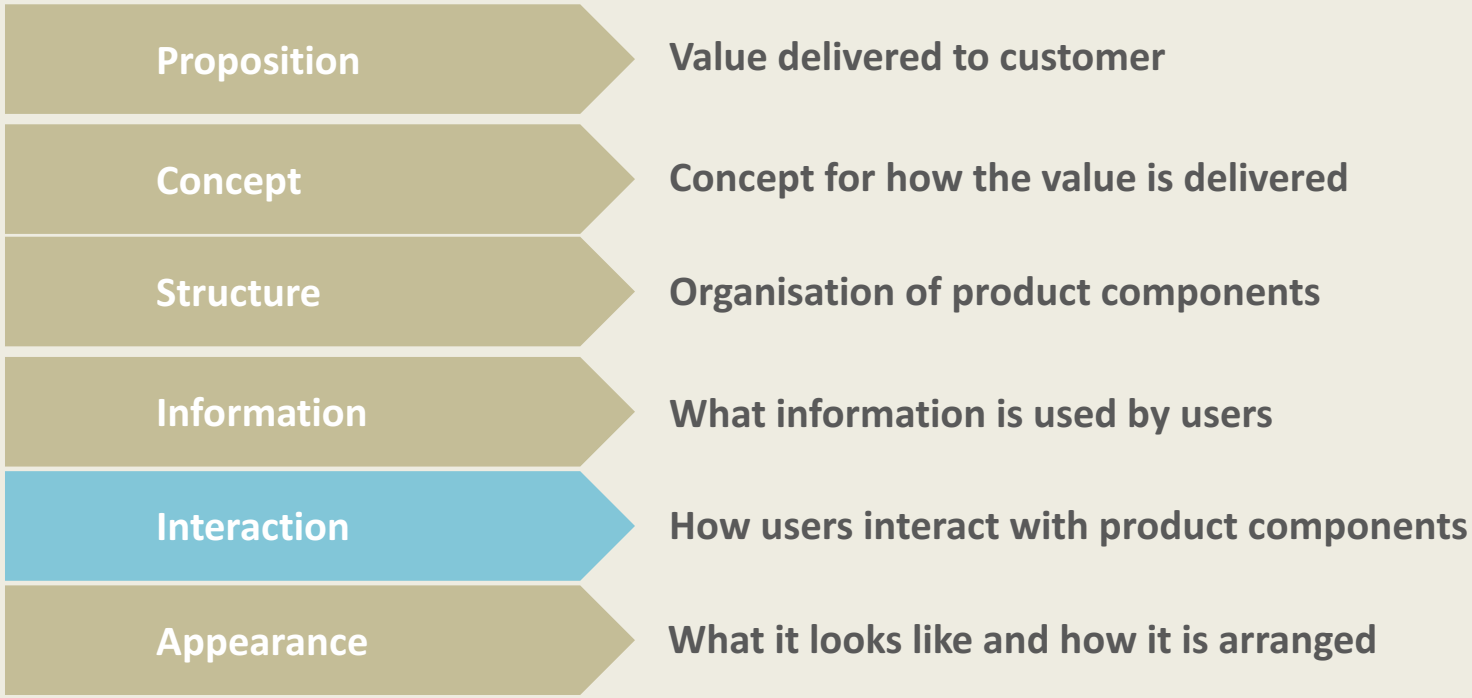
Task: *Sketch a wireframe*

- Think of the *Deliverease* homepage
- How will you explain the **proposition** of the site?
- What could the **structure** of the page look like?
- How can users **navigate** the site?

- **Sketch a wireframe** of the page
- **Annotate** with your comments
- Start simple, then progressively layer on more detail

Interaction design

The elements of user experience



…one view of it. Here's another one

Interfaces & interactions

- Task analysis allowed us to specify the **main goals of users** and the **steps required** to achieve them
- We now need to start translating this detailed **interactions** and how this will be achieved using the **user interface**
- **Interaction design** is concerned with designing the dialogue between the human and the machine
- Key aspects of interaction design are:
  - Task flow & Task Support
  - Action/Reaction
  - Behaviour of UI component
  - State of UI components
  - Error prevention

Patterns

- A **pattern** describes an **optimal solution to a common problem** within a specific context
- **Patterns** for interface and interaction design are now emerging
- The term is taken from the book ‘A Pattern language‘, originally invented by the architect Christopher Alexander

Web interfaces: pattern libraries & frameworks

- **Bootstrap**
- **Yahoo! design pattern library**
- **Semantic UI**

- **See also:** 37 Signals' article An Introduction to Using Patterns in Web Design

Pattern language applied to interactions and tasks

- **What are the components of an online shopping experience?** e.g. login, selection, shopping cart, payment, order-tracking, etc...
- **How do these parts fit together?** e.g. need to have login before anything else can happen, payment must occur before order tracking, an error message needs to be generated if the password is wrong, etc...
- **What's the best way to design individual interface components?** e.g. use drop down boxes or free text for dates when registering? radio buttons or check boxes for making selections? etc...
- **Once you know about user tasks and goals, and what content is available, you have to be precise** and logical to map interactions that support these goals.

Visualising interactions

- User experience designers usually use **flowcharts (workflows)** to describe the interactions in the site they are designing
- Usually use a tool like Sketch (Mac), Balsamic, **Microsoft Visio** (PC) or **Omni Graffle** (Mac)

Creating a functional specification

Some or all of the following may be found in a **functional specification document:**

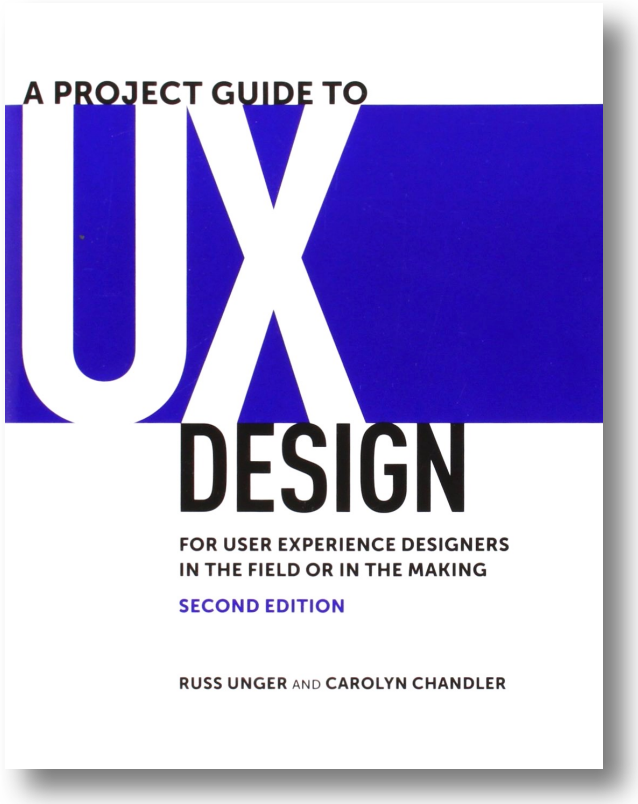
- Business analysis
- Competitor analysis
- User analysis (may include personas)
- Task analysis (may include scenarios)
- Technical requirements
- Site map/architecture
- Task/workflows (interaction design)
- Prototypes (mock-ups)

Further reading…

Chapter 8: Content Strategy

Chapter 9: Transition

Chapter 10: Design Principles

Chapter 11: Site maps and task flows

Chapter 12: Wireframes