Analysis

Graded unit

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## Introduction

Lidiflu Ltd are a Lanarkshire based company that supply mechanical instruments and components for the renewables industry, more specifically windmills used to generate electricity. Currently they have an old fashioned static style website and are looking to update this to an e-commerce site. This will allow them to market their goods to a wider audience and reflect better their brand.

## 

## The Project Brief

Lidiflu Ltd are a Lanarkshire based company, with additional premises in Birmingham. They provide complete mechanical instrument solutions for the renewables industry.

Lidiflu have a very out-dated static website and would the website redesigned and developed into an e-commerce version so that they can sell their lower value products online and target more customers.

They require an up-to-date standards compliant, SEO optimised e-commerce website. This would give the company a greater marketing and promotion advantage by allowing marketing of their company and products to a much wider geographic area. They have a simple logo which must be used.

## Client Questionnaire/feedback

1. **Briefly describe your business**

Lidiflu Ltd is a Lanarkshire based company that supply mechanical instruments and components for the renewables industry, more specifically windmills used to generate electricity. We currently have site in Lanarkshire and Birmingham. We also employ free-lance engineers who offer repair and engineering services for our customer’s windmills.

1. **Please describe what functionality you have in mind for the website? What is it that you need it to do to help your business succeed?** 
   1. Sell engineering products for the windmill industry
   2. Allow customers to login, save details, purchase goods and services
   3. Store customer information for repeat business
   4. Book maintenance of windmills online
   5. Use paypal to purchase services
   6. Show information about the weather(wind speed) on the site
      1. If its very windy display advertisement for maintenance of windmills
   7. Display gallery of windy places
   8. Display twitter feed
   9. Login as customer
   10. Login as owner
   11. Add products to database
2. **Please describe your potential customers. Pay special attention to their income, interests, gender, age, even type of computer they use, e.g., old with dialup account or newer with broadband.**

Mostly medium to large B2B customers looking to purchase parts for windmills. There may also be some B2C interaction for wind enthusiasts.

1. **Do you have a database?**

Yes there are three SQL databases.

* 1. If so, what data is there stored and where is it held?
     1. Customer Details database- stores information about customers
        1. Name
        2. Address
        3. Email
        4. Telephone Numbers
        5. Current Orders
        6. Previous Orders
        7. Payment details
           1. Card number
           2. Card address
           3. Bank address
     2. Products Database –stores information about products sold
        1. Product title
        2. Product ID
        3. Product Image
        4. Dimensions
           1. Height, width, length, weight
        5. Description
        6. Cost
     3. Engineer Database – stores information about engineers
        1. Name
        2. ID
        3. Current Job
        4. Previous completed jobs
        5. Telephone number

The databases are stored at the Birmingham location.

1. **Can you describe the products and their properties etc?**

Products are industrial parts such as turbines, clutches, generators, mountings and windmill blades used in the renewable energy industry. Information about products are stored in the Products database(see above)

1. **Do you have any graphics of the products?**

Yes, however they will need to be optimised for use on the website.

1. **Do you have any thoughts on the look of the website?**

The website will have a professional and clean feel that will represent the ethos of the company, whilst also reflecting the products and services being offered by us.

1. **Do you have any previous marketing or corporate branding? Will this affect the design of the site?**

We currently have a logo which must be used. Any design decision should incorporate this logo as well as reflecting the products and services being sold by the company. Colour schemes, media content and should also tie in with the logo.

1. **What is your deadline for completing the site?**
2. **What is your budget for this project?**
3. **If you were using a search engine, what words or phrases would you use to find your site? Which of these words or phrases is most important? Second?**

First: Windfarm, wind turbine , energy , renewables, parts manufacturer , parts distributors, energy from sustainable sources, international delivery

Second: brakes, clutches, couplings and friction material

1. **Will the website need to be updated regularly? If so is this something that you would be doing yourself?**

Yes the website will need to update regularly with new products. There will be the need to for me to login as a supervisor/owner and add new products to the database/site.

1. **Do you require a mobile site/app?**

Yes, we require a mobile app for our engineers. The app will allow the engineers to check for jobs in their area, sign-up for the job and mark when it has been completed.

1. **Do you have any preferred payment system?**

I would prefer to use Paypal for any transaction, however all forms of digital payment should be available.

1. **E-marketing? Do you have any social media site set up?**

Yes we have twitter and facebook accounts. We would like to have feeds of our twitter account to be displayed on the homepage.

## What are functional and non-functional requirements?

A Functional Requirement is a requirement that, when satisfied, will allow the user to perform some kind of function. A Non-Functional Requirement is usually some form of constraint or restriction that must be considered when designing the solution.

### Functional Requirements of website

* 1. Sell engineering products for the windmill industry
  2. Allow customers to login, save details, purchase goods and services online
  3. Book maintenance of windmills online
  4. Show information about the weather(wind speed) on the site
     1. If it’s very windy display advertisement for maintenance of windmills
  5. Display gallery of windy places
  6. Display twitter feed
  7. Login as customer
  8. Login as owner
  9. Access current database for products to be displayed for sale
  10. Add/remove products to the products database
  11. Store customer information for repeat business in database

### Non-Functional Requirements of website

1. Must be designed to appeal to and be easy to use for target audience
2. Fully accessible on pc/laptops
3. Fully accessible on mobile devices
4. Complies with current web standards for accessibility, usability and coding
5. Payment system should be by paypal
6. Must use current logo
7. Must be completed by
8. Must be completed for £
9. Must be SEO
10. User friendly
11. Design must reflect type of business and incorporate elements such as colours form logo

### Functional Requirements of mobile app

* 1. Secure login by engineers
  2. View all active jobs in their area
  3. Sign-up for job
  4. Mark job as complete

### Non-Functional Requirements of mobile app

1. Complies with current web standards for accessibility, usability and coding
2. Must use current logo
3. Must be completed by
4. Must be completed for £
5. User friendly
6. Design must reflect type of business and incorporate elements such as colours form logo

## System Requirements

|  |  |
| --- | --- |
| Browser | Internet Explorer, Firefox, Chrome, Safari, Opera |
| Screen Resolution | 800x600, 1024x786 or higher |
| Access | Access will mostly likely be from Office and other Businesses, or through mobile devices (see below). |
| Plug-Ins (mandatory) | Flash, Silverlight |
| Plug-Ins (optional) | HTML5 compatible |
| Graphics | All graphics will be optimised for web usage, keeping balance between file size and graphic quality. Images will be used with discretion to create high impact design but without compromising download speeds |
| Video | All videos will be optimised for web usage, keeping balance between file size and quality. Videos will be used with discretion to create high impact design but without compromising download speeds. |
| Mobile Devices | A separate app will be created to work with mobile devices. |
| Machine Specs | Mostly likely professionals businesses using mid-range hardware. Connection speeds will vary but site must be usable for low speed connections |

## Objectives

## Target Audience

|  |  |
| --- | --- |
| User1 = Business to Business | |
| Age | 22-55 |
| Gender | Male/Female |
| Location | National |
| Ethnicity | White/Pakistani/Chinese |
| PC Literacy | Varied - intermediate/advanced |
| Special Requirements | Possible sight/hearing difficulties |

|  |  |
| --- | --- |
| User2 = Owner | |
| Age | 22-55 |
| Gender | Male/Female |
| Location | Local |
| Ethnicity | White/Pakistani/Chinese |
| PC Literacy | Intermediate/advanced |
| Special Requirements | May have range of disabilities. |
| User3 = Engineer | |
| Age | 22-55 |
| Gender | Male |
| Location | Local |
| Ethnicity | White/Pakistani/Chinese |
| PC Literacy | Intermediate/advanced |
| Special Requirements | Possible sight/hearing difficulties.  Use within the field. |

## **Task Analysis**

|  |  |
| --- | --- |
| Task | Performed By |
| Find information about the time and date of the bonfire activity | Scout/Parent |
| View images of the Ben Lomond camping expedition | Scout/Parent |
| Register as a helper for the bonfire night activity | Parent |
| Find the information needed on how to obtain disclosure | Parent |
| Play one full game of hangman | Scout |
| Print off information on knot tying badge level 1 | Scout |
| Upload photos of Ben Lomond camping expedition | Scout/Parent |
| Log-in securely as a leader and go to helper upload page | Leader |
| Delete information on helper – Niall Ferguson | Leader |
| Modify information on helper – Yvonne Dickson – by changing her availability to Tuesday evenings | Leader |
| Find and view information regarding all registered helpers | Leader |

## 

## Heuristics

### 1. Visibility of system status

All links will be clearly highlighted using colour, which will be used consistently through the site. Navigation links will be clearly shown and user will be able track where they are using breadcrumbs. Login status will be clearly shown on the site and relevant feedback will be given to user when they register. Notification of status and completion of photo uploads will be given at each step, as well as notification on how far the user is in each process. Conformation will be given to user when they register as new customer.

### 2. Match between the system and the real world

All copy will be written with the target audience in mind. Jargon free and easy to understand language will be used to make the site user friendly for the target audience. Copy will reflect the real world with use of language and phrases familiar to those users. Information will be presented in a logical way with real world conventions i.e. from left to right and top to bottom, with different sections of information delineated be white space and headings.

### 3. User control and freedom

The design of the website will give users the ability to move freely to almost any page within the website. This will be achieved by the consistent placement of navigation links situated in the header section of every page and the ability to reach the homepage through a clickable logo. User will also be able to navigate and know where they are via breadbrumb links.

### 4. Consistency and standards

The website will be consistent and conform to web standards as set out by W3C. The site will have consisted layout, sticking to the convention of three main sections of header, variable main content and footer.

Links will be highlighted in separate colours and no underlines will be used in any body text to avoid confusion. All h1, h2 and body text will be defined by colour and size, which will be used consistently throughout the site. Flow of information will be left to right and top to bottom. All button will be clearly labelled with conventional titles and will be designed consistently throughout site.

All HTML will be validated by W3C, to conform to the internationally agreed standards.

### 5. Error prevention

Only essential and well developed technologies will be used on the site to minimise any potential errors. Regular testing will be carried out to make sure that all aspects of functionality are working. Any potential errors when carrying out a task will be clearly notified to the user in the form of a concise and informative dialogue box. All 404 messages will be customised and informative as to the error.

### 6. Aesthetic and minimalist design

The website design will be clear, simple and without any extraneous design elements that might confuse users and stop them from finding the information they require. All dialogue boxes or information boxes will have only relevant information. Only well implemented and relevant technologies will be used in the site to allow users to perform any task or find information.

## 

## Site Structure

Checkout

Shopping Cart

Home

Login/Register

Products

Contact

Admin

About

Gallery

Upload Photo

Add Product

Add Job

Fig1: Site structure of the Lidiflu Ltd Website

The site structure chosen will be a composite of hierarchy and linear (Figure 1). A hierarchical structure allows for a logical and easy to use navigation structure, with a central homepage which will branch down with further subpages. This allows the three main user types to each have a section and then subsequent pages and subpages which contain relevant information and functionality to them. There will also be “shared” pages which can be accessed through the homepage as well as the different user sections. Some elements of the site will have a linear navigation, where the user clicks through a series of pages one after the other. This will be useful for the upload photo functionality.

## Search Engine Optimization (Meta data)

Search engine optimization (SEO) is the process of affecting the visibility of a website or a web page to a search engine. Usually this is to increase the ranking of the web page, and so allow it to be displayed as far up the results list as possible for the given phrase. In general, the earlier (or higher ranked on the search results page), and more frequently a site appears in the search results list, the more visitors it will receive from the search engine's users.

A search engine obtains your URL either by you submitting your site directly to the search engine or by others linking to your site. Then, at a time of its choosing, a search engine sends out its spider (or “bot”) to visit your site. Once there, the spider starts reading all the text in the body of the page, including markup elements, all links to other pages and to external sites, plus elements from the page head including some meta tags (depending on the search engine) and the title tag. It then copies this information back to its central database for indexing at a later date which can be up to two or three months later. The spider then follows the links on the page, repeating the same process.

The use of relevant meta-data will be used to facilitate the ranking of the Lidiflu Ltd website and will include correctly titled web pages throughout the site, and the inclusion of description and keywords as shown below.

<meta name="description" content="Lidiflu is one of the UK’s largest suppliers of mechanical instrument solutions for the renewables industry, with offices based in Lanarkshire and Birmingham. We have many years of expertise in this field and our engineers are fully qualified to provide maintenance to your wind farm " />

<meta name="keywords" content="Wind farm, wind turbine , energy , renewables, parts manufacturer , parts distributors, energy from sustainable sources, international delivery, Lanarkshire, Birmingham, brakes, clutches, couplings and friction material " />