



MELBOURNE OPEN DATA PLAYGROUND DESIGN TEAM

SPRINT 1 – RESEARCH

Table of Contents

COLOUR PALETTE	3
LOGO DESIGN	5
Basics of Logo Design	5
Logo-Mark	5
Wordmark	5
Tagline	5
Background & Negative Space	6
Changes	6
WEBSITE VISUALITY	7
What is website visuality?	7
Why are website aesthetics important?	7
What makes an exemplary website?	7
What elements make a website easily accessible and pleasant to access/read?	7
Components & Stimulation	8
Layout	8
Text	8
CYBERSECURITY	9
Important elements for web applications	9
Devices and Security Protocols/Methods	9
Weaknesses and Improvements	9
FUNCTIONALITY FRAMEWORK	10
The functionality of the site will rely on thorough testing of all site aspects	10
REFERENCES	11

COLOUR PALETTE



¹Various colours can depict different emotions and have different implications:

- Blue: Calm, Stable, Trust, or Smart.
- Red: Passion, Immediacy, Anger, or Hunger.
- Green: Soothing, Natural, Envy, or Balance.
- Orange: Happiness, Attraction, Wealth, or Thirst.
- Pink: Caring, Love, Emotional, or Feminine.
- Purple: Luxury, Royal, Arrogant, or Sadness.
- Black: Strength, Power, Elegance, or Bold.

Immediately from these implications and depictions we can eliminate some colours from potentially being within our colour palette as our project and company do not currently desire to elicit these notions from our clients and consumers. These colours include **RED**, **PINK**, **PURPLE**, and **BLACK**. This is additionally due to the properties of these colours eliciting a potential condescending nature towards those using and interacting with the products.

This leaves the colours of blue, green, and orange to collaborate on a colour palette. It is denoted however, that businesses should only use two main colours within their design as it is easier for clients and customers to remember two colours, rather than three or more². Here we can exclude orange from the colour palette as orange is a warmer colour, as opposed to blue and green which are cool colours.



³Cooler colours are associated with higher quality and stronger lifespans with businesses as it can be perceived to enhance the productivity surrounding the product due to the elicited emotions, although it can hinder or hamper knowledge, usage, and awareness of a product when used incorrectly.

⁴Specifically, the colour blue was rated higher in trustworthiness within the colour scheme of websites as opposed to other colours as it displayed a perceived benefit in subjective alertness and attention towards products and tasks.

⁵Furthermore, the colour green is supportive of the perceptive notion of environmentally friendliness and positive interaction, which can be argued to be a core value within the City of Melbourne and their respective projects.

LOGO DESIGN



Basics of Logo Design

Logos are created to represent the goals, objectives, and purpose of the company, all in one graphic. Logos are fundamental in advertising and displaying the brands to greater audience through marketing and distinguishing itself from other brands/competition. The logo must be able to capture the audience's attention and invite curiosity from viewers.

A logo is made up of a Logo mark (Image), Word-Mark name of the brand, Tagline/slogan, Background and Negative Space. This requires extensive design to ensure the logo is easily comprehensible and simple as not to confuse viewers or customers.

Logo-Mark

The Image of the logo is often the most identifiable aspect of the brand with the most recognizable brands often being identifiable by the image of the logo by itself such as Google or PlayStation. The logo can communicate the traits of the company by what it symbolizes or represents. (Levanier 2021)

The chameleon logo for City of Melbourne meets the criteria by embodying the playground platform with a slide set. This also paints the company as being open to experimentation and not being vulnerable to failure. However, it does slightly miss on highlighting the purpose of the company which is to promote green energy and improve the greater community.

Wordmark

This is simply the name of the brand and can be used to as the logo-mark or the identifiable feature of the logo. When it is used with a Logo-mark then the position must be leveraged as to complement the logo-mark and not overrule/outshine it, which will confuse the reader. The wordmark in the 'City of Melbourne' logo meets the criteria as to be unique and complementary of the Logo-mark while being a representation of the company's purpose.

Tagline

The tagline is the slogan of the company, the slogan summarizes company and what it represents. The slogan is meant to be recognizable and able to catch the imagination of the reader/customer while providing context to the company objectives. (Levanier 2021)

One such example is KFC's "finger licking good" and "did someone say KFC" slogan, which is synonymous with the company and its purpose.

However, Chameleon lacks a slogan which is not all too important but does assist to make the logo more memorable. In some cases, it may trigger a positive recall of the logo and associate the logo with the company.

Background & Negative Space

The background is the colour, image, texture, or physical material placed behind the logo. Whereas Negative Space is how the space is used by logo such as how spaced elements such as the tagline and logo-mark are spaced, this is also known as padding.

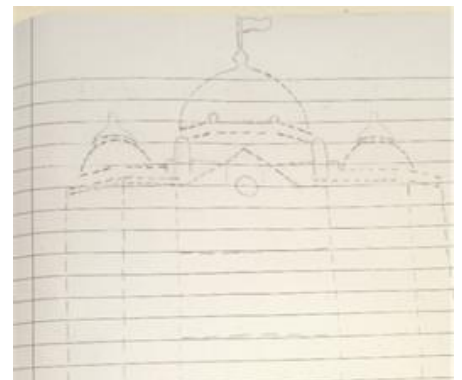
In tandem the background and utilization of the negative space/padding is essential to a website in maintaining proportions and attract interest from customers and readers. The city of Melbourne logo maintains this exceptionally by ensuring space is not wasted and the logo complements the elements of the logo.

Changes

Our first attempt was to adjust the logo to a more iconic and artistic logo, however that deters from the current trend (Sanders 2020). It also deters from the current logo that is minimalistic and eliminates confusion by only maintaining the elements that best showcase, the brand, and its objectives. The most popular brands such as Google or National Geographic use this method to significant effect creating iconic symbols alongside the brand.

Therefore, our next objective was to add an image that encapsulates Chameleon as a green energy company that makes strides in assisting the greater community. (Luce 2019)

The drawing is a rough sketch of the proposed changes that follow the goals of Chameleon namely conservation, green energy and assisting the greater community. The second proposed change is replacing the sun in the logo above with the drawing of flinders encased in a circle.



Rough hand drawn outline of Flinders Street

Side by side with image

<https://theculturetrip.com/pacific/australia/articles/12-things-you-didnt-know-about-flinders-street-station-melbourne/>

WEBSITE VISUALITY

What is website visuality?

Website visuality as a concept is structured around visual clarity.

“Visual clarity is the measure of how effectively visual design prioritises and conveys information. It is determined by all the components of a webpage that can stimulate visually. Clarity produces meaningful, unobstructed interaction. It is, also, instrumental when perceiving something as beautiful.” [6]

Why are website aesthetics important?

When it comes to website aesthetics, designers should be able to understand the impact of the visual stimulation on the user’s brain.

Components can include different things such as text used for the headings, animations, shapes, images, videos, and many others. Each of these components/stimulants require different amounts of cognitive energy (mental energy), for the user to be able to process them. The lower the cognitive strain, the “calmer” the result.

The positioning, shape, colour, effects, motion, and any other modifications made to components determine which cocktail of “feelings” the user will experience.

What makes an exemplary website?

Exemplary websites available for access include a balance of complexity and simplicity. They appear to house endless information in a form which can appear compact and easy to navigate.

Exemplary websites provide viewers with the confidence to navigate the site without the fear of being unable to locate the information they seek or becoming lost during the search.

A website with appropriate design techniques makes navigating the site a pleasant experience, increasing viewer satisfaction, and raising the overall quality of the site, and the perception of those who designed it.

What elements make a website easily accessible and pleasant to access/read?

Clear navigation tactics, including stable headers and drop in menus allow for an increased ease of navigation throughout the site, increasing the pleasantness of the site and contributing towards longer engagement with viewers.

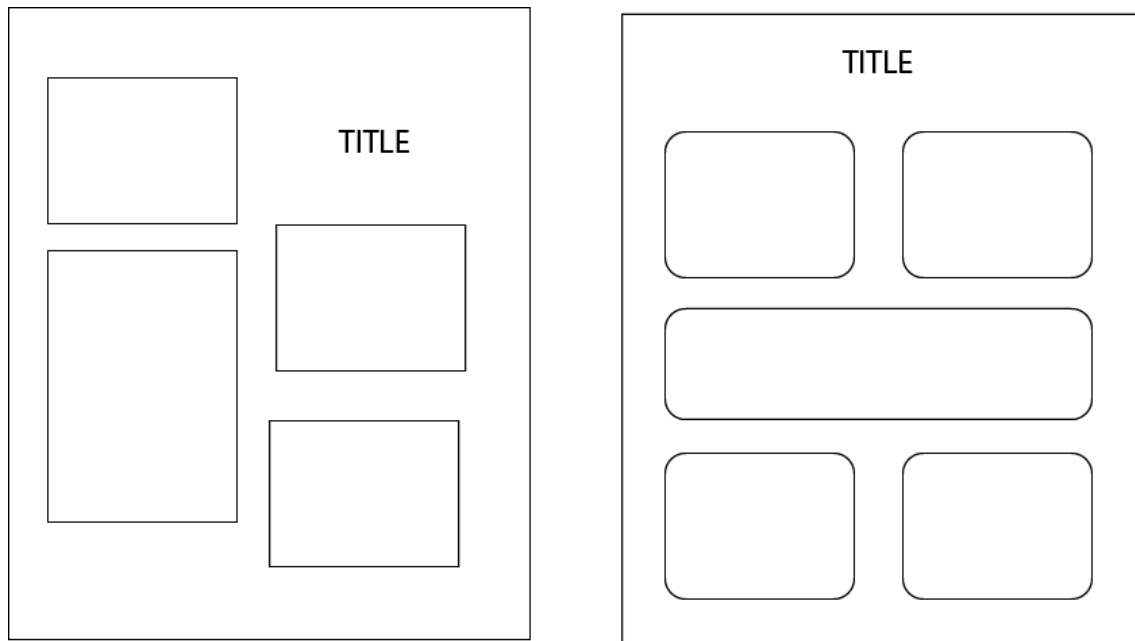
Crisp, clear, and complimenting colour schemes and imagery gives off a polished persona that reflects the professionalism of the site, providing viewers with confidence that the site is a legitimate, and useful source of information.

Components & Stimulation

Layout

Before adding in the colour, images, text or any other media, the most basic layer to focus on is the layout and positioning of the components. As shown below, both screens display the same amount of information.

However, the screen on the left-hand side is a little “throwing off” as compared to the screen on the right-hand side, where the content is put into a consistent layout. The rounded corners on the shapes give a softer look, which gives the user a comfortable base to the overall experience.



Text

Another very basic concept is the text used in websites. The font colour, size, family/style, and many other factors contribute to how “easy” the text is to read. Below are two examples, displaying the same information but having two very different impacts.

**Melbourne Open Data
Playground**

Melbourne Open Data
Playground

The shaping of characters in the text displayed on the left-hand side is reasonably easy and the effect of making the characters “bold” makes it easy to recognise, as it stands out from regular text. However, such text can only have limited usage, as it can easily cause over-stimulation and hence give the user an unpleasant experience.

The shaping of characters in the text displayed on the right-hand side makes it easy to read, as the characters have ample space to be drawn out in a very simplistic manner. Unnecessary curving of the characters’ ends has been avoided and the “open space” (such as in the letters “O” & “P”) has been increased to make it easier to recognise the shape of the character.

CYBERSECURITY

Important elements for web applications

Identify, Protect, Detect, Respond, Recover [7].

Active Sponsorship, Development Discipline, Developer Training, Threat Modelling, Automated Testing, Attack Blocking [8].

Visibility, mitigation, prioritization, and encryption [9].

Devices and Security Protocols/Methods

Server is being distributed the same to each device. Spyware installed on malicious advertisements, activated from the touch interface of a mobile phone are a slightly different vector of attack. Phishing, due to the smaller screens on mobile, means users are less able to view the full URL [10].

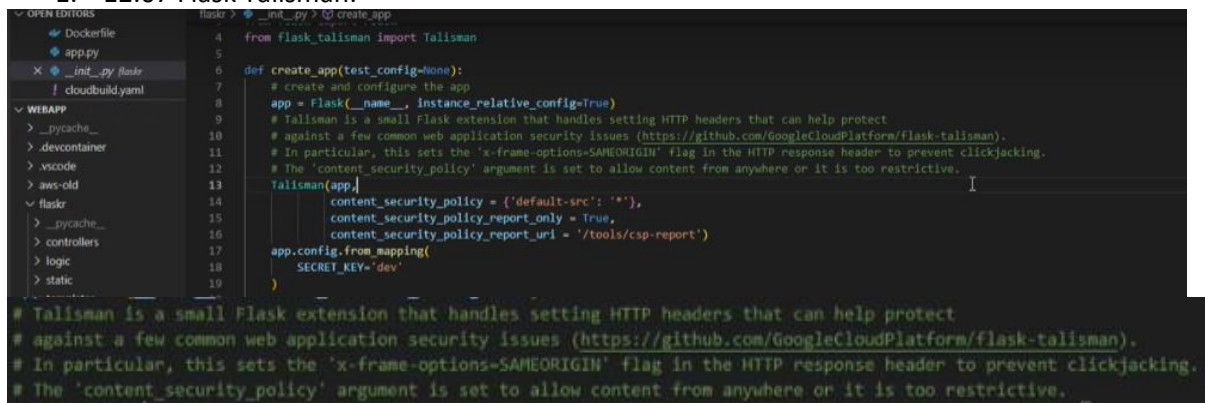
Weaknesses and Improvements

Looked at briefly last trimester and came up with an update on pen testing that could be considered in the same way as Brodie last tri(as full migration from AWS to GCP was not done previously):

- Scan services and hosts of network (using **NMAP**)
 - o Was found Ports 80(HTTP) and 443(HTTPS) were both open, was recommended to deny all traffic except 443
- Test database servers for SQL exploits (using **SQLMAP**)
 - o Was found site did not use SQL
- General vulnerability scanning (using **Nikito**)
 - o Was found vulnerable to clickjacking attack and Cross-Site Scripting (XSS) attack

WebDev meeting 29/07/22:

1. 12:07 Flask Talisman:



```
1 from flask import Flask
2
3 from flask_talisman import Talisman
4
5 def create_app(test_config=None):
6     # create and configure the app
7     app = Flask(__name__, instance_relative_config=True)
8     # Talisman is a small Flask extension that handles setting HTTP headers that can help protect
9     # against a few common web application security issues (https://github.com/GoogleCloudPlatform/flask-talisman).
10    # In particular, this sets the 'x-frame-options=SAMEORIGIN' flag in the HTTP response header to prevent clickjacking.
11    # The 'content_security_policy' argument is set to allow content from anywhere or it is too restrictive.
12    talisman = Talisman(app,
13        content_security_policy = {'default-src': '*'},
14        content_security_policy_report_only = True,
15        content_security_policy_report_uri = '/tools/csp-report')
16    app.config.from_mapping(
17        SECRET_KEY='dev'
18    )
19
20 # Talisman is a small Flask extension that handles setting HTTP headers that can help protect
21 # against a few common web application security issues (https://github.com/GoogleCloudPlatform/flask-talisman).
22 # In particular, this sets the 'x-frame-options=SAMEORIGIN' flag in the HTTP response header to prevent clickjacking.
23 # The 'content_security_policy' argument is set to allow content from anywhere or it is too restrictive.
```

Useful LinkedIn Learning Resources:

<https://www.linkedin.com/learning/ethical-hacking-hacking-web-servers-and-web-applications/testing-to-make-sure-your-website-is-safe?autoplay=true&u=2104084>

<https://www.linkedin.com/learning/cybersecurity-with-cloud-computing-2/making-your-cloud-deployments-secure?autoplay=true&u=2104084>

FUNCTIONALITY FRAMEWORK

The functionality of the site will rely on thorough testing of all site aspects.

In testing the functionality of the websites, the following should be tested:

Links	Forms	Database
i. Internal Links	i. Field validation	Testing will be done on database
ii. External Links	ii. Error message for wrong input integrity.	
iii. Mail Links	iii. Optional and Mandatory	
iv. Broken Links	fields	

Cookie Testing:

Cookies are small files stored on the user's machine. These are essentially used to maintain the session – mainly the login sessions. Test the application by enabling or disabling the cookies in your browser options.

Validate your HTML/CSS:

Mainly validate the site for HTML syntax errors. Check if the site is crawlable to different search engines.

Database Testing:

Data consistency is very important in a web application. Check for data integrity and errors while you edit, delete, modify the forms, or do any DB-related functionality.

Check if all the database queries are executed correctly, data is retrieved, and updated correctly.

More on database testing could be a load on DB.

Check out all the links:

	Comments	
Test the outgoing links from all the pages to the specific domain under test	All Links Tested, with results being forwarded onto the Dev team to resolve errors	<input type="checkbox"/>
Test all internal links	All Links Tested, and were found to be in working order	<input type="checkbox"/>
Test links jumping on the same page	All Links Tested, and were found to be in working order	<input type="checkbox"/>
Test links are used to send emails to admin or other users from web pages	N/A at this time	<input type="checkbox"/>
Test to see if there are any orphan pages	Task to be completed by the Dev team	<input type="checkbox"/>
Check for broken links in all the above-mentioned links	All Links Tested, with results being forwarded onto the DevOps team to resolve errors	<input type="checkbox"/>

Test forms on all pages:

Forms are an important part of many websites. Forms are used for receiving information from users and interacting with them.

	Comments	
Check Validation on each field	N/A at this time	<input type="checkbox"/>
Check for default values I the fields	N/A at this time	<input type="checkbox"/>
Incorrect inputs in the forms to the fields in the forms	N/A at this time	<input type="checkbox"/>

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