Technical Instructions for SA2GE Website

CONTENT

PART I: Whole Site

1. Objective

Briefly introduce *Le Regroupement* and describe the responsibilities and vision of the organization *Le Regroupement*. It should be noted that *Le Regroupement* is a platform and a bridge as well, which brings together and connects various resources of the aviation industry and promotes cooperation between different organizations, companies, and institutions. Therefore, in the selection of images, slogans and texts, it is necessary to highlight the characteristics of *Le Regroupement* itself and avoid highlighting a small number of companies too much.

2. Principles

2.1 Responsive. All pages should be responsive, that's to say, each page can adapt to different platforms automatically.

References:

i. Documentation of html5 – responsive web design: https://docs.microsoft.com/en-us/archive/msdn-magazine/2011/november/html5-responsive-web-design

ii. Responsive breakpoints: https://getbootstrap.com/docs/5.1/layout/breakpoints/

2.2 Reusable. Design components that can be reused, for example, the navbar, footer, buttons, search-bar, input field, and footer, etc.

References:

i. Component design principles: https://reactjs.org/docs/design-principles.html

ii. Collection of React components: https://github.com/brillout/awesome-react-components

2.3 Consistent. Main colors, page layout, fonts, font size, etc, should be consistent.

2.4 Accessible. Implement the standards and requirements of WCAG 2.1.

Reference:

Accessibility (WCAG 2.1): https://www.section508.gov/content/guide-accessible-web-design-development/

2.5 Well-organized SEO. Implement key requirements of SEO.

Reference:

SEO: https://blog.hubspot.com/marketing/seo

3. Main Frameworks and Technologies

3.1 React. For the development on client side.

3.2 Node.js. For the development on server side.

3.3 express.js. Popular framework of node.js.

3.4 MangoDB (optional). If use a database to host the data, we recommend MangoDB, otherwise could just use a JSON file to save the data.

4. Main Libraries and Open Sources

4.1 Next.js (optional). Framework of React.

4.2 Bootstrap. Library for html, css and js. (https://getbootstrap.com)

4.3 Google fonts. Take care of most fonts on the pages. (https://fonts.google.com)

4.4 Fontawsome. Insert all kinds of icons (SVG) into html file. (https://fontawesome.com)

4.5 Unsplash. Open-source images. (https://unsplash.com)

5. Development Tools

5.1 Visual Studio Code. Develop and test.

5.2 Git. Version management, we recommend Github.

5.3 Figma. UI design. (https://figma.com)

6. Global Settings

6.1 Basic CSS settings

body {font-family:"Roboto"; font-size:16px; background-color:#fff; }

:root{--title-grey: #383838; --prefix-blue:# 3572B5; --bg-green-light:# 77A643; --bg-green-dark:# 5F883F; --font-weight-light:300; --font-weight-bold:700; --font-weight-semibold:600;}

h1 {font-size:3rem;font-weight:var(--font-weight-bold);line-height:1.0;color:var(--title-grey);}

h2 {font-size:2rem;font-weight:var(--font-weight-semi-bold);line-height:1.0;}

p {font-size:1rem; font-weight:var(--font-weight-light);}

a {text-decoration:none; cursor:pointer;}

li {list-style-type:none;}

6.2 Layout

This setting can make the footer sticked at the bottom of the page and keep the flexibility of header, content, and footer.

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
<style>
html,body{height:100%;padding:0;margin:0;box-sizing:border-box;}
.container{height:100%;display:flex;flex-direction:column;}
.sizing{ width:100%;max-width:1140px;margin:0 auto;}
.header{height:125px;background-color:var(--title-grey);}
.main{height:100%;display:flex;flex-direction:column;}
.flexible-height{flex-grow:1;flex-shrink:0;}
.footer{height:205px;background-color: var(--title-grey);}
</style>
</head>
<body>
<div class="container">
   <div class="main">
     <div class="header">
          <div class="sizing"></div>
     </div>
     <div class="content flexible-height">
          <div class="sizing"></div>
     </div>
     <div class="footer">
          <div class="sizing"></div>
     </div>
   </div>
</div>
</body>
</html>
```
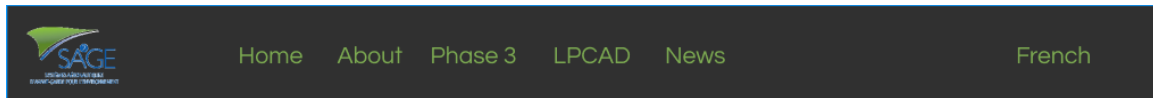
Reference link:

i. flexbox: https://css-tricks.com/snippets/css/a-guide-to-flexbox/

ii. layout: https://material.io/design/layout/understanding-layout.html#principles
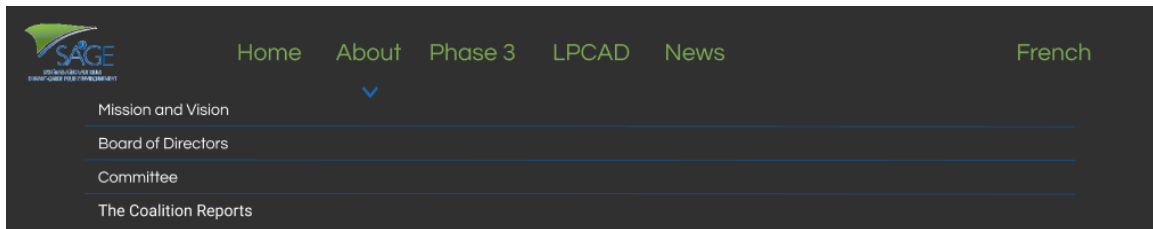
7. Common Components

7.1 Menu (navbar). It should be responsive. The item has sub-nav uses a dropdown list. For some sub-navs, they will be linked to the anchors of the destination page.
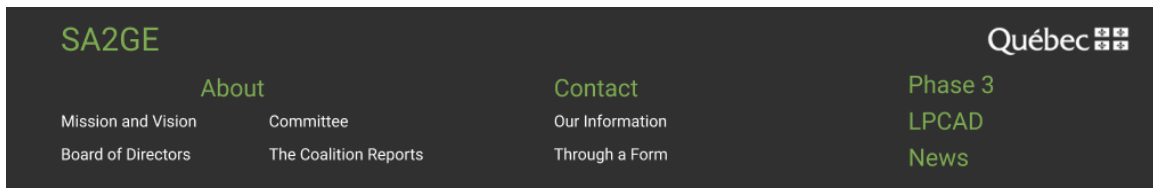
Menu

Menu on small screen

Menu expanded

Reference: https://getbootstrap.com/docs/5.1/components/navbar/

7.2 Footer. The elements will be displayed vertically on small screen.

7.3 Favicon. Redesign the favicon according to the standards and methods in the reference article.

Reference link: https://evilmartians.com/chronicles/how-to-favicon-in-2021-six-files-that-fit-most-needs#:~:text=Set%20the%20width%20and%20height,bit%20alpha%2C%20no%20palette%20settings.&text=Scale%20the%20image%20down%20to,and%20check%20the%20icon%20visibility.

PART II: Home page

1. Hero image. Two choices: a well-designed static image or dynamic slides.

Dynamic slides (images should cover as many companies as possible which are partners of Le Regroupement, each image could have its own title).

Static image (the image needs to be designed to reflect the nature and vision of Le Regroupement). The link on the image directs to the page 'about'.

References:

i. Hero image idea: https://colibriwp.com/blog/hero-websites/

ii. Slides technique: https://getbootstrap.com/docs/5.1/components/carousel

2. Section Industrial Partners

The list is separated into 5 columns evenly and each cell has the same height. Each image has a link to the company's website.

3. Section Reports (optional)

The gallery is with a hover effect. The report of 2021 is open by default. When the cursor hovers over a report, the image will have double width and three others single width.
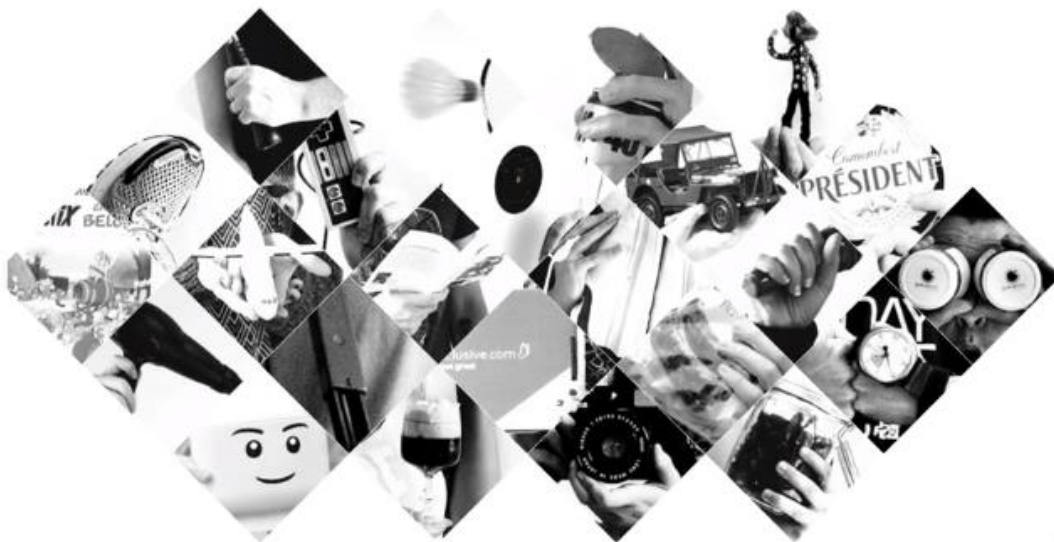

On the mobile device, display and unfold the images vertically with the same logic and certainly it's better to choose horizontal images.

Reference:

Hover effects: https://codepen.io/knyttneve/pen/YgZbLO

4. Section News

Two choices: the first one is an image with title that is linked to the page 'news', the second one is dynamic slides which contain three or four slides.

PART III: About

1. Mission and Vision

For the graphic, there're two choices. The first one is just using an image. The second one is creating a react component to make it dynamic which will be much easier to read on the mobile devices.

Here's the reference to the library that can help create a mindmap.

Reference: React-mindmap: https://www.npmjs.com/package/react-mindmap

2. Board of Directors

Two choices: mindmap or a list which contains two columns (the order of the members should be considered).

Design suggestion:

We could use several photos to form a specific shape, which can act a hero image on the page. We could also add hover effect or in-page link to each photo.

3. The Coalition Reports

Hover effect: right column contains the information of the report. On mobile devices, this effect will be displayed vertically.
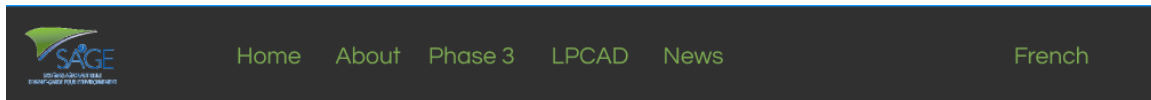
2021	›
2020	›
2019	›
2018	›
2017	›
2015	›
2014	›
2013	›
2012	›

Final Report Phase 2 (French version only)

Annual Report (French version only)

PART IV: Phase 3 & LPCAD

These two parts, we recommend in-page links (tags) instead of loading other pages (or other components in React). For React, it's not necessary to set route for each link.

SAGE   Home   About   Phase 3   LPCAD   News   French

Phase 3

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Phase 3 - POUSSEE

BELL

SA²GE - Phase 3: PROPULSION FOR SAFE, QUIET, ENVIRONMENTALLY-FRIENDLY AND EFFICIENT URBAN OPERATIONS

The main objective of the sub-project is to develop and build propulsion system prototypes in order to improve the power output and increase energy efficiency while reducing weight and external noise generated comparatively with the current ones.

The development of alternate propulsion systems will make it possible to move away from the classic helicopter configuration and to specialise vehicles according to their mission: urban taxi, parcel delivery, rescue, etc., while using the most suitable means of propulsion taking into account various environmental aspects, such as the energy consumption and the generated noise.

The work will be concentrating on three main themes:

PART V: News

There're two solutions for saving news data (texts and pictures) : binding a database or using JSON files. We recommend the latter considering the frequency of updating is once or twice a year.

For the list of years, it's better to create a JSON file for each year to avoid the growing size of the file.

For the paginator, we recommend a library. Here's the reference:

https://www.npmjs.com/package/express-paginate

PART VI: Message Form

Two solutions:

i. Save all the information received from the message box into a database.

ii. Just send the information to an email address of the administrator of the website.

Reference link: https://lo-victoria.com/how-to-build-a-contact-form-with-javascript-and-nodemailer