

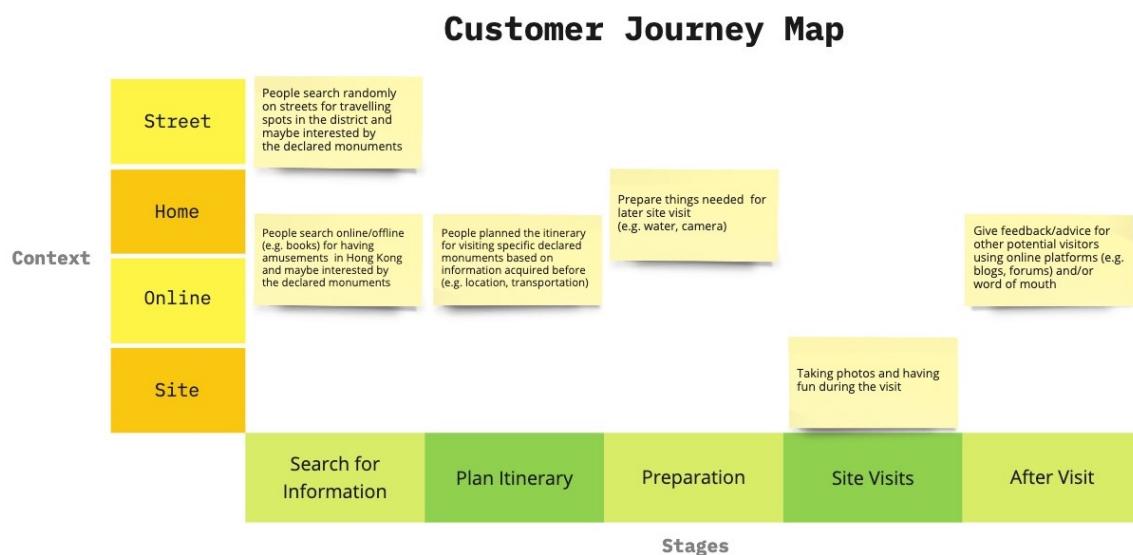
Final Report

Problem Definitions (Requirements)

Background

Ever since the pandemic of COVID-19 began, Hong Kong and many other countries announced border shutdown to avoid transmission of coronavirus from foreign countries. Since many Hong Kong people love travelling so much, the current situation really bothers them and they need more amusements to compensate the desire of travelling. It is not a right timing for global travelling now, but it may be a great opportunity to promote local tourism in Hong Kong. And, up to May 2020, there are a total of 126 declared monuments (法定古蹟) in Hong Kong but most of them are not well-known by the public. Some of them is worthy to go and good for people to take photos. In the case, building a platform which provides information on Hong Kong heritages, tourism and shopping may be a good business choice.

Figure 1. The journey map for people intended to visit declared monuments in Hong Kong.



Problem Statement

How can we help Hong Kong people and Chinese tourists who have interest on Hong Kong cultures and tourism [WHO] to explore local heritages, local tourism, and local souvenirs [WHAT] so that their desire of travelling can be satisfied [WHY]?

Major Competitor

Antiquities and Monuments Office (<https://www.amo.gov.hk/b5/monuments.php>) is an existing governmental website which provides official information on Hong Kong Declared Monuments.

Pain Points

Users need to take a lot of time to screen relevant information (e.g. location, background) on each declared monument one by one from the website of Hong Kong Antiquities and Monuments Office. In addition, there is no existing website which can provide free customized itinerary for visiting declared monuments in Hong Kong.

Target Users

Primary users are expected to be local Hong Kong people and secondary users will be tourists from Chinese communities who have interests on Hong Kong heritages, cultures and tourism.

Solution Provision (Design)

Prototype design

A responsive website named “港古” (https://mandynmy.github.io/COMM5961/Assignment%2010/final_prototype/home.html) is built to provide a more comprehensive information to the public. The website consists of a home page and four main pages (“Hong Kong Declared Monuments”, “Hong Kong Cultures”, “Itinerary Recommendations”, and “Handicraft Recommendations”). Other pages like “About Us” and “Contact Us” are also included. Design of each page will be briefly introduced respectively:

1. Home page

The website is first shown with an attractive cover photo. Then, the four main pages are introduced with short descriptions and corresponding thumbnails.

Figure 2. Home page.



港古 x 四大專題



香港本土建築
法定古蹟



香港本土日常
香港文化



香港本土旅遊
行程推介



香港本土手作
手作推介

2. Hong Kong Declared Monuments page

In this page, an overview of the 126 Hong Kong declared monuments with attachment of corresponding thumbnails and information (e.g. district, background introduction, and location) (see Figure 3) is launched. Users can thus view all declared monuments at once and save time for checking each monument one by one on the website of Antiquities and Monuments Office (i.e. tackle one pain point).

Figure 3. Overview table on declared monuments according to districts.

古蹟簡介

點擊下列下拉式選單按全港分區查看各個法定古蹟的資料及圖片：

北區 ▼			
Filter Sort ... 🔍			
<p>上水廖萬石堂</p> <p>地區 北區</p> <p>簡介 上水廖族先祖廖仲傑於元代（一 二七九至一三六八年）中葉自福建南遷廣東，初居屯門，旋遷深 山鄉，後移上水。其後十六世 地點 上水門口村</p>	<p>粉嶺龍躍頭觀龍圍門樓</p> <p>地區 北區</p> <p>簡介 觀龍圍又名新圍，是粉嶺龍躍頭鄧族五圍之一，亦是區內保存極 完好的圍村建築。龍躍頭鄧族於 地點 粉嶺龍躍頭觀龍圍(門樓)</p>	<p>沙頭角鏡蓉書屋</p> <p>地區 北區</p> <p>簡介 位於沙頭角上禾坑客家村的鏡蓉書屋，是少數專為教學用途而建 的書室。書室建成於清初，乃當 地點 沙頭角上禾坑</p>	<p>沙頭角蓮麻坑葉定仕故居</p> <p>地區 北區</p> <p>簡介 葉定仕故居約建於一九〇八年， 外觀仿照孫中山先生於中山翠亨 村的故居興建。葉定仕（一八七 九年—一九四二年），又名玉森 地點 沙頭角蓮麻坑村 (*通往此建築...)</p>
			<p>④ Download CSV ⌂ View larger version</p>

(資料來源：香港古物古蹟辦事處)

Other relevant information (e.g. monument distributions in terms of 18 districts of Hong Kong) (see Figure 4) and thematic YouTube videos are embedded on the page (see Figure 5).

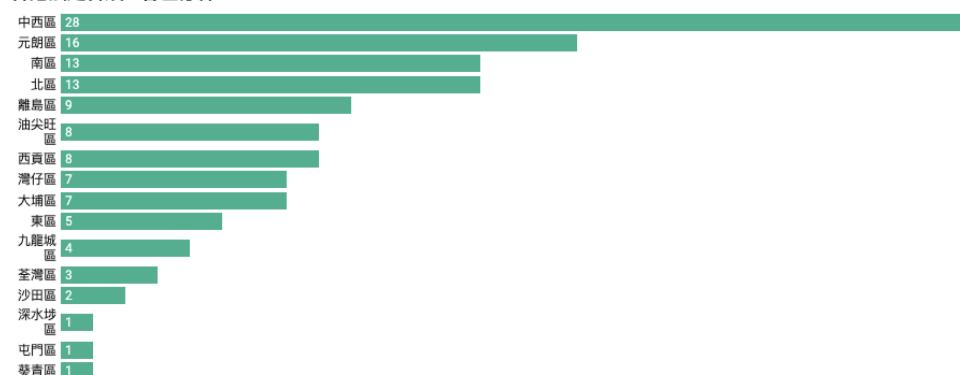
Figure 4. Distributions of declared monuments according to 18 districts of Hong Kong.

香港法定古蹟地區分佈

截止2020年5月，香港共有126項法定古蹟需要我們的悉心保護。

這126項法定古蹟遍佈全港各區，18個分區中共16區有法定古蹟。據統計，在港島，中西區共有28項、灣仔區共有7項、南區共有13項、東區共有5項法定古蹟；在九龍區，九龍城區共有4項、深水埗區共有1項、油尖旺區共有8項法定古蹟，唯獨是黃大仙區以及觀塘區暫時沒有法定古蹟；在新界區，北區有13項、元朗區有16項、大埔區有7項、屯門區有1項、沙田區有2項、荃灣區有3項、葵青區有1項、西貢區有8項法定古蹟；而離島區共有9項法定古蹟。

香港法定古蹟 - 各區分佈



Created with [Datawrapper](#)

Figure 5. Embedded YouTube videos.

其他相關影片介紹



To further boost views and use of the “Itinerary Recommendation” page, users are highly recommended to have reference on the page for scheduling time and planning itinerary for declared monuments visit (see Figure 6).

Figure 6. Recommend users to use “Itinerary Recommendation” page.

注意事項

1. 各古蹟的預計遊覽時間由10~60分鐘不等，實際時間因人而異，且全程所需時間會因出發位置不同而有所分別，故本網站不設各項古蹟的預計遊覽完成時間，請見諒。

★★建議解決辦法：請參考本網站【行程推介】之頁面，當中有直接提供部份地理位置相連的古蹟遊覽行程，並附上行程預計完成時間，以便遊客規劃行程★★

2. 由於部份古蹟（e.g. 香港大學，沙頭角蓮麻坑村葉定仕故居，香港天文台）不容許非授權/未預約人士進入，或該古蹟正位處於禁區而無法輕易進入，且部份古蹟開放時間或因疫情而有變化，本網站建議遊客在規劃前往古蹟前再次確認該建築是否可以隨時進入。

★★建議解決辦法：遊客可直接參考本網站【行程推介】之頁面，在專業人士的帶領之下前往，就不用擔心上述問題了★★

3. Hong Kong Cultures page

In this page, users can see four sub-themes related to Hong Kong cultures, including “museums”, “transportation”, “food and dining”, and “housing” (see Figure 7). When users clicked the icon, the website will direct the users to corresponding information page to know more about the theme. Moreover, the page embedded some thematic YouTube videos for users to know more about Hong Kong cultures in a way other than just reading text.

Figure 7. Four sub-themes related to Hong Kong cultures.

關於香港



博物館

歷史博物館、文化博物館、科學館、太空館、藝術館...



交通工具

山頂纜車、叮叮、輕鐵、地鐵、雙層巴士、渡海小輪...



港飲港食

大排檔、茶樓、冰室、涼茶...



房屋

唐樓、寮屋、籬屋、徙置大廈...

4. Itinerary Recommendation page

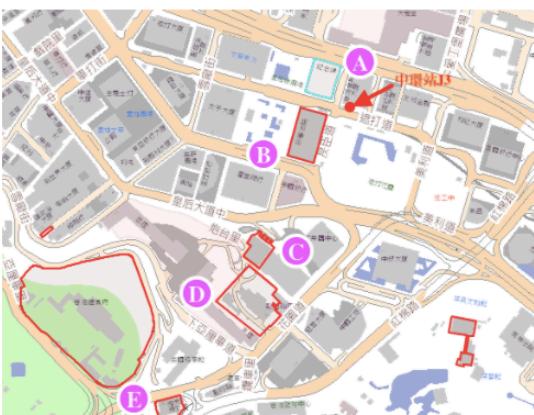
In this page, users will be introduced with rich itinerary ideas for local travelling, including but not limited to declared monuments visit, geo-park tour, islands tour, and farm visit (i.e. tackle another pain point). Information of the page comes from self-created contents by the website manager as well as advertising materials from local travel agencies (see Figure 8). If users are interested on particular itinerary, by clicking the button of “know more”, they will be directed to website of local travel agency which provides the tour and users can directly sign up on it.

Figure 8. Examples of self-created itinerary and local tourism advertisement.

中環古蹟半日遊

中環地鐵站J3出口 --> 【和平紀念碑 (A)】--> 【舊最高法院 (B)】--> 【前法國外方傳道會大樓 (C)】--> 【聖約翰座堂 (D)】--> 【梅夫人婦女會主樓 (E)】

預計完成時間：約3小時



地道文化美食一日遊

品嚐米芝蓮一星推介【添好運】10款精美點心
到訪香港首條文物徑【屏山文物徑】，欣賞法定古蹟
到【青馬大橋觀景台】飽覽青馬大橋、汲水門大橋、汀九橋美景
到訪【元朗公園百鳥塔】、【鄧氏宗祠】

[了解更多](#)



To provide more updated and trendy itineraries, there is also a session called “travelling with Youtuber” placed at the bottom of the page (see Figure 9). Users can find some embedded YouTube videos about KOL travelling in different spots of Hong Kong. This part can also be used for paid advertisements by KOL to boost reputation and views on their YouTube channels.

Figure 9. Embedded YouTube videos of KOL travelling in Hong Kong.

5. Handicraft Recommendations page

In this page, users can find some recommended local craft stores for daily accessories or souvenirs (see Figure 10). When they clicked the pictures, corresponding website of the online shop will be opened in another page. This page is also used for advertising purposes.

Figure 10. Example of local craft stores advertisements.

6. About Us page

This page shows a short text description on the website and the website manager. It also consists message on encouraging business owners to contact the manager for helping them to advertise and promote their businesses in the website.

7. Contact Us page

The page provides an email address for potential business partners to contact the website manager. In addition, to facilitate feedback collection and cooperation opportunities with simple steps, an Airtable survey is embedded on this page, so that people can directly and easily leave messages to the manager (see Figure 11).

Figure 11. Feedback collection survey.

告訴我們你的想法：

聯絡我們

你對這個網站有什麼意見/建議嗎？
你希望與我們分享更多關於香港的趣事？
你希望與我們合作宣傳自己的手作小店？
歡迎隨時聯絡我們。

你的名字:

你想對我們說:

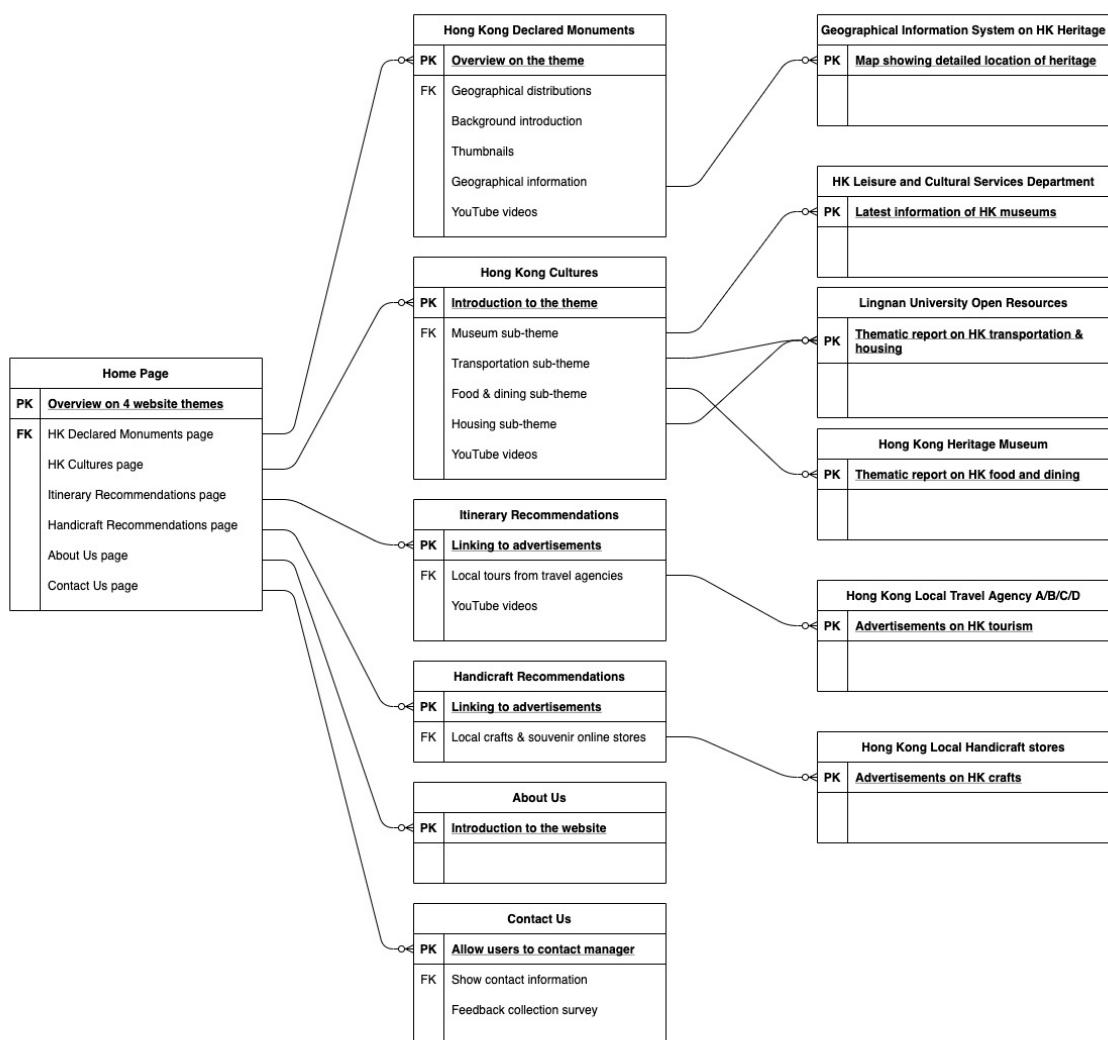
你的聯絡方式:

Airtable

Overview on Entity Relationship

The website has many external links connecting the page to external informational websites or advertising parties. To better illustrate the relationships between different entities and the overall website organization, please refer to the following Entity Relationship Diagram (Figure 12):

Figure 12. Entity Relationship Diagram.

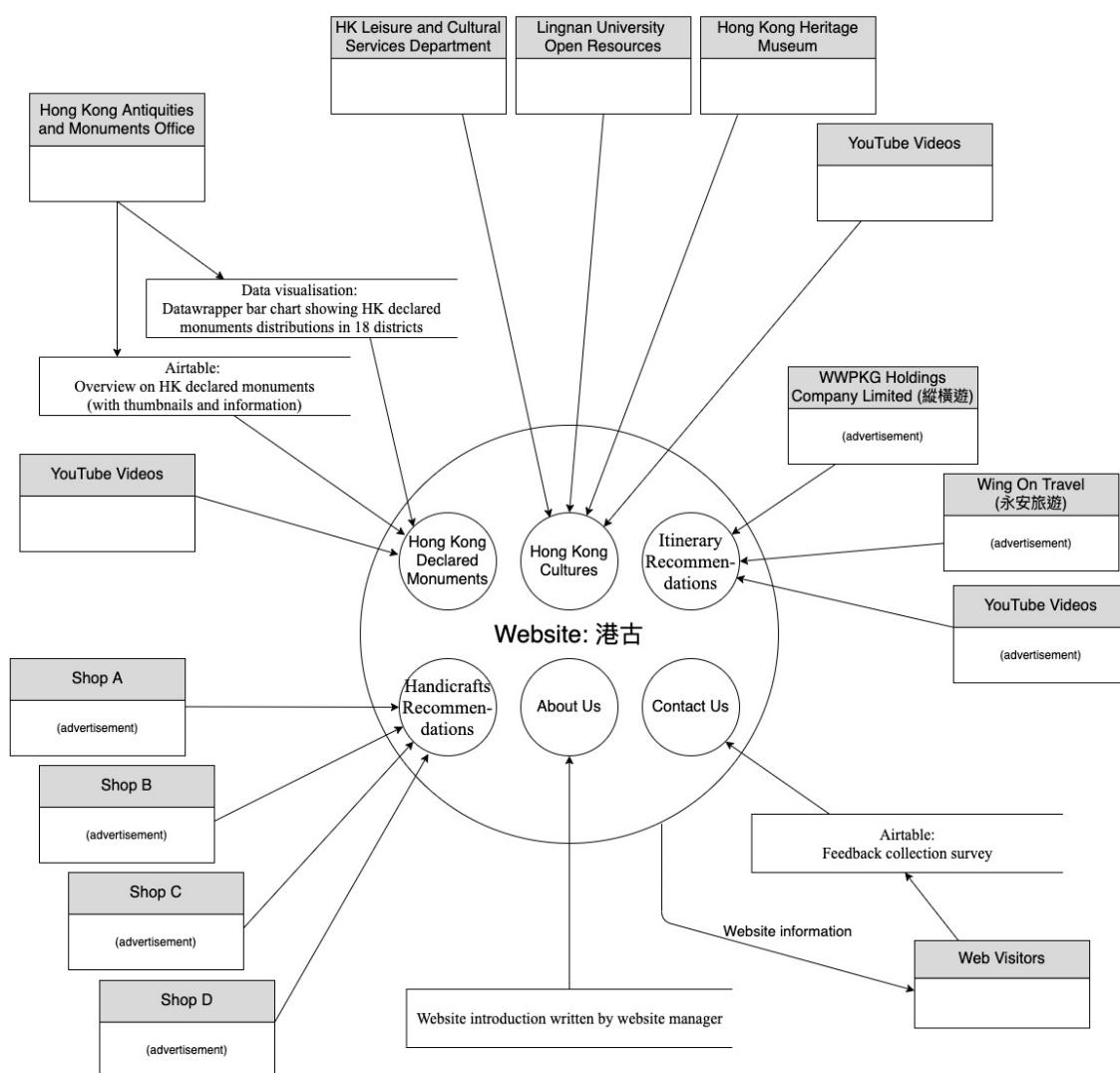


Data Source

The major source of data provided by the “Hong Kong Declared Monuments” and “Hong Kong Cultures” pages are open information from the Antiquities and Monuments Office website and other credible organizations (e.g. Hong Kong Leisure and Cultural Services Department, Lingnan University). For “Itinerary Recommendations” and “Handicraft Recommendations” pages, some contents are self-created by the manager and others are from advertising partners.

Figure 13 below shows a detail data flow (where the data of each main page came from) which support the information provided by the website:

Figure 13. Data Flow Diagram.



Business Opportunities/Financial Values

The proposed website will act as a paid media and allow relevant parties (e.g. local tourist guides or travel agencies, restaurants, small scale handicrafts stores) to have commercial advertisements in the pages of “Itinerary Recommendations” and “Handicraft Recommendations”. Also, the website may gain commissions when people linked to external parties from this website and eventually purchase something there. For Youtubers or KOL, they can also pay to promote their travelling-based YouTube channels or personal social media accounts in the page of “Itinerary Recommendations”.

Tests & Evaluations

Some tests were adopted to evaluate competitor's website and the design of new proposed website “港古” from drafted low-fidelity prototype to final html prototype. Improvements were made accordingly with the test results and analysis.

Usability Test

Before making final prototype of “港古” with html codes, two usability tests were conducted: one was for competitor's website (Antiquities and Monuments Office) to check its weaknesses, another was for a low-fidelity prototype of “港古” designed with Figma.

1. Usability Test on Competitor's Website

Five participants were invited to join the usability test on website of the Antiquities and Monuments Office to find out its level of ease-of-use and see if there was any room for improvement (see Figure 14 for details). A task was given to them and all of them were able to finish the task; However, according to the feedback collected from them, some claimed that the website was sometimes difficult to use and left comments like “no direction”, “don't know how to start searching” (see Figure 15 for details). With these feedback, the new proposed website will tackle the weaknesses found on the usability test and make corresponding improvements.

Figure 14. Usability test methodology dashboard for competitor's website.

USABILITY TEST PLAN DASHBOARD		
AUTHOR Mandy Ng	CONTACT DETAILS 1155145790@link.cuhk.edu.hk	FINAL DATE FOR COMMENTS 09/11/2020
PRODUCT UNDER TEST What's being tested? What are the business and experience goals of the product? Official website introducing declared monuments in HK (https://www.amo.gov.hk/b5/monuments.php)	TEST OBJECTIVES What are the goals of the usability test? What specific questions will be answered? What hypotheses will be tested? Is the website easy to use? Can user acquire desired information efficiently?	PARTICIPANTS How many participants will be recruited? What are their key characteristics? Recruited five participants using convenient sampling
BUSINESS CASE Why are we doing this test? What are the benefits? What are the risks of not testing? To find the ease-of-use of official website and see if there is any room for improvement. If not testing, users needs may be missed.	EQUIPMENT What equipment is required? How will you record the data? Digital devices (laptop and mobile phones)	TEST TASKS What are the test tasks? Please find out the accurate address of "Yuen Long Fortified Structure at Ha Pak Nai" (元朗下白泥碉堡) and the year of being declared as a monument.
PROCEDURE What are the main steps in the test procedure?		RESPONSIBILITIES Who is involved in the test and what are their responsibilities? Mandy Ng [ALL]
		LOCATION & DATES Where and when will the test take place? When and how will the results be shared? Date: 08-09/11/2020 Format: Face-to-Face and via the Internet
<pre> graph LR A[Greetings] --> B[Give instructions] B --> C[Start task] C --> D[Record completion time] D --> E[Collect feedback from participants] E --> F[Debriefing] </pre>		

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Figure 15. Usability test result dashboard for competitor's website.

How long does it take and how easy can you find the accurate address of "Yuen Long Fortified Structure at Ha Pak Nai" (元朗下白泥碉堡) and the year of being declared as a monument?

Participants



Some feedback from participants

"No direction. Don't know how to start searching."

"Have no idea that the map is clickable. Better if there is a hint."

"Non-Hongkongers may have no concept on how to read the map and find location according to districts."

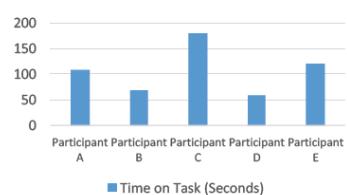
Percentage of Participants



■ Successful ■ Failed ■ Abandoned

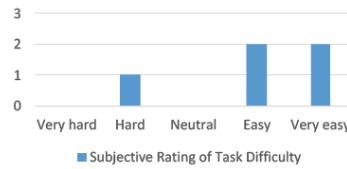
Efficiency

Mean time
~107 seconds



Perceived ease-of-use

Most people found the task easy



2. Usability Test on Low-fidelity Figma Prototype of “港古”

Based on some feedback obtained from the previous usability test towards the competitor, a low-fidelity prototype of “港古” (drafted version on desktop and mobile view with basic wireframes only) was built with the use of Figma (see Figure 16 and 17 or refer to https://mandynmy.github.io/COMM5961/Assignment%2008/Figma_prototype.html). Major differences between the new website and the competitor’s website were the extra new themes (e.g. “Hong Kong Cultures”, “Itinerary”, and “Handicrafts”) and the way of presenting information on declared monuments (e.g. tables will be used to show the monuments in terms of 18 districts in the new website instead of presenting each monument with an individual page like the competitor).

The same five participants were invited to browse the prototypes of “港古” and then filled in a mini survey and provided feedback on it so as to evaluate the new proposed website in terms of perceived ease-of use, level of interest on the theme or information provided, and if they would keep using the website when it was officially launched; Most importantly, they were also asked if the new website performed better than the previous tested competitor’s website (see Figure 18 for details).

Among the five participants, most found the new proposed website easy to use; Some showed certain level of interest on the theme and information; And, more than half participants claimed that they would like to use the website after official launch; Last but not least, all of them agreed that the new website performed better than the previous tested competitor’s website (see Figure 19 for details). Feedback like “font size can be bigger”, “can also include YouTube videos in the itinerary page”, and “the page name of ‘手作館’ may mislead users that the website is also an online shop” were also collected and used to improve the prototype and make adjustments on the final prototype.

Figure 16. Low-fidelity prototype of “港古” in desktop version.

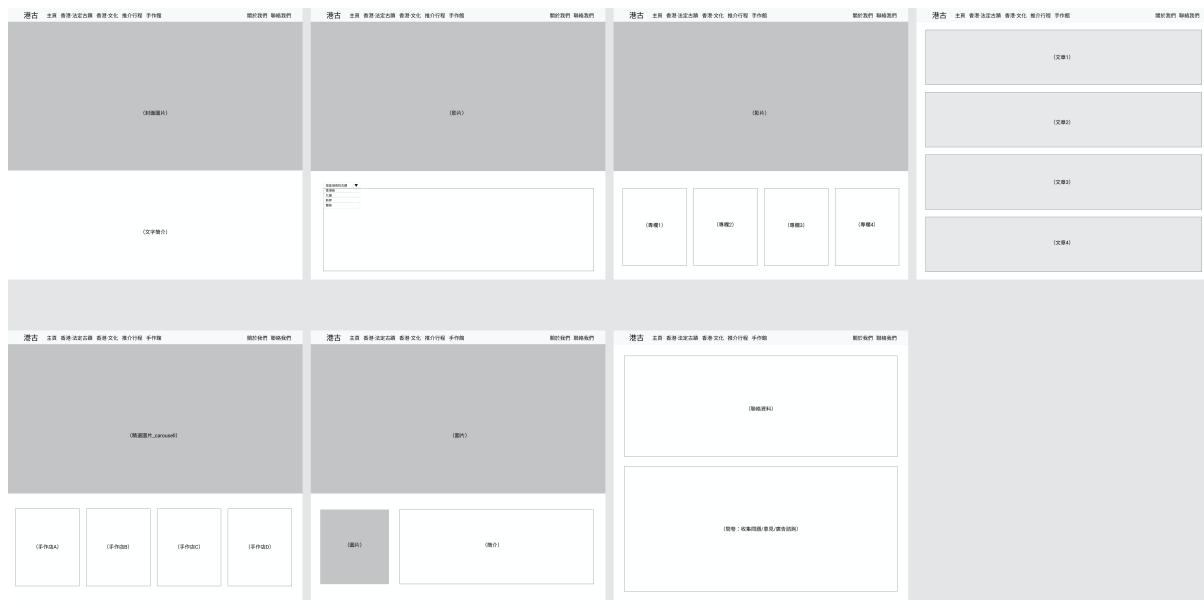


Figure 17. Low-fidelity prototype of “港古” in mobile version.



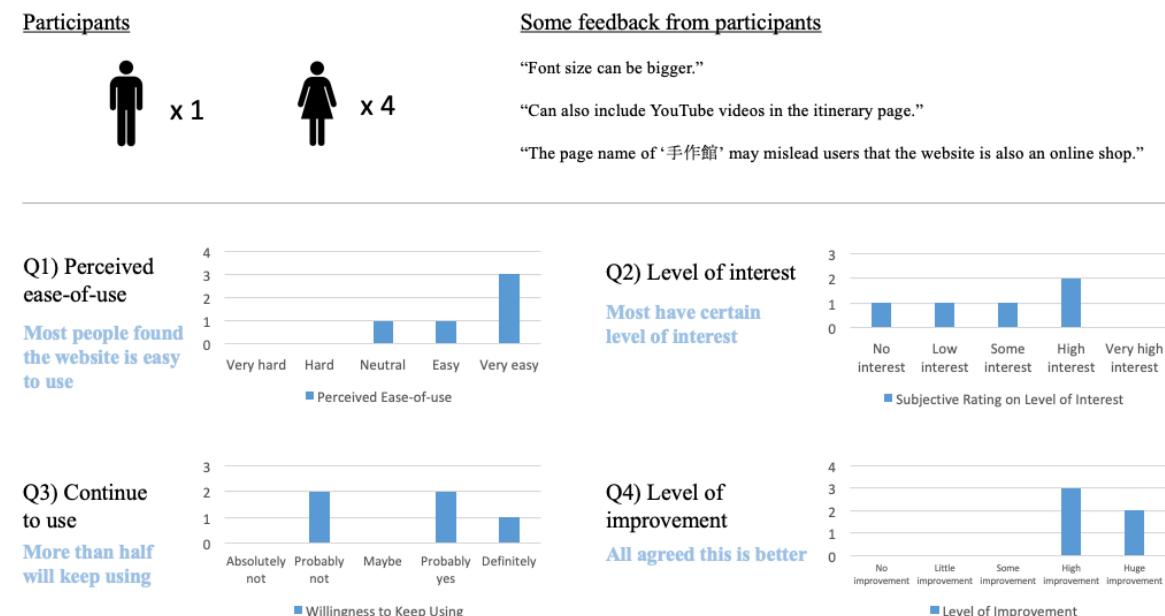
Figure 18. Usability test methodology dashboard for low-fidelity prototype of “港古”.

USABILITY TEST PLAN DASHBOARD

AUTHOR Mandy Ng	CONTACT DETAILS 1155145790@link.cuhk.edu.hk	FINAL DATE FOR COMMENTS 22/11/2020
PRODUCT UNDER TEST What's being tested? What are the business and experience goals of the product? A low-fidelity prototype of "港古" in Figma (with basic wireframes) is being tested.	TEST OBJECTIVES What are the goals of the usability test? What specific questions will be answered? What hypotheses will be tested? Is the proposed website easy to use? Are people interested on the theme or information intended to provide? Will people continue to use the website when it is officially launched?	PARTICIPANTS How many participants will be recruited? What are their key characteristics? Five participants will be recruited using convenient sampling.
BUSINESS CASE Why are we doing this test? What are the benefits? What are the risks of not testing? To check the usability, web design, and perceived usefulness (see if they have interest to use) on the proposed website.	EQUIPMENT What equipment is required? How will you record the data? Digital devices (laptop and mobile phones)	TEST TASKS What are the test tasks? Since the prototype aims to check overall design and people's desire to use, it is built with subpage names and basic wireframes only (with no actual information attached).
PROCEDURE What are the main steps in the test procedure?		LOCATION & DATES Where and when will the test take place? When and how will the results be shared? Date: 22/11/2020 Format: Face-to-Face or via the Internet

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Figure 19. Usability test result dashboard for low-fidelity prototype of “港古”.



A/B Test

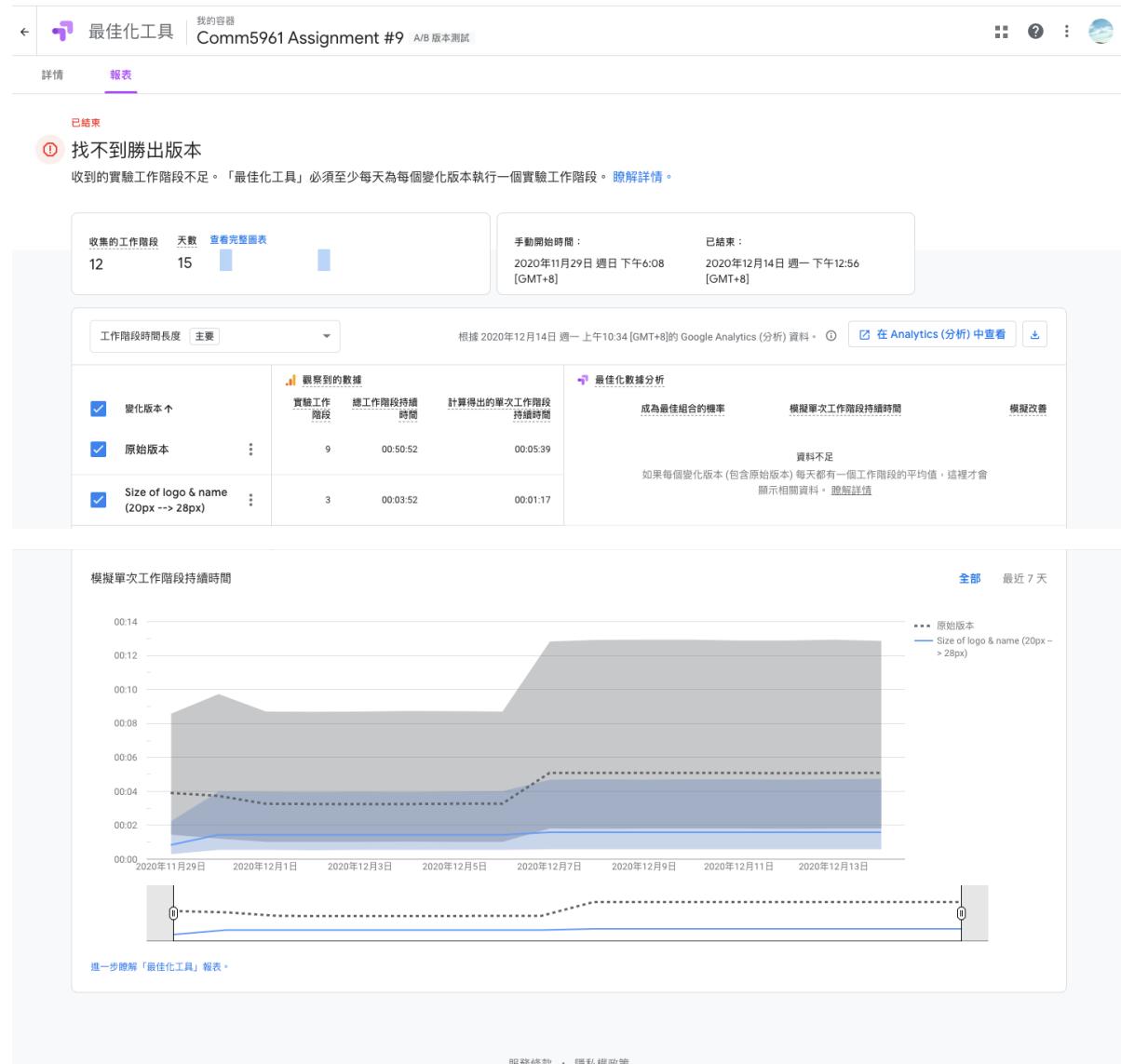
After the two usability tests, a high-fidelity prototype of “港古” was built and feedback on using it was collected from five new users; And, an A/B test was also conducted to see if some minor adjustments on website design were needed:

After showing a high-fidelity prototype of “港古” (<https://mandynmy.github.io/COMM5961/Assignment%2009/home.html>) to the five new participants, their feedback on browsing the website was collected. They generally satisfied with the website design, and gave suggestions like “can add small titles on each page indicating where the users are currently located”, “include attractive monument photos on top of the ‘Hong Kong Declared Monuments’ page is better”, etc.

During the feedback collection, traffics and performance of the website was monitored by Google Analytics; And, an A/B test was conducted using Google Optimize. For the A/B test, a variant version of the home page (with bigger font size for the top navigation bar) was tested with the original version. Results showed that people stayed longer for website in original version (see Figure 20). Therefore, the original version is keep using in the final prototype.

Future Tests and Evaluations

The final prototype of “港古” is now launched (https://mandynmy.github.io/COMM5961/Assignment%2010/final_prototype/home.html) with reference to results and feedback from all of the above usability tests and A/B test. In the future, the website will keep using Google Analytics and Google Optimize to monitor its performance and regularly conduct A/B test to check if modifying some design elements is better or not.

Figure 20. A/B test results.

Recommendations

A few recommendations are suggested below in order to make the website more competitive and popular in the future:

1. Further developments

In the future, the website can build an extra page and provide more information on other Hong Kong heritages (not only declared monuments), like Grade 1,2 and 3 historic buildings (一級、二級和三級歷史建築).

Moreover, to attract a larger group of users from the mainland China and other countries, adding extra language versions (e.g. Simplified Chinese, English) on the website can be considered.

In addition, physical incentives (e.g. souvenirs) can be provided to attract people to give more valuable ideas (user-generated content) on itineraries or other themes. More participation from users and higher interactivity with the website may help to retain users and build up loyalty towards the website.

2. Sustainable operations

The website will update on a regular basis. For example, when the Hong Kong government announced that a heritage was defined as a new declared monument, relevant information will be added in the “Hong Kong Declared Monuments” page through updates on Airtable manually. For “Hong Kong Cultures” page, more timely topics will be added and changed seasonally. In addition, more free customized itineraries for visiting declared monuments will be added to provide more options for users, so as to attract new users and retain old users.

3. Possible cost and revenue

In long term, operational monetary cost on running the website is estimated to be low (i.e. only have potential cost on souvenirs for motivating user-generated content) but the requirement on effort will be high since information of the website need to update frequently to attract and retain users.

When the website developed to certain scale and accumulated some frequent users, potential revenues may be earned from advertisements and commissions on cooperation with relevant business partners (e.g. local travel agencies and handicraft stores) regarding the “Itinerary Recommendation” and “Handicraft Recommendation” pages.