

The Report of Exploring Shanghai Escape Room Website

Requirement Part

- Site objectives/User needs

SITE OBJECTIVES		TARGET USERS		USER NEEDS
Primary goal	Become a mainstream website for exploring and booking Shanghai escape room	Primary User	Newbies, Young people who are not familiar with escape rooms	Book a suitable escape room for party in Shanghai
Additional goal	Build a strong connection with escape room companies	Secondary User	Experienced players who are familiar with escape rooms	Know new and upcoming themes and escape rooms.

Table 1: The site objectives, target users and user needs

The part circled in the red box in Table 1 is the website's objectives, primary user and user need.

Persona Segmentation Table

Persona Segmentation Table							
	AGE	SEX	COUNTRY	PREFERENCE	FREQUENCY	EDU LEVEL	FAMILIARITY WITH ESCAPE ROOMS
1	16-30	FEMALE	CHINA	OUTDOOR ACTIVITIES	INFREQUENT	PRIMARY SCHOOL	UNFAMILIAR PLAYER
2	31-40	MALE	FOREIGN COUNTRIES	INDOOR ACTIVITIES	ONCE A WEEK	MIDDLE SCHOOL	EXPERIENCED PLAYER
3	41-50	BOTH		STAY HOME	TWICE A WEEK	HIGH SCHOOL	
4	51-60				THREE TIMES A WEEK	UNIVERSITY	
5	61-				FOUR TIMES A WEEK	GRADUATE SCHOOL	

Table 2: The persona segmentation table

The part circled in black box the target users. According to the report "2019 Global Survey of Escape Room Enthusiasts in China", the popularity of Chinese escape room enthusiasts in First-tier and second-tier cities in China is increasing, Young and highly educated enthusiasts are in the majority, and those with a college degree or above even account for more than 80%.

That's why I chose Shanghai, mainly targeted young Chinese intellectuals, who like indoor activities, including escape rooms, but they are not very familiar with the escape rooms and its themes. Therefore, they can not make the decision quickly. The age range is 16-30 years old because the report mentioned that most of the escape room players are in this range.

Customer Journey Map

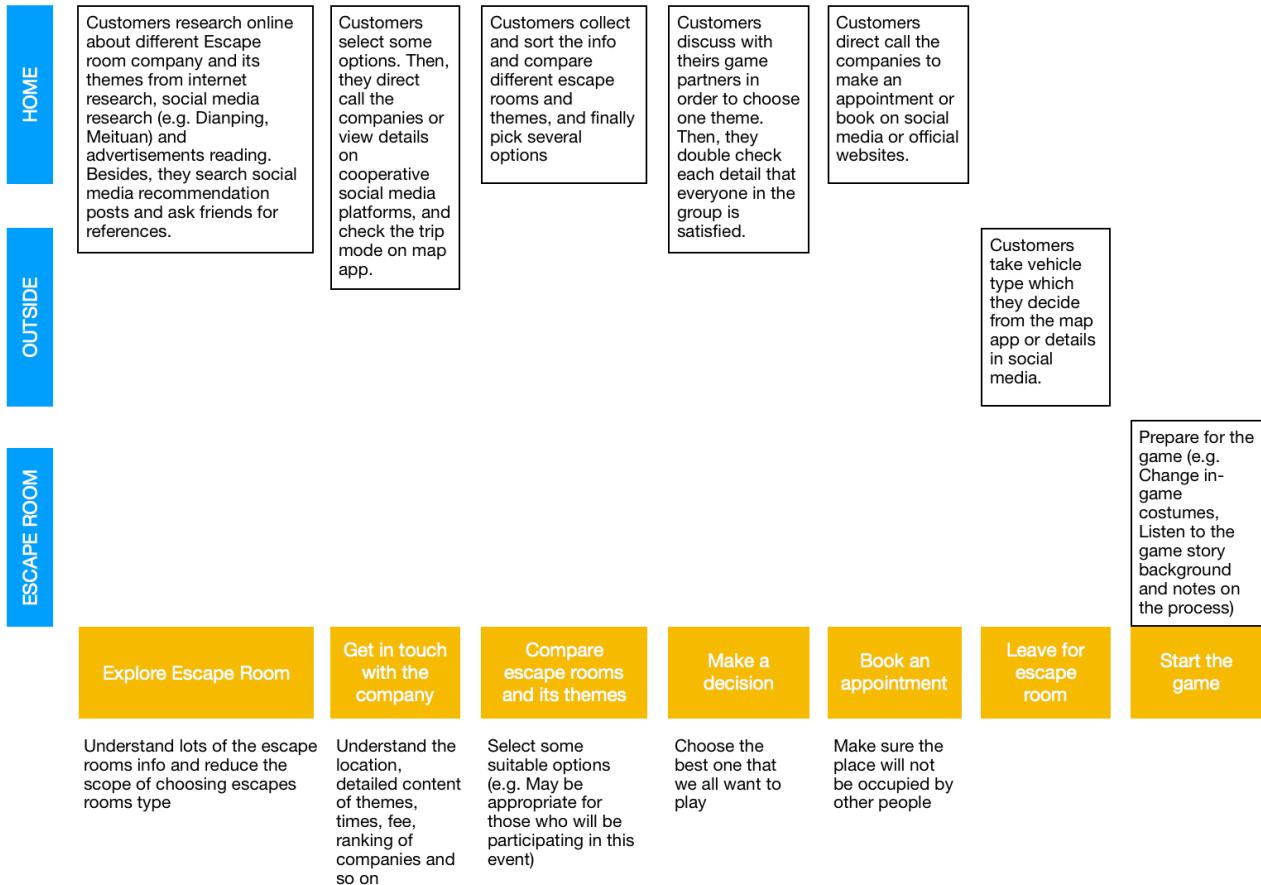


Figure 1: Customer journey map for booking an escape room in Shanghai

In fact some of the behaviors in this journey happen at different stages at the same time. For example, at the beginning of the 'research online', customers may have already learned about the detailed information of the various topics through social media, or they may have started searching for the mode of travel directly. But the final decision has to be made through this journey, because it is a collective activity and the unity of opinion requires that everyone's conditions are met.

Pain Points

Throughout the journey, the pain points that described below.

The group which I targeted was interested in playing the escape room, but when they faced with a variety of escape rooms and themes, it was inevitable that they would have to choose for a while before confirming their reservations. Since there are so many ways to get information, it is hard for them to decide which one they want to play quickly. For example, "business information portals" like DianPing, MeiTuan, and "word-of-mouth from players" are the two traditional ways to get information about the rooms. "Social media" and "we-media's reviews and recommendations" have become popular since then, and are also the main channels to obtain information. Therefore, in order to choose a theme, users need to switch back and forth between different apps in order to view detailed information of the theme and its related posts (recommended or complained) which will influence their decision. The process is very troublesome and wastes a lot of their time.

In the existing solutions, DianPing and MeiTuan provide all the detailed information of the escape room and its themes, with filtering function but not related to the theme content. They have their rating system, and also have a reference for good and bad reviews. However, their reviews are not specific to each theme but each escape room company, and it is not easy for users to find the corresponding comments for each theme. Besides, users are hard to collect and sort lots of escape rooms and its themes info on these platforms, because they cannot see all the themes options at the same time. They spend lots of time to check many escape rooms again and again.

Moreover, they may even forget the suitable theme they have seen before is come from which escape room companies.

The pain points list in the Figure 2.

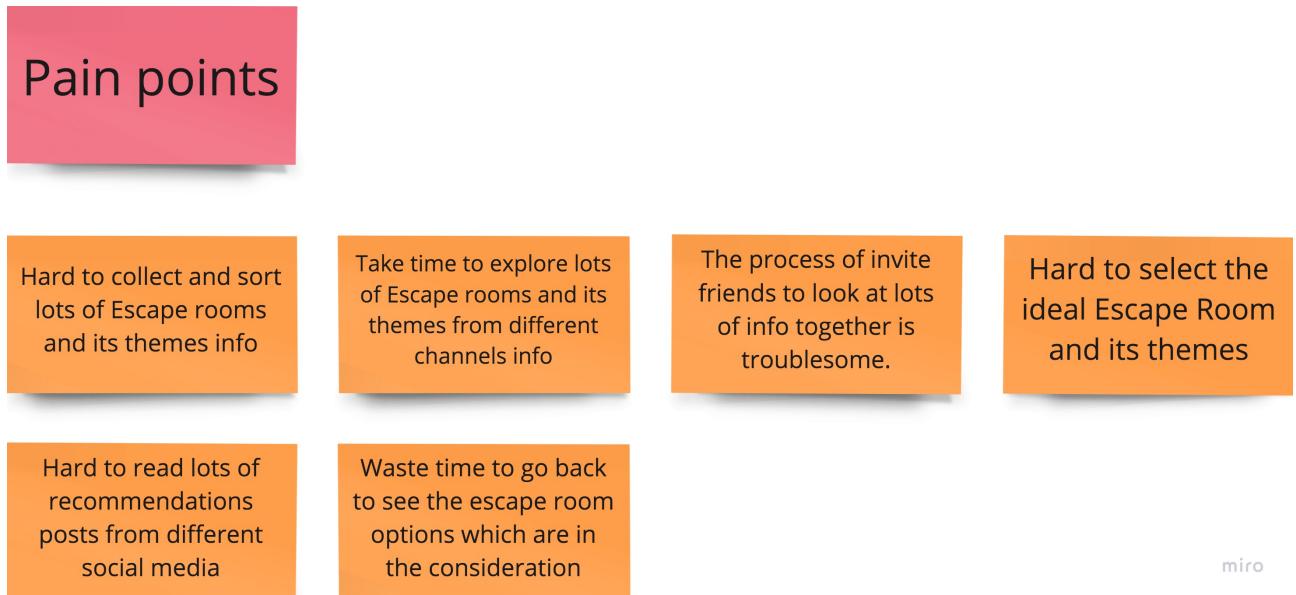


Figure 2: The pain points for booking an escape room in Shanghai

• Functional Specifications/Content Requirement

Refine the Scope

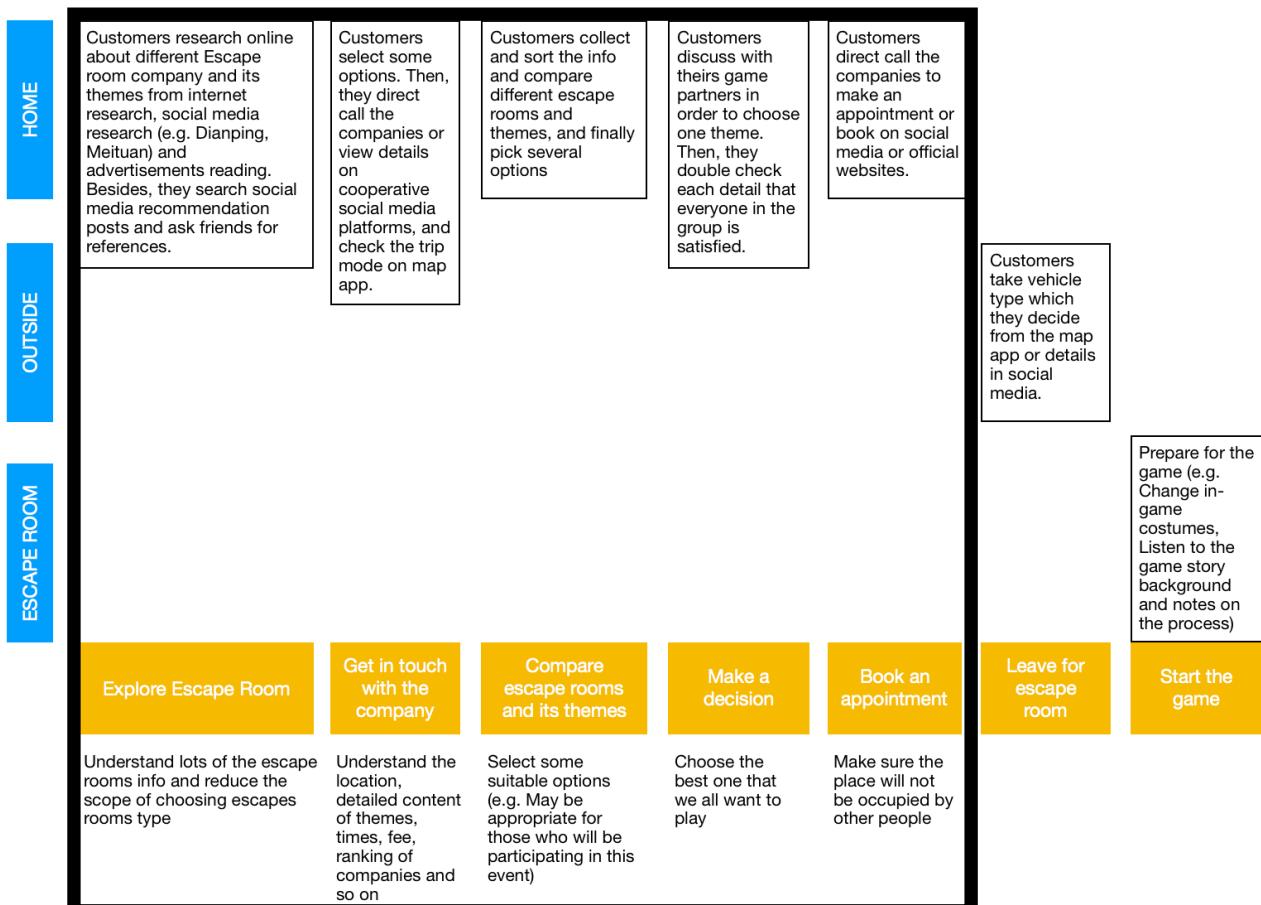


Figure 3: Refine the scope of the customer journey map

Problem Statement

How might we help young people familiar with shanghai escape room and help them find the suitable escape rooms and themes conveniently so that the new website can become a mainstream website for exploring and booking Shanghai escape room.

Future Customer Journey Map

The purpose of the new website is to take the hassle out of choosing and booking an escape room theme; in other words, simplify the process and save time. By filtering the category, it consolidates all the information needed to book an escape room theme, making it possible for the user to learn all the details of the theme very quickly and make a choice quickly. So the website is an all-in-one service designed to consolidate all the information about booking a escape room theme in Shanghai.

The future customer journey map showed in the figure 4, mainly reduce the process at home stage.

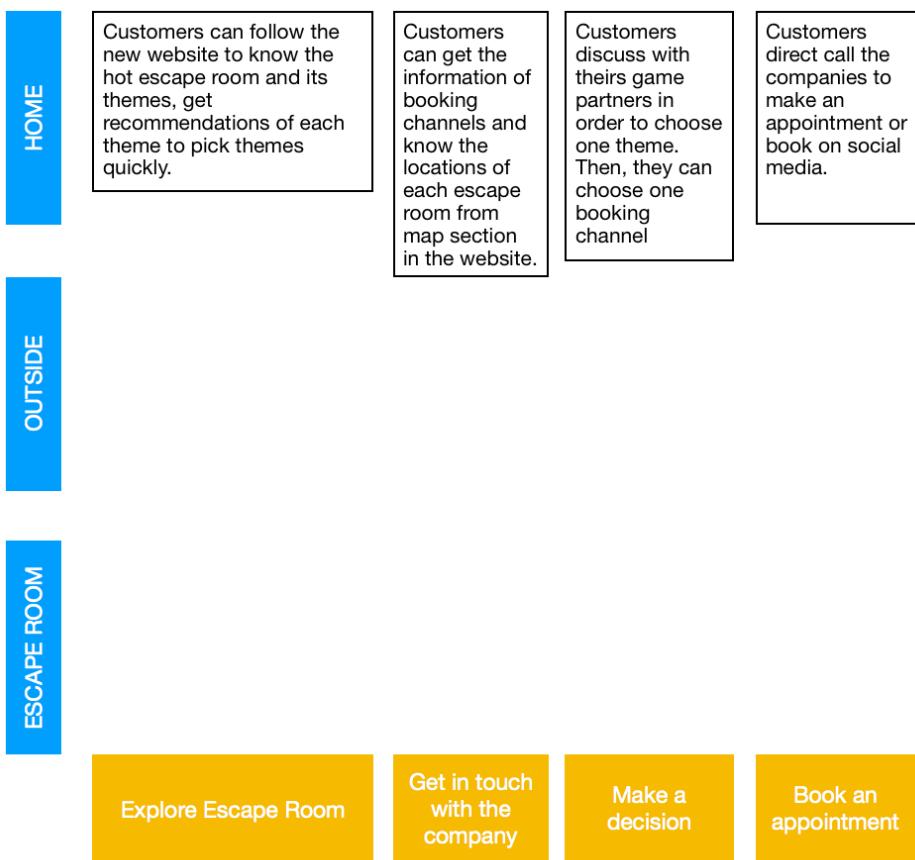


Figure 4: The future customer journey map

Data Understanding - Data Flow Diagram

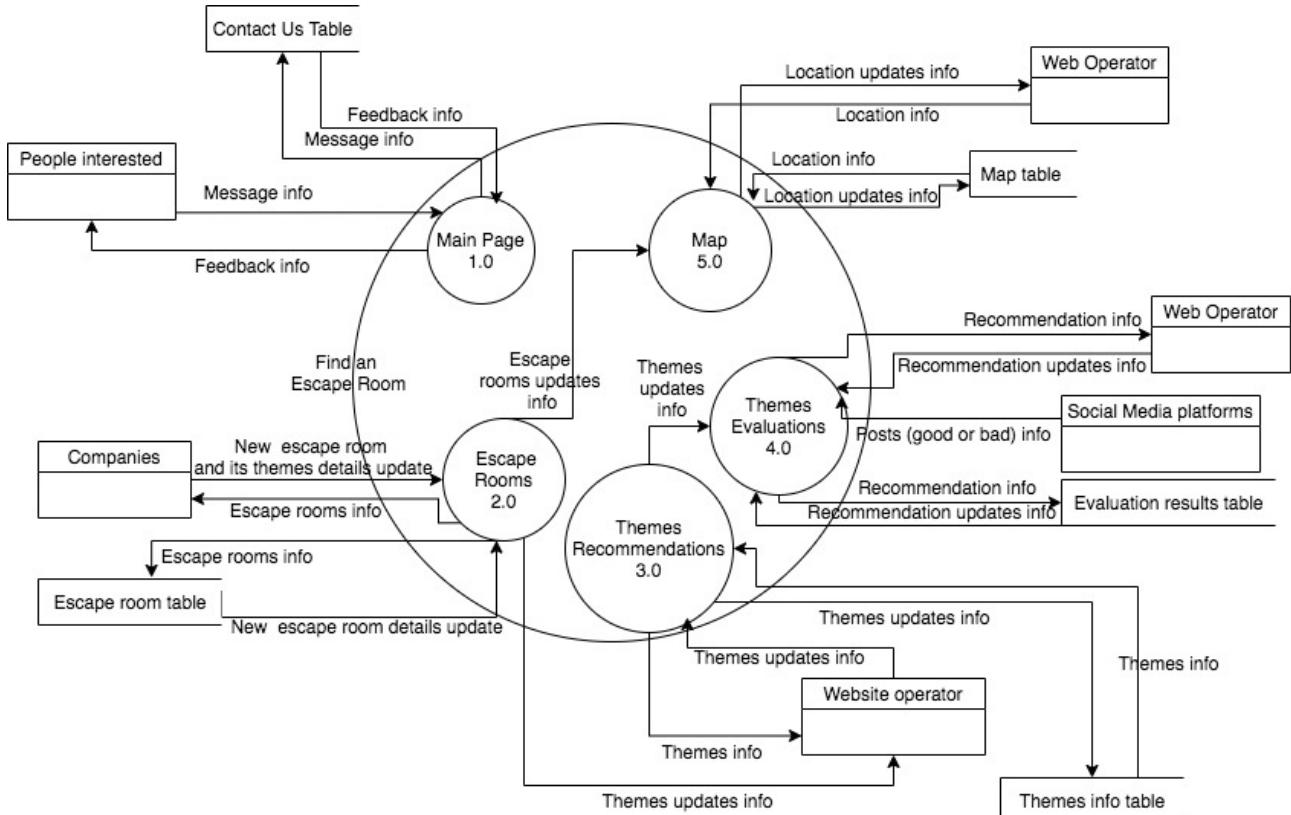


Figure 5: The data flow diagram of Exploring Shanghai Escape Room website

This website mainly shows the data to customers, and its data flow illustrated in Figure 5. The components of the process are Main Page, Escape Rooms, Themes Recommendations, Themes Evaluations and Map. Different processes have some data flow. And each process has one data storage. The external entity includes People interested, companies, Website operator and Social Media Platform.

Data Understanding - Key Data Views

The data points that the Exploring Shanghai Escape Room website has plan to include.

Key data views

Escape Room Type Info

Themes Types Info

Escape Room Location Info

Trip Mode Info

Map Info

Each Theme Details

Each Escape Room Details

Themes Evaluation Info
miro

Figure 6: The key data views of Exploring Shanghai Escape Room website

Design Part

- Interaction Design/Information Architecture

Entity Relationship Diagram

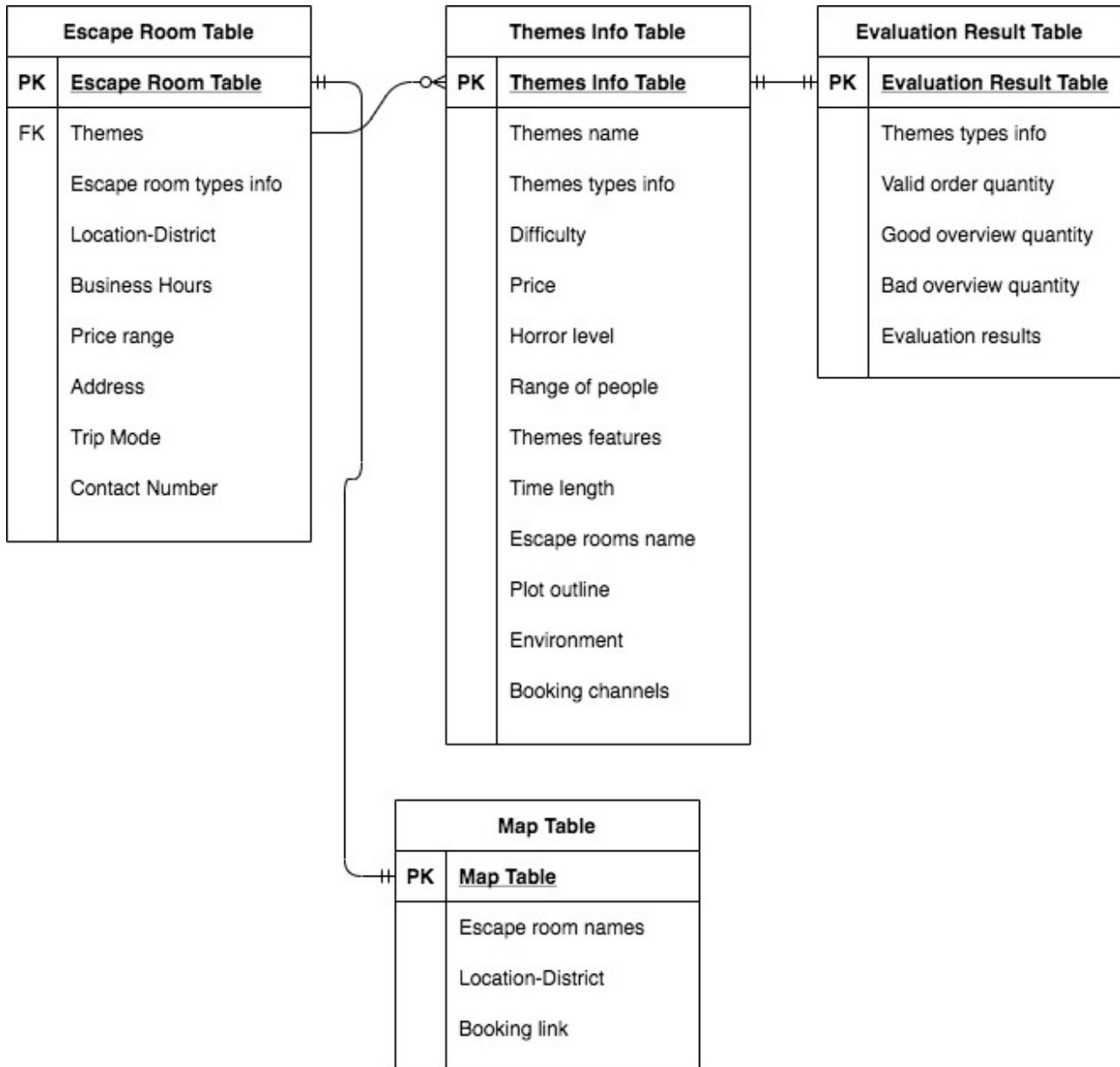


Figure 7: The entity relationship diagram of Exploring Shanghai Escape Room website

The information architecture of the website is a hierarchical structure, the entity relationship diagram (Figure 7) support the development of information architecture.

- Interface Design/Navigation Design/Information Design

In the website, the first part I designed is ‘Escape Room’. When you click on Escape Room, it will jump directly to this side where you can see the 12 recommended rooms (Figure 8). These rooms were selected by looking at dianping reviews and social media (e.g. Xiaohongshou Weibo, etc.) to see which rooms are the most recent and popular. The recommended rooms are subject to change or add by observing the dynamics of the escape rooms in the market. The main types and areas of this room are described above.



Figure 8: The 12 recommended rooms in 'Escape Room' section

By clicking on any of the names, the user can see more detailed information about rooms, its opening hours, price range as well as address and phone number (Figure 9).

房间名称	营业时间	价格范围	地址	电话号码
X先生密室	周一至周日 10:00-24:00	¥200-500/人	上海黄浦区局门路550号八号桥三期1号楼 距离地铁13号线世博会博物馆站3B口步行570m	
UMEPLAY沉浸式剧场	周三至周日 10:00-23:00	¥398/人	上海浦东新区潍坊西路80号-2 (近八佰伴, 9号线商城路站) 距离地铁2/4/6/9 号线世纪大道站11号口步行1.4km	
奇闻INFINITIES E+	周一至周日 09:00-23:30	¥250-400/人	上海徐汇区文定路199号B1层A区 (徐汇商务大厦) 距地铁3/4/9号线宜山路站5号口步行810m	
逃亡兔恐怖密室	周一至周日 13:00-03:30		上海徐汇区斜土路2669号英雄大厦405号 距地铁4号线上海体育场站4号口步行150m	

Figure 9: The detailed information about rooms in 'Escape Room' section

In the function of "View different themes of Escape Room", you can see what themes are available in each room, and what themes are coming soon (Figure 10). Experienced players can quickly see what themes are unplayed and quickly check if the themes are recommended and worth playing by clicking on the 'theme evaluation' button which will be mentioned later.

不同密室的主题

Hide fields			Filter	Group	Sort	...	
	密室名称	主题名称					即将推出
1	X先生密室	弥生2 弥生 绝爱 安卡拉之心2 ZS体验馆					安德森2
2	UMEPLAY沉浸式剧场	极司菲尔 孤生 上位 不可饶恕					
3	奇闻INFINITIES E+	百年魔法师 机械妈妈 釜山行 安魂曲 谋玉 魔宫 临安府札记 老师好!					
4	逃亡兔恐怖密室	冥魂尸宴 瞳灵人					关灯后 (美式恐怖)
5	屋有岛机械剧情密室	天堂岛 明香女校 龙凤铃 殷府奇案 厕所大作战					
6	屋有岛深度体验密室	胭脂扣 守灵夜					蚩灵
7	入戏INSIDE沉浸式体验剧场	和平饭店					
8	屋有岛-学院大逃杀	胭脂扣 美术馆 图书馆 大礼堂					魔女 直播
9	MC沉浸式机械密室	THE ROOM 消失的魂器					
10	RU Kidding奇闻体验馆	百年魔法师 五右卫门传 21克照相馆 千古罪人 吝啬鬼葛朗台					
11	图灵-嘿慢吧	张家楼 (盗墓笔记) 偷天换日 盗梦空间					
12	GIR沉浸式主题游戏馆	红色 渗透-九龙 海湾医院 返校 X/3 森林马戏团 G0427舱 等你下课 (2小时) 返校2					
13 records							

Figure 10: The different themes of different escape rooms in 'Escape Room' section

Next is the 'Theme Recommendation' section, which is the core part to solve the hassle searching processes. Here all the themes from 12 escape rooms are fused together and divided into 5 types - Science Fiction, Horror, Confrontation, Ancient Style and Relax types. Users can choose one theme type they want to play, which can help them filter out some of the themes quickly (Figure 11).

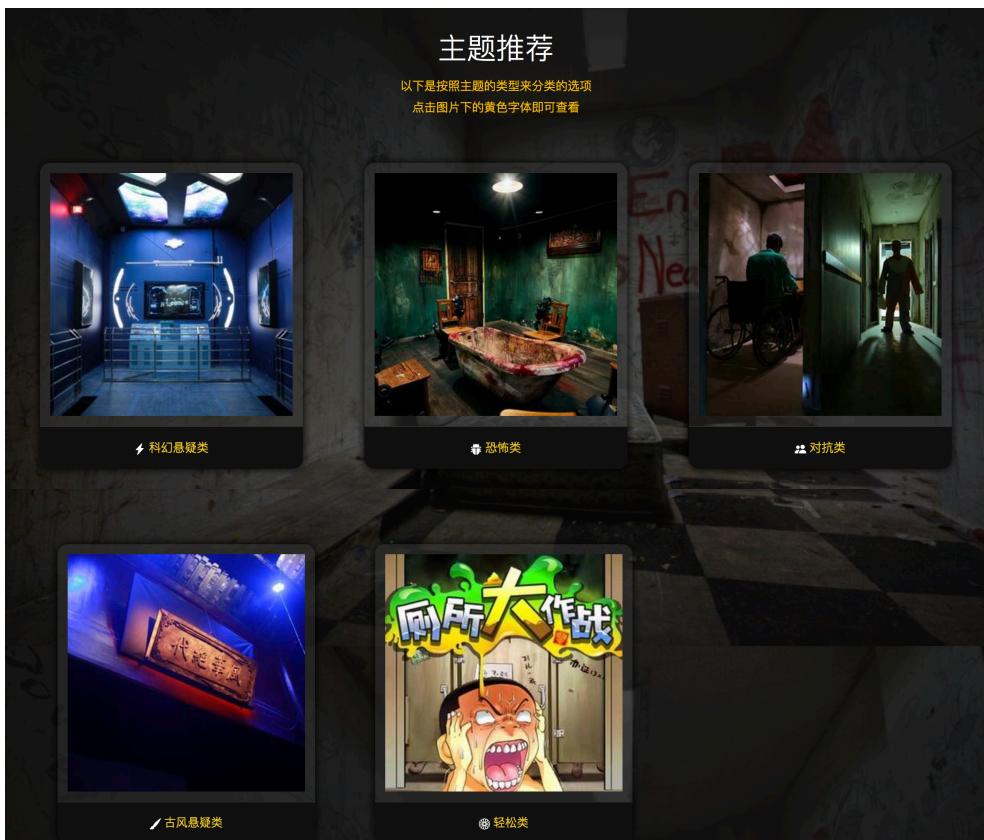


Figure 11: The five types of different themes in 'Theme Recommendation' section

By clicking on any theme type, all the needed information about different themes are integrated on the same page to give users a clear information, including difficulty, price, horror level, number of players, theme characteristics, duration, plot summary, environment, reservation channel, and the name of the room (Figure 12).

Due to the escape rooms are all with suspenseful plots, some themes will come with scary scenes even if they don't belong to the horror category, so in each category there will be a classification of horror level to facilitate user filtering.

A screenshot of an Airtable database interface. The table has columns for Theme Name, Difficulty, Price, Horror Level, Number of Players, Theme Features, and Duration. The data includes 9 records, with the last record being 'G0427舱'. The interface includes a header with 'Hide fields', 'Filter', 'Group', 'Sort', and '...' buttons, and a search bar at the top right. At the bottom, there are buttons for 'Download CSV' and 'View larger version'.

	主题名称	难度	价格	恐怖程度	人数要求	主题特点	时长
1	弥生2	★★★★★	¥279起/人	微恐	4人起订	真人NPC 有剧情 悬疑	100分钟
2	弥生	★★★★★	¥279起/人	微恐	4人起订	真人NPC 有剧情 悬疑	100分钟
3	百年魔法师	★★★★★	¥248起/人	无恐	4人起订	有剧情 大型机械	120分钟
4	机械妈妈	★★★★★	¥258起/人	无恐	4人起订	有剧情 机械	120分钟
5	天堂岛	★★★★★	¥128起/人	微恐	4人起订	有剧情 悬疑 机械	100分钟
6	THE ROOM	★★★★★	¥168起/人	无恐	4人起订	小朋友可玩 大型机械	70分钟
7	消失的魂器	★★★★★	¥268起/人	无恐	6人起订	真人NPC 角色扮演	90分钟
8	盗梦空间	★★★★★	¥158起/人	无恐	4人起订	有剧情 悬疑 角色扮演	100分钟
9	G0427舱	★★★★★	¥398起/人	无恐	6人起订	真人NPC 多重结局 角色	150分钟

Figure 12: The integrated detailed information of different themes in ‘Theme Recommendation’ section

Users also have the option to view information according to what they care most about, like the length of the horror level, the number of people required, and the escape room name category (Figure 13).

A screenshot of a web-based application showing a grouped table of escape room themes. The table has columns for Theme Name, Difficulty, Price, Horror Level, Number of Players, Theme Features, and Duration. The data is grouped by room name, with categories including 'X先生密室', '奇闻INFINITIES E+', and '百年魔法师'. The interface includes a header with navigation links like '主页', '密室逃脱', '主题推荐', '主题评估', '地图', '联系我们', and a lock icon. A sidebar on the left lists filtering options: '请选择分类方式', '按主题分类', '按时长分类', '按恐怖程度分类', '按人数要求分类', and '按密室名称分类' (which is checked). At the bottom, there is a link '查看大图'.

	主题名称	难度	价格	恐怖程度	人数要求	主题特点	时长
	密室名称						
	X先生密室	Count 2	Sum 8				
1	弥生2	★★★★★	¥279起/人	微恐	4人起订	真人NPC 有剧情 悬疑	100分钟
2	弥生	★★★★★	¥279起/人	微恐	4人起订	真人NPC 有剧情 悬疑	100分钟
	密室名称						
	奇闻INFINITIES E+	Count 1	Sum 4				
3	机械妈妈	★★★★★	¥258起/人	无恐	4人起订	有剧情 机械	120分钟
	密室名称						
	奇闻INFINITIES E+	Count 1	Sum 4				
4	百年魔法师	★★★★★	¥248起/人	无恐	4人起订	有剧情 大型机械	120分钟

Figure 13: The different view by choosing the escape room name category

By the category of escape room name, users can quickly find the address and reservation phone number in the ‘Escape Room’ section. Alternatively, on the map section, users can click on the room they want to go to and then click on the link to go directly to the Dianping to complete the reservation.

Then there is the ‘Theme Evaluation’ section, which is based on the recommendations collected from Dianping and Xiaohongshu data, including valid order quantity, good overview quantity, bad overview quantity, and evaluation results (Figure 14).

	主题名称	主题类型	订单数量	推荐文章数量	差评文章数量	评估
1	弥生	科幻悬疑类	14173	18	0	👍
2	弥生2	科幻悬疑类	37064	13	0	👍
3	绝爱	恐怖类	10036	8	0	👍
4	安卡拉之心2	对抗类	8777	3	1	👍
5	ZS体验馆	对抗类	33884	0	1	
6	百年魔法师	科幻悬疑类	2635	4	4	
7	机械妈妈	科幻悬疑类	3159	1	0	
8	釜山行	恐怖类	10114	8	1	👍
9	安魂曲	恐怖类	4350	1	0	
10	谋玉	古风悬疑类	12801	6	2	👍
11	魔宫	古风悬疑类	6414	6	0	👍
12	临安府札记	古风悬疑类	3734	2	1	
47 records			Sum 585232	Sum 240	Sum 30	

Figure 14: The integrated information from social media in ‘Theme Evaluation’ section

It can be categorized by theme type, so that users can find evaluation results by theme type more quickly after they have a theme they want to play. Or users can choose the theme they want to go to directly from the evaluation results (Figure 15).

	主题名称	主题类型	订单数量	推荐文章数量	差评文章数量	评估
6	THE ROOM	科幻悬疑类	980	1	0	
7	消失的魂器	科幻悬疑类	3900	5	1	👍
8	盗梦空间	科幻悬疑类	3511	2	0	
9	G0427舱	科幻悬疑类	554	0	1	
主题类型		恐怖类 Count 10	Sum 144824		Sum 77	Sum 4
10	绝爱	恐怖类	10036	8	0	👍
11	釜山行	恐怖类	10114	8	1	👍
12	安魂曲	恐怖类	4350	1	0	
13	明香女校	恐怖类	33503	10	0	👍
14	龙凤铃	恐怖类	28212	5	1	👍
15	张家楼 (盗墓笔记)	恐怖类	6425	3	0	👍

Figure 15: The different view by choosing the theme type category

Some of the new themes may have a relatively small number of orders, and the evaluation results may be poor. However, the evaluation results will change depending on the changing of number of orders, the number of positive or negative reviews. In addition, the recommended themes are based on the following criteria: number of orders greater than 3,000, number of positive reviews greater than three, and number of negative reviews less than or equal to three.

The last one is the map section, where all the escape rooms are located in eight zones. After selecting a room, you can click on the icon, and then click on the picture or the room name to go

to the Dianping website to make a reservation online or by phone, or to get more information (Figure 16).



Figure 16: The 'Map' Section

The 'Contact Us' Section is attached on the main page for user to leave message for the website, and user can received the feedback via email (Figure 17).

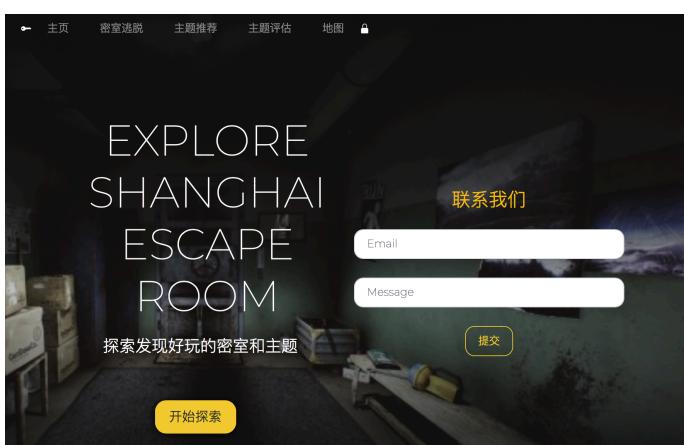


Figure 17: The 'Contact Us' Section in the main page

Test/Evaluation Part

- **Visual Design**

Usability Study - Persona

There are five people chosen to be the representative users in the usability study.

1. Panna JIANG (22 years old, Live in Shanghai, love indoor activities, not familiar with Shanghai escape rooms)
 2. Enoki LI (23 years old, Live in Shanghai, love both outdoor and indoor activities, not familiar with Shanghai escape rooms)
 3. Zoe YU (21 years old, Live in Shanghai, love both outdoor and indoor activities, not familiar with Shanghai escape rooms)
 4. Zoe ZHANG (21 years old, Live in Shanghai, love both outdoor and indoor activities, not familiar with Shanghai escape rooms)
 5. Demia SUN (25 years old, Live in Jiangsu, Usually come to Shanghai, love both outdoor and indoor activities, not familiar with Shanghai escape rooms)

Usability Test 1 - Competitor (DianPing Website)

USABILITY TEST PLAN DASHBOARD

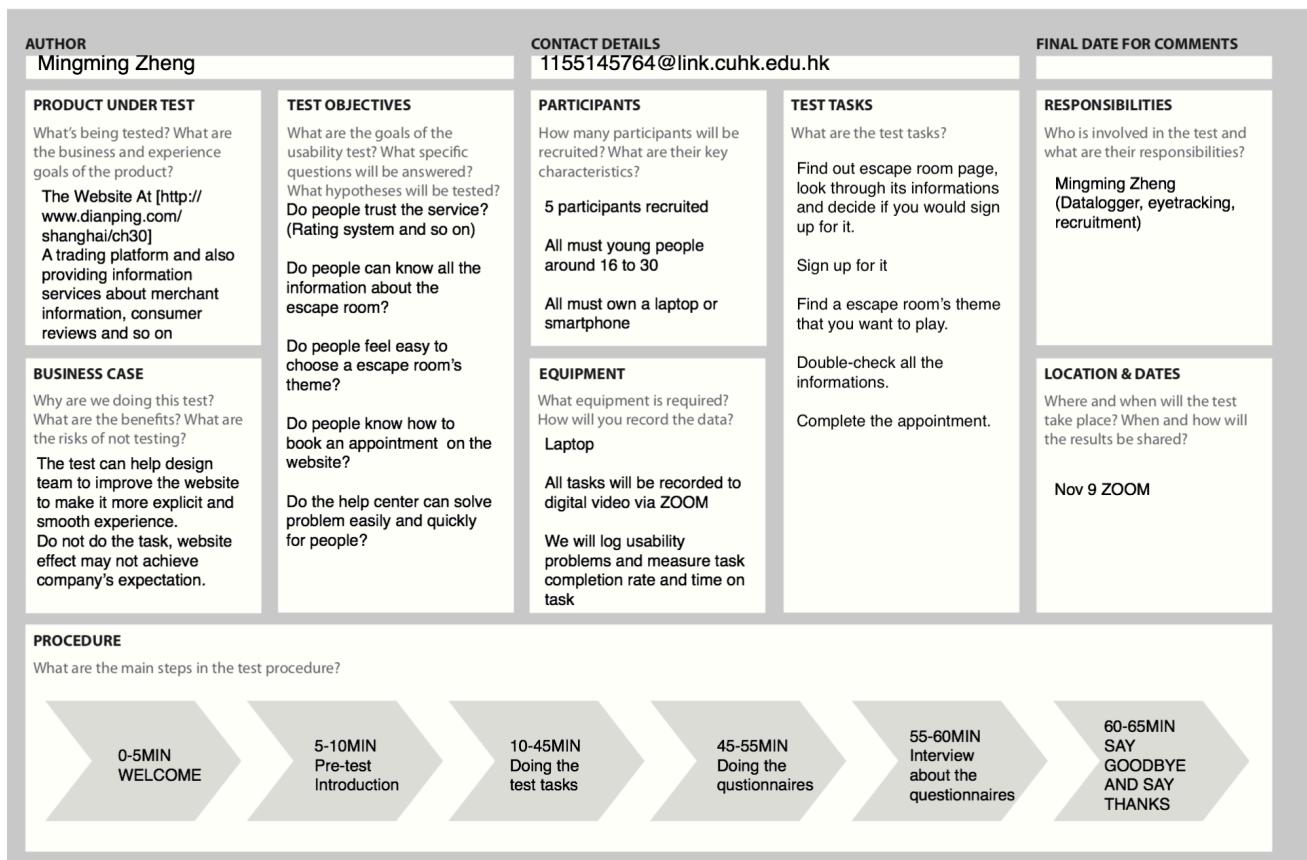


Figure 18: The usability test plan of DianPing website

The usability test plan of DianPing website showed in the Figure 18. The simple summary illustrated below.

Effectiveness

All 5 participant willing to sign up for the website because it has lots of the information and complete the ‘sign up’ task smoothly (‘sign up task’).

All 5 participant didn't complete the 'finding a escape room theme' task.

It took them about 5 minutes to click into a escape room to look at themes, then return to the home page, find another escape room, and then looking at themes, keep repeating the previous actions and ultimately not finish. Through the interviewing process, they all mentioned some key

words ‘too many choices’, ‘Hard to shop around’, ‘have to jump back and forth on different pages’, and ‘forget which escape room the theme they thought was good before was in’.

Efficiency

5 participant can quickly complete the ‘double-check information’ and ‘make and appointment’ tasks in about 2 minutes. However, it is hard for them to complete the ‘finding a escape room theme’ on time.

Results

It is essential for the new website to make consumers see escape rooms and its themes easily. It can build integrated information of all the escape rooms and themes on the same page. Besides, it can provide the filtering functions for users to choose what they concerned most about.

Usability Test 2 - Information architecture and wire-frames for Exploring Shanghai Escape Room Website

USABILITY TEST PLAN DASHBOARD

AUTHOR	CONTACT DETAILS	FINAL DATE FOR COMMENTS
Mingming Zheng	1155145764@link.cuhk.edu.hk	
PRODUCT UNDER TEST What's being tested? What are the business and experience goals of the product? A prototype for Shanghai Escape Room This website is an all-in-one service to consolidate all the information about reserving a secret room theme.	TEST OBJECTIVES What are the goals of the usability test? What specific questions will be answered? What hypotheses will be tested? Do people trust the service? (Rating system and so on) Do people can know all the information about the escape room? Do people feel easy to choose a escape room's theme? Do people know how to book an appointment on the website? Do the map can help to find the location of escape room?	PARTICIPANTS How many participants will be recruited? What are their key characteristics? 5 participants recruited All must young people around 16 to 30 All must own a laptop or smartphone EQUIPMENT What equipment is required? How will you record the data? Laptop All tasks will be recorded to digital video via ZOOM We will log usability problems and measure task completion rate and time on task
BUSINESS CASE Why are we doing this test? What are the benefits? What are the risks of not testing? The test can help design team to improve the website to make it more explicit and smooth experience. Do not do the task, website effect may not achieve company's expectation.	TEST TASKS What are the test tasks? 1. Find the page of the Escape Room 2. Find the closest Escape Room to you. 3. Find a theme of Escape Room 4. Find a information about the theme that you most concern 5. Refer to the themes evaluations to select a theme 6. Find reservation information	RESPONSIBILITIES Who is involved in the test and what are their responsibilities? Mingming Zheng (Datalogger, eyetracking, recruitment)
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? Nov 23 ZOOM

Figure 19: The usability test plan of Exploring Shanghai Escape Room Figma

Improvements made to the new website

1. The new prototype offer twelve popular Escape Rooms, narrowing down the choices for users.
2. The new prototype are more clearly categorized:

Escape Room page can be used by experienced players to explore and discover the new room themes.

Themes are sorting by types, allowing common users to make exclusions faster.

3. In each type, common users can see all the information of all the themes at once, to filter them.

4. In the new prototype, each topic has a corresponding evaluation on the Themes Evaluation page. Users can view them by theme category, so they can quickly find the rating of the theme they want to see.
5. The map page can provide which escape rooms are available in each district, so users can see the closest one to the user at once.

Tasks

1. Find the page of the Escape Room

In this task, all four test participants enter the Escape Room page by clicking on "Escape Room" and "Explore now", respectively. Users who clicked on "Explore now" had a screen-sliding action. One user clicked on "Themes Recommendation", slide the page for a while, and then clicked on "Escape Room" to complete the task successfully.

The addition of the "Escape Room" option to the navigation in the new model allows users to quickly complete the task of finding the page where the room is located. One user clicked more than once, which may have been a problem with the wording. But overall, the task was completed quickly by all five users.

2. Find the closest Escape Room to you.

A user clicked on "Escape Room", swiped for 1 minute, clicked on "View themes sorted by Escape Room", then clicked on "Map", then clicked on "ChangNing".

A user clicks on "Themes Recommendation", clicks on "Confrontation Type", then stops at the page to view information on the topic for 2 minutes, and clicks on "Map", then clicked on "XuHui" and "ChangNing" successively. Finally, I stayed at "XuHui".

A user clicked on "Map", then clicked on "PuDong".

A user clicks on "Map", then clicked on "JiaDing".

One user clicked on "Map", then clicked on "HuangPu" and "PuDong", and finally stopped at "PuDong".

Two users did not click Map directly to find the nearest secret room. In Dianping, the map is placed on each escape room page, and users might have mistakenly thought it was on the "Escape Room" page or the "Themes Recommendation" page. Two users clicked on two locations before making a decision. The selection of all 12 rooms did not include all areas of Shanghai, and users may have been confused as to which was closest to them. One user was able to complete the task quickly by clicking twice.

3. Find a theme of Escape Room

One user clicked on "Escape Room", slide around for 2 minutes, clicked on "View themes sorted by Escape Room", looked around for a while, clicked on "Themes Recommendation", clicked on "Ancient Style Type", and then stopped at the page where they were viewing theme information.

Two users clicked on "Themes Recommendation", clicked on "Science Fiction Type", and then stopped at the page where they were viewing the topic information.

One user clicked on "Themes Recommendation", clicked on "Confrontation Type", and then stopped at the page where they were viewing the topic information.

One user clicked on "Themes Recommendation", clicked on "Confrontation Type", clicked on "Back to Themes Recommendation", clicked on "Science Fiction Type", and then stopped at the page where the topic information was being viewed.

One user did not select "Themes Recommendation" directly, but had to bypass the "Escape Room" page before clicking on "Themes Recommendation". One user, after selecting a room type, went back to the "Themes Recommendation" page to select another one. The user might be wondering which one is better.

4. Find a information about the theme that you most concern

One user clicked on 'Theme Recommendation', clicked on 'Science Fiction Type', then clicked on 'Horror Level', stepped back, selected 'Confrontation Type', and clicked 'Horror Level' again. Finally the user stopped here.

One user clicked on 'Theme Recommendation', clicked on 'Confrontation type', clicked on 'Time Length', and finally the user stopped here.

One user clicked on 'Theme Recommendation', clicked on "Ancient Style", clicked on "Horror Level", and finally the user stopped here.

One user clicked on 'Theme Recommendation', clicked on 'Confrontation Type', clicked on 'Range of people'. Finally the user stopped here.

One user clicked on "Theme Recommendation", "Science Fiction Type", "price ", then clicked on "Plot outline" and "environment". Finally, the user stopped at "Price".

All five users selected the information they were most interested in within one minute, indicating that the information presented in "Themes Recommendation" was comprehensive enough. However, the first user repeatedly clicked on 'Horror Level', and the third user also clicked on 'Horror Level', indicating that the users cared a lot about 'Horror Level'. This could be used to add a Theme Type for the Horror category in future improvements.

5. Refer to the themes evaluations to select a theme

Four people clicked on "Themes Evaluation", then "Check", and finally stopped at the rating page.

One person clicked on "Themes Recommendation", clicked on "Confrontation Type", and then stopped for 2 minutes to view the topic information. One person clicked on "Themes Evaluation" and ended up on the rating page.

Only one user clicked incorrectly on "Themes Recommendation" first, probably because of the similarity of the text in the title.

6. Find reservation information

A user clicked on "Escape Room", scrolled up and down the page, and stayed for 1 minute. Clicked on "Themes Recommendation", then clicked on "Science Fiction Type", looked at the page for 1 minute, and finally found it.

A user clicked on "Escape Room", scrolled up and down the page, and stayed for 30 seconds. A user clicked on "Map", looked for a few seconds, clicked on "Themes Recommendation", and then clicked on "Confrontation Type". Themes Recommendation", looked for 25 seconds, and finally found it. Two users clicked on "Themes Recommendation", then "Confrontation Type", looked for 27 seconds, and finally found it.

One user clicked on "Themes Recommendation" and then clicked on "Ancient Style Type", checked for 20 seconds, and finally found it.

Three users found the reservation without problems, but one user clicked on "Escape room" first, and one user even clicked wrongly twice in a row, which means that the user had some difficulty in finding the reservation information part.

Usability Test 3 - HTML Prototype of Exploring Shanghai Escape Room Website

USABILITY TEST PLAN DASHBOARD

AUTHOR	CONTACT DETAILS	FINAL DATE FOR COMMENTS
Mingming Zheng	1155145764@link.cuhk.edu.hk	
PRODUCT UNDER TEST What's being tested? What are the business and experience goals of the product? A prototype for Shanghai Escape Room This website is an all-in-one service to consolidate all the information about reserving a secret room theme.	TEST OBJECTIVES What are the goals of the usability test? What specific questions will be answered? What hypotheses will be tested? Do people trust the service? (Rating system and so on) Do people know all the information about the escape room? Do people feel easy to choose a escape room's theme? Do people know how to book an appointment on the website? Do the map can help to find the location of escape room?	PARTICIPANTS How many participants will be recruited? What are their key characteristics? 5 participants recruited All must young people around 16 to 30 All must own a laptop or smartphone
BUSINESS CASE Why are we doing this test? What are the benefits? What are the risks of not testing? The test can help design team to improve the website to make it more explicit and smooth experience. Do not do the task, website effect may not achieve company's expectation.	EQUIPMENT What equipment is required? How will you record the data? Laptop All tasks will be recorded to digital video via ZOOM We will log usability problems and measure task completion rate and time on task	TEST TASKS What are the test tasks? 1. Find the location info of the Escape Room 2. Find a information about the theme that you most concern 3. Go to the DianPing reservation page
PROCEDURE What are the main steps in the test procedure?		RESPONSIBILITIES Who is involved in the test and what are their responsibilities? Mingming Zheng (Datalogger, eyetracking, recruitment)
		LOCATION & DATES Where and when will the test take place? When and how will the results be shared? Dec 6 ZOOM

```

graph LR
    A[0-5MIN WELCOME] --> B[5-10MIN Pre-test Introduction]
    B --> C[10-45MIN Doing the test tasks]
    C --> D[45-55MIN Doing the questionnaires]
    D --> E[55-60MIN Interview about the questionnaires]
    E --> F[60-65MIN SAY GOODBYE AND SAY THANKS]
  
```

Figure 20: The usability test plan of Exploring Shanghai Escape Room HTML

Improvements made to the new website

1. Add a Horror Type in the 'Theme Recommendation' Section
2. Change the English version to Chinese version to provide a more exact meaning for target customers
3. Add the filtering function in the 'Theme Recommendation' Section
4. Add more detailed information of Escape Room

Tasks

1. Find the location info of the Escape Room

Four users clicked on "Map", then clicked on "View Escape Room location", selected an escape room, clicked on the blue icon, then clicked on "Photo" or "Escape room name", entered the DianPing interface, and clicked on the location info.

One user clicked on "Escape Room", then clicked on the name of a room, went to "Escape room detailed info", and found "Location info" for all the rooms.

The first four users took more than 2 minutes, while the last one took less than 1 minute. But all five users were able to find "Location info" in different ways. So this part is well developed.

2. Find information about the theme that you the most concern

One user clicked on "Theme Recommendation", then click on "Horror Type", and then stopped at "Time Length".

One user clicked on "Theme Recommendation", then click on "Horror Type", and then stopped at "Range of People".

One user clicked on "Theme Recommendation", then click on "Horror Type", and then stopped at "Price".

One user clicked on "Theme Recommendation", then click on "Relax Type", and then stopped at "Horror Level".

One user clicked on "Theme Recommendation", then click on "Ancient Style", and then stopped at "Price".

All five users completed the task as expected. And three of them chose "Horror type". This shows that it is necessary to add this category.

3. Go to the DianPing reservation page

The four users who found the DianPing website in the first task quickly found the DianPing reservation page.

Another user clicked on "Escape Room", then click on the name of an escape room, clicked on "Phone number", found no response, returned to the page, clicked on "Theme Recommendation", then clicked "Horror Type", and found that there was still nothing, then clicked "Map". After clicking on "View Escape Room location", click on an escape room, then clicked on the blue icon, then clicked on "Photo", and jumped to the DianPing reservation page. This means that the user will not know the function of jumping to DianPing website without using this website before. A hint word can be added in the "Map" section in the future improvement.

A/B Test

The 'Contact Us' section in the original website is located at the bottom (Figure 21). The change in the escaperoomb website is that the 'Contact Us' section is placed on the main page (Figure 22).

Purpose of the comparison: To test which version has better aesthetics and usability

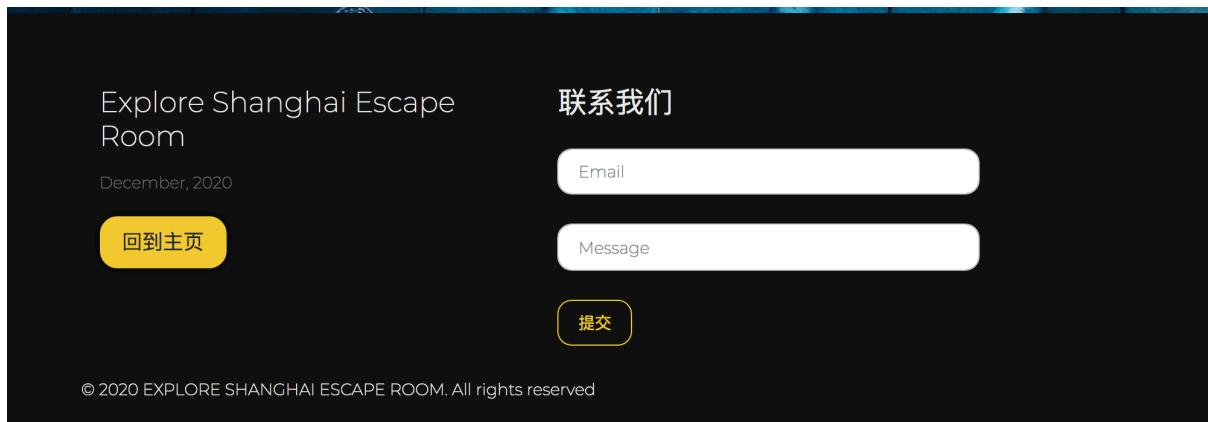


Figure 21: The 'Contact Us' section in the original website



Figure 22: The 'Contact Us' section in the escaperoomb website

The data results from Google Analytics

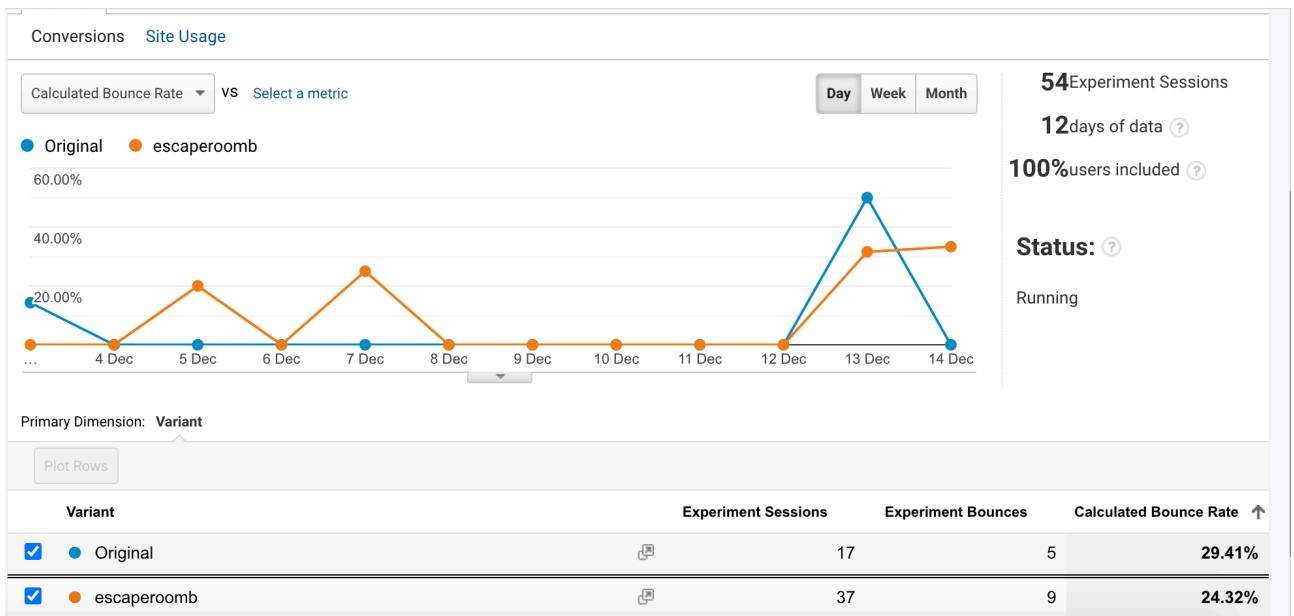


Figure 23: The data result from Google Analytics

From Figure 23, during 12 days, there is a total of 54 people who have entered into the website until 14/12/2020. The calculated bounce rate showed that the original one (29.41%) is higher than the escaperoomb one (24.32%). It means that the escaperoomb website version is better because people are more willing to stay at this website version.

Evaluation - Further Development, operation, cost and market studies

Further Development

This website is full of Airtables, so people who have to know how to utilize this function to find what they want is the most important thing. However, in this website, the filter and grouping functions are straightforward; there is the simple guide to lead users like the hint 'Please choose...'. When the data grow into the large volume, I think the filter function can help the user to find what they want quickly. Besides, the website will clean some data about some unrecommended and outdated rooms and themes regularly to make sure the website looking explicit for users. In the future, the website can also change Airtables into JQueryTable, because it can support the paging and direct keyword search.

Possible business case

As more and more customers come in, it is possible to partner with reputable escape room companies to gain benefits by adding their rooms to the list of recommended escape rooms, or even to place on the front of the list.

A membership system can be set up to benefit from customers. Members can be offered direct access to booking features. A community of players could also be created, offering tutorials for newbies, tricks, basic leveling strategies, and the like. Members could also share with each other what escape room themes are fun or some experience in game clearance.

Operation, cost and market studies

The site requires constant attention to the escape room market to change the recommendation of escape rooms in the "Escape Room" section. The operator should check the major social media outlets to summarize the recommendations, such as Weibo, Xiaohongshu, DianPing, Meituan and so on. Besides, in order to guarantee the data which has been collected is trustworthy, the operator can hire some people to experience some hot themes. For the "Theme Evaluation" part, the website extracted some data from Xiaohongshu and DianPing. In order to prevent copyright issues, the website can exchange resources with them. They can also get our data and put it on their platform. Both sides can also have free promotion for each other. By continually deleting and adding content, this also keeps the page from being too confusing. If a user wants to go back to the previously recommended rooms, the site will add a "browse last month's recommended rooms" feature. Therefore, new users and experienced users will not miss any recommendations. One more thing that the operator should check regularly is the discussion in the membership section. The operator should keep discussion section healthy and enjoyable.

The cost of the websites includes creating website, maintaining website, updating the website, testing the website, website technician and marketing (promote the website).