



LikeLake

Eco-Community Engagement Platform

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Hacking Chengdu: Activating New Urban Development in China

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Part I: On-Site Research

Background

Watersystem has been an integral part of Chengdu's urban life throughout its 2000-year history. Several rivers, most notably the Jin River, passes through the Chengdu region and nurtures the people in the city (Fig. 1).

In the recent decades, China has gone through a period of rapid economic development that separated the citizens from the traditional water-based living mode. Waterways are filled up to become roads, rivers, ports, docks and bridges are also disappearing. Water quality also deteriorated.

Fortunately, people realized about the "water crisis" in time and began the rejuvenation of Chengdu's water environment. Since the 90s, a few major water roadways (such as Fu fiverm South river, Sha river and Clear Water river) have been treated. In the 2000s, East and South lakes were being transformed and treated as well. In the 2010s, Jincheng lake and Xinglong lake were created.

Same changes also happen in the real estate development scene. Luxelake, a large-scale mixed development project in Chengdu's Tianfu New District, recreates large swaths of watersystem that interweaves with the built environment. The revived watersystem can perform self-cleaning and has a Category II surface water quality standard. This success has led to many developers to invest in water-centered community building and develop large scale lake-residential projects. Sufficet to say, Luxelake has set a new development model that leads to a renaissance of living with water in Chengdu.

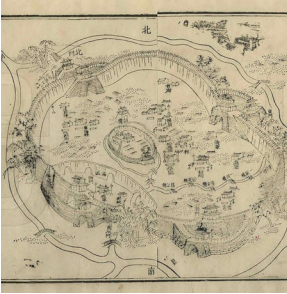


Figure 1: An old map of Chengdu. River can be seen surrounding and passing through the city.



Figure 2: Survey of Luxelake's geography via drone video. The residential area, visitors' activity zones, and water system are knitted closely together.

Physical & Geographical Survey

During a visit to Luxelake in January 2020, we took a drone video to learn the geological, ecological and infrastructure condition of the site. We found the interlinked water areas are closely connected to residents and visitors' activity zones (Fig.2). This helps us establish a comprehensive understanding of the water context of the Luxelake community.

Residents and visitors survey

In addition to the physical and geographical survey, we produced and conducted a brief survey to the residents and visitors to the Luxelake site to get the user profile of "common people" coming to and interacting with the watersystem here. The survey consists of questions about the reasons for visits, the main attractions of Luxelake, and also the people's interest in learning more about the water quality and ecology in Luxelake and the city at large (Fig.3). Our survey finds balanced results that show equal interests in the scenery, ecology and water-based activities in Luxelake (Fig.4). People are also generally interested in learning more knowledge about the Luxelake watersystem. The results have shown us that there are lots of diversified user needs and interests to Luxelake, and a big potential in promoting community interest and learning of the water system.

Stakeholders overview

Through in-depth discussions with more stakeholders, such as the Luxelake developer and government, we found that the lake is a shared resource with engendering conflicts. Some of the clashing interests include its scenic visual value against its ecological services, and its role as a transportation artery against its recreational spaces, as well as its identity as a source of profit. An overview of stakeholders is summarized in Figure 5.

Current Challenge: Conflicting usage of water

The current Luxelake presents itself as a classic multi-usage management problem. The lake is a shared resource engendering conflicts. Some of the clashing interests include its scenic visual value against its ecological services, its role as a transportation artery against its recreational spaces, as well as its identity as a source of profit.



Figure 3: Sample questionnaires used to survey Luxelake residents and visitors.

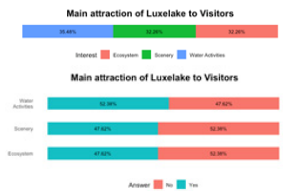


Figure 4: Attraction of the Luxelake water region to visitors.

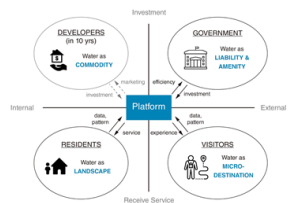


Figure 5: An overview of stakeholders (Developers, Government, Residents, Visitors)

Future Challenge: Financial prospect of water management

The current cost of maintenance of the Luxelake water system is 60 million CNY per annum, which is now split between the developer and the government. In 10 years, the government will quit financially supporting the maintenance, and the developer and the community will have to take the responsibility of water maintenance. How might the Luxelake community continue to maintain the water?



Figure 6. Community organization structure in Luxelake.
Source: Zhihu

Opportunity: Community making

The Luxelake developer has emphasized a lot on community-building and formation of group-based social bonds between homeowners. Modeled after the Letchworth town in England, which is the first Garden City in the world, Luxelake developers have come up with a threefold approach to foster the accumulation of social capital in the resident community. First, a community council consisting of homeowner representatives was founded to establish self-governance. Second, numerous community groups and events were initiated by the residents and developers to better advance the social bonding among neighbors using the vast public space, facilities and water landscape. Third, a communal fund backed by the developer, with gradually increasing input from residents were set up to financially support the social activities in the Luxelakes. A diagrammatic representation of community organization structure in Luxelake is shown by Figure 6.

The emphasis on community-building and social bonding in Luxelake provides a new inspiration for us. We ask ourselves, can we engage the residents and visitor to achieve the long-term water management goals? With that question in mind, we began a series of deeper explorations.

people just treat the water using some quite ruthless logic. On the other hand, if that connection can be brought back, it is possible to manage the water as a “new heritage” and people will be more willing to pay for it.

Ma et al. (2015) argues for a holistic approach of managing different types of water across typically separated institutions. It claims that through an integrated planning of water management schemes, the overall operational cost will decrease, and efficiency will rise. There will also be new applications to reduce water usage, by recycling and reusing wastewater in the system. The paper also discusses some of the psychological and managerial barriers to this integration. While proposing an all-out integration of water management seem to be a big topic, it does pique our interest in looking into how Luxelake’s various stakeholders could be better integrated in a behavioral aspect through means such as community engagement, in order to streamline the water management efforts and reduce costs.

Gonzalez et al. (2015) describes the case of Galapagos Islands at risk and proposes new solutions for it to be a resilient socio-ecosystem. The authors have proposed that strong measures will be needed to shift the current unsustainable model towards more resilient ones, which feature a co-management model between government agencies and local people. This has given us a useful inspiration for building community-integrative co-management in Luxelakes.

2. Culture, Identity & Community Engagement

Silapacharanan (2013) illustrated community-water relationship in a Thailand context. The article shows a dissipating identity of water-based communities in Thailand caused by several factors: 1) change of travel mode from waterborne to land-based, such as highways and railways; 2) construction of dams and sluices, which puts a heavy cost on the aquatic environment. An important lesson is the productivity of an environment has a tremendous impact on the process of identity-forming and association with natural ecosystems.

Summaniti et al. (2012) shows some cases of traditional water-based communities transforming to new economic uses of the water environment when encountered with challenges such as urbanization, obsolescence of traditional sectors, and environmental changes. In the case of Suan Nok Bangchang in Thailand, it has successfully balanced



Figure 8. Examples of community residents’ social media posts.

the mission of trying to maintain the water and also to keep the community economically fulfilled. The approach is community revival and eco-tourism development. That also leaves us questions on how the markets should be identified, cultivated and sustained for communities trying to find new productive uses of their water environment.

3. Technological Intervention

“Internet of Nature” aims to bring nature online and interact with the future city’s digital infrastructure, by utilizing technologies such as geospatial sensing, high-speed communication, machine learning, ecosystem mimicking and so forth (Galle et al, 2019). It would ensure better efficiencies at managing the environment and promote higher levels of integration between the human made and natural ecosystems.

Roboat is a smart city application that utilizes boats in Amsterdam’s waterways as scanners for underwater garbage (Wang et al., 2019). It inspires us to think of vehicles as multi-purpose organs of the city- since it can be sensory, it can also be playful and interactive.

In summary, some important insights from the literature are: first, integrating stakeholders in water management could significantly save the cost of water maintenance; second, frequent and healthy interactions with water are key to build the identity to it; third, in present days when the boundary between physical and digital is blurring, digitizing the nature can help us better understand and preserve it. These results have therefore inspired us to seek a solution that engages the community via digital means.

Domain Expert Interviews

We also conducted an interview with Professor James Wescoat, one of the leading experts in urban water management in MIT. Starting from a list of prepared questions, we engaged in a conversation with Professor Wescoat that helped us to review our context, and validate our concept while providing us with more design insights.

Professor Wescoat helped us to develop a simple and elegant mental model. With larger spatial and temporal scales of interactions, our relationship with water changes from experiential to functional, and finally philosophical (Fig.9). However the larger identity is based on smaller ones- the meta-narrative is predicated upon many daily narratives. A

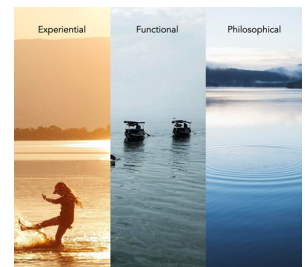


Figure 9. The human-water relationship across the spatial and temporal scales of interaction with water. Larger scales change the relationship from experiential to functional, and finally philosophical.

natural conclusion is that the establishment of a larger, more fundamental association to the water on community level is dependent on numerous small experiences of interacting with water.

Case Study: Singapore

Singapore is often mentioned as a role model of urban water management in our conversation with Professor Wescoat and many reviewers. The city-state has implemented prudent strategies and innovative technologies to ensure water supply, such as the establishment of reservoirs, desalination of sea water and reclamation of wastewater (known as NEWater). But more importantly, the city government has emphasized on building water identities and promoting water conservation through story-telling. For example, the Public Utilities Board (PUB) has recently initiated a campaign that promotes water conservation through media like bus stop advertisements (Fig. 10). In the publicity material, water is connected with Singapore's historical narrative to produce a strong resonance with people.



Figure 10. A Bus stop sign showing PUB's advertisement for its "Make Every Drop Count" campaign. This advertisement engages citizens by invoking a narrative of the past when the city had a shortage of water.

Refined Problem Statement

After the multi-pronged research into the initial challenges and exploring available solutions, we refined our problem statement: How might we raise the awareness of the water ecosystem, enhance the people-water association, and encourage bottom-up water-sustainable behaviors to the lake, such that to serve the long-term lake management goals?

Solution

We respond to the problem by LikeLake, a community engagement platform that aims to promote active participation in sustainable water system management by raising residents' and visitors' awareness of the water system in Luxelake and instilling socio-ecological knowledge about the lake. We have proposed two visions for LikeLake's improvements to Luxelake:

1. Anticipates current and future lake management problems, drives all aspects of the lake's operations to become more efficient, which translates into lower operational costs.
2. The lake can better serve its users, improving residents' engagement and increasing the potential for higher revenue and real estate assets.



Figure 2: Survey of Luxelake's geography via drone video. The residential area, visitors' activity zones, and water system are knitted closely together.

Part III: Design Ideation

Goal

Our goal is to ramp up community engagement before 10 years later handing off to the community. We aim to close/narrow the gap between the expected management cost of the water system, and its users' willingness to pay for that management, before the 10-year period lapses and the water management turns completely to a community-autonomous subject. On one hand, our solution increases community participation in the management, which are voluntary and drive down the overall cost of water management; on the other hand, the process of establishing that willingness to participate also invokes a sense of association to the water system and the average willingness to pay for water management also gradually rises. We do not envision it to be a change that will be resolved in one-shot; but with a careful and iterative improvement of our platform, the gap should close. Diagrammatically, the process is represented by Figure 11.

Target User group

We chose Residents and Visitors as the main target user groups of our platform. There are two main reasons for that: first, the residents and visitors are plural, massive "bottom-up" section of the community involved in water management at Luxelake, and they use the lake with very high frequency and density; hence there is a strong need, along with big potential, in changing their mind to benefit the water management. More importantly, residents and visitors engage in two-way interactions with the water, i.e. when they use the water they directly conduct actions on the water and receive close, immediate reaction from the water. However this is not the case for government and real



Figure 11. Target Scenario.

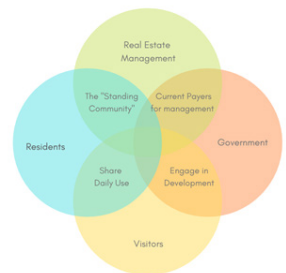


Figure 12. The Categorization of User Groups in the whole user space of Luxelake water system.

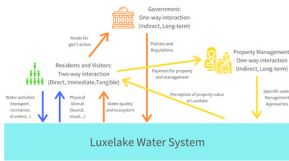


Figure 13. A brief representation of the interaction between stakeholders and the Luxelake water system.

estate companies, for they engage in more one-way interactions, on a more macroscopic scale (e.g. imagine that the government issues a water standard regulation on the luxelake water system; the result of a cleaner water body will not immediately impact the government per se though it affects people's lives). For our platform, two-way interactions on a personal scale is more flexible and operable. Moreover, we use a venn diagram (Fig.12) to show our analysis of the composition of the userspace for Luxelake and an interaction diagram (Fig.13) to summarize the modes of interaction between water and various stakeholders.

The following parts show our documentation of the ideation process.

Enhanced User Journey

Resident's storyboard :[Community Partnership + Education] engagement approaches



Figure 14. Resident's storyboard.

1. Amy noticed a community volunteer event on LikeLake forum that was co-hosted by MyH2O organization and the resident council, focusing on educating the residents and their kids about the water in Luxelake 2. Amy thinks her 10-yr-old daughter should learn about water and water conservation as well. Amy signed up for the event 3. On the weekend, Amy takes her daughter to the one-day water bootcamp, participates in the volunteer event 4. Amy is awarded the community engagement credits by completing tasks in the event 5. Amy spent community engagement credits at a lakeside restaurant and with her daughter

Visitor's storyboard: [Gamification + Social Media Sharing] engagement approaches

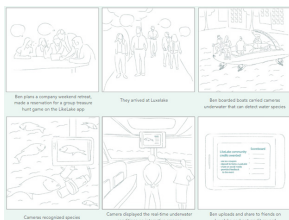


Figure 15. Visitor's storyboard.

1. Ben was planning a weekend retreat for his company and made a reservation for group treasure hunt gamethrough the LikeLake app. 2. The weekend came, Ben and his colleagues divided into different teams and took different boats carrying cameras underwater that can detect water species. 3. Cameras recognized species and displayed the real-time underwater conditions on on-boat interactive screens with gamified content (different scores assigned to encountering and identifying different species) 4. Teams collaborated on gametasks and were ranked on leaderboard 5. By the end of the day, the winning team received different levels of rewards for discounted water services or credit

deposit in Kedou LuxeLake to contribute to corporate social responsibility fund for biodiversity conservation

6. Ben and his colleagues got LuxeLake water species memos, shared on social media, and were excited to come back

User Needs, Interaction and Touchpoints

Focusing on the target groups, we identified three main types of user needs related to water: Everyday activities, including water transport and delivery services; personal leisure, such as water recreation, clubs sports, and lakeside dining; and community activities as education and sports events, festivals, sharing and interaction on social media. We also thought of developing a corresponding Management Platform Dashboard that would include Real-time Tracking (visitor flow/pattern: where do they visit, Transaction & Revenue data: how much they spend, etc.), Evaluation (user satisfaction, recommendation/suggestions), Analytics (hotspots, user behavior, resource availability) and Prediction (maintenance, etc.). We also mapped out the interaction touchpoints on the physical site and classified them into three categories for design ideation: Infrastructure touchpoints include boats, bridges, physical facilities, Ecological Resource touchpoints include lake, plants, and aquatic species, and Digital Interface touchpoints include digital signages and smartphone.



Figure 16. Interaction and Touchpoints.

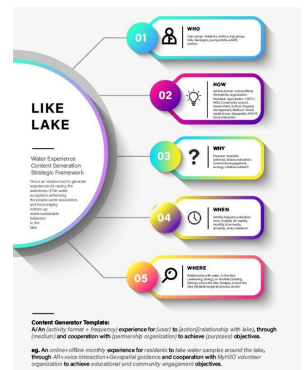


Figure 17. Water Experience Content Generation Framework.

Water Experience Content Generation Framework

To facilitate the content generation of water experience for LikeLake platform, we create this content generation strategic framework with opportunity space as an ideation tool for community management group and partner volunteer groups and educational organizations to create and curate water experiences that raise the awareness of the water ecosystem, enhance the people-water association, and encourage bottom-up water-sustainable behavior to the lake.

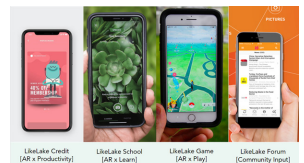


Figure 18. LikeLake School for education, LikeLake Game for entertainment, and LikeLake Forum for sharing and communication.

Highlighted Key Features

Leveraging the digital assets of GIS, AR and voice interaction, we propose a gamified information and engagement platform for residents and visitors to take action in LikeLake School for education, LikeLake Game for entertainment, and LikeLake Forum for sharing and communication. It's important to note the LikeLake

community engagement credits system we create to nudge behavior for ppl to do positive things to LuxeLake water system through incentives such as free membership, coupons, and badges.

Part IV: Design, Prototype & Iterations

User Flows

According to our Content Generation Framework, we went through design brainstorming workshop and came up with two typical user flows include resident volunteer experience and visitors game experience.

First, we have an online+offline personalized experience for residents to take water samples (around the lake), through AR+voice interaction+Geospatial guidance and cooperation with MyH2O volunteer organization to achieve educational and community engagement objectives.

We also created an offline experience for visitors to explore water species and ecological system (in the lake), through the on-boat interactive screen and voice interaction and cooperation with water transport management group and LeHu water entertainment vendor to achieve educational and engagement objectives.

Based on the storyboards and ideation, we drew the basic wireframes and digitized them into low-fidelity prototypes.

Visual Design System

We chose a Visual Design System that best harmonized with the style of the already established LuxeLife App, a system that can best integrate and enhance the user experience and create seamless connection and transition between interfaces.

User Test and Feedback for Iterations

We then conducted six user tests with our prototypes for concept validation, usability testing and feature improvement for feedback from community residents

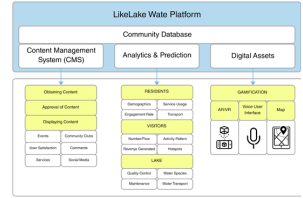


Figure 19. Platform architecture.



Figure 20. Wireframe.

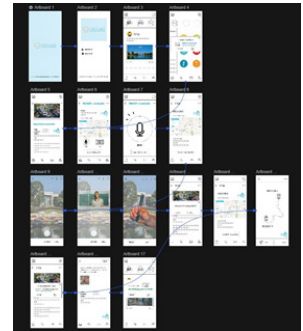


Figure 21. Low Fidelity Prototyping.



Figure 22. Visual Design System.

Participant ID	Feedback Summary
P001	Feedback on the user interface and navigation flow.
P002	Comments on the content clarity and visual design.
P003	Input on the overall user experience and engagement.
P004	Observations on the platform's usability and accessibility.
P005	Insights into the perceived value and benefits of the platform.
P006	Feedback on the integration of social media and community features.
P007	Comments on the platform's performance and load times.
P008	Input on the platform's branding and messaging.
P009	Feedback on the platform's security and data privacy.
P010	Comments on the platform's overall design and user flow.

Figure 23. User Test and Feedback.

and visitors. Interviews with the users produced in-depth feedback that we integrated into the design iterations. Example user test with Mr Yuxin Zhan (Luxelake IT Division, Luxelake App developer), we received feedback such as how the Voice Assistant as active "Tour guide", Kedou Luxelake is a promising idea, Maker the "event banner" more attractive, Non-monetized community credit is easier to implement, Recommends using big platforms (e.g. "Small program" of WeChat) to promote product and attract users. After two rounds of iteration, we ended up with a mobile app design that is friendly and fun.

Final Prototype

Demo video with Residents Volunteer Experience: <https://youtu.be/cj4MWJrq5Bw>

Demo video with Visitors Game Experience: <https://youtu.be/xgT8x5EyEtQ>

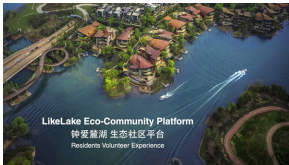


Figure 23. Resident's demo video.

Evaluation and Success Metrics

Lastly, to measure the success of our platform, we come back to the same data-informed approach: we will conduct longitudinal analysis on social media data to quantify the changes in engagement and perception related to water.



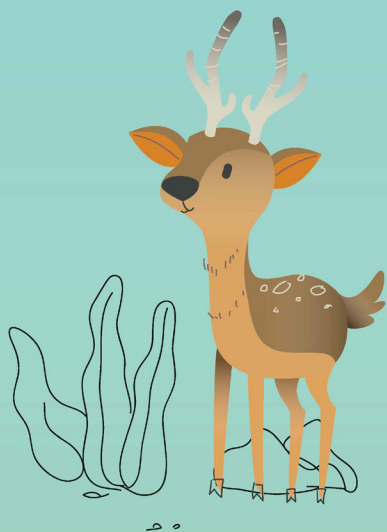
Figure 24. Visitor's demo video.

People are always the decisive factor in water management. Fortunately, the Luxelake community has shown much care and enthusiasm for the water environment. LikeLake, a community engagement platform will promote active participation in sustainable water system management by raising residents' and visitors' awareness of the water system in Luxelake and instilling socio-ecological knowledge about the lake. We believe that with the help of LikeLake, we can sustainably manage the water and make a new long-term model of living with it.



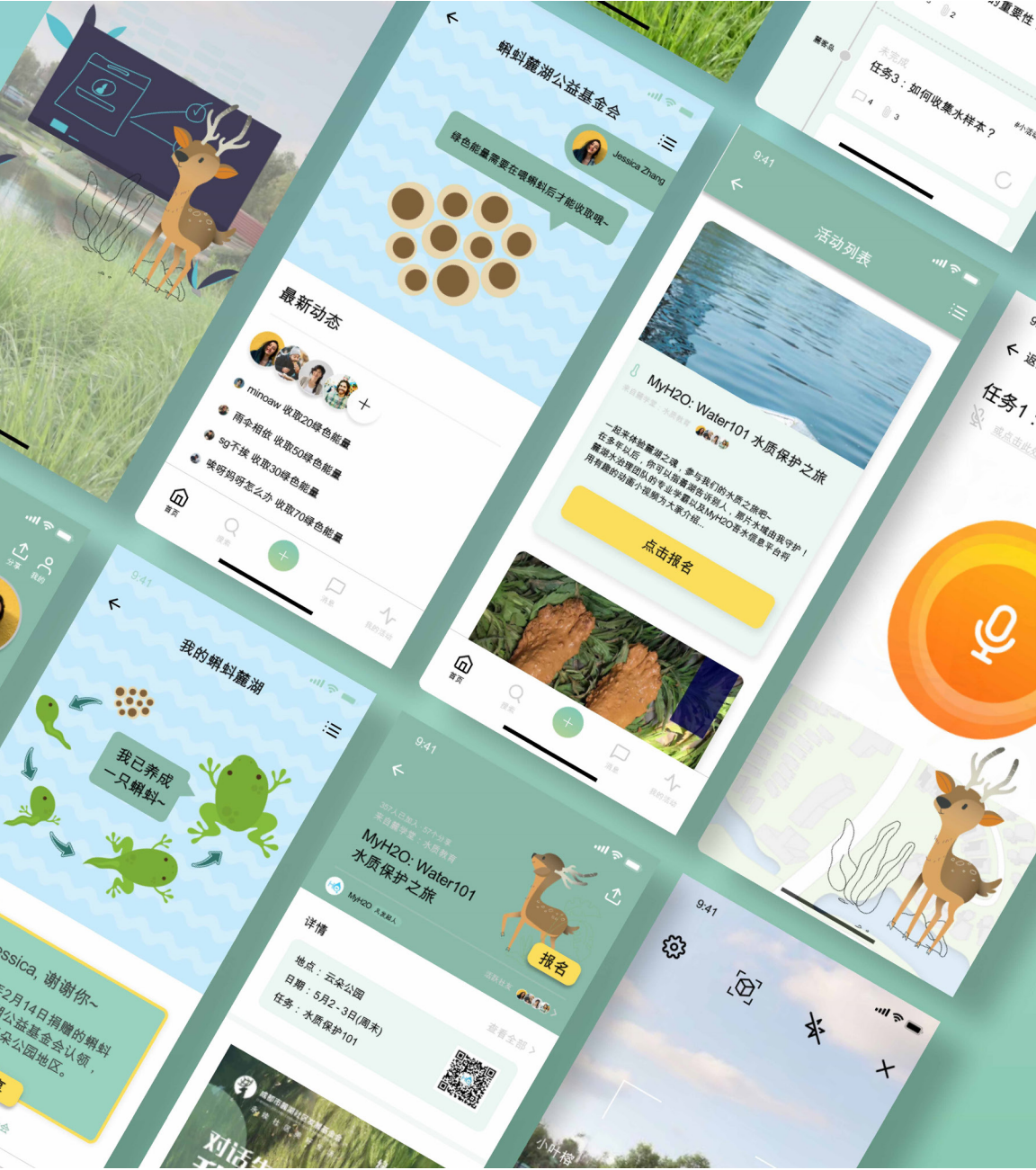


钟爱麓湖
LikeLake
生态社区平台



钟爱麓湖
LikeLake
生态社区平台





Final Prototype Mockup
LikeLake Eco-Community
Engagement Platform





Part V: Appendix

MIT x Hacking Chengdu
Spring 2020
Instructor: Professor Brent. D. Ryan
Team: Yujie Wang, Wendy Wu and Ruoming Fang



Hello! This survey is a part of a research collaboration between Luxelakes and MIT. This study aims to better understand the interactive relationship between the visitors to Luxelake and the Luxelake water ecosystem.

您好！这份问卷是麓湖与美国麻省理工学院合作的地产研究项目的一部分，旨在更全面地了解麓湖水系与游客之间的互动关系。

(此次调查问卷为匿名并且只在麻省理工的研究项目团队中分享)

The Visitors:P

游客：

1. Where do you currently live in Chengdu?
您现居成都哪个区域？
2. What is your purpose of visit today?
您这次前来麓湖是出于什么目的？
 - A. As prospective homeowners 看房
 - B. As tourists 游玩
 - C. Others 其他
3. What water features of Luxelake attracted you and your family/friends the most?
您和您的家人最喜欢麓湖水系的哪个方面或特色？
 - A. Scenery 景观
 - B. Ecosystem 生态
 - C. Water Activities 水上活动
4. Do you plan to purchase properties here?
您是否计划在此置业？
 - A. Yes 是
 - B. No 不是
5. Are you interested in knowing more about the ecology of Luxelake water system?
您是否对于了解麓湖水系生态(例如水文、动植物等)有兴趣？
 - A. Yes 是
 - B. No 不是
6. Are you interested in having access to monitoring information on the city's aquatic ecosystem?
您是否有兴趣得到对于城市水系生态的监测信息？
 - A. Yes 是
 - B. No 不是

Thank you for participating in the survey! If you wish to further involve in this study, please provide your contact information below:

感谢您参与我们的调查！如果您想进一步参与我们的研究，请在下面提供您的联系方式：

WeChat/微信：

Email/邮箱地址：

Hello! This survey is a part of a research collaboration between Luxelakes and MIT. This study aims to better understand the interactive relationship between the visitors to Luxelake and the Luxelake water ecosystem.

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(此次调查问卷为匿名并且只在麻省理工的研究项目团队中分享)

Residents Representative (from different residential areas of Luxelake):

业主代表：

Demographic:

1. Where do you live in Luxelake?
您住在麓湖的哪种住宅？
 - A. Waterfront villa 临水别墅
 - B. In-land villa 半临水/不临水别墅
 - C. Apartment Building 公寓楼
2. What is your household structure?
您的家庭组成如何？
 - A. Single 独身
 - B. Married without children 已婚无子女
 - C. Married, with Children 已婚有子女
 - D. Others 其他
3. Is the lake and its ecological values part of the reasons why you chose to reside in Luxelake?
麓湖水系及其生态价值是否是您选择居住在麓湖的原因之一？

Service:

Transportation 交通:

4. What tools of transportation do you usually take to commute to and from your home?
您一般选择何种交通工具往返家中？
5. What is your usage pattern of the boat services?
请问您对于麓湖游船服务的用途？
6. Do you currently own or plan to own a boat in the future?
您是否已经，或计划购买私人船只？

Water Activities 水上活动:

1. What water activities do you currently take part in?
您现在进行哪几类水上活动？
 - A. Swimming 游泳
 - B. Kayaking 皮划艇
 - C. Dragon Boat 龙舟
 - D. Fishing 钓鱼
 - E. Performance 表演
2. What water activities in Luxelake do you wish to take part in in the future?
您想在将来进行哪几类水上活动？
 - A. Swimming 游泳
 - B. Kayaking 皮划艇
 - C. Dragon Boat 龙舟
 - D. Fishing 钓鱼
 - E. Performance 表演
3. Do you imagine these activities to be initiated and organized by:
您希望谁是一些水上活动的组织者？
 - A. Luxelakes management 麓湖物业
 - B. Community clubs 社群
 - C. Yourself/your family 您本人/家庭

Education 教育信息:

4. Are you interested in knowing more about the ecology of Luxelake water system?
您是否对于了解麓湖水系生态(例如水文、动植物等)有兴趣？
5. Are you interested in having access to monitoring information on Luxelake's aquatic ecosystem?
您是否有兴趣得到对于麓湖水系生态的监测信息？

Thank you for participating in the survey! If you wish to further involve in this study, please provide your contact information below:

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User Interview, Usability Test, and Feedback

Participant Info	测试参与者相关信息
Key Takeaways	
	感谢您参与我们的产品我们为麓湖的社区设计了一些和麓湖水系的问题,问题所示的大致方向和
Intro Script	
Questions	
Warm-up	
I've learnt that LuxeLake community just resumed club events....	我们听说麓湖社区刚刚
Discovery	
Do you think you will have time to make such a journey with your children or family?	请问您觉得您会有时间
Do you think you and your children/family will be interested in such activities?	请问您觉得您的孩子和
Do you find the incentives shown in the demo attractive and meaningful?	请问您觉得我们在演示
What other incentives would you suggest that we add to our platform?	请问您觉得我们还应该
Concept validation	
How do you find the interactive voice avatar, Jienigui?	请问您对于语音互动助
How do you feel about having a voice assistant guiding the whole user journey?	请问您对于“语音助手”整个旅程更顺畅?)
What's your opinion on the role of AR in the whole experience?	请问您对于增强现实(
Do you think AR is capable of helping you accomplish the things described in the demo video?	请问您认为AR在实际
Do you think the community credit points given will have wider usage at Luxelake in the future?	请问您认为今后在麓湖
How do you view the Kedou Luxelake that we proposed in the demo video?	请问您对于我们在视频
Usability	demo video here (播
How do you feel about the demo video we've just shown you? Feel free to talk about anything.	请问您对于刚才的用户
How do you instinctively feel about the user interface of the app?	请问您对于演示中app
Do you have any suggestions of improvements to the user interface?	请问您对于app的用户
How does the user interface in our demo compare with the current UI of the Luxelake app?	请问我们演示中的app
Wrap-up	
Do you think of any particular user group that we should reach out more to?	您觉得有我们应该再联

Insights (synthized from 6 participants):

- Voice Assistant as active “Tour guide”
- Kedou Luxelake is a promising idea
- Maker the “event banner” more attractive
- Non-monetized community credit is easier to imple
- Recommends using big platforms (e.g. “Small progr

测试！我们LikeLake团队致力于以科技和设计的结合实现人与自然的和谐共处。这一次我
一款围绕麓湖水系的数字化社区参与平台(以下介绍平台特性,省略)接下来我们会和您聊一
并通过用户演示视频的形式向您展示一个典型的用户体验;演示完毕之后,我们会按照如下
和您进行讨论。

恢复了社群活动...

和孩子或家人完成这一系列的活动吗？

和家人会对视频里的这些活动感兴趣吗？

视频里展现的激励是否足够具有吸引力和意义？

应该在平台中加入哪些激励？

助手的杰尼龟形象有何看法？

提示”这个元素在整个用户体验中的感受？(如:语音助手是否会破坏体验?语音提示能否让

AR)技术在用户体验中的角色(辅助完成任务,地图指引等)有何意见？

情景下能否像在用户演示视频中那样发挥应有的作用？

期会有更多更广的场景可以使用我们在演示中展示的可消费社区信用分数？

视频中提出的“蝌蚪麓湖”(类似“蚂蚁森林”)的看法？

播放演示视频)

演示视频感觉如何?可以聊聊任何您感兴趣/有意见的部分。

的用户界面的直观感受如何?

界面有什么改进的建议?

用户界面和现今麓湖app的用户界面相比您更偏好哪个?

关系哪些用户群体进行测试?

ment

am” of WeChat) to promote product and attract users

Domain Expert Interview Questions

James Wescott: Water Management

- 1) What do you think is the typology of the association between community identity formation and the physical water environment that the community is situated in?
- 2) In the current time where water is gradually waning in importance to the urban community (in some aspects like resource production), what do you think are good ways of rebuilding/strengthening the community-water association? Are there any good examples of that worldwide?
- 3) What do you think is the role of urban communities in today's ecocity/biophilic urbanism developments, in which technological mediation of the water system and human settlements play a central role?
- 4) What do you think needs to be improved in China's urban water policy?
- 5) Where do you think are the emerging fields of importance in urban water systems to the urban citizens at individual and/or community scale?
- 6) What do you think are powerful incentives of community engagement?
- 7) How do you see digital interventions/ digitalization in water management and community engagement?

Miho: Eco-community

- 1) In light of future environmental and/or risks, how do you think urban waterways can provide useful services to urban residents and communities against the risks?
- 2) How does urban water system design (both physical and ecological) influence its service to urban communities?
- 3) What's the role of top-down management and bottom-up action respectively in urban water governance and risk management? What do you think is the right "mix", especially in a Chinese context?
- 4) Nowadays, what are the key incentives in eco-communities that tie the community identity and solidarity together with the nearby water landscape?

5) How are opportunities and risks differ between coastal communities located beside freshwater and seawater systems?

6) What do you think are powerful incentives of community engagement?

7) How do you see digital interventions/ digitalization in water management and community engagement?