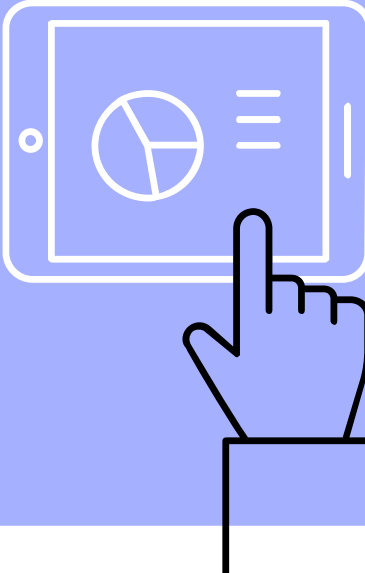
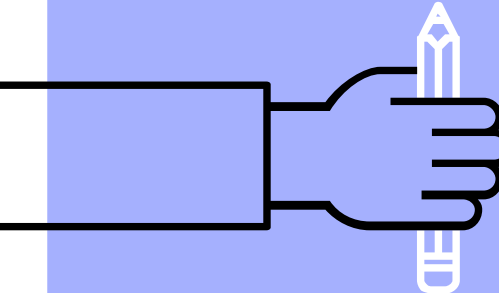


Exhibition Service System



Group2

106034702 李宇馨、106034704 張瑜庭

107034401 林玉媚、107034537 章偉哲

Instructor : Professor Chiu

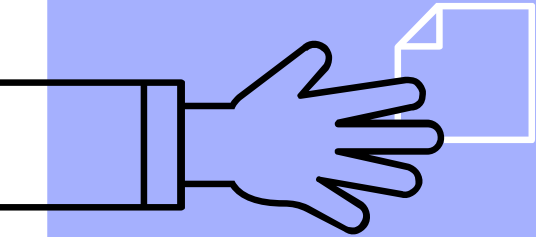
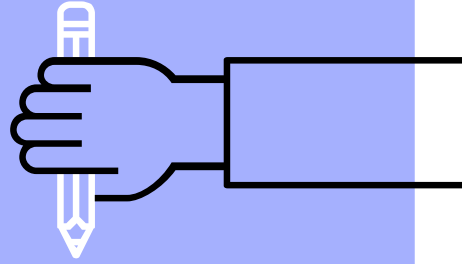
Date : 20181129

OUTLINE

1. System Introduction
2. System Analysis
3. System Design
4. Discussion & Conclusion



System Introduction



Background

💡 What | 排隊

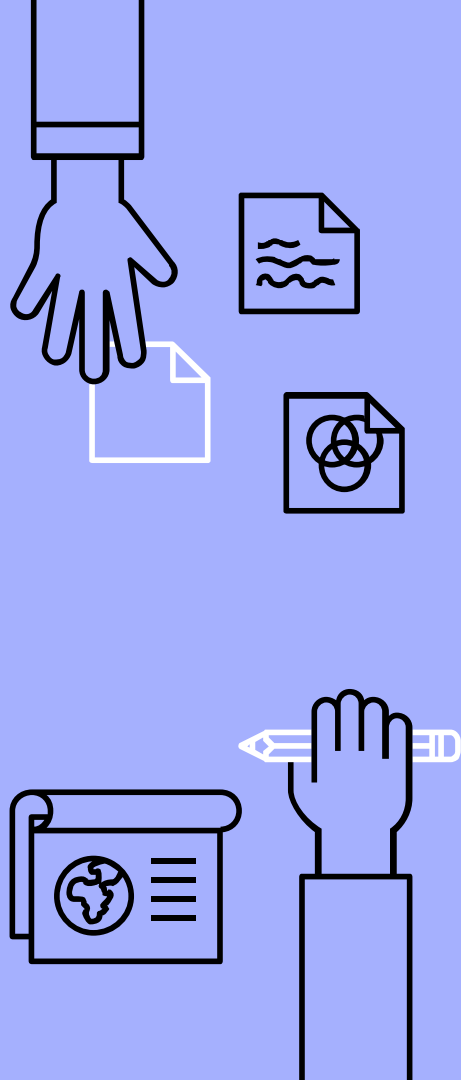
💡 When | 任何時間

💡 Who | 顧客

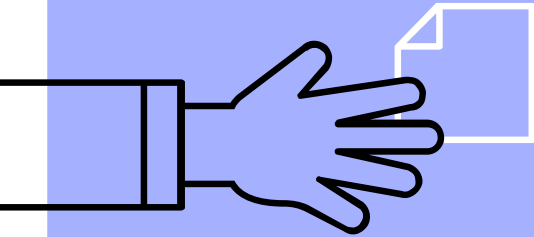
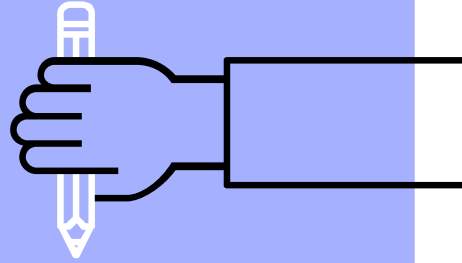
💡 Where | 展覽

💡 Why | 久候不耐

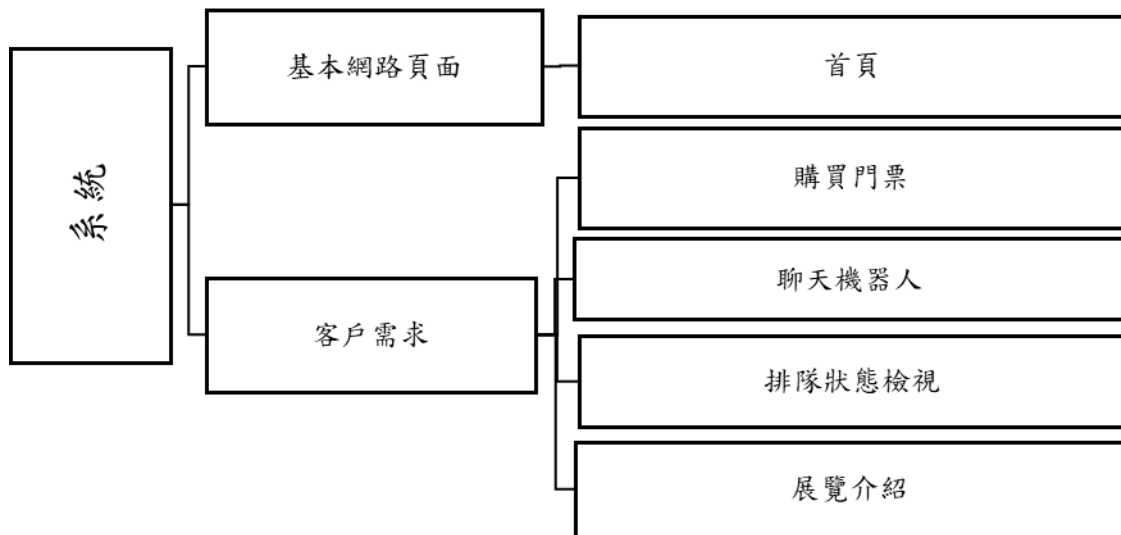
💡 How



System Introduction



系統架構



Problem Assumption (1/2)

- ▶ Open from 09:00 to 17:00 (8 hr/day)
- ▶ Average **250** customer/day
- ▶ Simulated 20 runs(1 day = 1 run)

時段	Avg 人/小時
9-10	30
10-11	45
11-12	45
12-13	30
13-14	40
14-15	10
15-16	8
16-17	3



Problem Assumption (2/2)

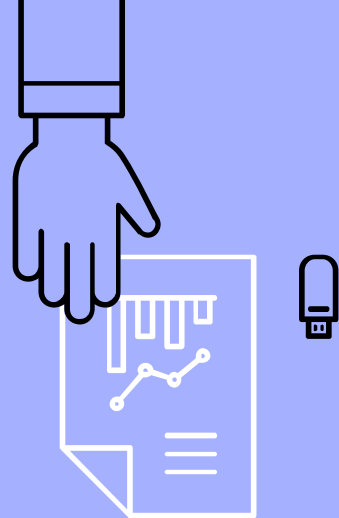
套票(張)	喜好
1	20%
2	30%
3	50%

限制

容納30人

剪票25人/小

展場名稱	展場偏好	Avg 逛展時間 (hr)
神隱	1	1
龍貓	1	1
魔女	1	1



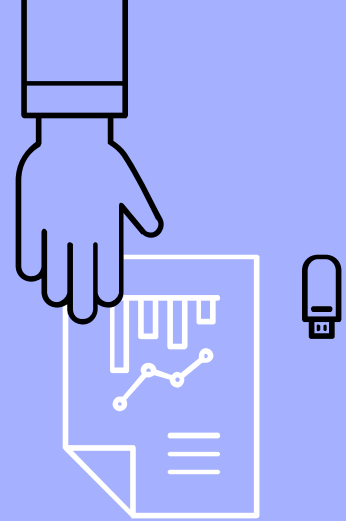
Simulation Model



Time Analysis (1/4)

▶ 等待時間過長

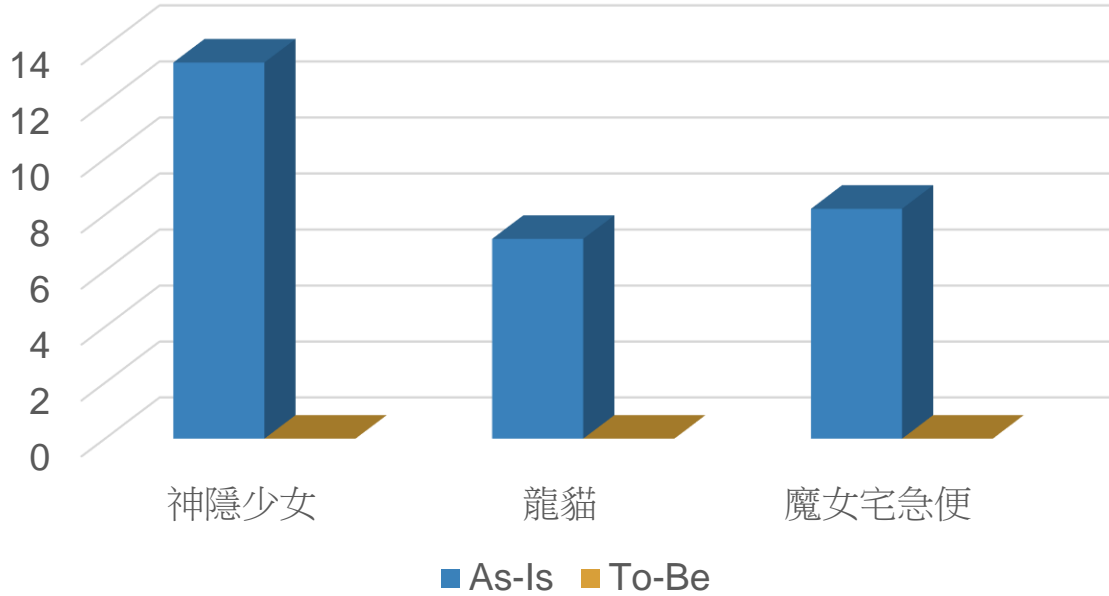
Exhibition	Capacity	Process Time (min)	Avg. Queuing Time (min)	Max Queuing Time (min)	Avg. Queuing Probability
Exhibition 1	30	60	13.4	56.1	0.35
Exhibition 2	30	60	7.1	21.8	0.11
Exhibition 3	30	60	8.2	52.6	0.21



Time analysis (2/4)



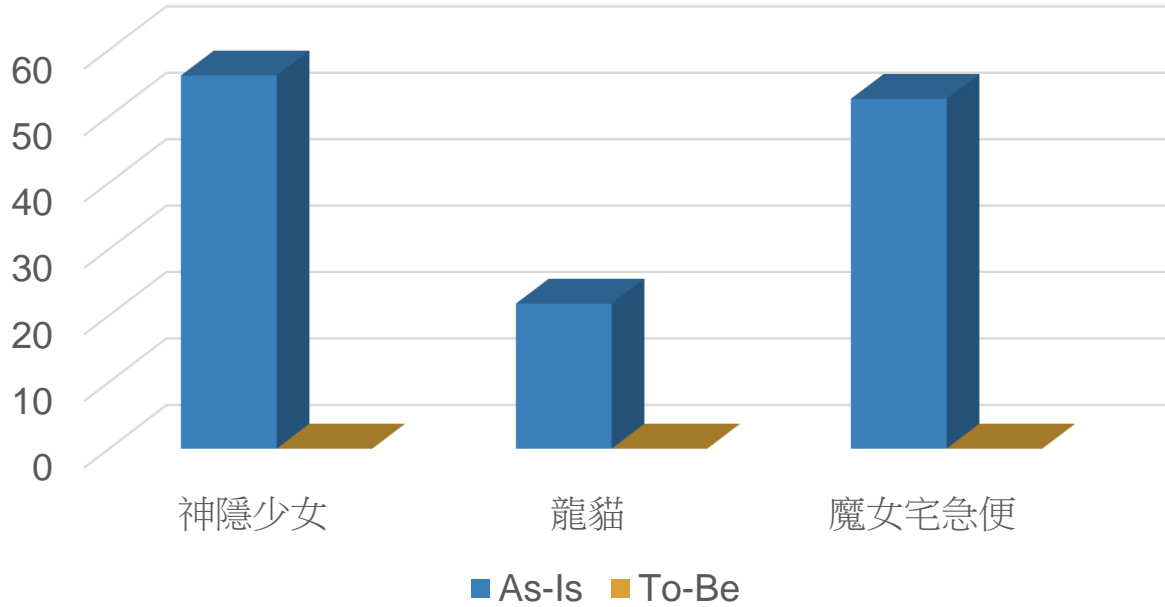
Avg. Queuing Time



Time analysis (3/4)



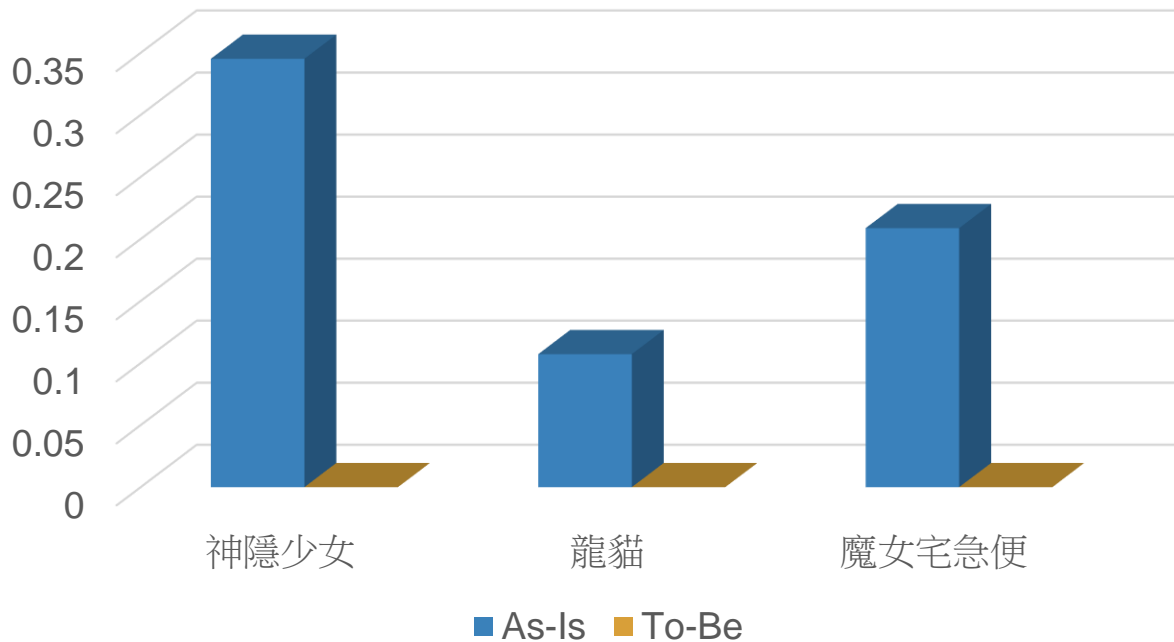
Max Queuing Time



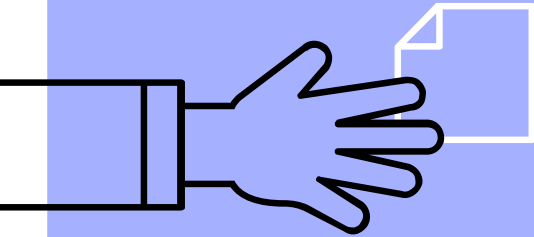
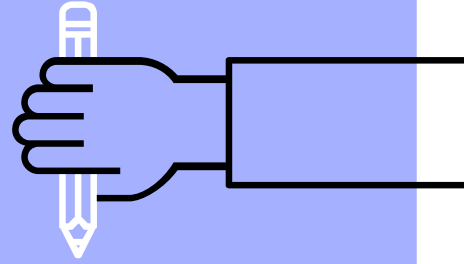
Time analysis (4/4)



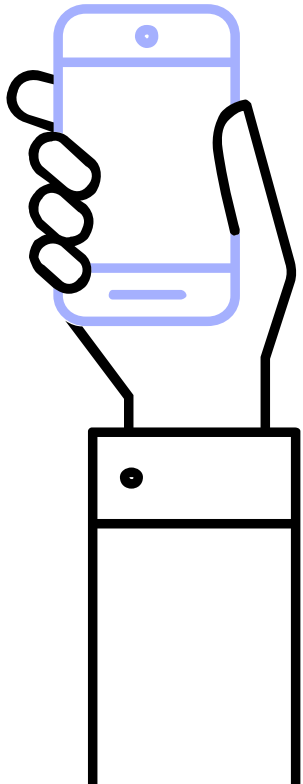
Avg. Queuing Probability



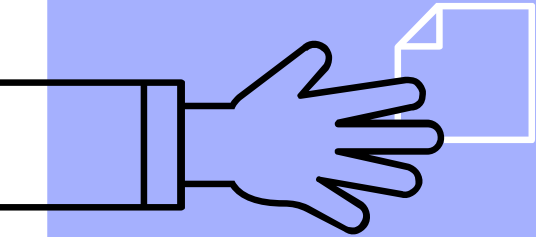
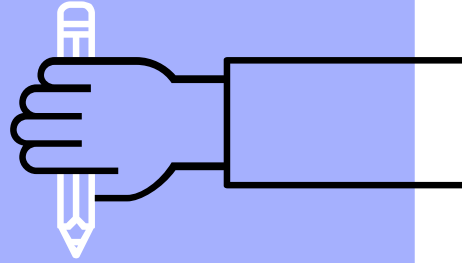
System Design



Demo - APP



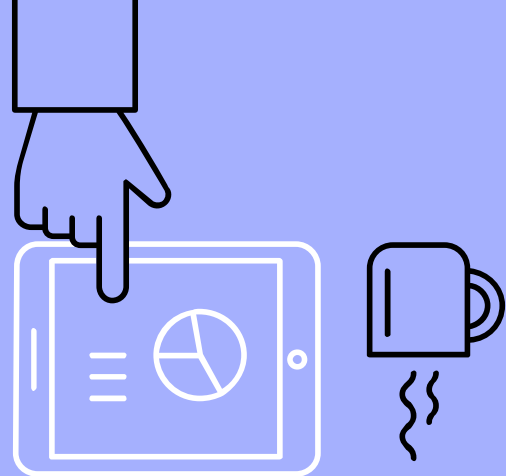
Discussion & Conclusion



Contribution(1/2)

- 顧客

- 減少等候時間
 - 買票入園
 - 等候展覽
- 提前得知展場資訊
 - 展場簡介與限制
 - 優惠價格



Contribution(2/2)

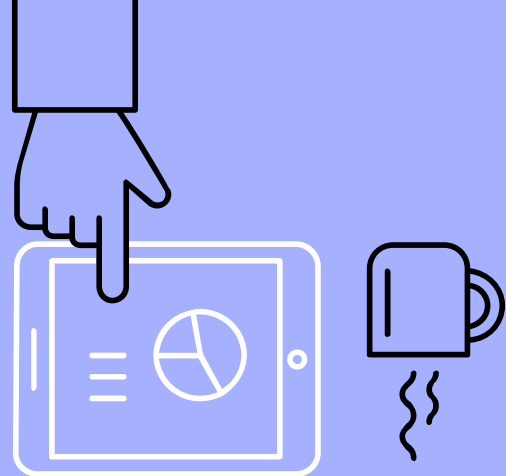
- 企業

- 減少人力

- 服務顧客
- 維持秩序

- 管理效率提升

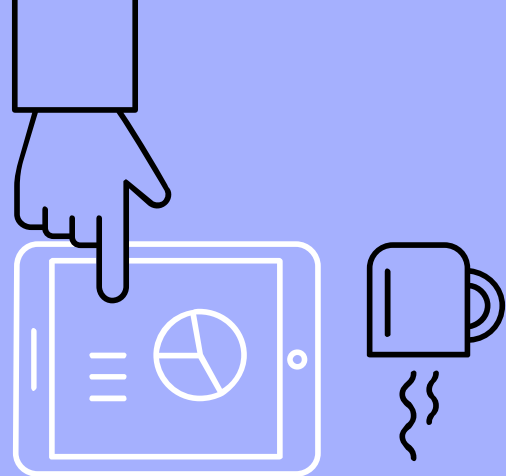
- 人力配置



Limitation

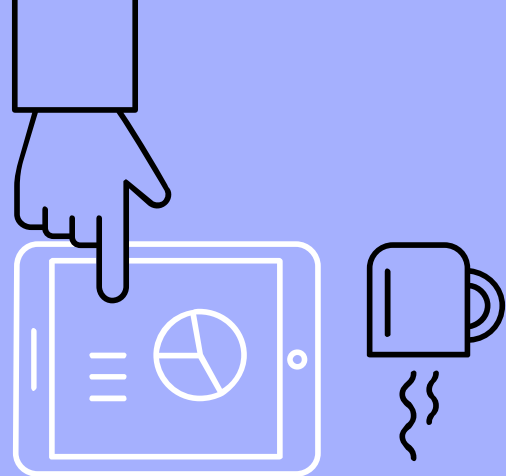
- 企業

- 交通資訊
- 整合訂餐系統
- 整合商城系統



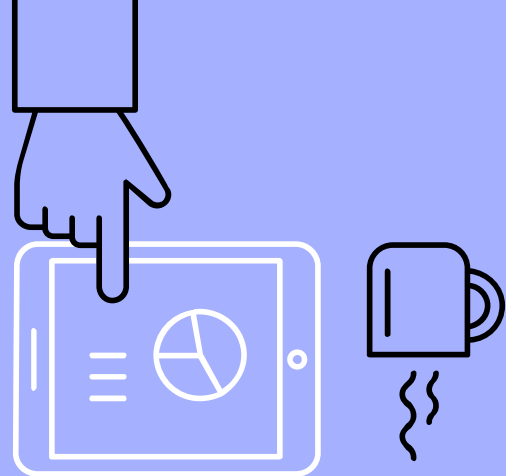
Applicability & Future Development (1/2)

- **Applicability**
 - 博物館
 - 觀光景點



Applicability & Future Development (2/2)

- **Future Development**
 - 顧客滿意度調查
 - 展場改善與產品銷售



THANKS!

