



# USER REQUIREMENT SPECIFICATION OF DIGITAL COUPON SYSTEM VERSION 1.2



CLP POWER  
[CONFIDENTIAL INFORMATION]

**IMPORTANT INFORMATION:** Customer Data must not be transferred to any third parties

## 1. Background

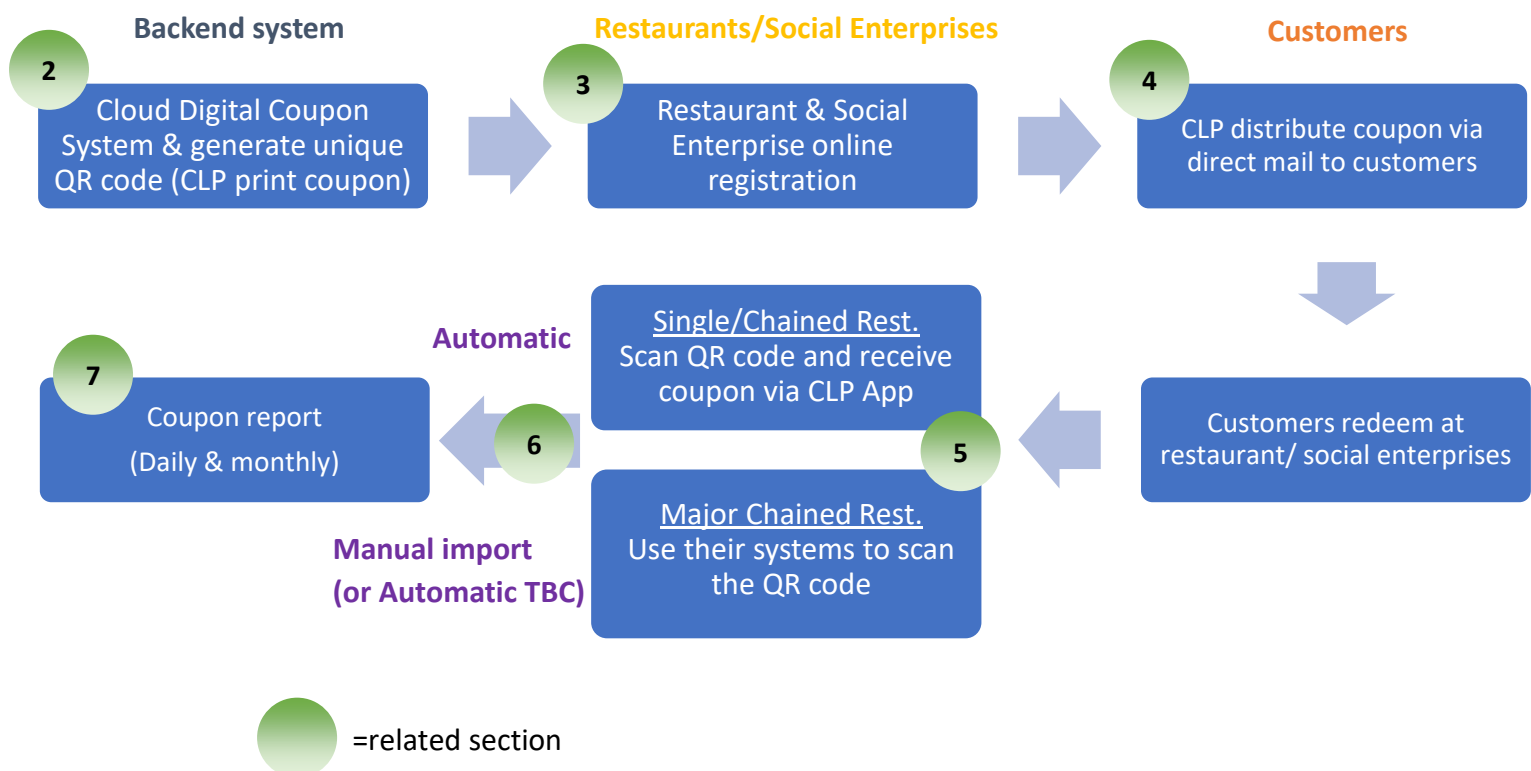
CLP Power Hong Kong Limited (CLP) is considering providing coupons to the needy and to support the restaurants and social enterprises (The Merchants).

Duration: Jan to Jun 2021

Estimated number of coupons: 1.5millions to 2 millions

Estimated number of restaurants/ retail shops: about 2000

### Coupon redemption mechanism



## 2. Scope of supply

- Web base Registration System (in traditional Chinese, simplified Chinese, English, etc.)
- IOS/AOS QR code scanning APPs for CLP coupons (in traditional Chinese, simplified Chinese, English, etc.)
- Web Base Report System for CLP & restaurants, social enterprise shops
- Technical Support (online & on-site)
- Propose numbering system of 1.5M-2M coupons serial number(optional)
- QR code generation (optional)
- Push notification on APP (optional)

## 3. System Features

- System is able to read QR code or manually input serial number of coupons.
- System should be able to store all QR code/coupon number in data base.
- In each redemption, the coupon number record should be marked as “USED”. No reuse is allowed once marked. In other words, no duplication is allowed.
- If there is any duplication, system vendor should resolve the issue.
- If the system is down, it should have a backup system.
- For chained restaurant, CSV & Excel file should be able to import to the system. All used coupon number should be marked as “USED’.
- Version upgrade functions
- System should be able to monitor the online conditions of each Merchants (optional)
- Push message to APP for information notification purpose (optional)

## 4. Merchant Registration Process

1) Submit Register Form via Online Portal

System vender should provide online channel for merchants to register.

Information included:

- Merchant Name
- Redeem location & address
- Username & password
- Bank account name & number
- Contact person information (name, email & mobile)

2) CLP confirmation

3) Merchants install Operator App

## 5. Disbursement Process

CLP will distribute the coupon kit including printed coupon with one individual QR code (type and size must be provided to CLP) and individual serial number which used to redeem \$50/ \$100 to users.

### Sample Coupon layout



## 6. Customer Redemption Process at Merchant

1) Merchant is required to install a Free Operator App (support both IOS and AOS) to the redemption device (prepared by Merchant). Alternately, major chained restaurant can use their system.

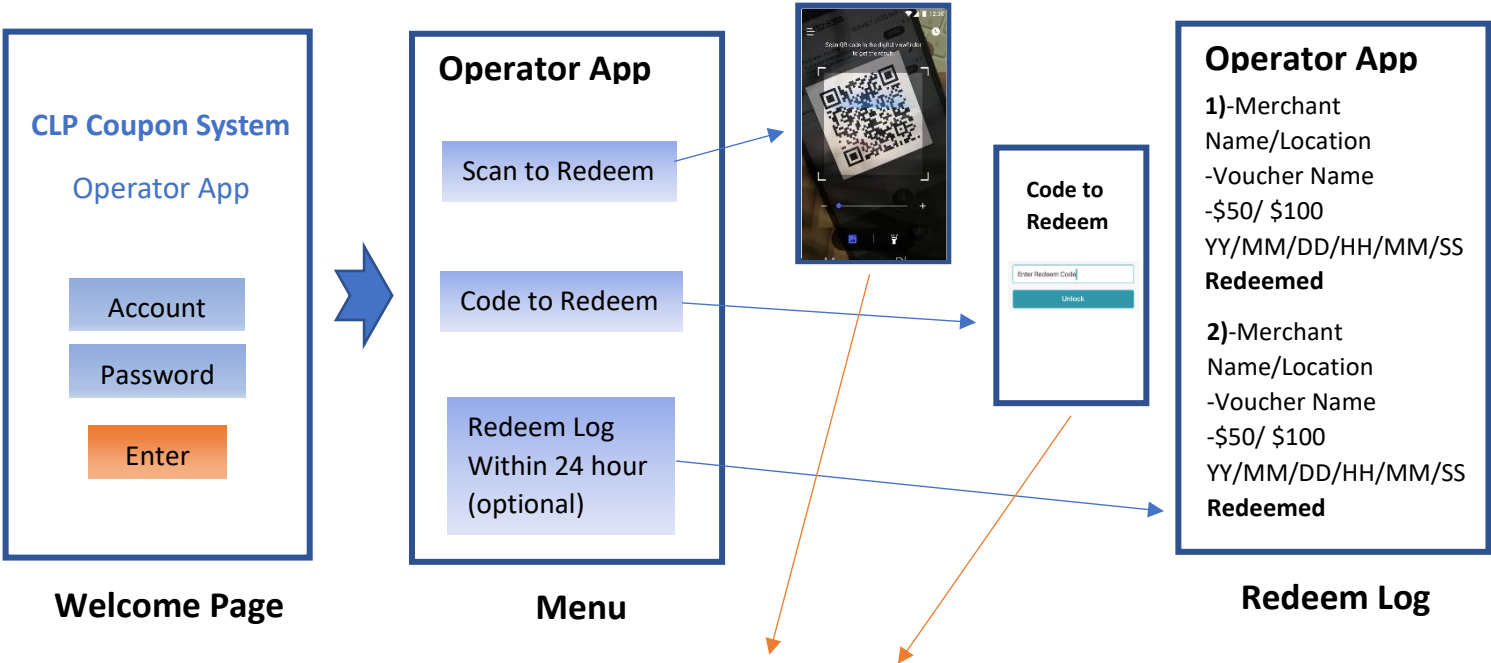
2) Customers present the Food coupon (with QR code) to Merchant.

3) Merchant can use the redemption device to scan the QR code or key in the voucher number to process the redemption. Time latency of each redemption within an acceptable time, the High availability system may be used, e.g. Dual server in cloud. System vendor shall provide the details of time latency and high availability system.

After redemption, confirmation code should be sent back to the device for acknowledge.

In case acknowledgment is not received, the APP should store the coupon number and send later.

Example of Device layout of merchant (System Vendor to provide both Chinese and English interface)



Status after redemption (example only. Other format is also acceptable)



## 7. Data Import from restaurant

-QR code was scanned via operator App will be uploaded to cloud automatically

-Major chained restaurant which use their system to scan the QR code should manually (by automatic TBC) import the data to cloud. Therefore, the system should be able to read the data from restaurant's import (CSV/Excel etc.)

-A daily and monthly report, which show the data is imported, will be generated to CLP & merchants.

## 8. Reconciliation Process (Daily & monthly)

CLP and The Merchants can view the Reconciliation Batch File daily & monthly (Transactional Report) through web login.

### Details Capture and Export (CSV & Excel):

- Transaction Date and detail Time record (formats: yyyy, mm, dd, hh, mm, ss)
- Transaction ID
- Merchant ID and Name
- Merchant Sub Location Name
- Coupon Number
- Open Balance Amount
- Redeemed Amount
- New Balance Amount
- Error message
- Failure count
- Failure log

## Appendix A: Price (base on 3+3 weeks &amp; 1.5M coupons)

Items	Price (HK\$)
<b>1. System cost (with breakdown)</b>	
Web base Registration System	\$ 8,000
IOS/AOS QR code scanning APPs for CLP coupons	\$17,000
Web Base Report System for CLP & restaurants, social enterprise shops	\$ 8,000
Technical Support (online & on-site)	\$ 6,000
Propose numbering system of 1.5M-2M coupons serial number(optional)	\$ 5,000
QR code generation (optional)	Free
Push notification on APP (optional)	Free
NoSQL Database Server	\$ 3,000 * 3
Radius Search Service(optional)	\$ 3,500 * 3
SQL Database Server (Optional Clp Reports)	\$ 3,000 * 3
<b>2. Licence fee (if any)</b>	
<b>3. Man-power support (e.g. training, on-site services, etc.)</b>	

## Appendix B: Key performance & technical Index

Items	Descriptions
1. Number of concurrent logins per system	Above 2000
2. Number of concurrent logins per Account (per restaurant)	Above 40
3. System availability	Only in Hong Kong
4. Capacity for 2 million QR code (Yes/No)	Yes
5. Maximum number of restaurants registration	Above 2000
6. System response time in QR code ready & confirmation 6.1. 95% Respond time within 3 seconds (Yes/No) 6.2. Average respond time within 4 seconds (Yes/No) 6.3. Maximum respond time within 5 seconds (Yes/No)	Yes Yes Yes
7. Data storage period	At least 3 years
8. Time out function (Yes/No)	Yes
9. Data archive (Yes/No)	Yes
10. Daily/weekly/monthly report per account (Yes/No)	Yes
11. Backend report for CLP (Yes/No)	Yes
12. Backup cloud (Yes/No) (If yes, please provide the location)	Yes, Hong Kong

## Appendix C: Delivery Schedule

## Appendix D: Technical Deviation

## Appendix E: Sample Report



## Appendix F: Project Reference

## Project 1

Items	Descriptions
Project Name & Background Imperial Parking	
Project Scale	70 sites, 10,000 parking slot
Period	5 years
Number of coupons are/were included	Around 50,000
Included QR code? (Yes/No)	Yes
Device/System used (e.g. AOS, IOS)	Web Base

## Project 2

Items	Descriptions
Project Name & Background	Yes, Hong Kong  Yes, Hong Kong
Project Scale	
Period	
Number of coupons are/were included	
Included QR code? (Yes/No)	
Device/System used (e.g. AOS, IOS)	

**Project 3**

Items	Descriptions
Project Name & Background	
Project Scale	
Period	
Number of coupons are/were included	
Included QR code? (Yes/No)	
Device/System used (e.g. AOS, IOS)	

**Project 4**

Items	Descriptions
Project Name & Background	
Project Scale	
Period	
Number of coupons are/were included	
Included QR code? (Yes/No)	
Device/System used (e.g. AOS, IOS)	