

Octopus Cards Limited

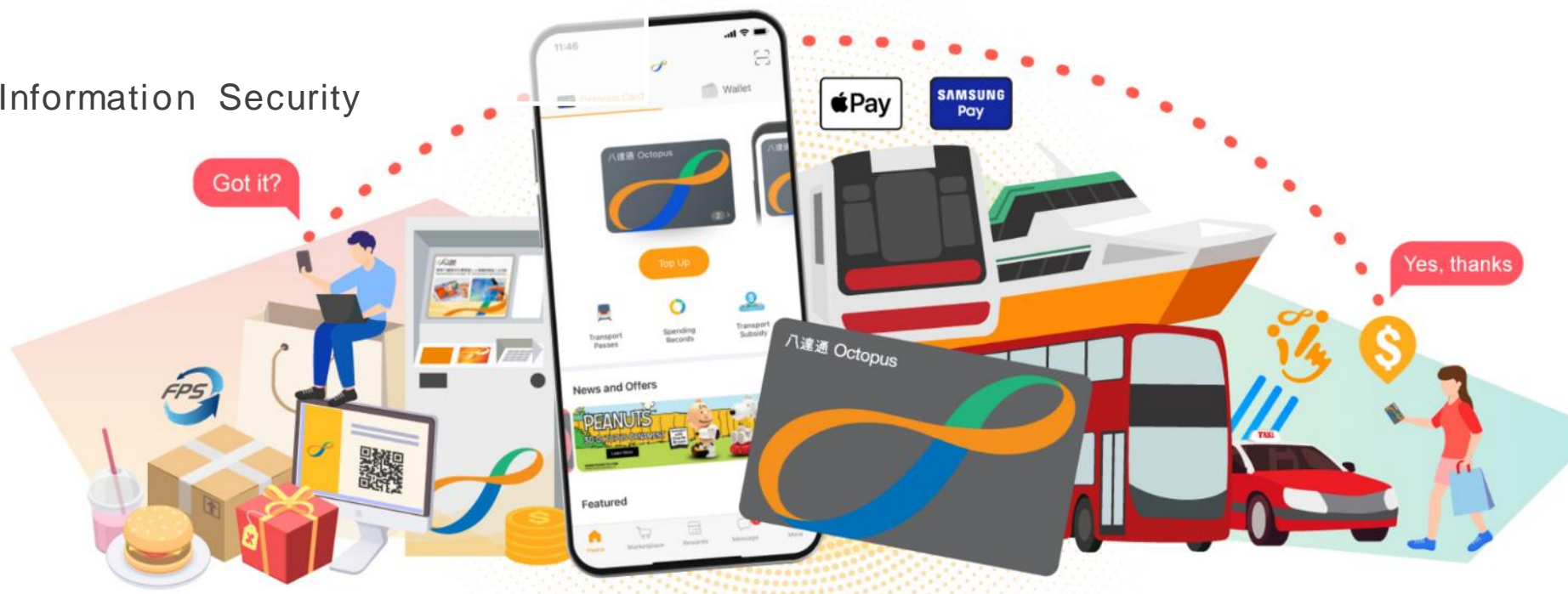
Making Everyday Life Easier



Cyber Security Essentials in Transforming to Online Business

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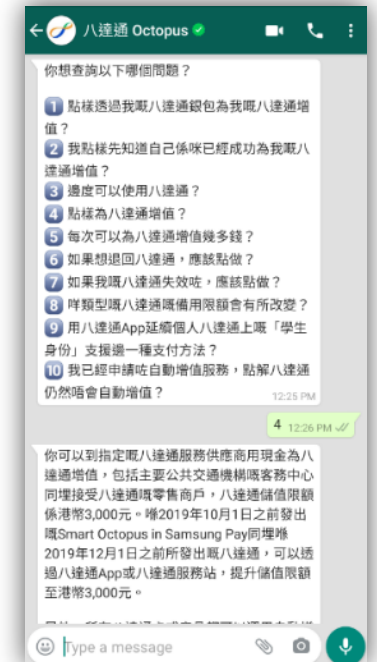


New Economy under COVID-19

- Pandemic has expedited digital transformation
- Shift towards online shopping and away from brick-and-mortar (e.g. Octopus Wallet)
- Embracing ecommerce and digital payment at a much faster rate (Octopus Mastercard)
- Heightened expectations for frictionless, contactless transactions
- COVID-19 birthed a new age of innovation

Business Go Online

- Marketing website
- Online shop
- Mobile payment
- Chatbot
- CRM
- etc.



Cyber Security Risks

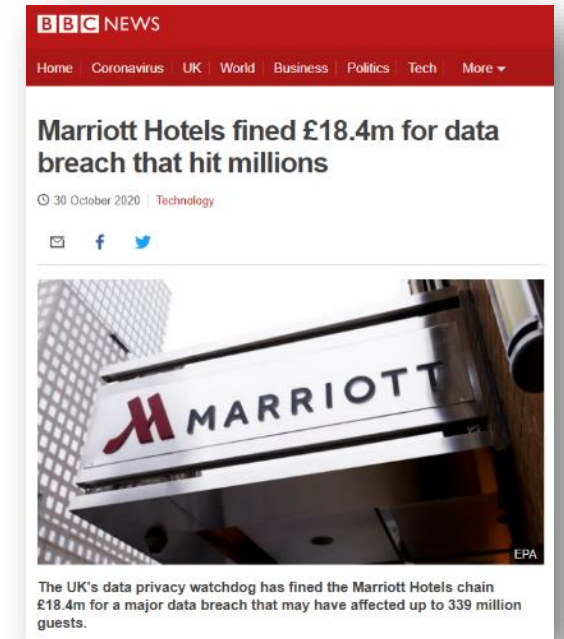
- Data breach
- Fraud
- Ransomware
- Distributed Denial of Service (DDoS)
- etc.

Sources:

<https://www.infosecurity-magazine.com/news/travelex-forced-administration/>

<https://www.bbc.com/news/technology-54748843>

https://search.rthk.hk/search?q=%E6%B8%AF%E4%BA%A4%E6%89%80%E7%B6%B2%E9%A0%81%E5%8F%97%E5%88%B0DDOS%E6%94%BB%E6%93%8A&search2.btn=%E6%90%9C%E5%B0%8B&client=revamp16_v1p_frontend&output=xml_no_dtd&proxystylesheet=revamp16_v1p_frontend



Managing Cyber Security Risks



Not Keeping Customer Data

- Rule of thumb: Don't keep customer data unless necessary
- Especially sensitive personal data, e.g.
 - HKID numbers or even HKID copies
 - Credit card numbers, expiration dates, CVV2 codes
- What is Personal Data?
 - Any data that can be linked back to a specific individual



Keeping Customer Data

- You may want to keep contact information like name, email, phone, etc.
- Be cautious:
 - *What to store*
 - *How much to store*
 - *How long to store*
- Remember: You are putting risk to your customers and your company

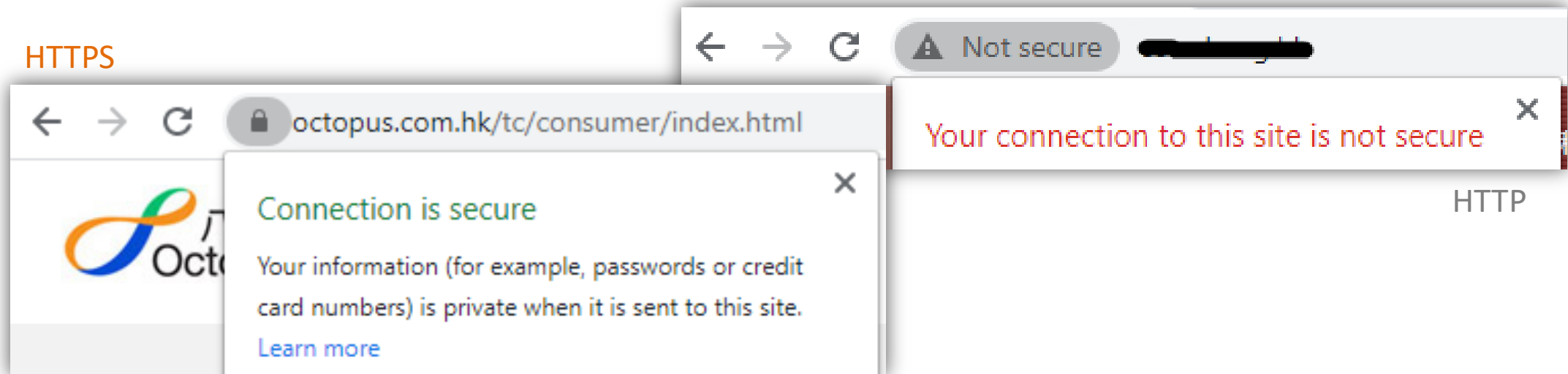


Encryption!
Encryption!!
Encryption!!!

- The transformation of data from the *original* to a *difficult-to-interpret* format as a mechanism for protecting its confidentiality and integrity

Encryption in Transit

- Enable **HTTPS** for your website
 - Move from HTTP to HTTPS
 - Encrypt all data flowing between your server and your customer
 - Prove authenticity of your website



Encryption at Storage

- HTTPS protects data in transit but doesn't prevent hacker from stealing data directly from servers or offices
- Encrypt sensitive data (esp. personal data) wherever they are stored
 - Databases
 - File servers
 - User workstations
 - USB drives or other removable media
 - Cloud storage



Encryption by Evil

Ransomware

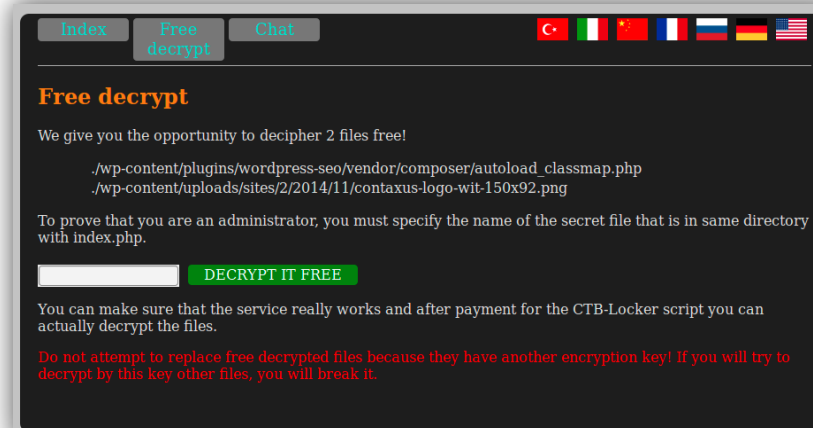
- A malware encrypts your files and asks for ransom



<https://www.cybersecurity.hk/>

Ransomware

- Infected by file download, phishing email, USB drive, etc.



Mitigations of Ransomware

- Install anti-virus software and keep it **up-to-date**
- **Patch and update** your devices, incl. OS, apps, browser, plugins, etc.
- Only download and install software from **trusted sources**
- Beware of **phishing**
- Regular **backup** – save in separate locations
- Have a **contingency plan** in case of attack?

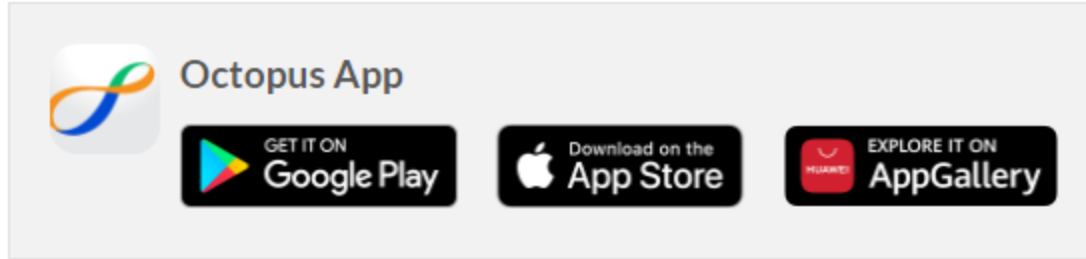


Making Safe and Secure Online Payment

- Consider to use Debit Card rather than Credit Card
 - Only spend how much you have in your account
 - Even better if you can switch it on or off anytime
- Choose a card that you can set limit for each transaction
- Get notified for all transactions



Example: Octopus Mastercard



- Get the card instantly in Octopus App
- Deduct directly from your Octopus Wallet



- Receive In-App push notification messages for all transactions.

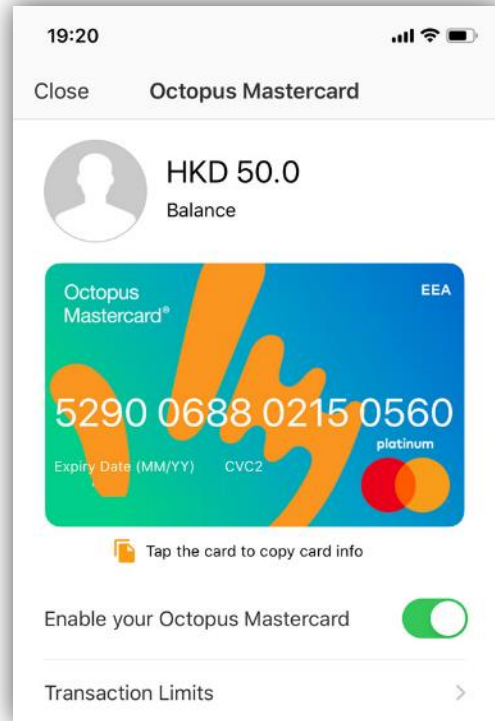


- Mastercard SecureCode® for extra security
 - You will be asked to input a one-time password (OTP) to authenticate your identity

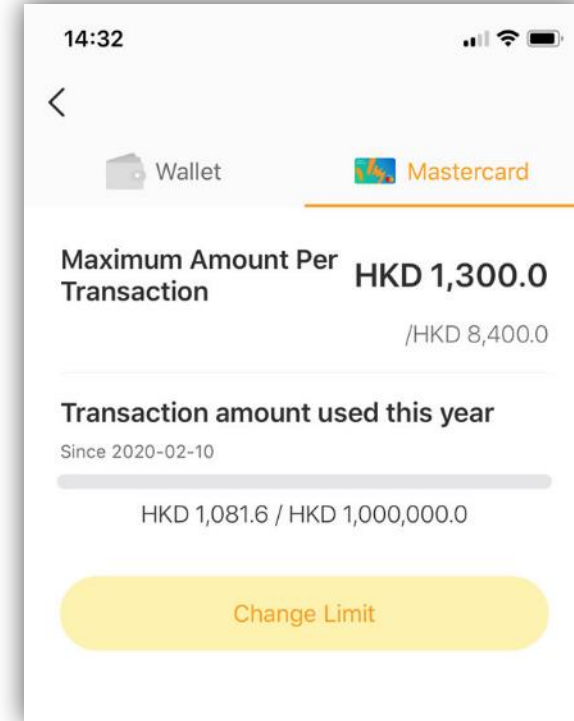
Security Features



- Turn your Octopus Mastercard on or off anytime

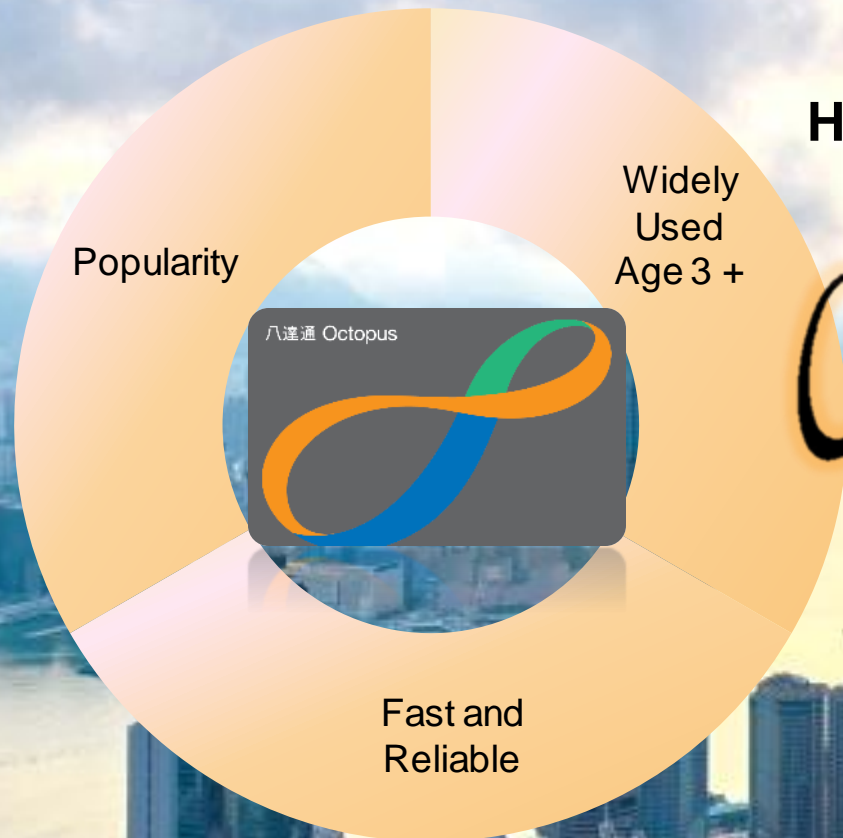


- Set your own limit for each transaction for greater control



Selecting a Secure and Robust Payment Service

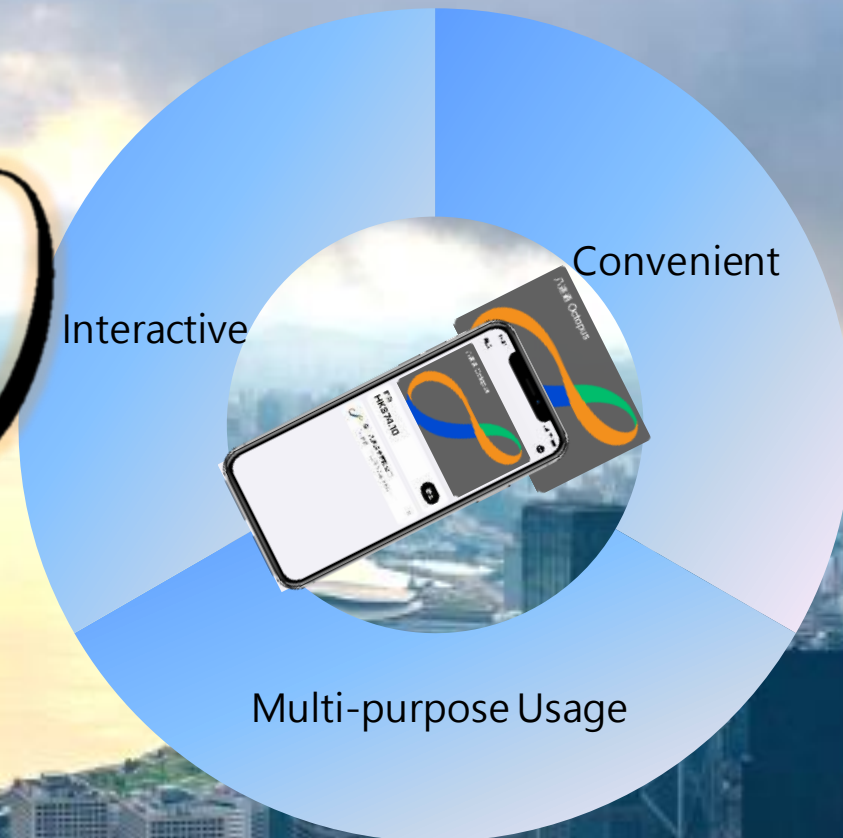
Octopus Card



Hybrid Model



Mobile



The Mobile Payment Journey of Octopus



Takeaways

- Don't keep customer data unless necessary
- Adopt data encryption for transit and storage
- Fight the ransomware – patch and backup
- Make secure online payment
- Select a secure and robust payment service



Thank you

A decorative graphic consisting of three thick, curved bands. An orange band starts from the bottom left, curves upwards and to the right, and then curves downwards. A green band starts from the top right, curves downwards and to the left, and then curves upwards. A blue band starts from the bottom center, curves upwards and to the right, and then curves downwards. The bands overlap in the center of the image.