# **SAP x HSBC x Goldjoy Travel**

Data & Privacy in a Digital Age 數碼時代的數據和私隱



Mr. Sam Wong

SAP Digital Advisory, **SAP Customer Experience** 

### 2019 / 09 / 27 (Friday) 5:45pm - 7:30pm (Registration starts at 5:30 pm)

Explorium HK 🌳 1/F, Li Fung Tower 868 Cheung Sha Wan Road

Language: English

HKEBA

Funded by SME Development Fund Trade and Industry Department



Mr. Jacen Loke **HSBC** Regional Lead, **Cyber Security Consulting** 



**Dr. Fred Yip Goldjoy Travel Executive Director** 



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### Event Organizer 主辦機辦

### HKEBA 香港電子商務業協會

# HKEBA

Hong Kong E-Commerce Business Association

### Trade and Industry Departme 工業貿易署

### Supporting Organizations 合作機構

### Explorium Hong Kong







### Past Seminars 過往講座

#### **1. Introduction to Omnichannel Sales & Commerce**





#### **2.** Applications of Platform and Enterprise Data Analytics







Lane Crawford

#### 3. Boosting your brands in China







4. Accelerating your e-commerce business







5. Growing crossborder e-commerce for brands in South East Asia





6. General Managers' view on crossborder e-commerce from Hong Kong

ebay





### Past Event 過往活動

### Taiwan Delegation Tour 2019



### **AppWorks**

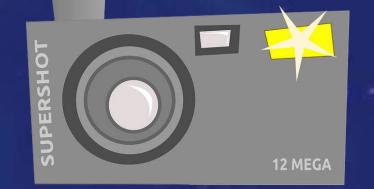


### Taiwan Startup Stadium



### **Startup Terrace**

# Photo Taking 拍照



### Speakers 演講者



### Mr. Sam Wong

SAP Digital Advisory, SAP Customer Experience



### Mr. Jacen Loke

HSBC Regional Lead, Cyber Security Consulting



### **Dr. Fred Yip**

Goldjoy Group Executive Director

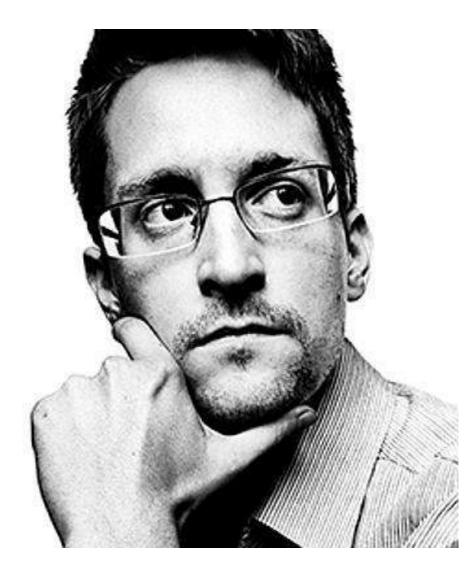




## Handling Data Today ( Privacy, Consent, Trust ) SAP Customer Experience ~ C4HANA Platform



### When I think about privacy...



### **Data Privacy the SAP way** Build Trusted Customer Relationships



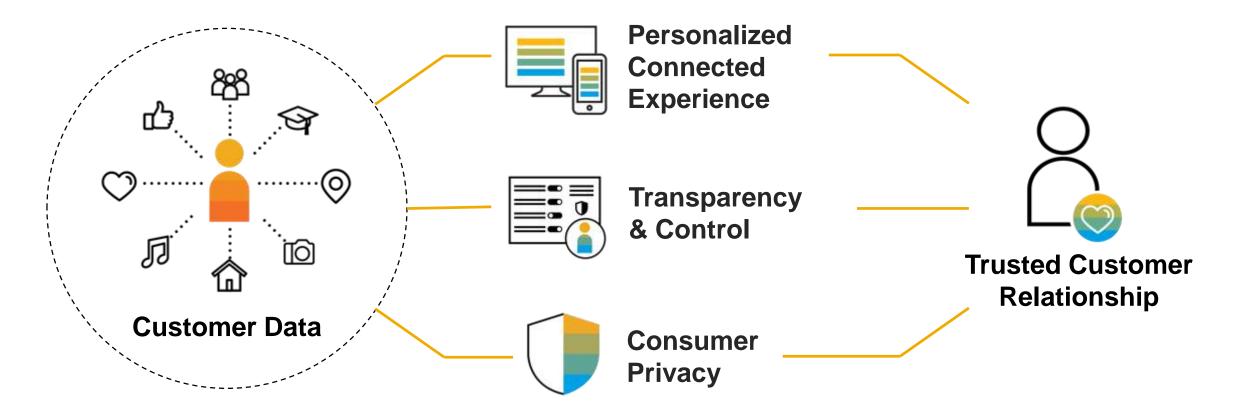




TURN ANONYMOUS VISITORS INTO LOYAL CUSTOMERS BUILD TRUSTED CUSTOMER RELATIONSHIPS THE SOURCE OF TRUTH FOR FIRST PARTY CUSTOMER DATA

### **Strategy & Vision**

Mega trends driving the need to build trusted customer relationships



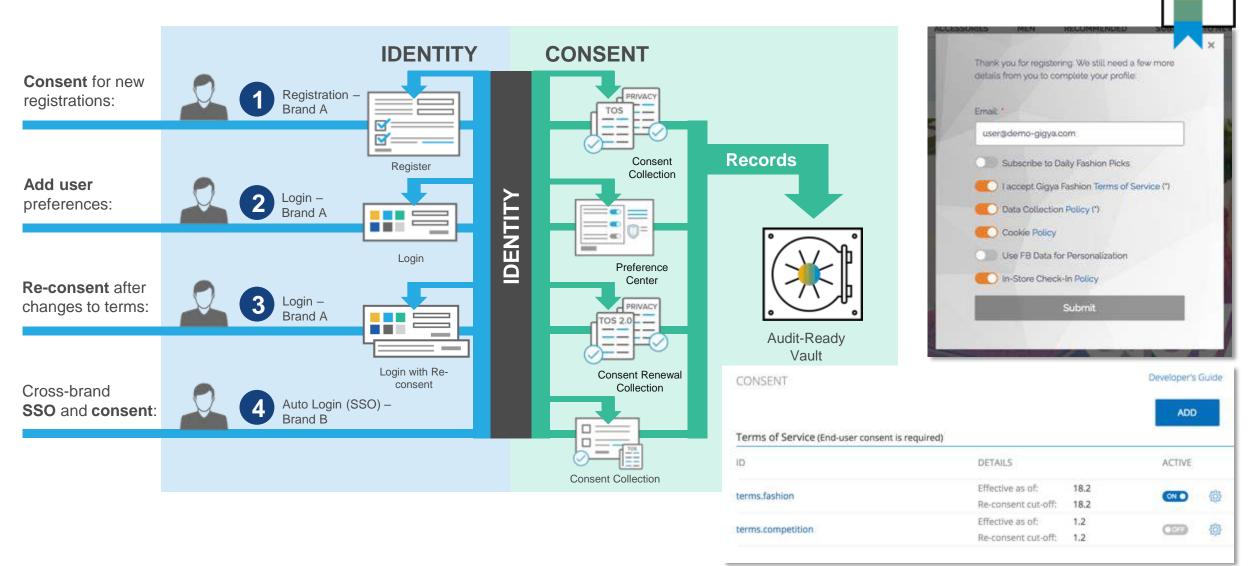
### Are you giving rights to your customers?

#### **Data Collected (PII) Individual Rights** The right to **Profile Data** erasure The right to The right to Connections **Social Data** rectification restrict processing VS. Likes & Location The right of The right to Interests Data data portability access $\cap$ d รีเ â 0 Device The right to Behavioral The right to Data object Data be informed Registration Rights in relation to automated Data decision making and profiling

### **SAP's solution on Consent**

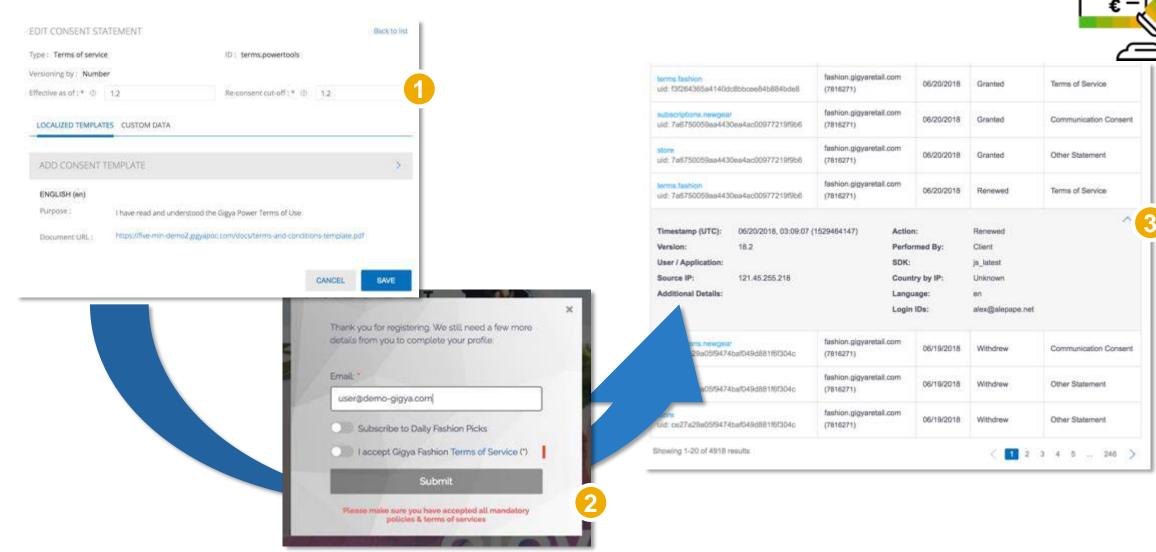
### **CONSENT - Preference & Consent Capture**

Registration, Login and Auto-Login Consent Collection Use-Cases



### **CONSENT - Version Control**

### Earning Customer Trust with Triggered Consent Renewals Gains Loyal Customers



### **CONSENT - Self-Service Preference Center**

IDENTITY

CONSENT

Opt-out

Withdraw

Automatic Revocation

Preference Center Consent Use-Cases

Preference

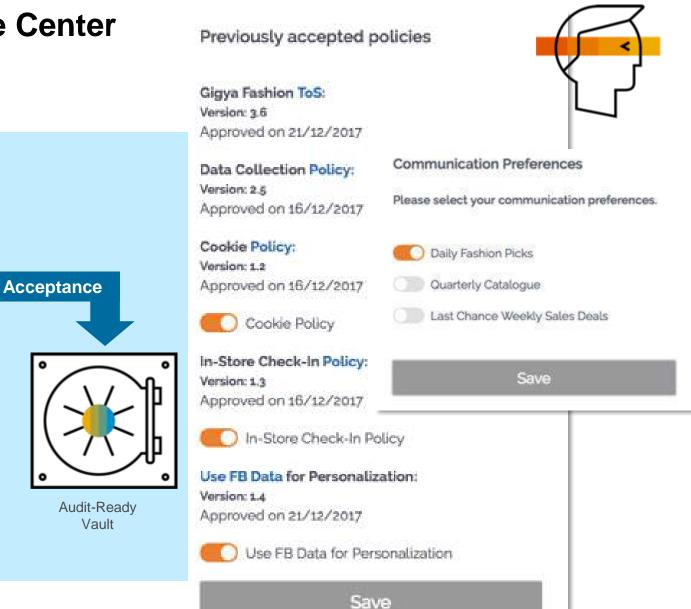
Preference

Preference

Center

Center

Center



(Pre) registered user

**Registered User** 

**Registered User** 

**Consent Expiration:** 

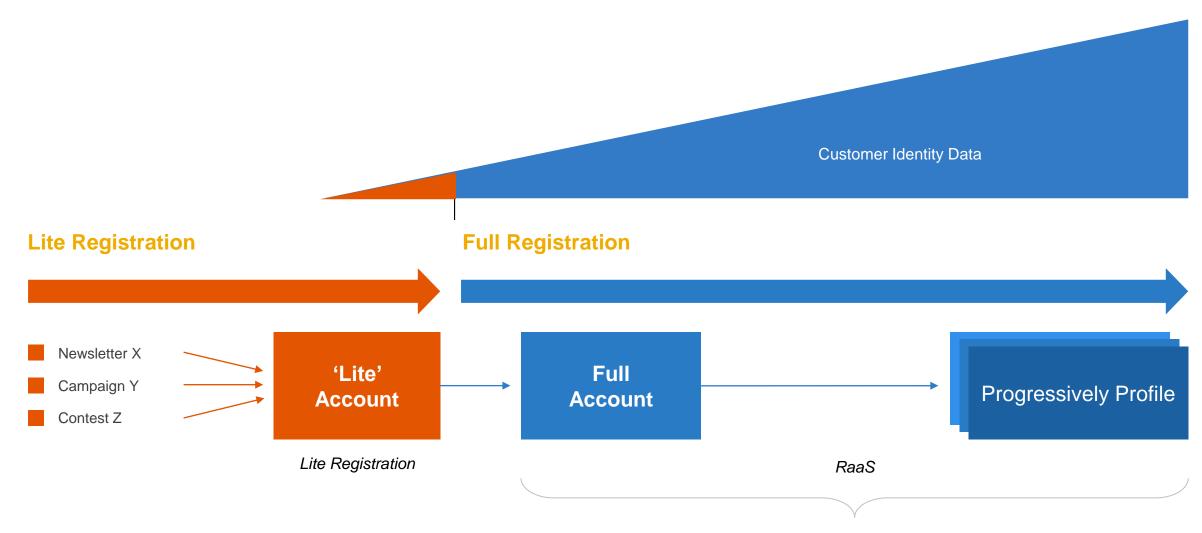
**Consent Withdraw:** 

**Opt-Out**:

Cancel

### SAP's continuous gathering of data: Progressive Profiling

### **Capture Data Continuously Over Time**

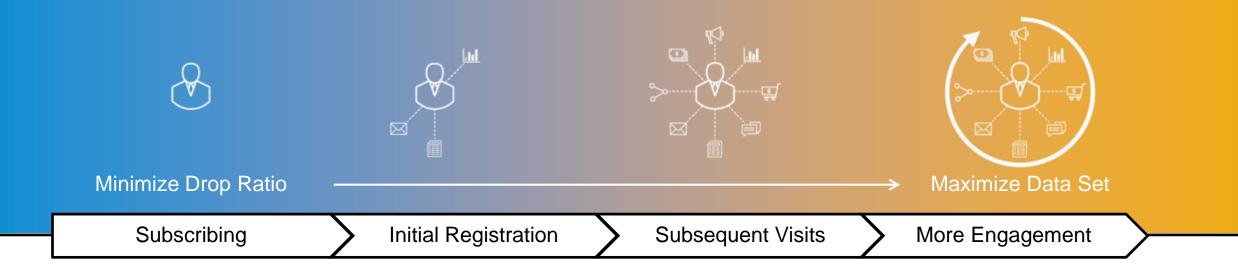


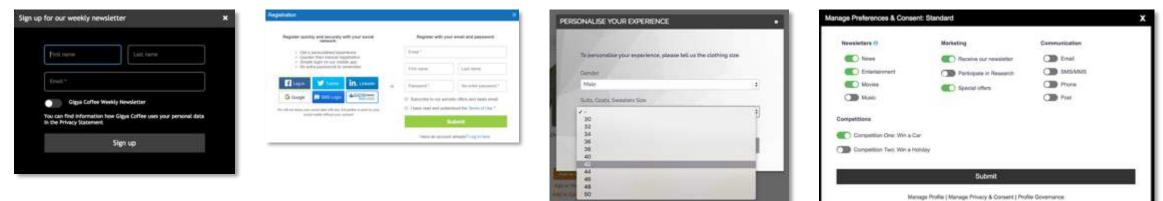
With full accounts, users can be queried over time to build their profiles

### **Progressive Profiling**

Enrich customer profiles along the journey using configured logic, based on user profile, context, behaviour, etc.







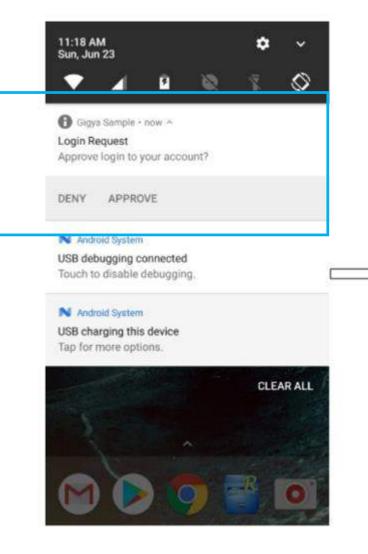
### Some more Details on 'subsequent visits'

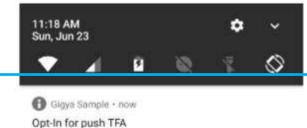
1. **Request** information from your users after <u>trust</u> is built

### 2. Ask after certain event triggers

- Maybe a 4th login
- Adding a connection
- Commenting
- Profile editing
- A visit to a specific page
- Number of shares reached
- 3. Information is **gathered unobtrusively**, while user registration stays high
  - **Leverage** a quick/simple survey to capture their experience with you

### **Customer Identity** | Push Authentication

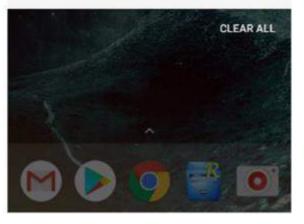




This device is registered for push two factor authen...

N Android System USB debugging connected Touch to disable debugging.

N Android System USB charging this device Tap for more options.



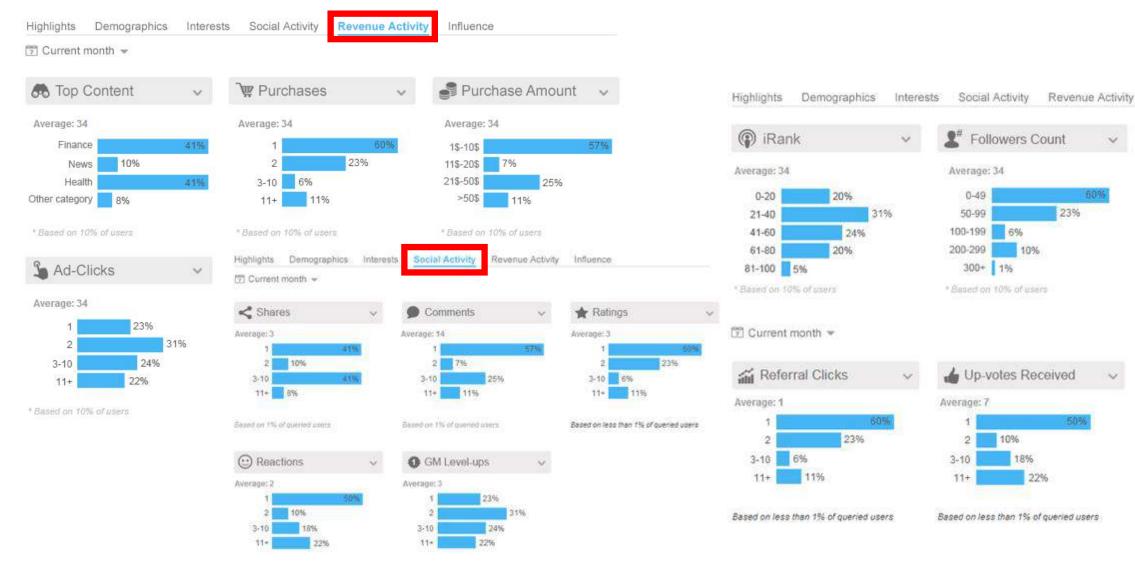
### Where you've built trust, append more data

Question 1	$\odot$	Question 2	$\odot$	Question 3
Login         First name:       Jonathan         Last name:       Low         Email:       t1@mail.com         Company:       Company name         Enter a company, press submit and then refresh th screen to restart the display.         sub	ne	First name: Jonathan   Last name: Low   Email: t1@mail.com   Company: Gigya   Job Title: Enter your job title   Enter a job title, press submit and then screen to restart the display	refresh the	First name: Jonathan   Last name: Low   Email: t1@mail.com   Company: Gigya   Job Title: Technical Writer   What is the size of your company? Select a size range  Select a size range  After submitting data, refresh the screen to restart the display Exit submit

### **Collecting all sorts of Behavioral Data**

Top Like Catego	ories				~	Customer Insights Plus				Options
Community 33%	Musician/band 91%	Local business 87%	Company 83%	Tv show 83%	Productiservice 41%	Set Filters Age: between 13 and 25 Audience: 3.053 but of 25,496 users (11%) Highlights Demographics Interests		• Contraction and • Contraction		Quick Filters My Filters All users Influencers Purchasers Ad dickers
Top Likes					~	<b>∔</b> ¶ Gender	~	Age Average: 2	2	Youth Adults
Starbucks 25%	Target 20%	Amazon.com 18%	VICTORIAS SECRET Victoria's Secret 17%	Music 15%	T's (191 Taylor Switt 16%	Female, 78%	36	0-12 0% 13-17 10% 18-24 25-34 20% 35-49 0% 50+ 0%	70%	Seniors Males Females Save current Create or replace
aguiga a	Rute		<b>A</b>		Beattles	Based on 70% of queried users		Based on 100% of quoried users		Gender Males Females
The Office 16%	Family Goy 15%	Lady Gaga	Katy Perry 15%	Adele 14%	The Beatles	** Relationship Status	~	Clucation	~	Age Youths
sed on 56% of queried users	2000 0					In a relationship 3 Single 34	596	College, 68%		Adults Seniors
Favorite Movies			NEMO		, ,	Married 23 Engaged 7% In a domestic partnership 1%	*		Grad. School, 14%	Education High School College Graduate School
The Hangover 17%	Harry Potter 15%	The Notebook	Finding Nemo	Toy Story 13%	The Hunger Games	Based on 43% of queried users		Based on 3% of queried users	igh School, 18%	Relationship Status Single In a Relationship

### More Behavior data like (Revenue, Social, Influences) Activities



Based on less than 1% of queried users

Based on less than 1% of guened users

Influence



**DMP (Data Management Platform)** 

Tracking, monitoring, anonymous activity only

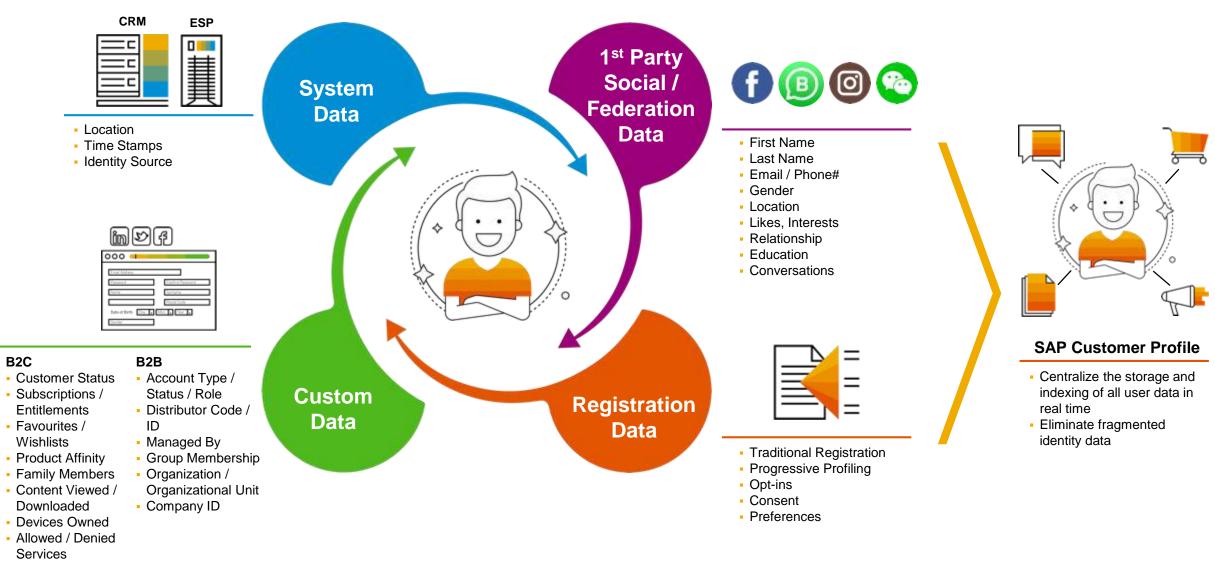
### **CIAM (Customer Identity Access Management)**

Turning anonymous into KNOWN consumers

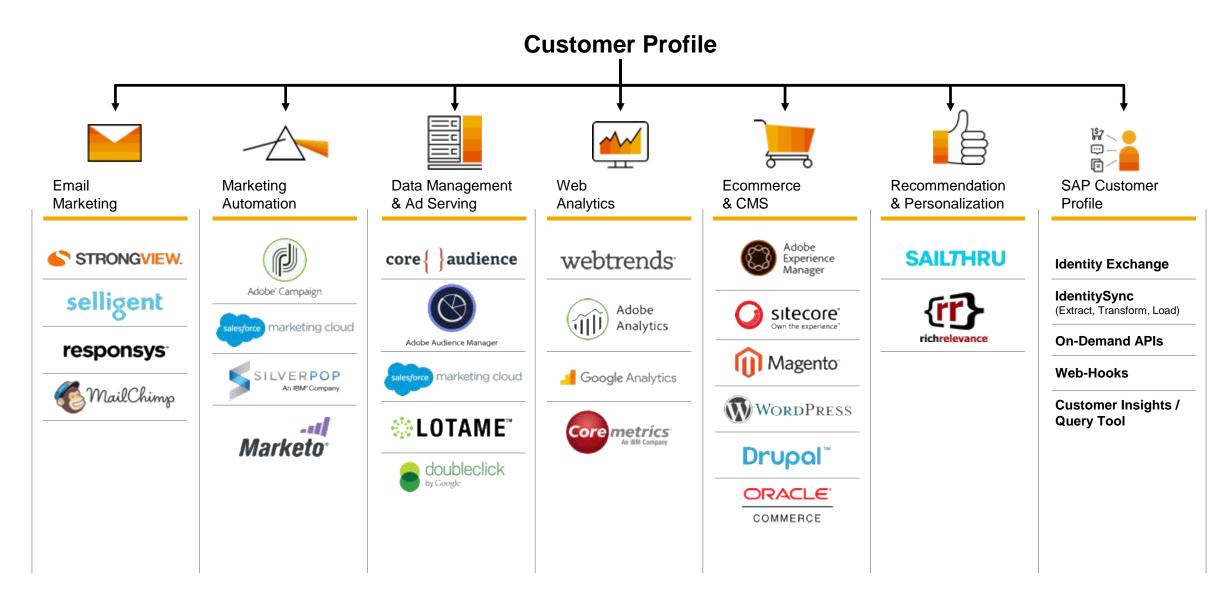




### **CIAM ~ Flexible Account Structure**

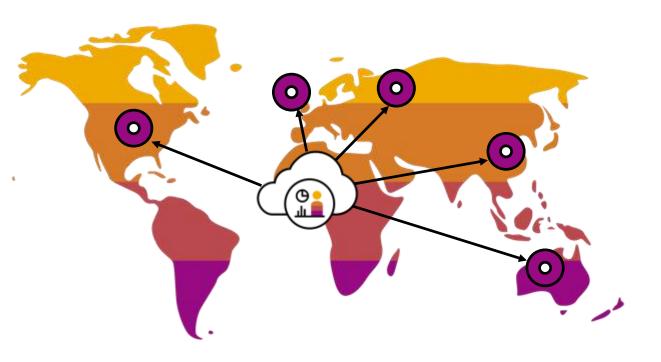


### **PROFILE - Orchestrate profile, preferences and consent downstream**



Global Access Business View and Benefits

### Trusted customer experiences at a global scale.



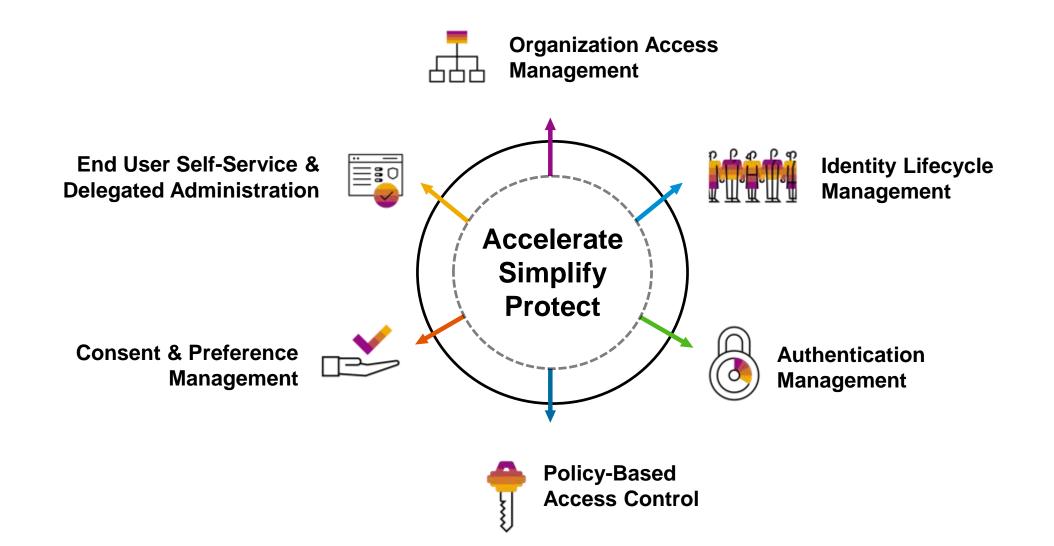
Provide a truly global experience whilst maintaining data regulatory compliance. Register once, offer the same experience across the globe.

Remove the global duplication of customers as they travel.

Out-of-the-box capabilities rather than managing complex and fragile global login solutions.

### Let us help you to Initiate, Establish & Build Trust





# "If your customers trust you, they'll engage you & open up to you"

### Thank You SAP CX





### Mr. Jacen Loke

HSBC Regional Lead, Cyber Security Consulting Overview of Cybersecurity and the current Cyber Threat Landscape



#### Objectives of today's session

Increase your knowledge of the cyber threat landscape

Improve your understanding of how we protect, detect and respond to these threats Raise awareness of what you can do to support us and your businesses in the fight against cyber crime PUBLIC

The best security starts with the Human Firewall ...

# WATCH THIS HACKER BREAK INTO MY CELL PHONE ACCOUNT IN 2 MINUTES

https://www.youtube.com/watch?v=lc7scxvKQOo

# How much do you know about Cyber?

### What is Social Engineering?



An attempt to obtain sensitive information such as usernames, passwords and credit card details, often for malicious purposes



A non-technical strategy cyber attackers use that relies heavily on human interaction and often involves tricking people into breaking standard security practices



A social evening for engineers

### What is Social Engineering?



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A social evening for engineers

#### What is ransomware?



A type of malicious software designed to block access to a computer system until a sum of money is paid



A cyber-attack where a perpetrator seeks to make a network resource unavailable to its users temporarily or indefinitely



To deliver or redeem from punishment for sin

### What is ransomware?



# A type of malicious software designed to block access to a computer system until a sum of money is paid

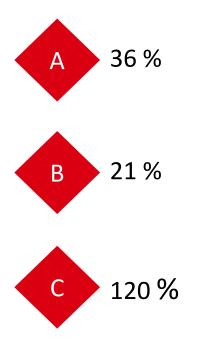


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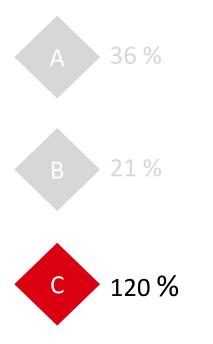


To deliver or redeem from punishment for sin

What is the % of employees' clicks during a simulated phishing attack?



What is the % of employees' clicks during a simulated phishing attack?



# What is our exposure to cyber threats?

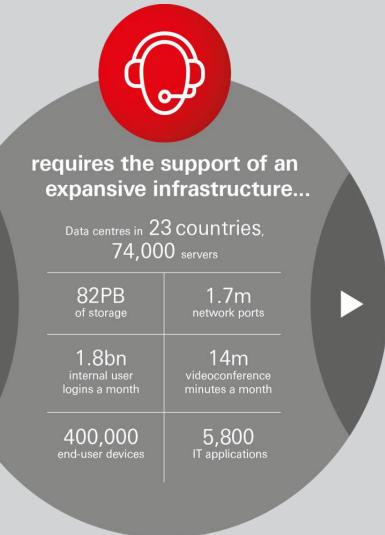


Protecting and monitoring one of the largest Technology estates in the world...

> 50m+ external customers worldwide

250,000 colleagues worldwide 26,000 -strong ATM networks in 40 countries

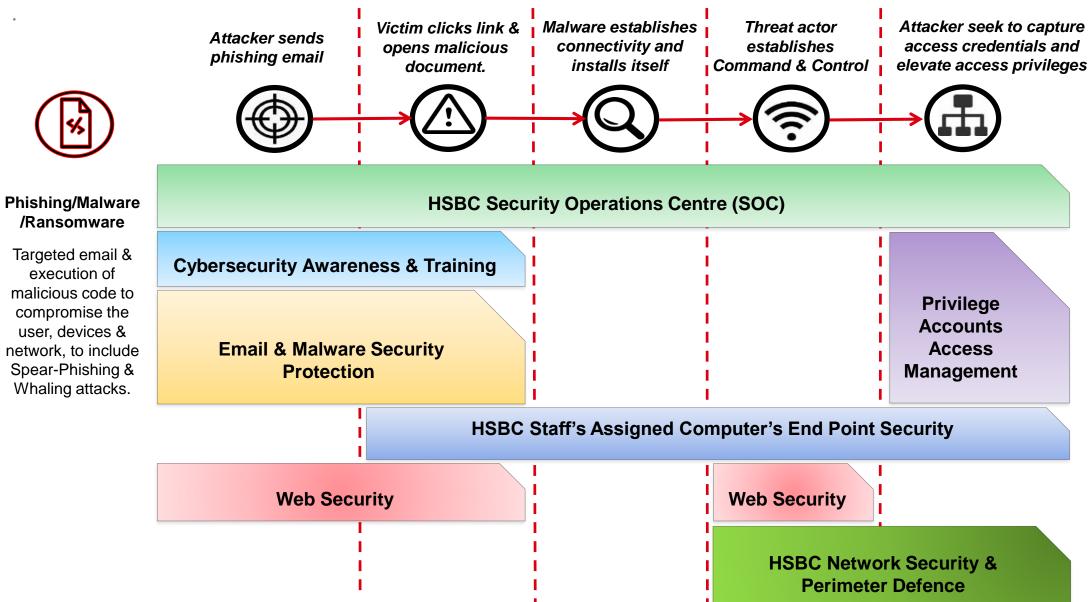
#### 6,300 offices in 74 countries and territories



# Malta's Bank of Valletta Cyber Attack

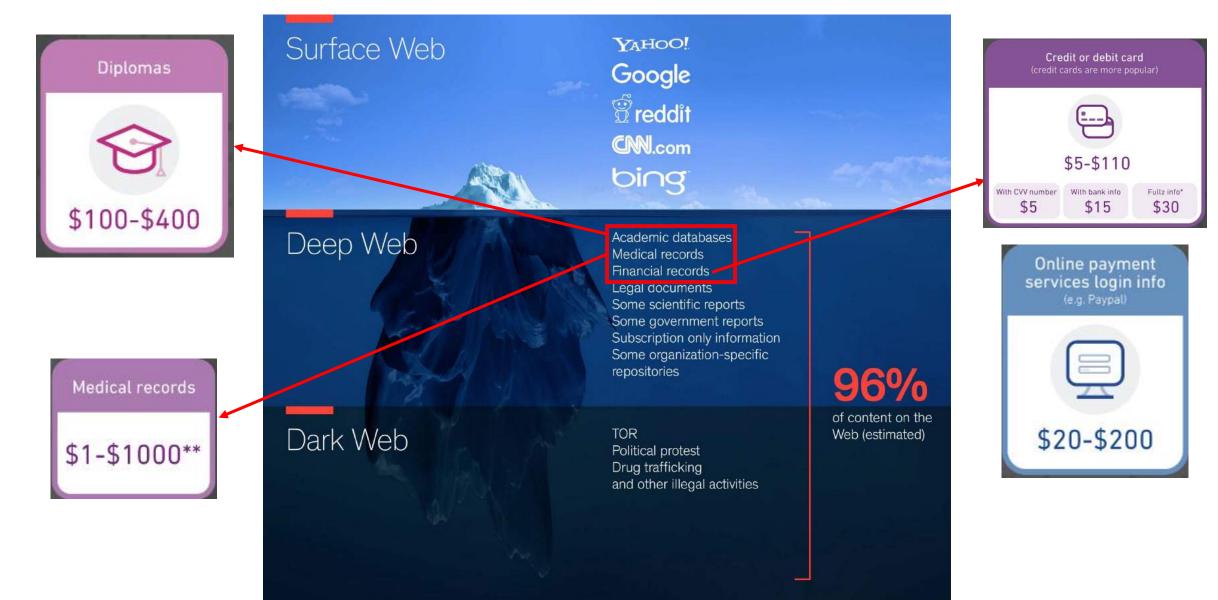


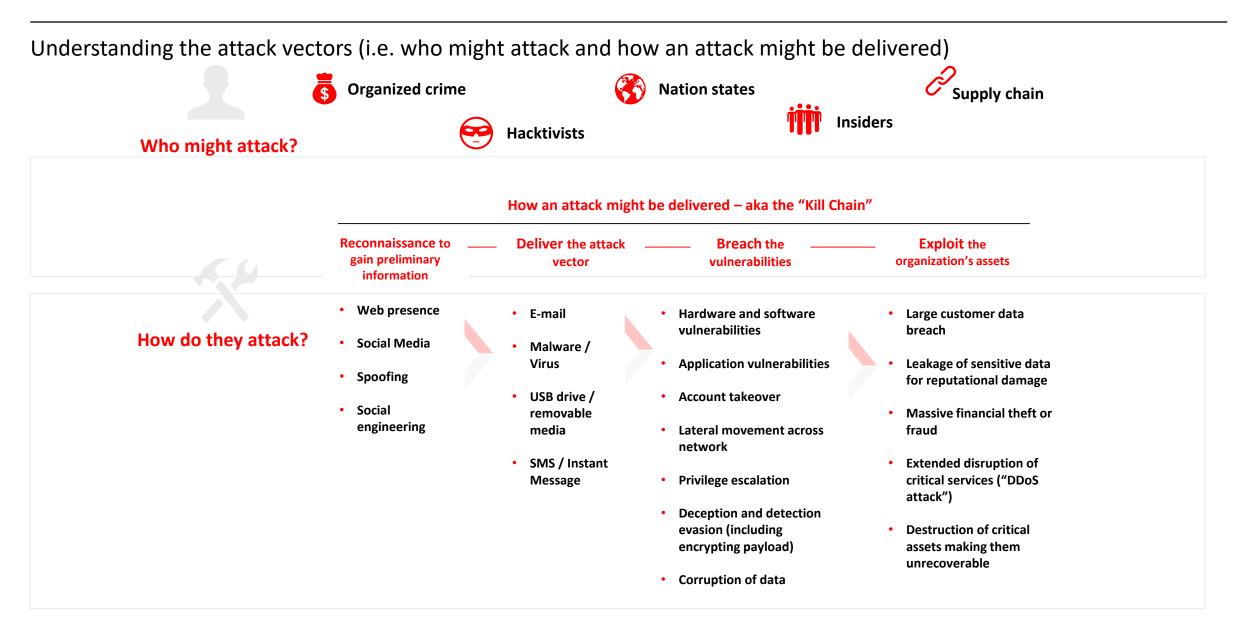
#### Threat Actor's <u>Known</u> Tactics, Techniques and Procedures (TTPs) as mapped to HSBC Phishing/Malware Defences



# What does a Cyber Attack look like?

## Cyber world as a whole





# How do we protect our business?

### **Cyber Security Strategy Overview**

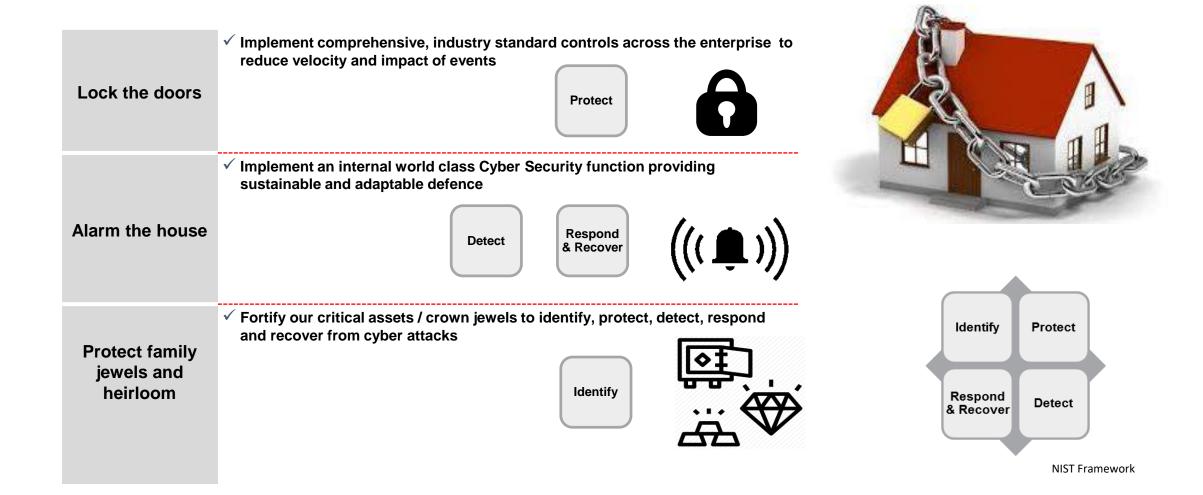
#### Vision

Defend for today and Prepare for the future, in order to protect the organisation and safeguard our customers

Strategy



## Protecting your business is analogous to protecting your house



## **Cybersecurity Awareness & Training**

Humans can be either the weakest link or the strongest defense in cyber security, depending on the level of awareness. Cyber Security has initiated an awareness program targeting audiences at all levels, through a number of initiatives including:







# What can YOU do?

# HOW PRIVATE IS YOUR PERSONAL INFORMATION?\_

PUBLIC

The walker wyatt coffee shop

STAPLETON, ROADS.W

.

•

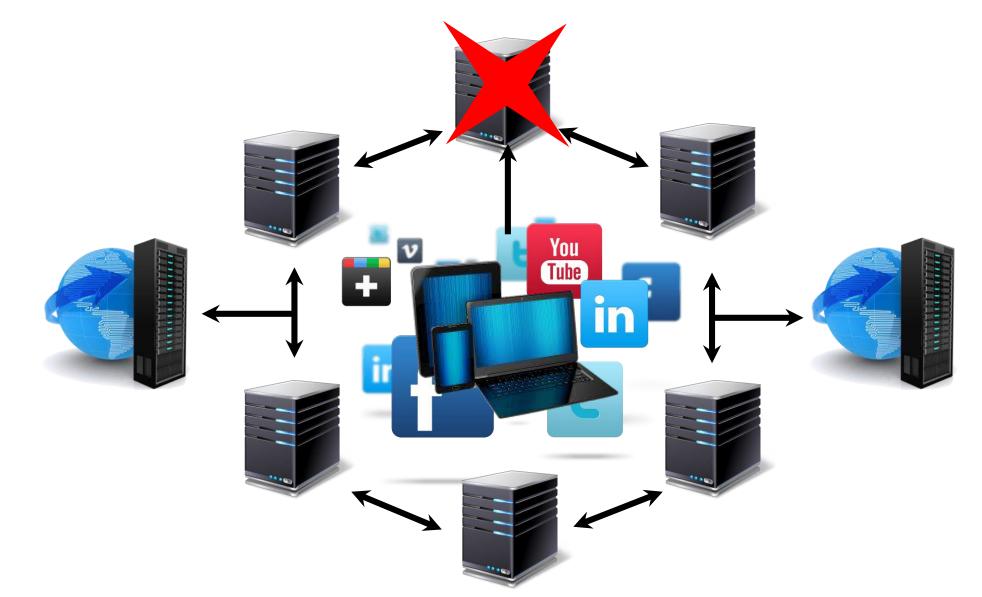
A **<u>Digital Footprint</u>** is a trail of data you create while using the Internet.

It includes the websites you visit, emails you send, and information you submit to online services.

What is your digital footprint?

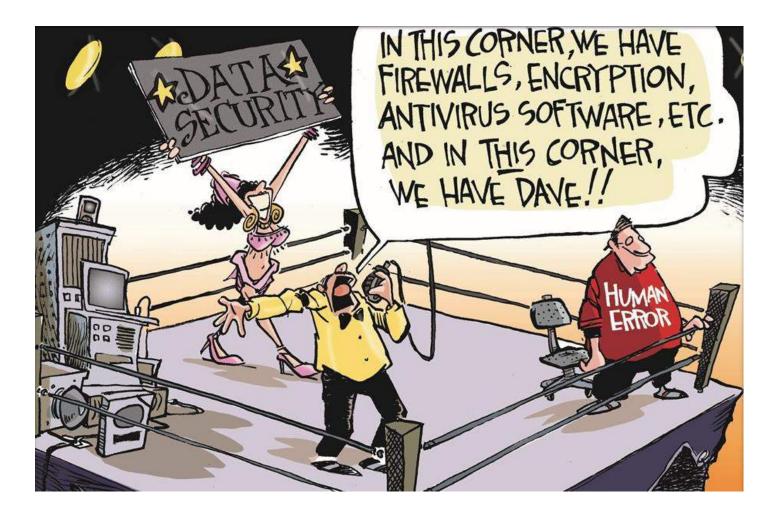
- Photos / Videos
- Working Relationships
- Location Data
- Email Address / Phone Number
- Personal Information Hobbies, Interests
- Online transaction details
- IP addresses
- Information posted online or passed over an insecure network can provide threat actors with invaluable information.
- Over 85% of successful cyber attacks involve an element of social engineering (e.g. Phishing).

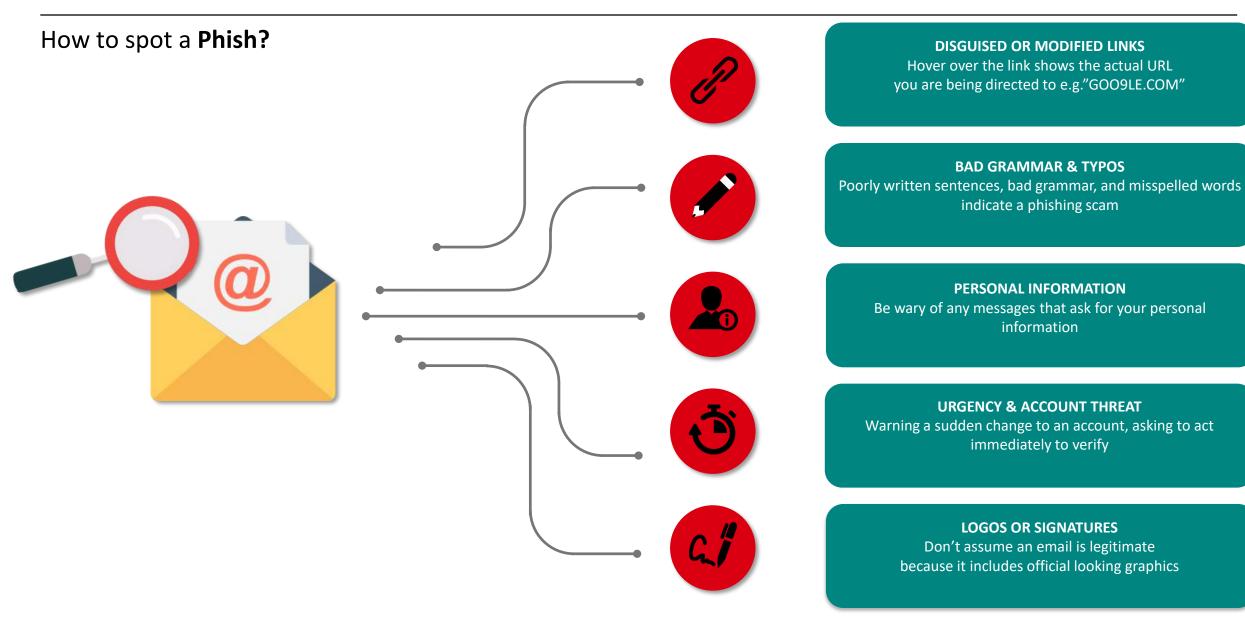
## Can I Just Delete My Digital Footprint?



### **Practical Steps**

- An attacker will spend less than 5 minutes when attempting to seek a vulnerability.
- Ensure clear separation between your professional and personal digital footprint.
- Consider how the footprint of your family, friends and colleagues could lead to vulnerability.





A reminder of what we have achieved today

We have increased your knowledge of the cyber landscape

You understand how on a daily basis organisations are protecting, detecting, and responding to cyber threats You are aware of how you can support in the fight against cyber crime

# Goldjoy Holidays 金怡假期



## **Dr. Fred Yip**

Goldjoy Group Executive Director





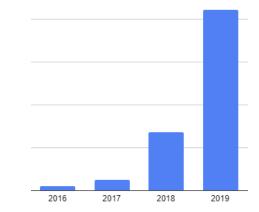
## DATA & DATA PRIVACY





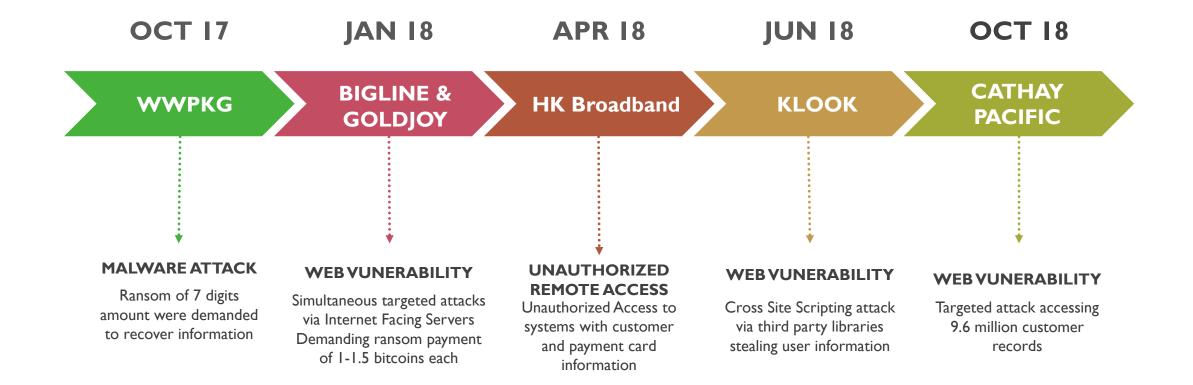
# WHY DO WE COLLECT DATA?

- DATA → PERSONAL IDENTIFIABLE INFORMATION (PII)
- NATURE OF THE BUSINESS
- TO PROVIDE YOU A SERVICE
- PERSONALIZATION AND RECOMMENDATIONS
- DIGITAL TRANSFORMATION



3800%+ over 3 years

# WHAT CAN HAPPEN IN 12 MONTHS?



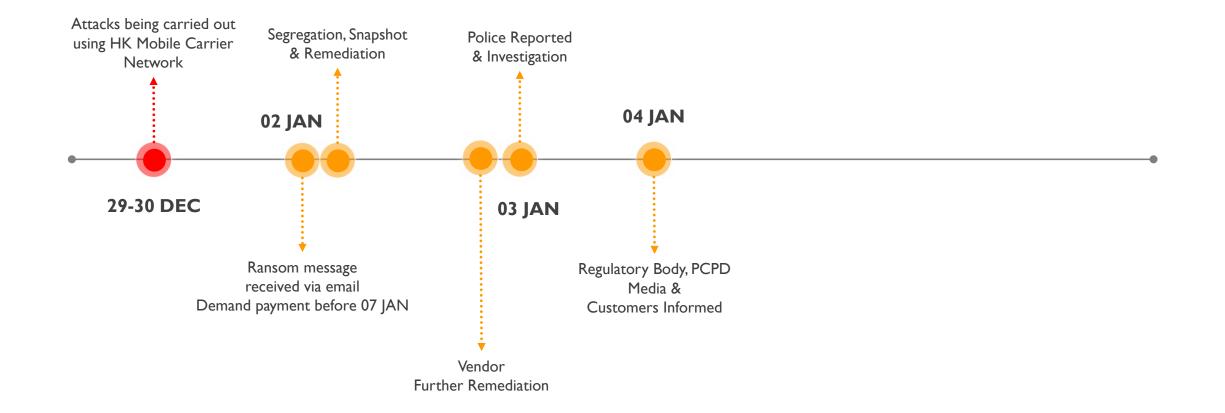
# HOW DID IT UNFOLD?

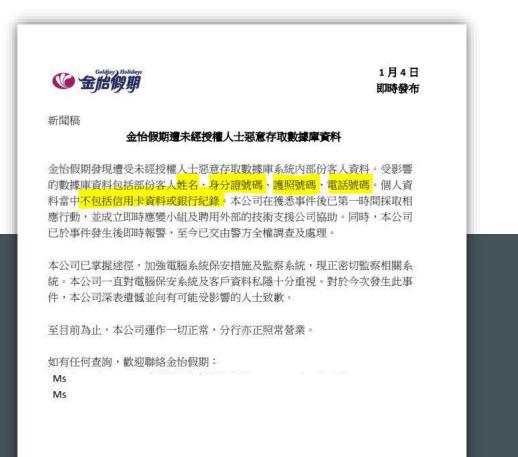


# IMMEDIATE STEPS WE TOOK

- I. Verify Authenticity & Assess Impact
- 2. Kill Switch & Limit Exposure
- 3. Notify Key Personnel
- 4. Establish Incident Response Team & Assign Roles/Responsibilities
- 5. Snapshot & Remediate
- 6. Prepare for contacting Police
- 7. Notified employees of incident and ask to direct any enquiries to the assigned media & communications contact

# SECURITY INCIDENT RESPONSE





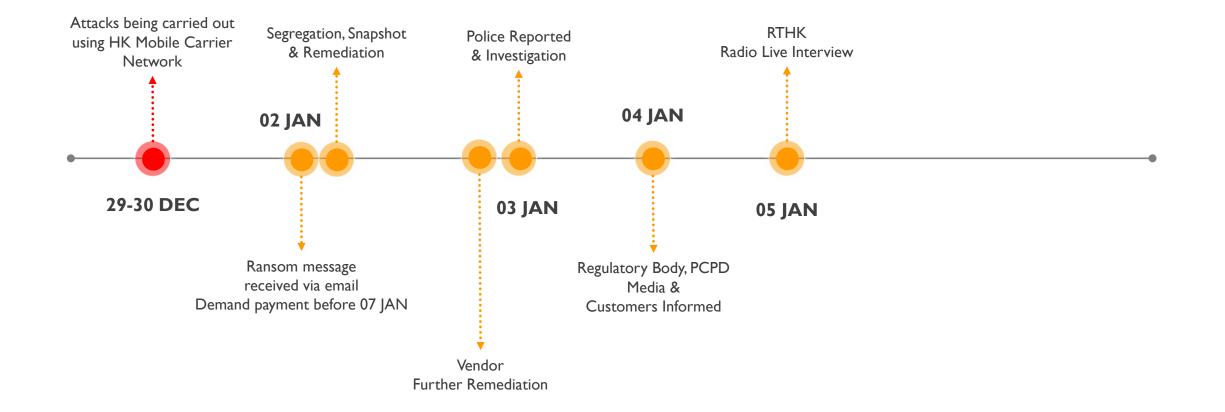


# **BE PREPARED**

- I. Further Attacks & Scans
- 2. Media Attentions
- 3. Dedicated Hotline and Email
- 4. Respond to Social Media



#### SECURITY INCIDENT RESPONSE



【大公報訊】記者謝進亭報道:旅行

3萬手法雷同大航事件各影響

社被黑客入侵電腦肋索巨額款項事件接 速三發生、金齡假期昨日表示,經調查這 谈测豁地址、初步懷疑是本地黑客犯案

約數萬客資料被盜

金抬假期主席葉慶寧昨日在一個電台 並且表示・估計約數萬名客戶資料受黑客 入侵影響=數月前該公司已加強保安系統 ·仍未能避免事件發生 · 日後會定期找外 物保安公司調試系統安全性。金伯假期資 影科技部主管葉揚鄧稱一旅行社不會儲存 等戶信用卡資料、受影響客戶母須因事件

而通知銀行或取消信用卡。 去年十一月縱橫遊被派客入侵電腦約 索後、大航假期、金怡假期近日世均被派 客人侵電腦動索。旋議會昨日表示,監於 樂界先後發生三宗事故·請會推出多項措 施,昨日已與警方開會、進已着手成開計 到,協助該會會員應付網絡風險一警方將 把實用提示及資訊提供結論會、語會將以 不同渠道、包括逝古、講座等、使會員知 悉有關提示及資訊。 議會並與香港檢測和認證局、生產力 促進局礙爾合作;協助旅行社路低被網絡

攻擊的風險。



示懷疑是本地黑客入侵公司系統,

估計約有數萬名顧客資料受影響。

暫未收到客戶投訴,已報案交由網

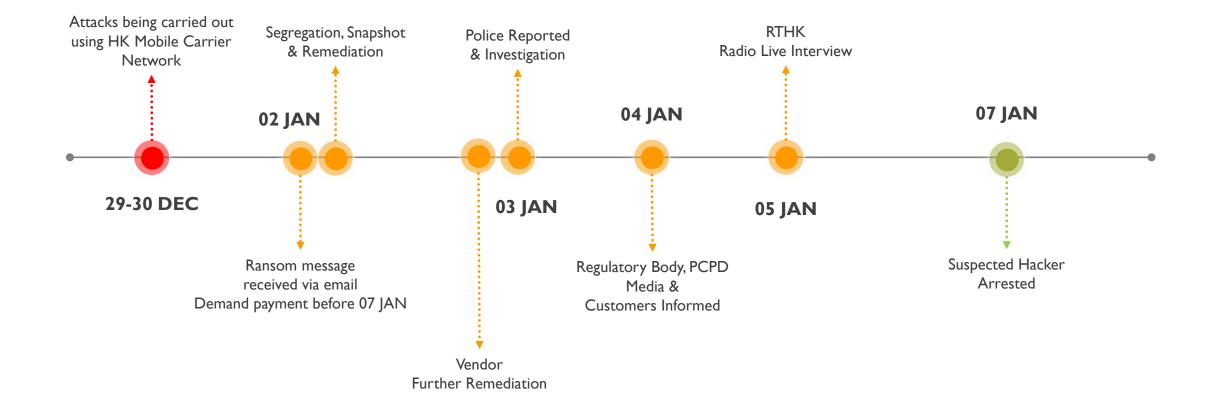
件會否影響成團。

「萬客戶私隱資料被盜取 兩日內第二宗 侵 資料不包括信用卡號碼 絡安全及科技罪案調查科跟進 接連有旅行社被黑客入侵,在 地黑客入侵,因為部分黑客的網絡 未經授權下存取數據庫,一批客戶 地址是在香港境內,旅行社內部的

輝表示,初步懷疑旅行社是受到本 電腦一向有安裝防火牆;事發後亦 , 了解系統的漏 有外聘技術支援 表示, 被益

洞。他指、公司電腦系統運作正 客的姓名及證件號 常,再次為事件造成不便致歉 旅遊業議會表示,昨與警方網 資料不包括信用卡號碼,暫沒有收 絡安全及科技罪案調查科開會, 方將把實用提示及資訊提供給議 到客戶投訴,大多客戶致電關注事 會,再以不同渠道向業界發放網絡 金怡假期資訊科技部主管葉揚 保安資訊 記者 周峻峯

#### SECURITY INCIDENT RESPONSE



大航金怡伺服器遭入侵 警長洲拘30歲IT男 2018-01-09





本港多間旅行社疑遭黑客相繼入侵電腦伺服器,盜取客戶資料再被勒索的案件,警方拘捕一名 懷疑涉案男子,行動中檢獲多部桌上、手提及平板電腦,以及3個電腦硬盤、5部手提電話和多 張電話卡,案件仍在調查,不排除有更多人被捕。

被捕男子30歲、從事電腦工作(IT),於上周六在長洲一住宅被捕; 昨被黑布蒙頭(圖),由探員帶 到觀塘溢財中心,即他任職的公司調查後,檢走更多證物,之後再被押送返警署繼續調查。據 悉,被捕男子無犯罪紀錄,而今次勒索手法與縱橫遊遭勒索的手法亦不同。

警方網絡安全及科技罪案調查科警司莫俊傑指,疑犯涉嫌跟兩間旅行社,包括大航假期及金怡 假期的電腦系統被黑客入侵,盜取客戶資料,再勒索比特幣的案件有關。警方正評估涉及多少 市民資料,亦會密切留意有否資料外洩。

他又指,黑客是捨難取易,會針對攻擊保安相對不足的系統,強調網上世界並非無法可依,大部分適用於現實世界的法例都適用於網上,而勒索亦是嚴重罪行。警方亦會向業界宣傳網絡保安的重要性。

金怡假期及大航假期早前表示,在上周分別收到勒索電郵及信息,内容指已經入侵他們的客戶 數據庫,盜取部分客戶資料勒索,包括姓名、身份證、護照、回鄉證號碼及聯絡電話等,並將 事件報警處理。





警方今天在長洲拘捕一名30歲男子,該名男子從事電腦工作,他涉及勒索兩家旅行社(左);警方在一個觀塘開源道辦公室檢 走多部電腦及平板電腦、多個硬碟手提電話(右)。(TVB新開戰圖)

旅行社大航假期及金怡假期上週先後聲稱資料系統被黑客入侵,部分客戶資料被盗取。網絡安全及科技 罪案組發言人今午見記者表示,警方經調查後,已於過去週六(1月6日)拘捕一名30歲懷疑涉案男子。

發言人表示,警方早前接獲兩間旅行社聲稱資料系統被黑客入侵,黑客盜取客戶資料後分別向旅行社勤 索一個比特幣。發言人稱,警方1月6日於長洲展開行動,並於一個住宅單位內拘捕一名30歲,從事電 腦相關工作的本地男子,該名男子目前仍被扣查。

發言人指,警方於行動中檢獲2部桌上電腦、2部手提電腦、3部硬盤,1部平板電腦及5部電話。

發言人表示,警方目前仍在評估受影響的客戶人數,並會繼續作進一步調查,不排除稍後將拘捕更多涉 案人士。

發言人呼籲市民,大部分適用於現置世界的法律均適用於網絡世界,而勒索屬於嚴重罪行,一經定罪可 被判監14年。



#### POST-INCIDENT ANALYSIS

# "Sooner or later, every organization will be affected by a cyber-attack"

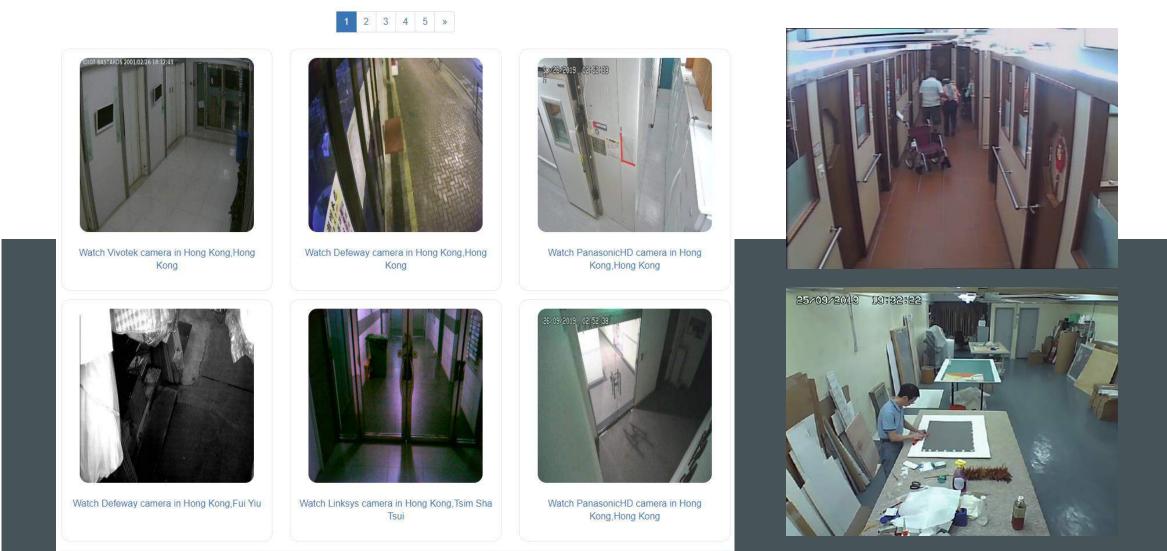
McKinsey & Co Perspective on transforming on cybersecurity 2019

#### When you are connected

## you are vulnerable



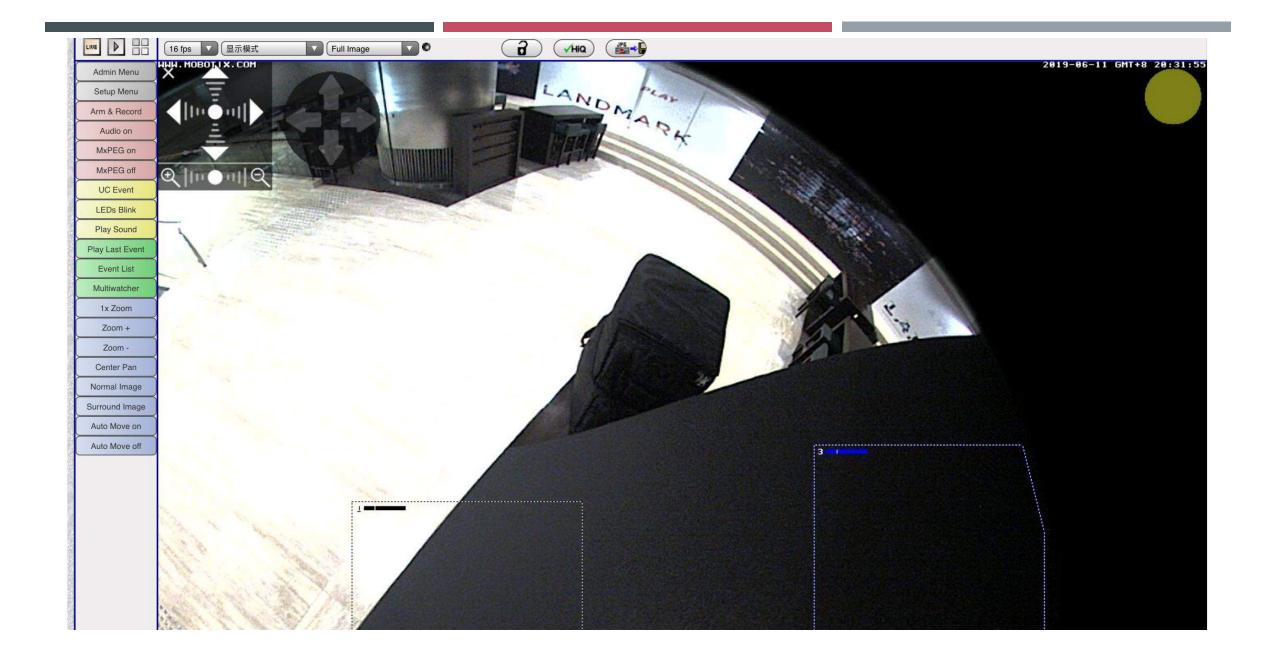
## PROOF

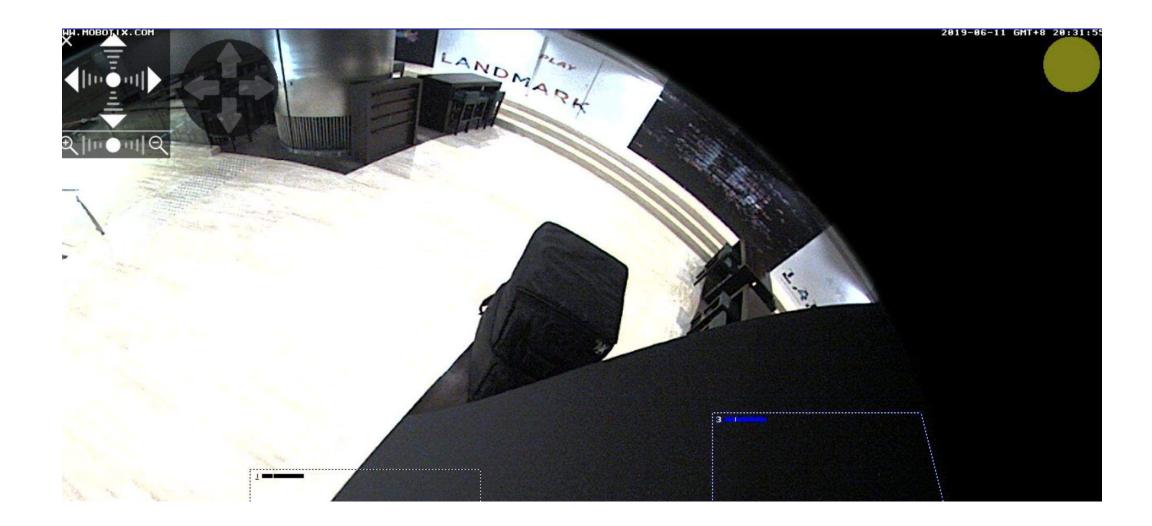


#### View camera online in Hong Kong (Sar), Hong Kong

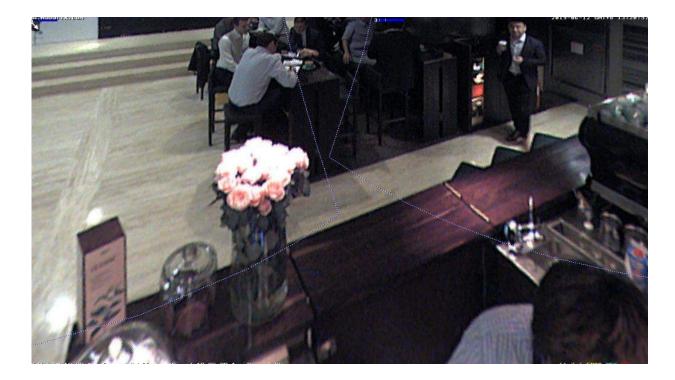














# TAKEAWAYS

- Compartmentalize systems between application and data Kill switch feature
- Log Everything
- Have an Incident Response Plan (IRP) & Press Release Templates
- Internet = Assume you will be attacked
- Web Application Firewalls (Not Just Network Firewalls)
- Block High-Risk Countries (Russia, Ukarine)
- Regular Penetration Testing
- 2 Factor Authentications
- Reduce Liability through Encryptions → Pseudonymize → Anonymize