THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

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SCHOOL OF HOTEL & TOURISM MANAGEMENT

Trends and Issues in the Tourism & Hospitality Industry (Technological Aspect)

旅遊與款待業趨勢及議題 (科技方面)

Dr Daniel LEUNG 梁堯忠博士
Assistant Professor
School of Hotel and Tourism Management
The Hong Kong Polytechnic University
Email: daniel.yc.leung@polyu.edu.hk

Leading Hospitality and Tourism

Agenda

14:30 – 14:35	Introduction 簡介
14:35 – 15:25	Why does Information Technology matter in the Tourism & Hospitality industry? 為甚麼資訊科技在旅遊與款待業中很重要？
	Q&A 問與答
15:25 – 15:35	Break 小休
15:35 – 16:25	Technology Application in Marketing & Distribution of T&H industry 資訊科技在旅遊與款待業營銷和分銷的應用
	Q&A 問與答
16:25 – 16:35	Break 小休
16:35 – 17:30	Technology Application in the Service provision & Experience design and optimization of T&H industry 資訊科技在旅遊與款待業服務提供和設計與優化體驗的應用
	Q&A 問與答

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Unique nature of tourism and hospitality products

Consumers

Suppliers

#1 Intangibility

- Services cannot be experienced prior to the purchase

#2 Variability

- Quality of service is inconsistent because the providers are not identical

#3 Perishability

- Unsold rooms/seats cannot be stored for later sale

#4 Inseparability

- Service is being consumed when it is delivered

Unique nature of tourism and hospitality products

Consumers

#1 Intangibility

- Services cannot be experienced prior to the purchase

#2 Variability

- Quality of service is inconsistent because the providers are not identical

Acquire → Information about facilities and service provided by different hotels/airlines

Acquire → Consumer reviews published on TripAdvisor, Yelp and others

Acquire → Comments and recommendations shared by travel influencers

Provide → Special request (e.g., non-smoking room; late checkout)

Unique nature of tourism and hospitality products

Suppliers

#3 Perishability

- Unsold rooms/seats cannot be stored for later sale

#4 Inseparability

- Service is being consumed when it is delivered

Acquire → Which channels are frequently used among consumers

Acquire → How much consumers are likely to pay for having a hotel room/air ticket

Acquire → What kind of special requests guests made while making the reservation

Provide → What product/service you can offer to prospective guests

Unique nature of tourism and hospitality products

Consumers

Information plays a vital role when products are intangible & variable

- Information can help create a vibrant sample of experience
- Information can help reduce risk of choosing the wrong option

Suppliers

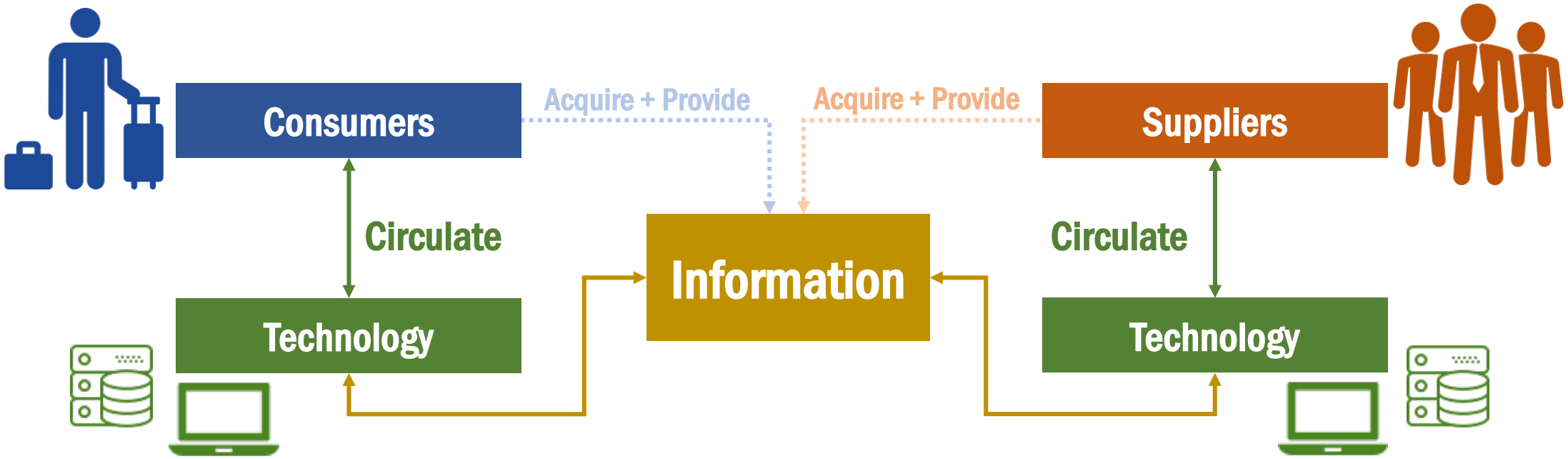
Information plays a vital role when products are perishable & inseparable

- Information (e.g., guests' preferred channel & willingness to pay) can help maximize revenue
- Accurate information (e.g., special request) can assure adequate service is offered

Unique nature of tourism and hospitality products

Tourism and hospitality are known as an **information-intensive** industry

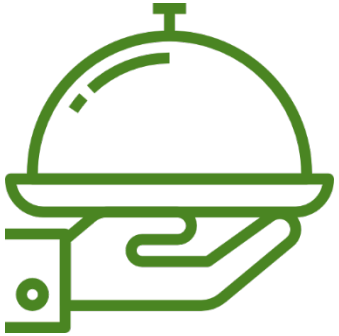
- Information is the lifeblood of the industry
- As the information is huge in size, IT provides tools & backbone for circulating them



Tourism and hospitality are known as a **highly competitive** industry

	Year 2019	Year 2020	Year 2021	Year 2022
Number of hotels	303	311	319	319
Number of guesthouses	1,520	1,462	1,413	1,353

Source: Hong Kong Tourism Board (2022)



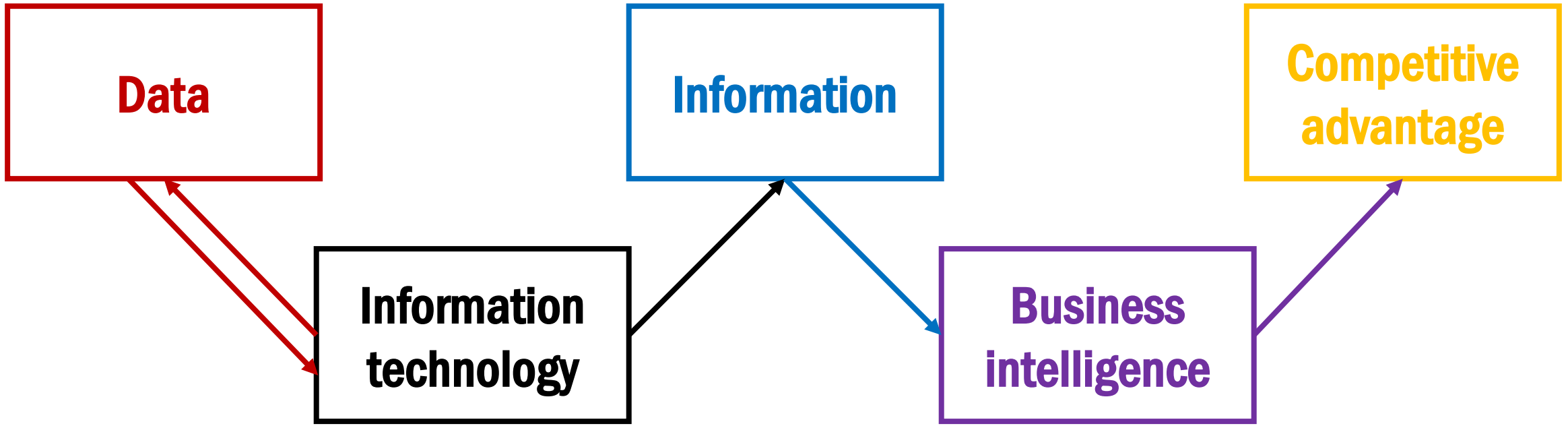
	Year 2019	Year 2020	Year 2021	Year 2022
Number of general restaurants	11,448	11,799	12,037	12,630

Source: Food & Environmental Hygiene Department (2022)

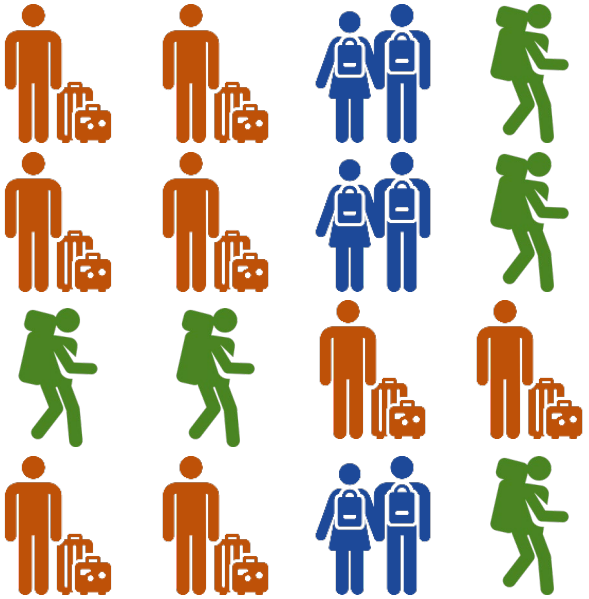
Roles of technology in business intelligence development

In view of the high competition within the industry …

- Businesses need to gain sustainable competitive advantage
- IT can empower businesses to achieve this via acquiring business intelligence



Roles of technology in business intelligence development



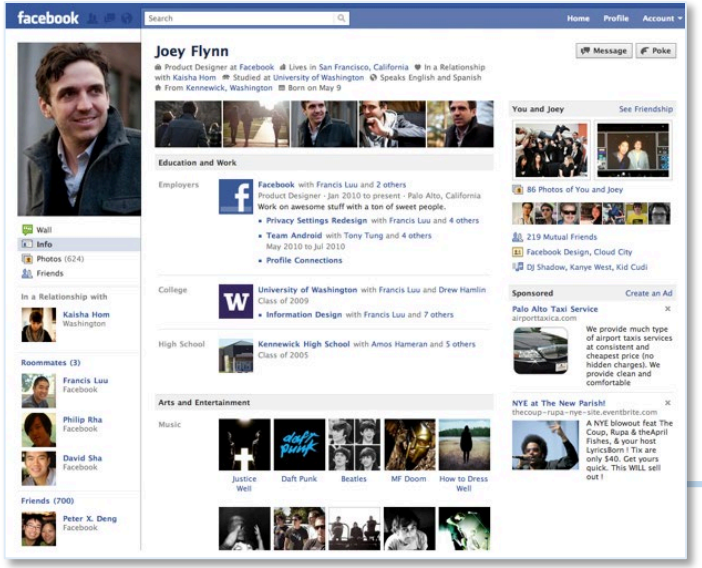
Collect data about guest' willingness to pay for rooms and trip purpose

	Rm. rate	Purpose
	$1,200	Business
	$1,000	Business
	$1,100	Leisure (C)
	$950	Leisure (S)
	$1,000	Business
	$1,200	Business
	$1,300	Leisure (C)

Analyze guests' willingness to pay for room by trip purposes

Revise the price tag to optimize revenue

Roles of technology in business intelligence development



Understand specific guest's preferences through reviewing his/her social media profile

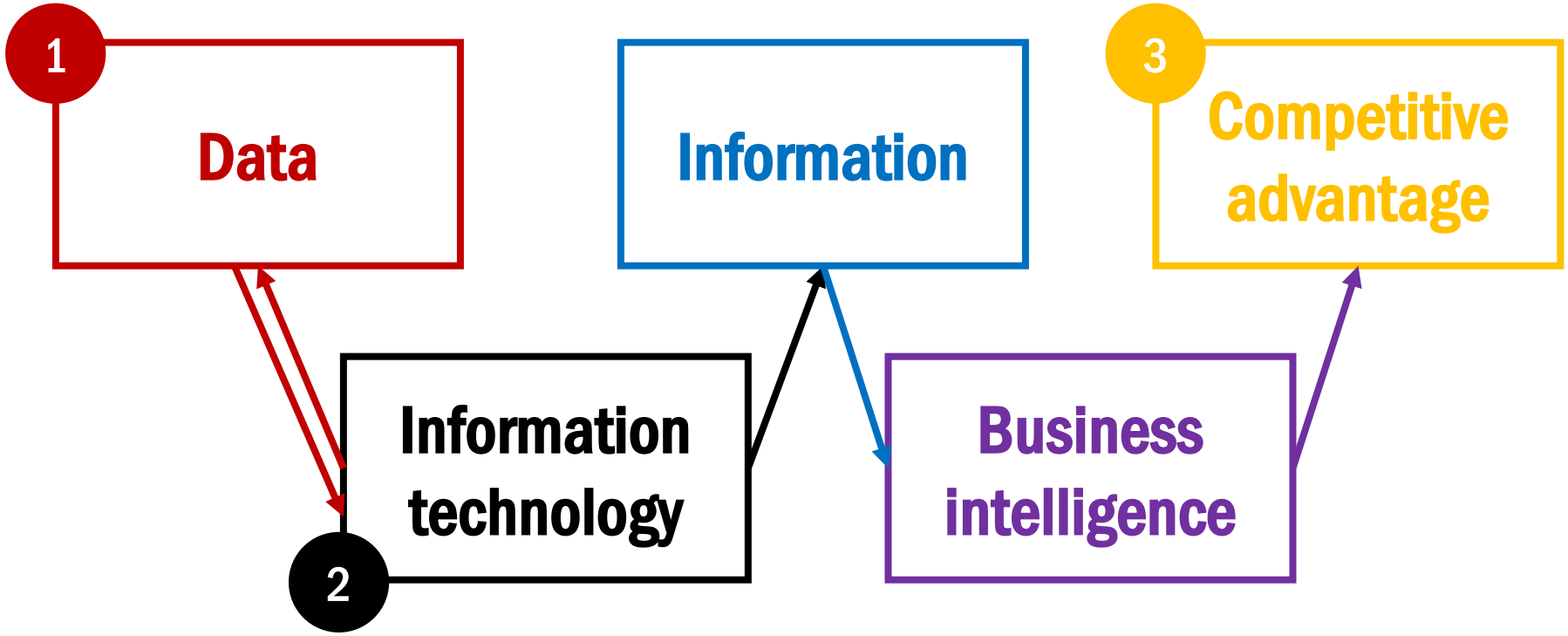
Prepare premiums items

(e.g., fruit baskets, extra amenities)

before they make the request

Check past special requests made by specific guest

Roles of technology in business intelligence development



Source: Hagiu & Wright (2020)

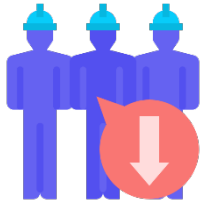
Benefits of Using IT from Service Providers' Perspectives

Integration & Use of IT can benefit service providers in several areas:

Demand forecasting

Marketing and promotion

Communication and cooperation



Labor shortage

Benefits of Using IT from Service Customers' Perspectives

Integration & Use of IT can benefit service customers in several areas:

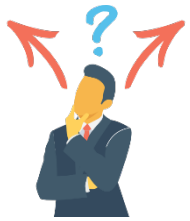
Product information

Ease of Purchase

Post-purchase feedback

Concerns of Using IT from Service Providers' Perspectives

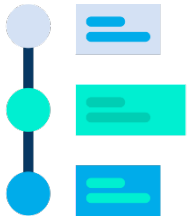
Service providers need to resolve several obstacles when they integrate and use IT in their businesses:



Top management's reluctance to change

High investment cost

Cross-system compatibility



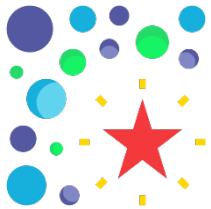
Operation efficiency

Concerns of Using IT from Service Customers' Perspectives

Service providers also need to notice what customers concerns when they integrate and use IT in their businesses:

Privacy and security

Customer reluctance to change



Differentiation

Part 1: Unique nature of tourism and hospitality products

Part 2: Roles of technology in business intelligence development

Part 3: Benefits & Concerns of Using IT from Service Providers' Perspectives

Part 3: Benefits & Concerns of Using IT from Service Customers' Perspectives

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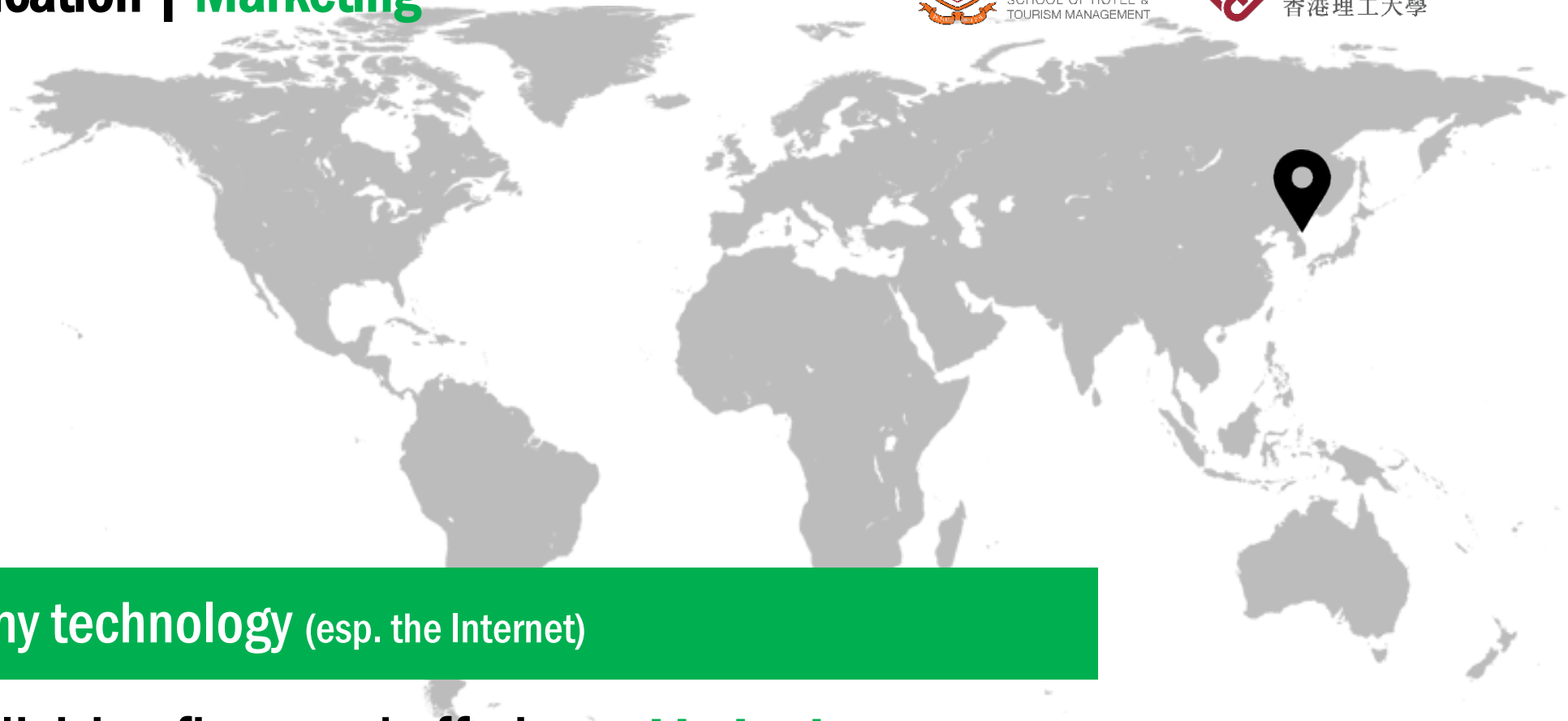
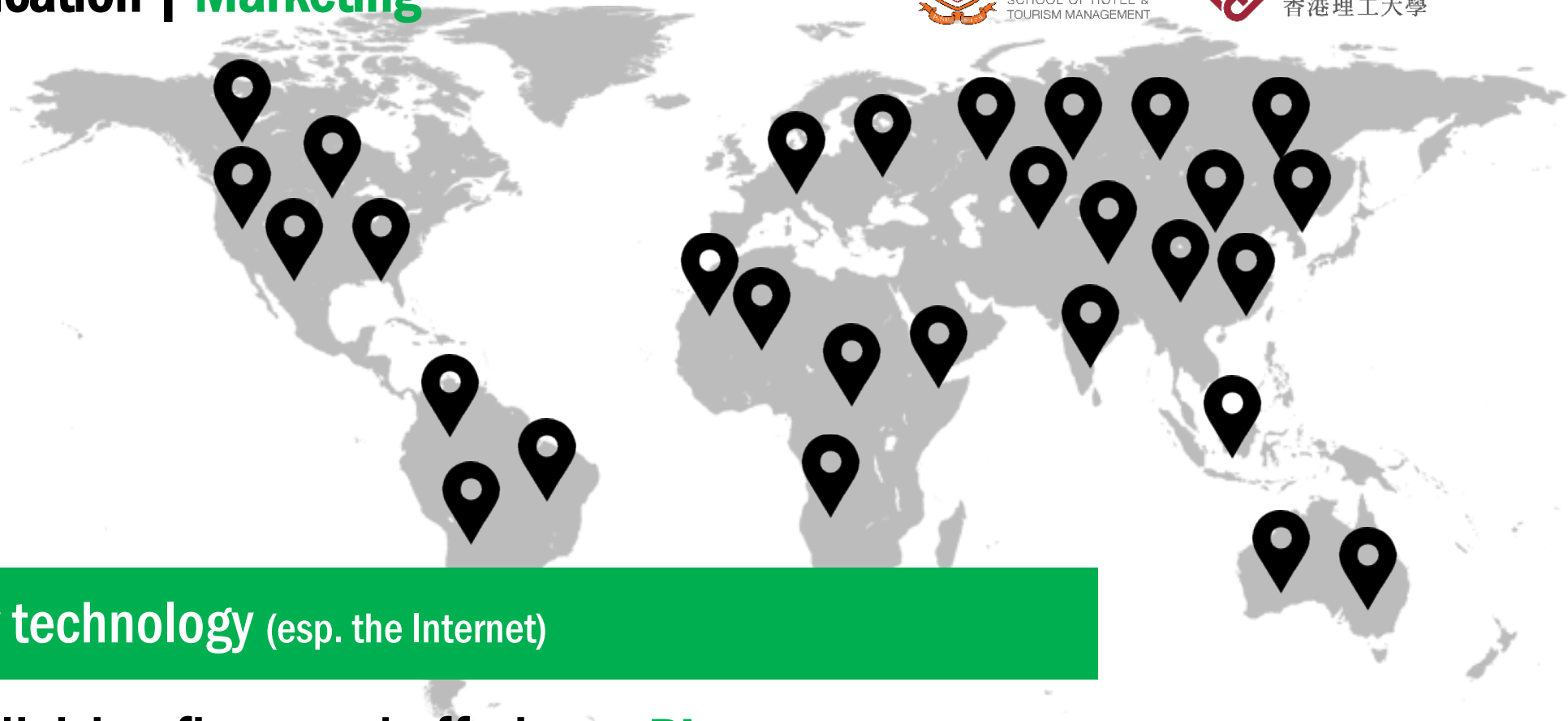
Technology Application | Marketing



Before having any technology (esp. the Internet)

- Tools for publicizing firms and offerings: **Limited**
- Volume of people firms can reach: **Limited**
- Geographical coverage of people you can reach: **Local / Regional**

Technology Application | Marketing

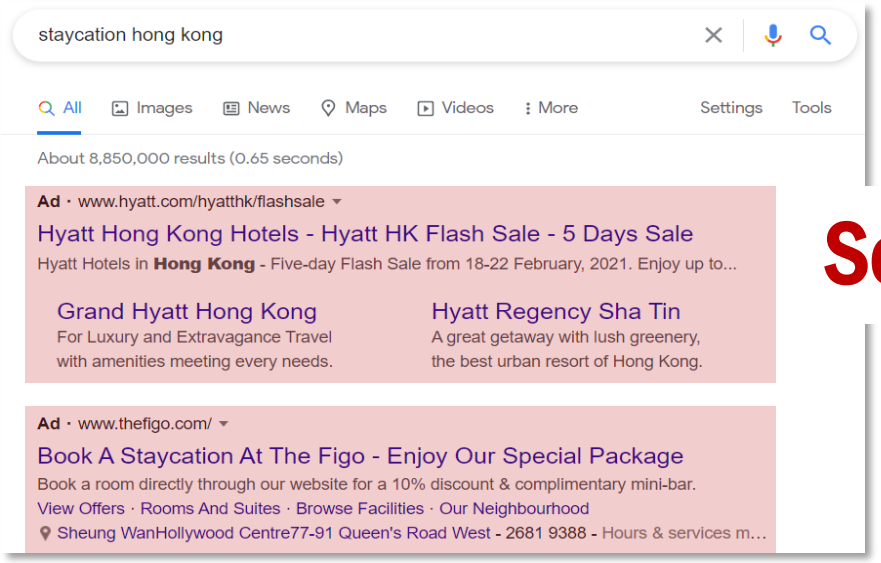


After having any technology (esp. the Internet)

- Tools for publicizing firms and offerings: **Plenty**
- Volume of people firms can reach: **High** (Source: Internet World Stats, 2023)
- Geographical coverage of people you can reach: **Global**

Digital Advertising

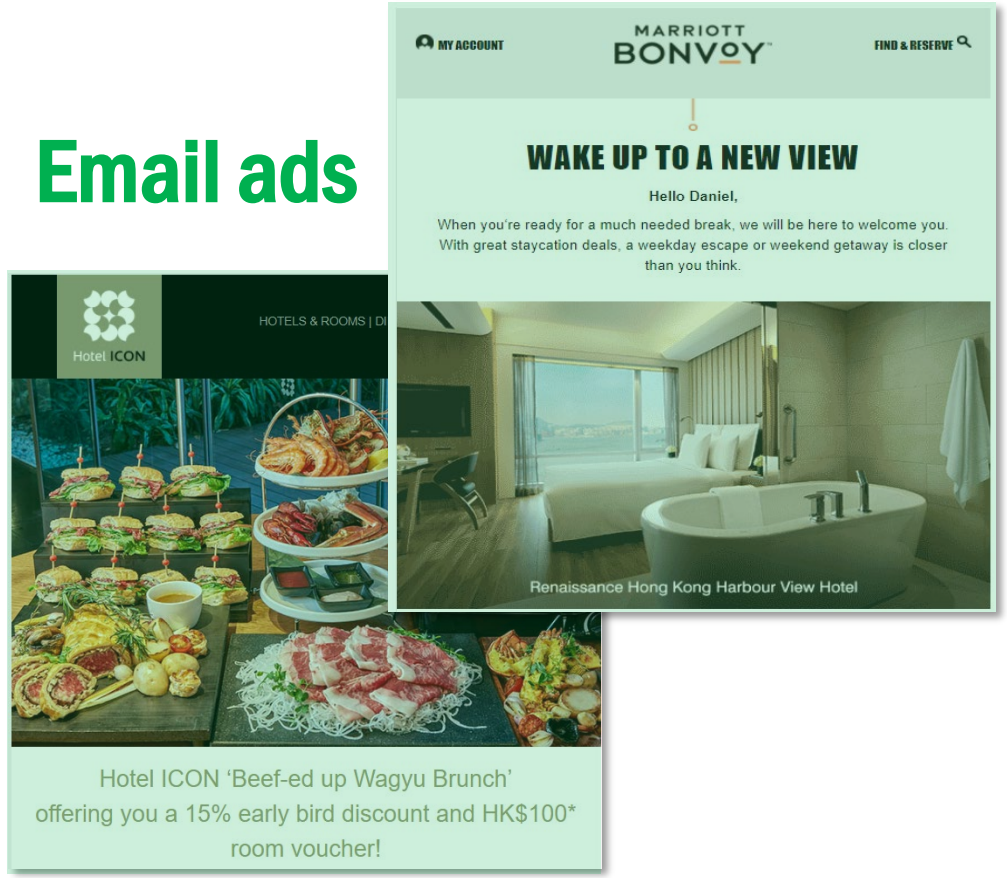
- Tactics that leverage technologies to convey promotional messages to consumers



Search ads

Display ads

Email ads



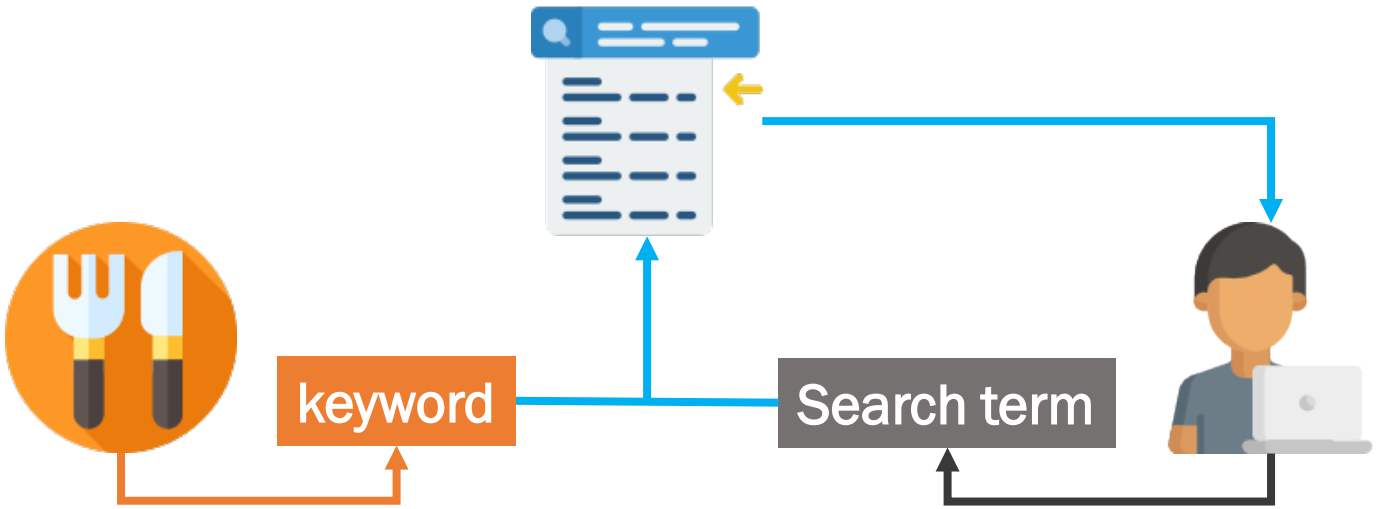
Digital Advertising

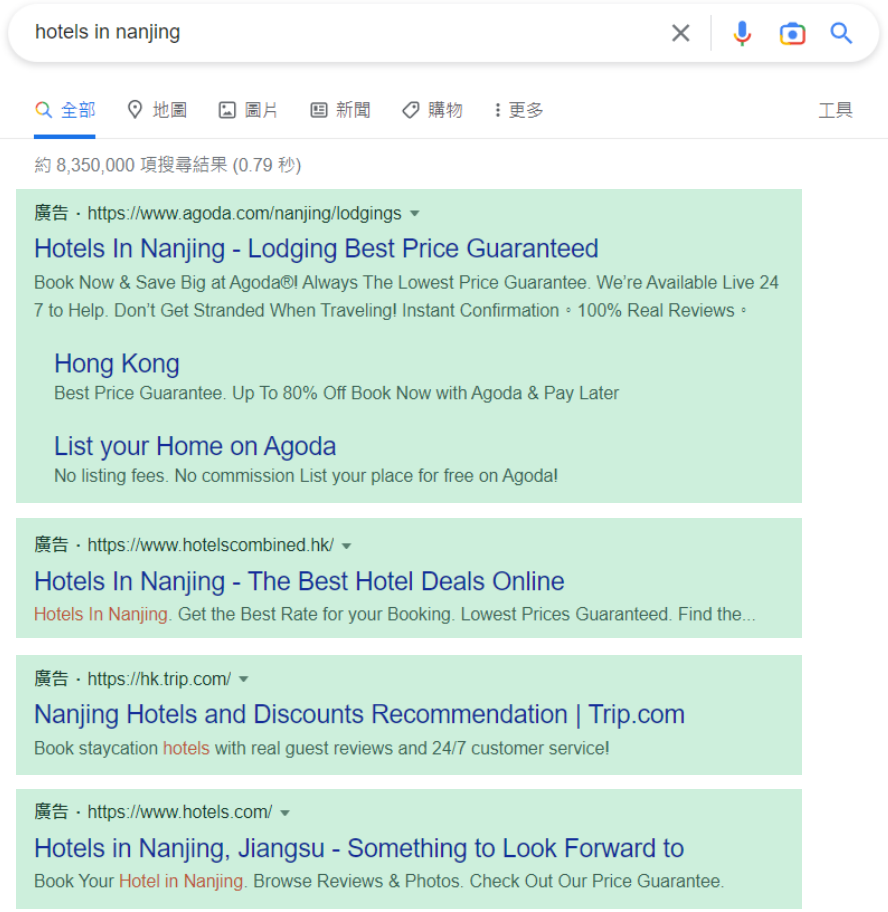
	Printed Ad	Digital Ad
Reach: Reaching and delivering the promotional message to target consumers	Low	Higher
Controlling: Controlling the placement context/location of the advertisement	High	Higher
Targeting: Reaching the right consumer at the right time with the right message	Low	High
Attribution: Attributing the sales of an individual consumer to a specific advertisement	Low	High

Source: Bayer, Srinivasan, Riedl, & Skiera (2020)

Search Advertisement

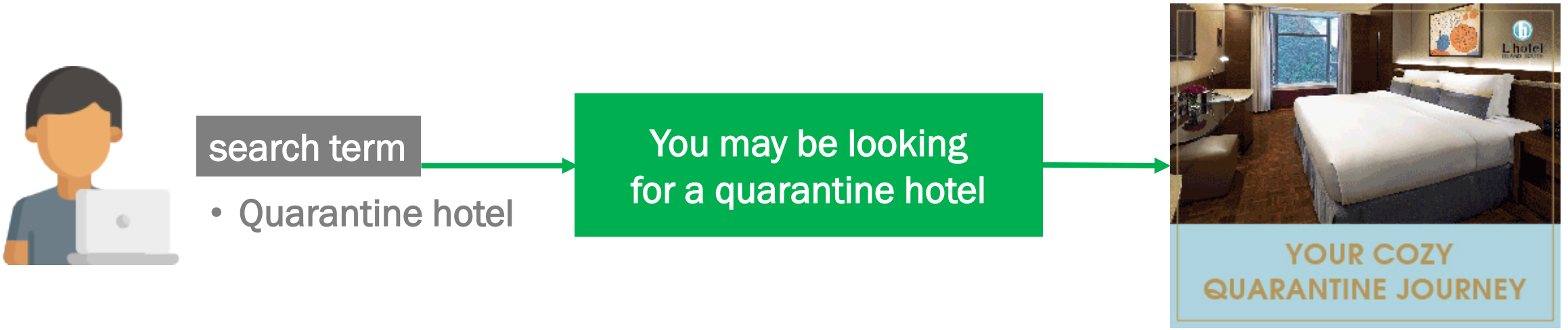
- **Search ad** is a type of advertisements that will be shown to search engine users when their search terms matches ads' keywords
  - Ads will only be shown on search engine result pages
  - Only textual elements can be used to design ads





Display Advertisement

- **Display ad** is a type of advertisements that will be shown after visitors search for a particular type of thing or/and visit a particular type of website
  - Ads will be shown on all Google's sites and other sites in Google's display network
  - Textual, pictorial, audio-visual elements can be used to design ads



Display Advertisement

- **Image ads** is a pervasive type of display ad
  - Advertisers can use static or animated image to showcase their products/services
  - Advertisers can select specific website/webpage to place the image ads

Display Advertisement

- **Video ads** is another pervasive type of display ad
  - Advertisers can post video ads on related websites to showcase products/services
  - Advertisers can post video ads on social media when viewers watch related content
  - Example 1 - https://www.youtube.com/watch?v=9I2xta0ahIs&t=1s
  - Example 2 - https://www.youtube.com/watch?v=8IpIWT2vFQ4

Email Advertisement

- **Email ads** refer to the approach of using electronic mail to deliver promotional or commercial messages to targeted people

Hotel ICON 27 April 2023

Bring a Glow to your Favourite Lady

Treat the important women in your life to a day of nourishing feast and pampering! This Mother's Day, Hotel ICON presents a scrumptious brunch buffetn exclusive 'Glow Package' in spa and more.

LEARN MORE

Hotel ICON 3 March 2023

Songkran Celebration

To celebrate Songkran, Thailand's Annual Water Festival, former royal family chef, Oliver Rattanamanee will join hands with The Market's Thai Chef Jack Pinkkang to showcase the quintessential Royal Thai Cuisine, offering guests an exclusive and unique four-hand

Hotel ICON 28 December 2022

CNY Auspicious Seafood Buffet Event

Gather together with family and friends at Silverbox Ballroom's CNY Auspicious Seafood Buffet Event, offering not only traditional CNY gourmets and free-flow wine but also phenomenal live show, entertainment and lucky draw by award-winning talents and chefs.

Social Media Marketing

- **Social media marketing** is a set of tactics that leverage social media platforms to reach, influence and engage with target consumers

Social networking sites

Media sharing sites

Microblogging sites

Social Media | Facebook

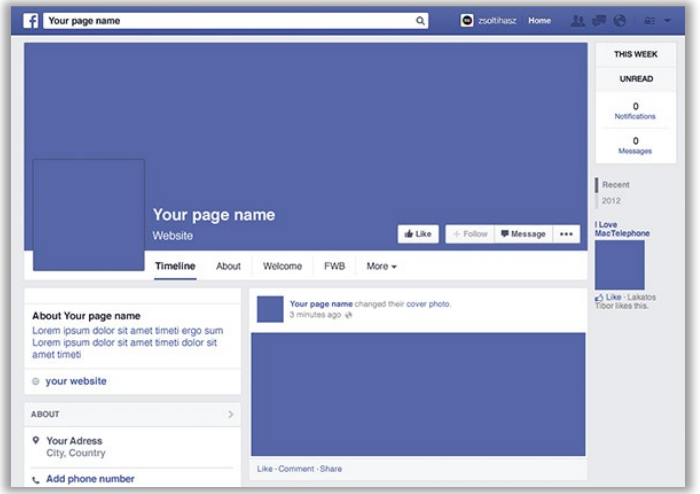
Objectives

- Increase brand awareness and engagement
- Increase lead generation / customer acquisition
- Promote upcoming events

Available tools

- Facebook Ads Managers
  - For creating ads and display them on Facebook's Audience Network

- Facebook Brand Pages
  - For creating an online platform for people to engage with your business
  - For soliciting guests' feedback and answering guests' enquiries



Social Media | Instagram

Objectives

- Increase brand awareness
- Showcase product pictures and videos
- Promote upcoming events

Available tool

- Instagram business profiles
  - For hosting posts published by businesses and acquiring insights
  - For referring people to visit the business website for shopping
  - For soliciting guests' feedback and answering guests' enquiries

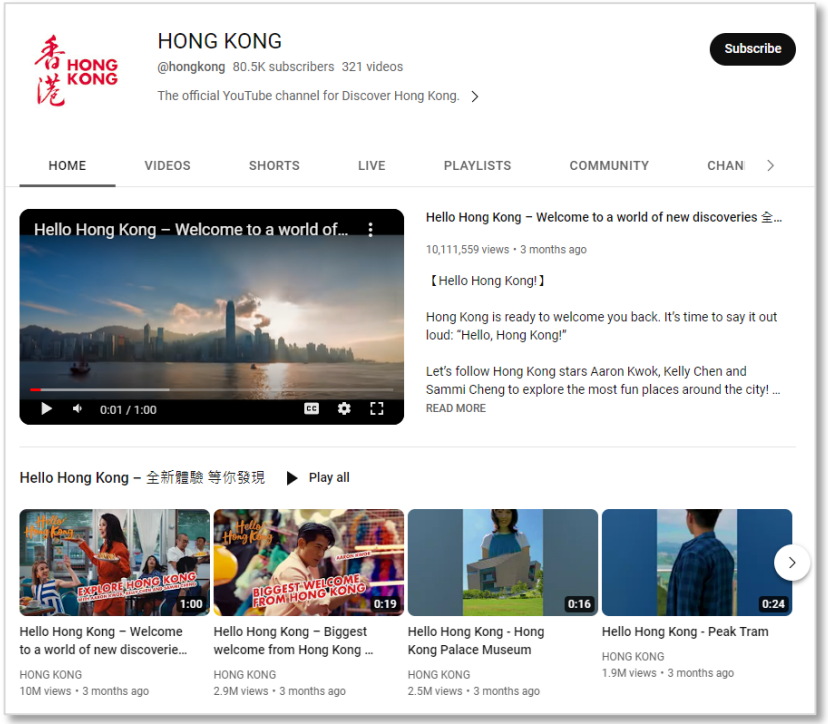
Social Media | YouTube

Objectives

- Increase brand awareness and engagement
- Showcase product videos and demos
- Promote upcoming events

Available tool

- YouTube company channel
  - For hosting videos published by businesses and acquiring insights
  - For referring people to visit the business website for shopping
  - For hosting live-streaming events to interact with guests



Social Media | WeChat

Objectives

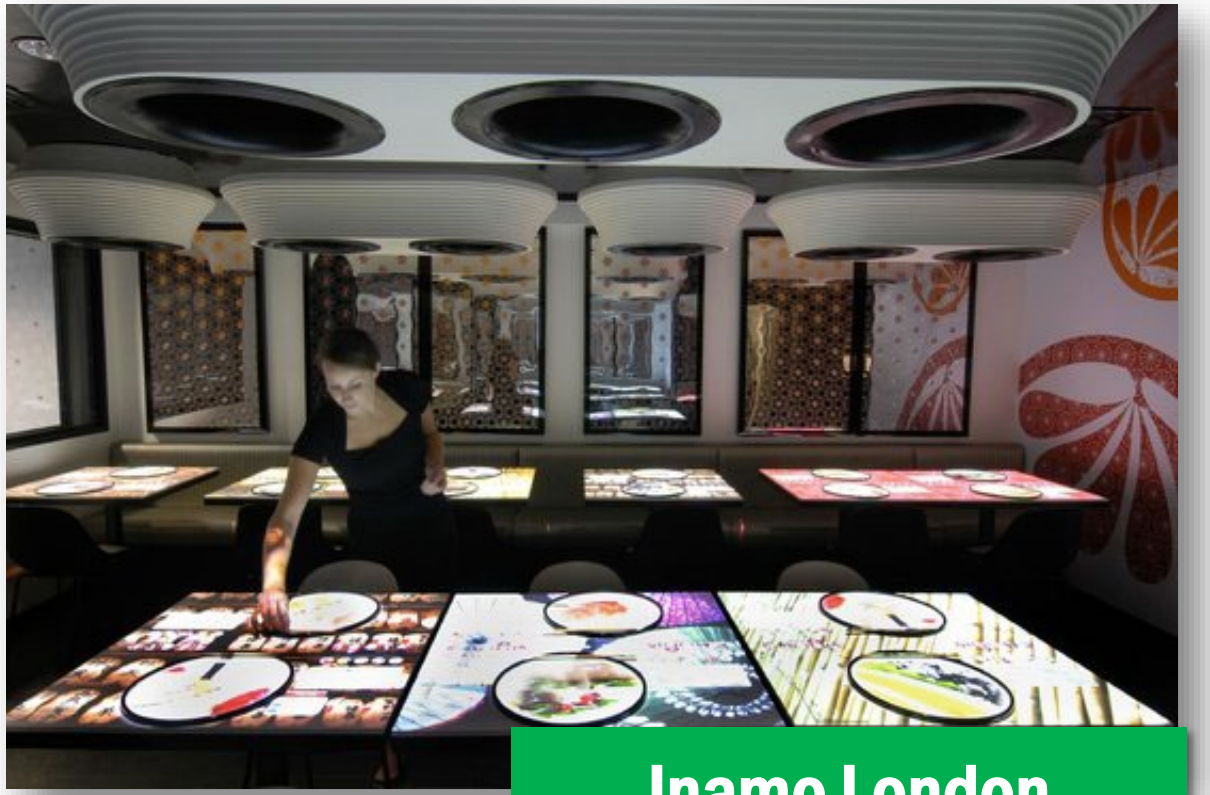
- Increase brand awareness and engagement
- Publish and share brand-related articles
- Share recommendations and tips

Available tool

- WeChat public account
  - For hosting brand-related articles/posts targeting visitors from the Mainland
  - For hosting videos published by businesses and acquiring insights
  - For sharing recommendations and tips to prospective visitors from the Mainland

Mixed Reality | Augmented Reality

- **Augmented Reality** is a technology which can overlay real-world objects with digital objects/information



Inamo London

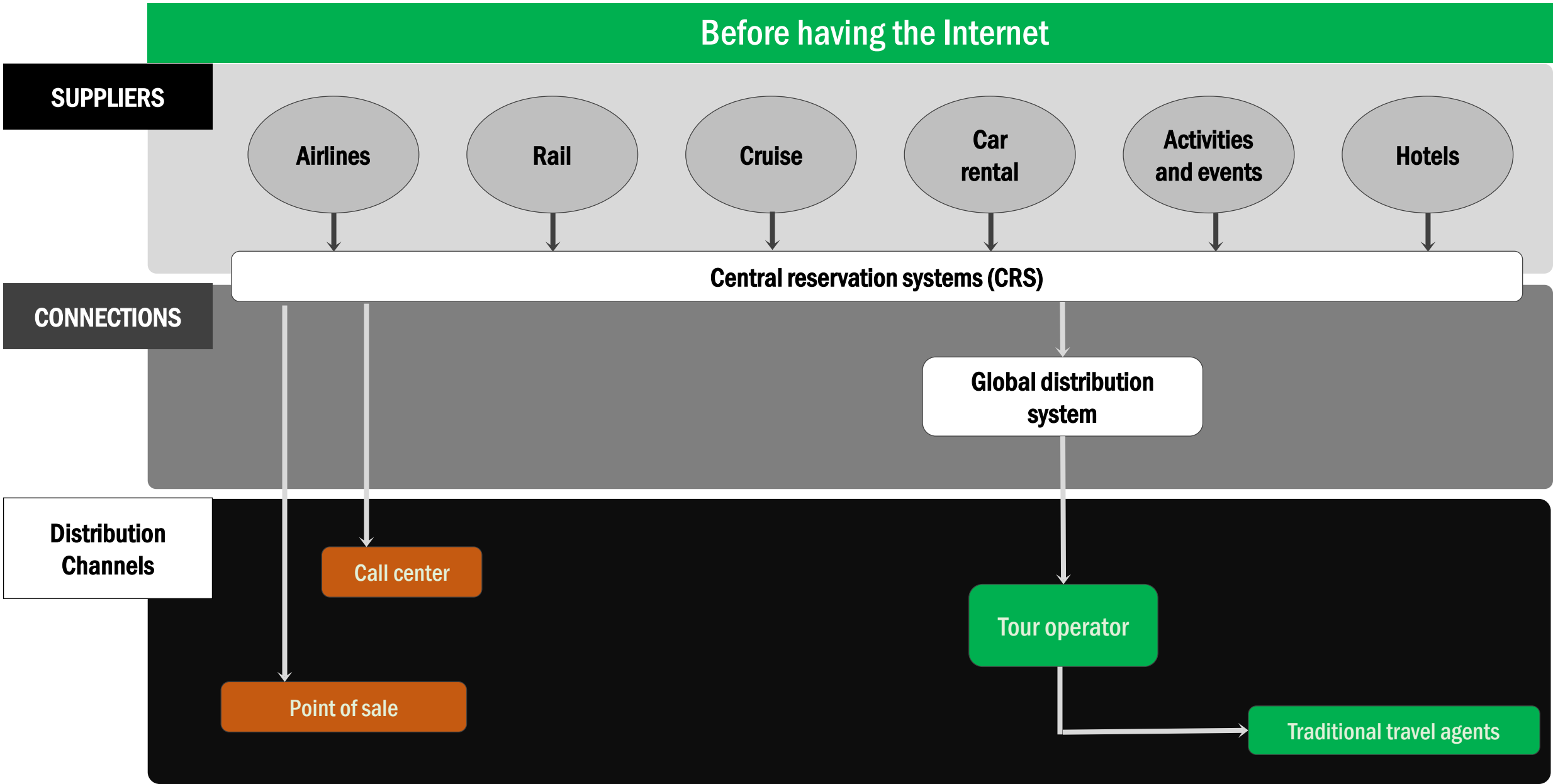
Cleveland Museum of Art

Mixed Reality | Virtual Reality

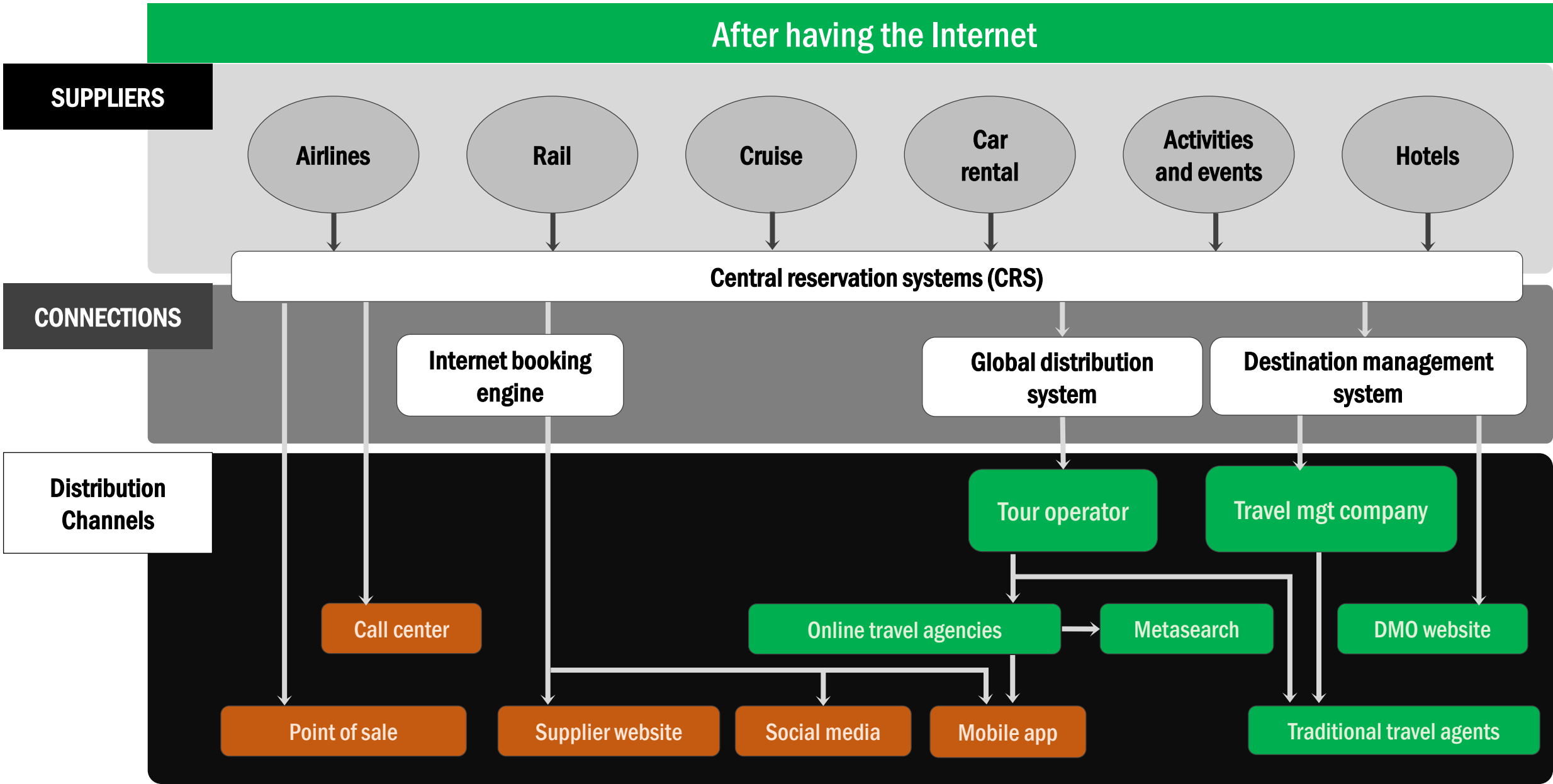
- **Virtual Reality** refers to a hyper-realistic computer-generated environment that could induce higher mental imagery and establish the feeling of presence

Shangri-La Hotels

Technology Application | Distribution



Technology Application | Distribution



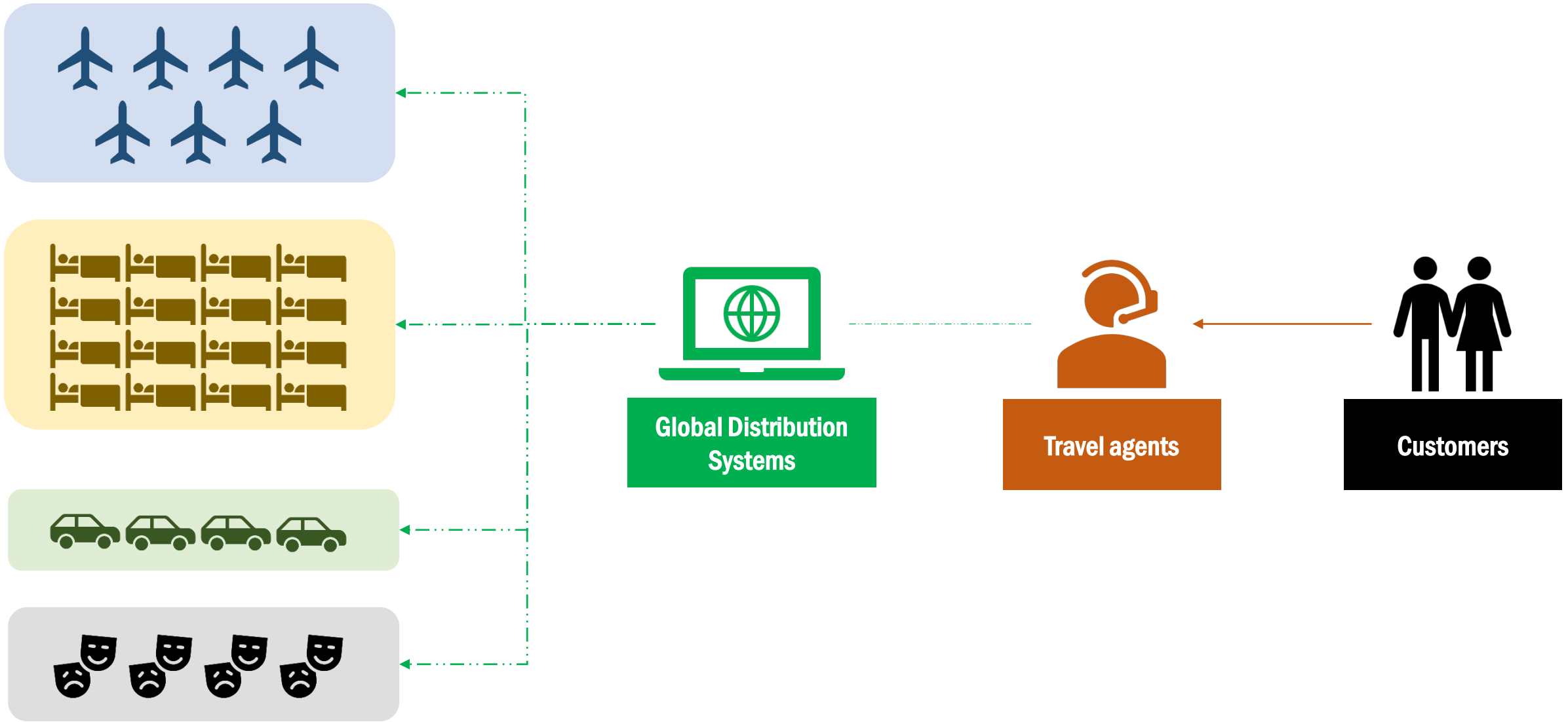
Distribution | Global Distribution System

- **Global Distribution Systems (GDS)** are electronic distribution intermediaries that:
  - Can provide travel agents with up-to-date information of different kinds of travel products (e.g., hotel rooms, airline seats, rail tickets, limousines, attraction tickets)
  - Can enable travel agents to reserve various travel products upon customers' request

- Core GDS functions:
  - Aggregate available inventory from different suppliers for searching and comparison
  - Display rules, policies, terms and conditions for each rate/fare
  - Provide booking capability for travel agents

- The three major GDSs are AMADEUS, GALILEO and TRAVELPORT

Distribution | Global Distribution System



Distribution | Online Travel Agencies

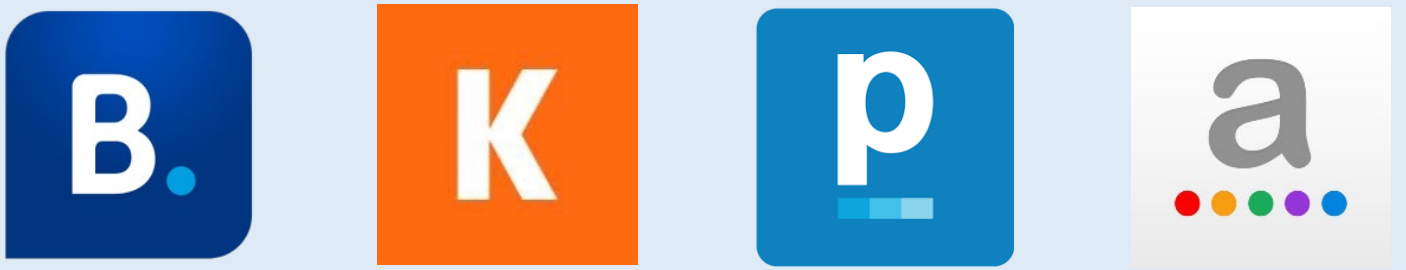
- Before having the Internet, GDSs play tremendously important role in the distribution landscape because most travelers rely on travel agents to reserve travel products

- But after having the Internet, the role of GDSs and travel agents decrease because suppliers can bypass them to sell products to customers via their own websites
  - Travel agents are no longer the only channel for distributing products to global customers

- Travel agents recognized the risk, and reacted by embracing the Internet and transforming themselves into **"online travel agents"**

Distribution | Online Travel Agencies

BOOKING HOLDINGS

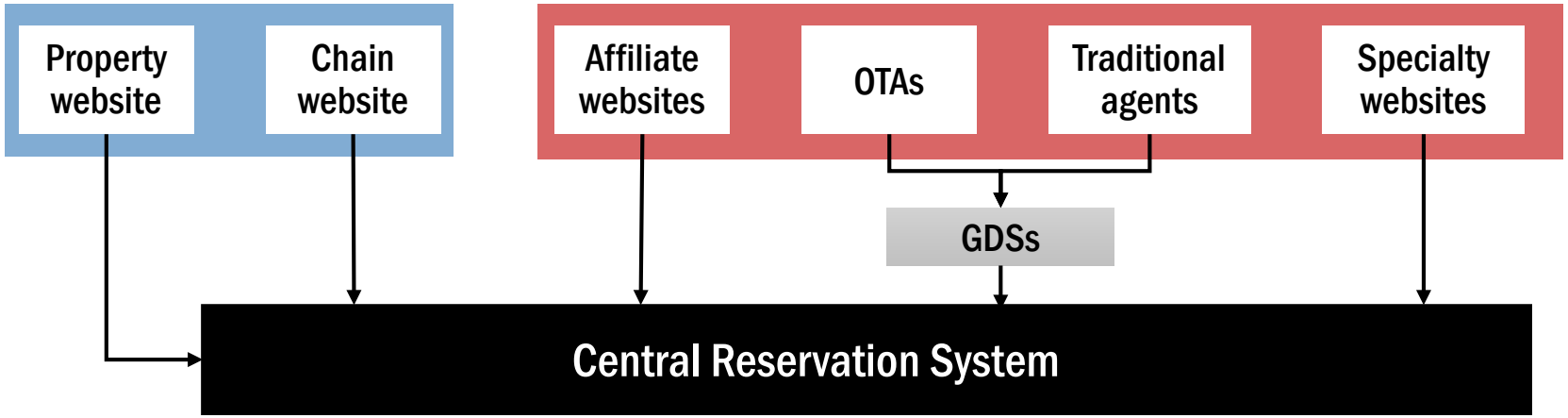


Distribution | Online Travel Agencies

Channel (Distribution cost)	Net Profit [if ADR is USD275]
Hotel website ($5 / booking)	**USD 270**
Global Distribution System (GDS) (10 - 15% commission / booking)	**USD 233**
Offline Travel agents (10% commission + $6 pass-through fee / booking)	**USD 242**
Online Travel Agents (20% - 25% commission / booking)	**USD 206** (- 24%)

Distribution | Central Reservation System

- **Central Reservation System (CRS)** is a centralized system that can help operators :
  - Manages room inventory allocated to different distribution channels
  - Monitors rates and percentages of bookings by different channels
  - Identifies the most productive and lucrative channels
  - Monitor the room availability of all properties under the same hotel chain



Part 1: Technology Application in the Marketing of T&H industry

Part 2: Technology Application in the Distribution of T&H industry

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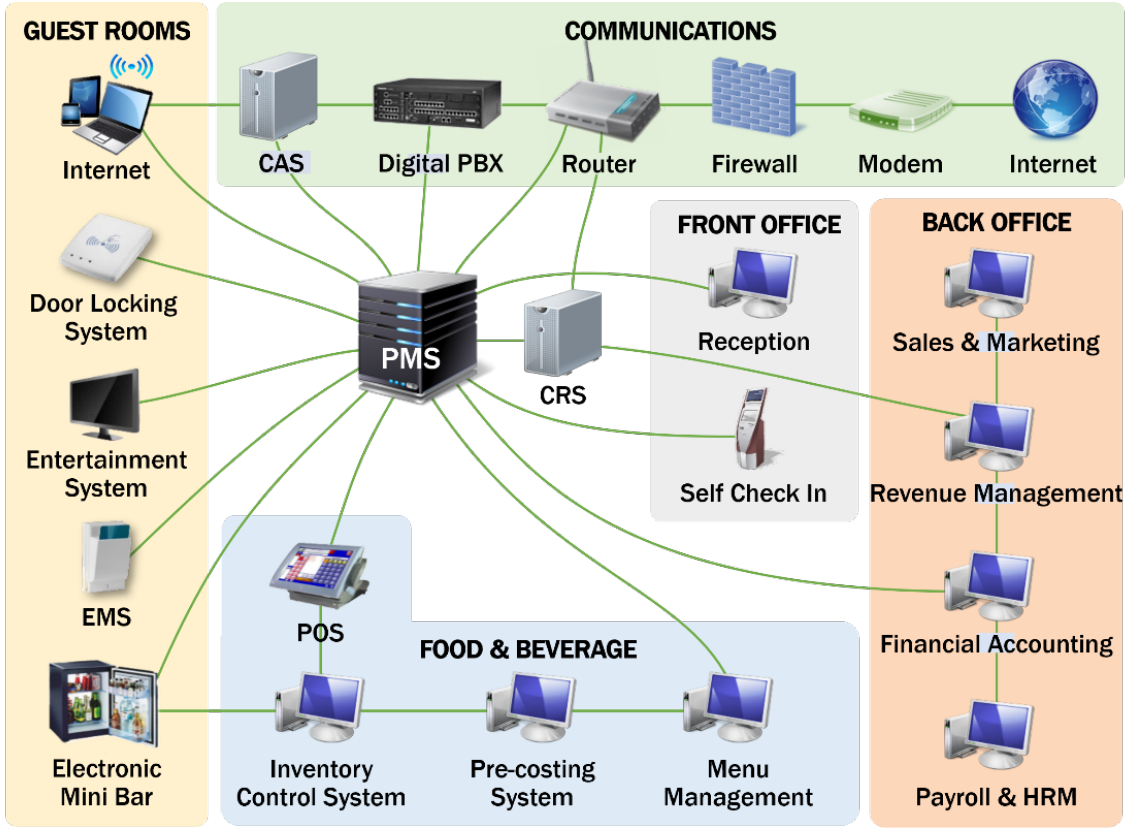
	Q&A 問與答

Property Management System (PMS)

- An integrated system network that handles the functions of information processing for the whole hotel property

- Used by all rooms-related departments:
  - Reservation office
  - Reception / Front desk
  - Housekeeping
  - Food & Beverage
  - .....



Core Modules in Property Management System

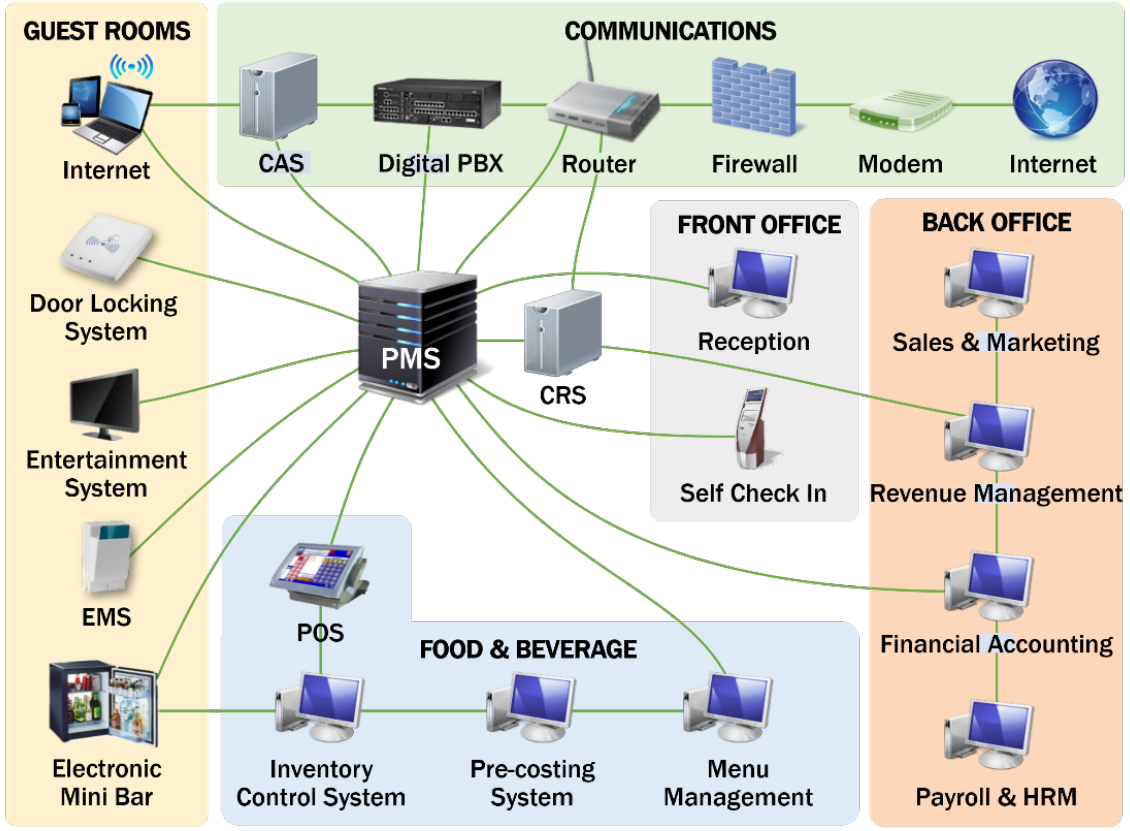
- #1 - Reservation module
  - Display the availability and rate of all rooms which are available for sale
  - Record details of individual and group reservations

- #2 - Registration and guest accounting module
  - Verify each individual guest's personal records, reservation records, and financial record
  - Post charges and monitor guests' credit limit

- #3 - Rooms management module
  - Tracks the status of guest rooms and assists the HSKP department with their duties
  - Update the status of guest rooms when they are undergoing cleaning and maintenance

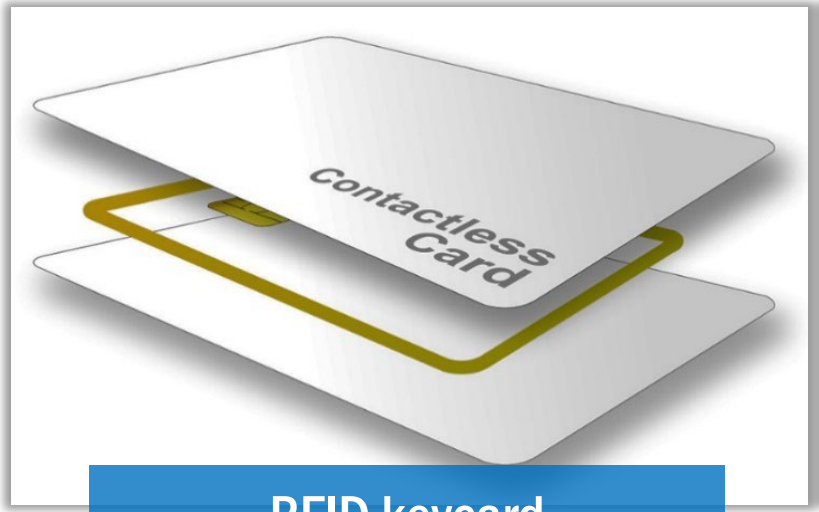
Benefits of using PMS

- The information needed for decision making is timely and easily accessible
- The internal operation can be standardized in a way that is easy to control
- The quality of service provided to customers can be improved

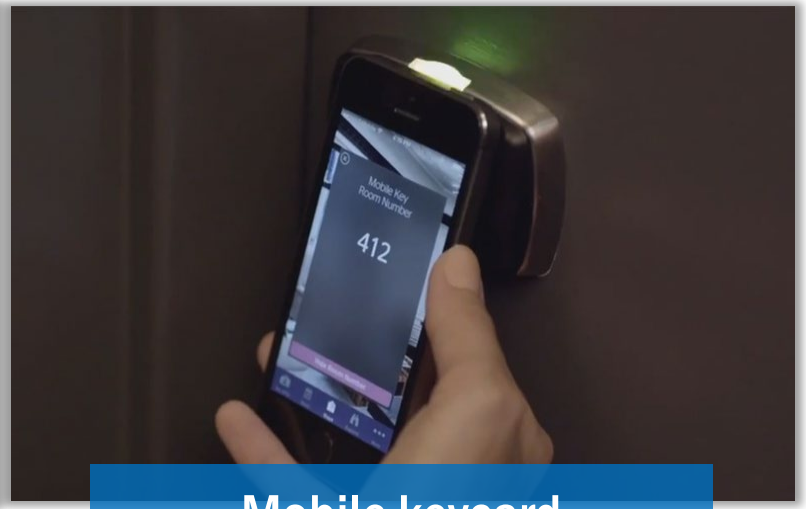


Electronic Locking System

- A collection of system which aims to avoid illegal entry and duplication of keys:
  - A central computer console stores codes plus guest information on the key
  - The door is unlocked if the key's code matches the code in the key-matching device



RFID keycard



Mobile keycard

Biometric-based keycard

Private Brand Exchange

- A computer system that facilitates and controls the connection of hotel telephone calls to the outside world for guests and employees

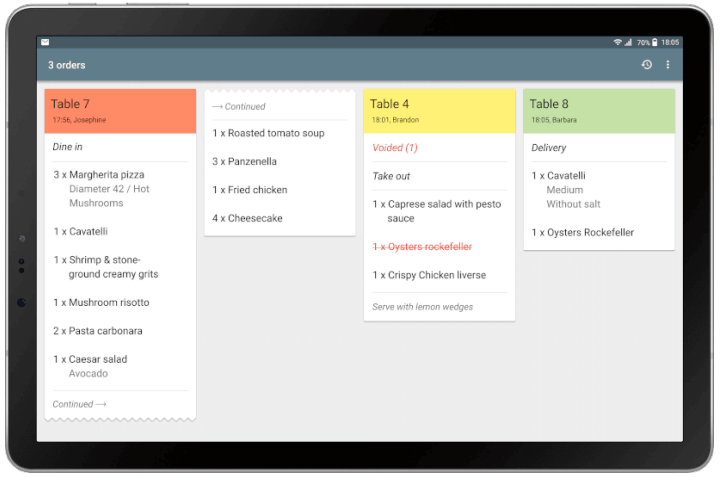
Call Accounting System

- A computer system that allows the hotel to track guest calls and bill them to the guest folio

Point-of-Sale System

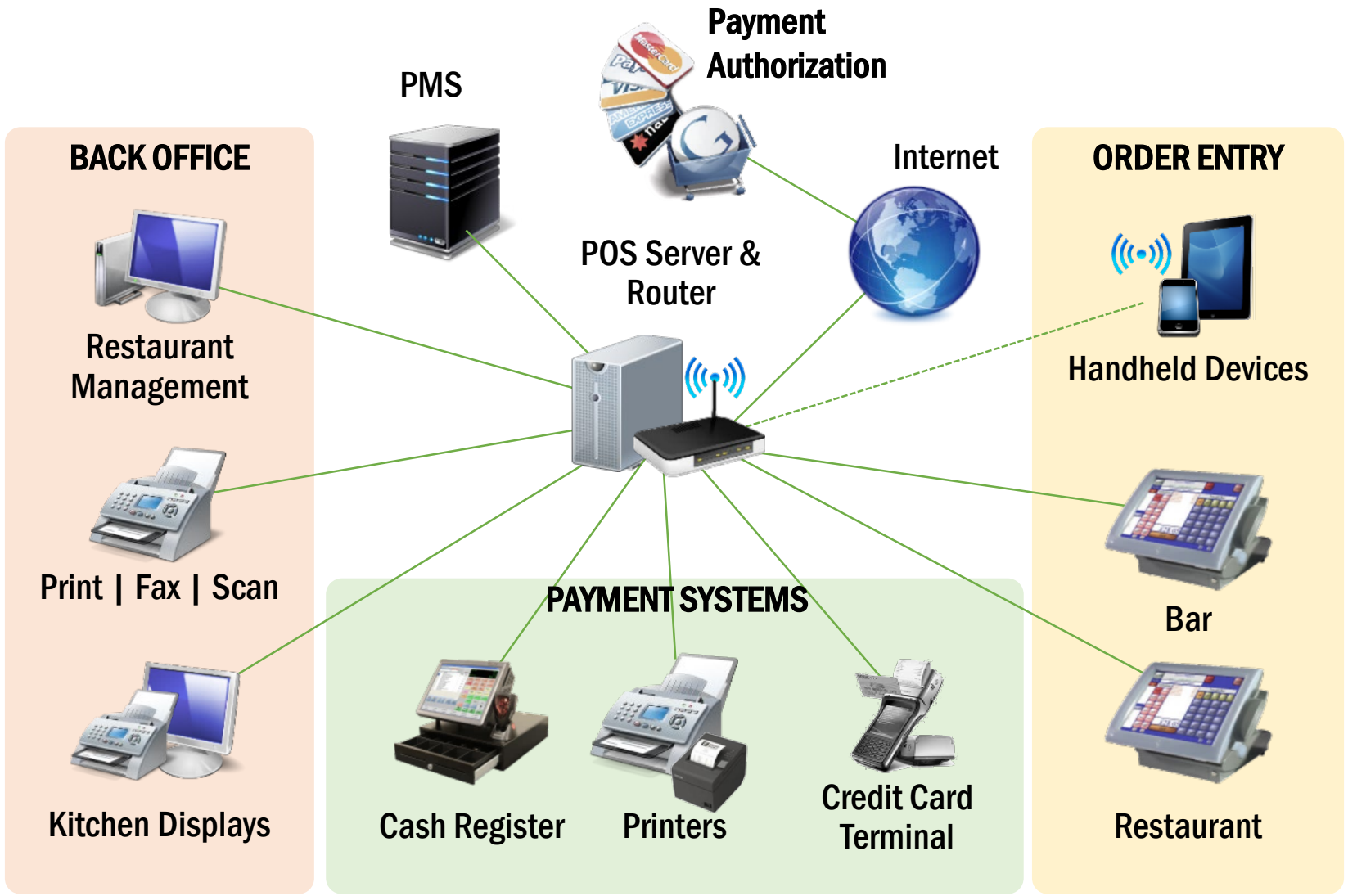
- A collection of systems that handles F&B orders, transmits orders to kitchen and bar, timekeeping, and interactive charge posting to guest folios
  - Improve the accuracy and efficiency of food delivery
  - Conduct menu engineering
  - Conduct pre-costing

Kiosks



Kitchen display

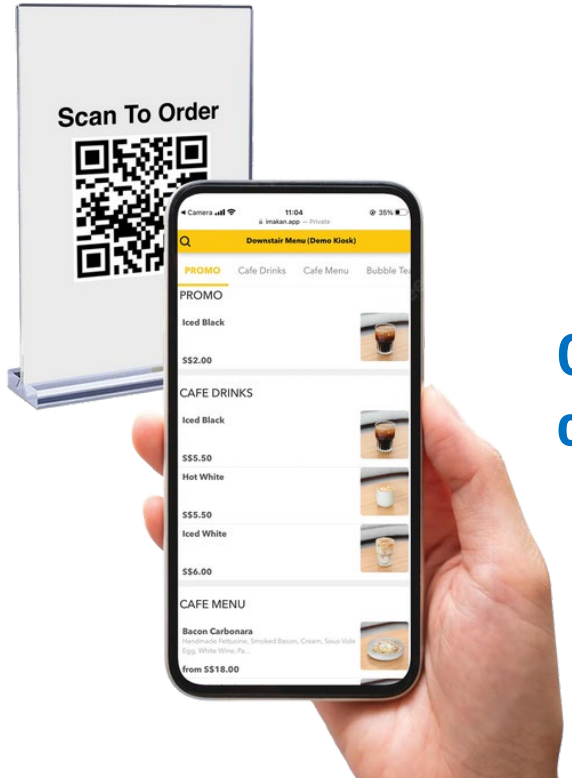
Service Provision | Point-of-sale System



Self-service Technology (SST)

- Technological interfaces/applications which enable customers to take a active role when using services without the presence support of the service staff

Self-service Kiosks



QR code ordering system

Service Provision | Self-service Technology

Hong Kong International Airport

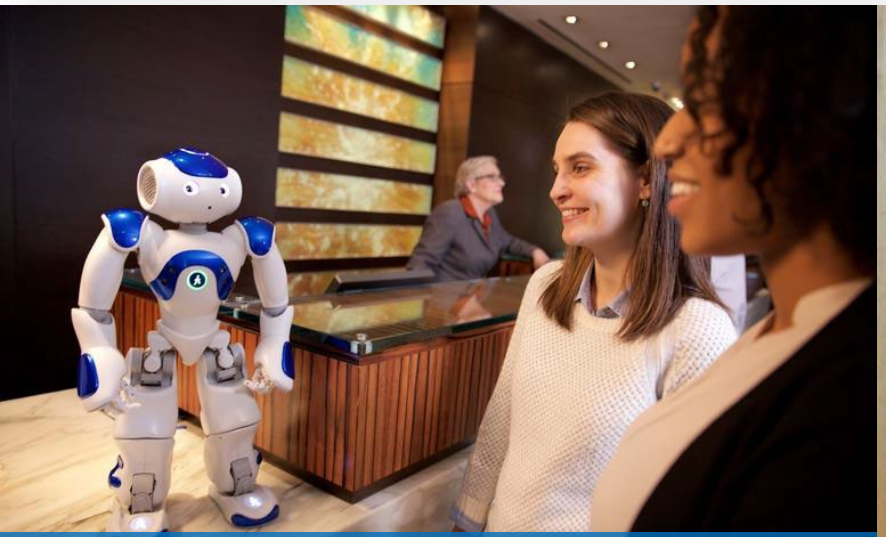
Immigration Department

Supermarkets

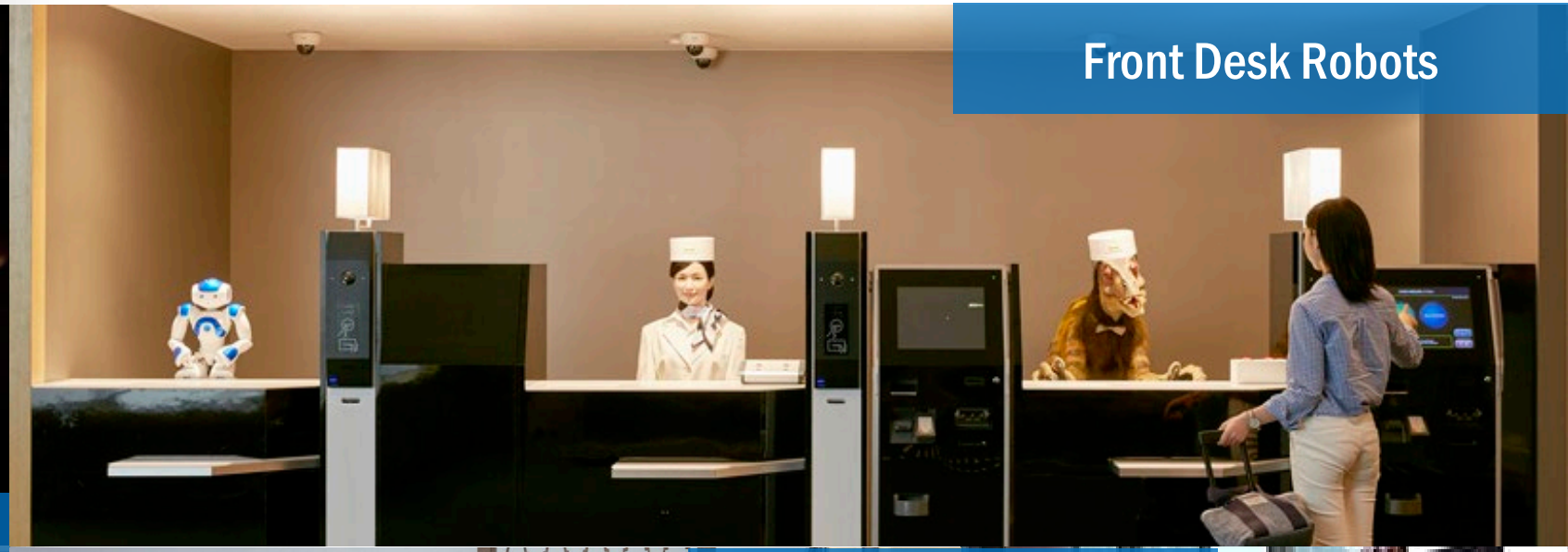
Service robots

- System-based autonomous & adaptable interfaces that can interact, communicate, and deliver services to targeted customers
  - Delivery robot / Relay robot
  - Robot concierge / Chatbots
  - Front desk robot
  - Cleaning robots
  - Entertainment robots
  - .....

Service Provision | Service Robots



Robot Concierge



Front Desk Robots

Cleaning Robots

Advantages of using SST and Service Robots

- Reduced labor costs
- Quicker service delivery
- Customer empowerment
- Data-driven decisions

Disadvantages of using SST and Service Robots

- Utility and maintenance costs
- Unnecessary confusion
- Reduced human interaction
- Service interruption

Technology Application | Experience Design

Key tasks in designing & optimizing experience	Before having the Internet	After having the Internet
Understand customer preferences	Difficult	Less Difficult
Understand customer experience	Difficult	Less Difficult
Solicit customer feedbacks	Difficult	Less Difficult
Service recovery speed	Slow	Fast

Experience Design | Online Reputation Monitoring Platforms

●●●●●

They really 'love to care'

This is my first day on Hotel Icon, i was extremly touched with detailed caring from Guest Relation team and Front Office team. Especially the interns, Ryu Ki & Yvette & Coral were very helpful to me, i didnt even notice that they were interns. Thank you for the hotel ICON, who made a great day for me.

Read less ▲

Date of stay: May 2023

Trip type: Travelled as a couple

●●●●● Value
●●●●● Service
●●●●● Location

Traveller rating

- ☐ Excellent 8,138
- ☐ Very Good 869
- ☐ Average 138
- ☐ Poor 22
- ☐ Terrible 26

Time of year

- ☐ Mar-May
- ☐ Jun-Aug
- ☐ Sep-Nov
- ☐ Dec-Feb

Traveller type

- ☐ Families
- ☐ Couples
- ☐ Solo
- ☐ Business
- ☐ Friends

Language

- ○ All languages (9,193)
- ◉ English (7,319)
- ○ Chinese (Trad.) (588)
- ○ Chinese (Sim.) (474)

More

Popular mentions

All reviews | timeless lounge | club suite | polytechnic university | mini bar is free | training hotel | harbour view | top floor | pool and gym | late flight | nespresso machine | excellent hotel | breakfast buffet | guest relations | hong kong island | rain shower

Tripadvisor: Plan & Book Trips
Tripadvisor
4.5 ★

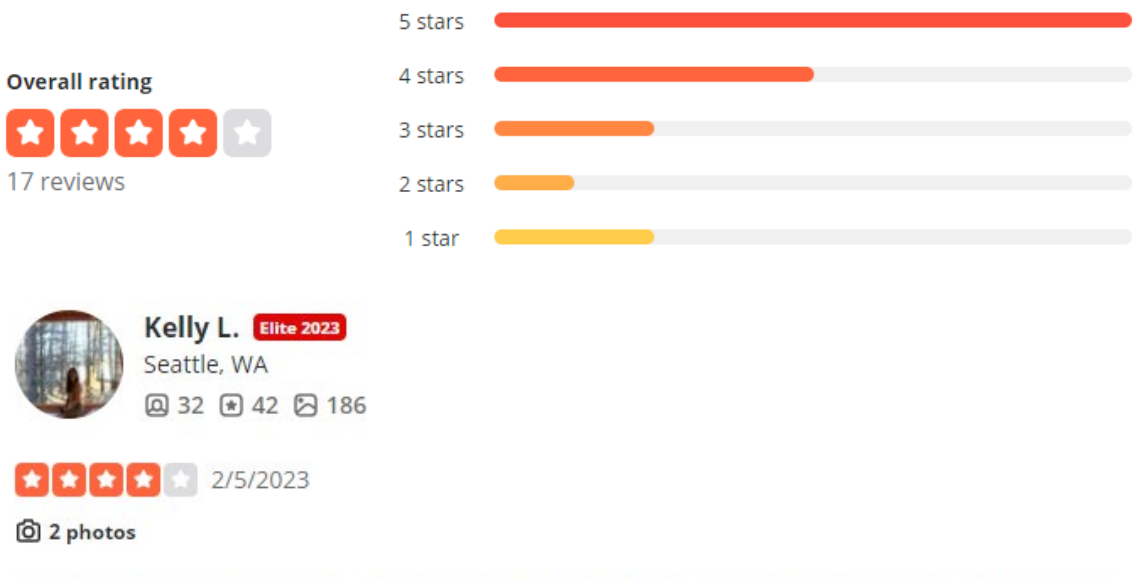
Experience Design | Online Reputation Monitoring Platforms

- Delivery
- Reservations
- Burgers
- Japanese
- Chinese
- Mexican
- Italian
- Thai

- Dry Cleaning
- Hair Salons
- Phone Repair
- Gyms
- Bars
- Massage
- Nightlife
- Shopping

Yelp: Food, Delivery & Reviews
Yelp, Inc
4.5 ★

Experience Design | Online Reputation Monitoring Platforms



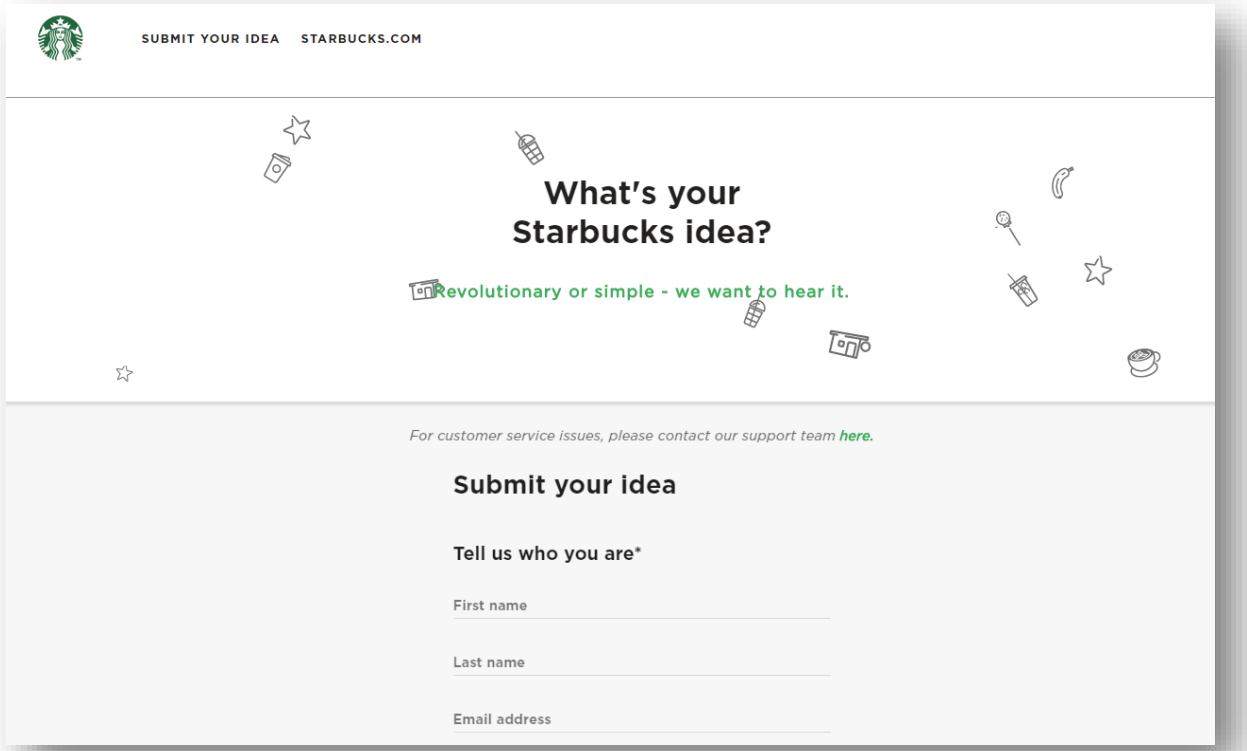
Yelp: Food, Delivery & Reviews
Yelp, Inc
4.5 ★

Experience Design | Online Reputation Monitoring Platforms

小红书 - 你的生活指南
行吟信息科技(上海)有限公司
3.3 ★

OpenRice
Openrice Group Inc
4.2 ★

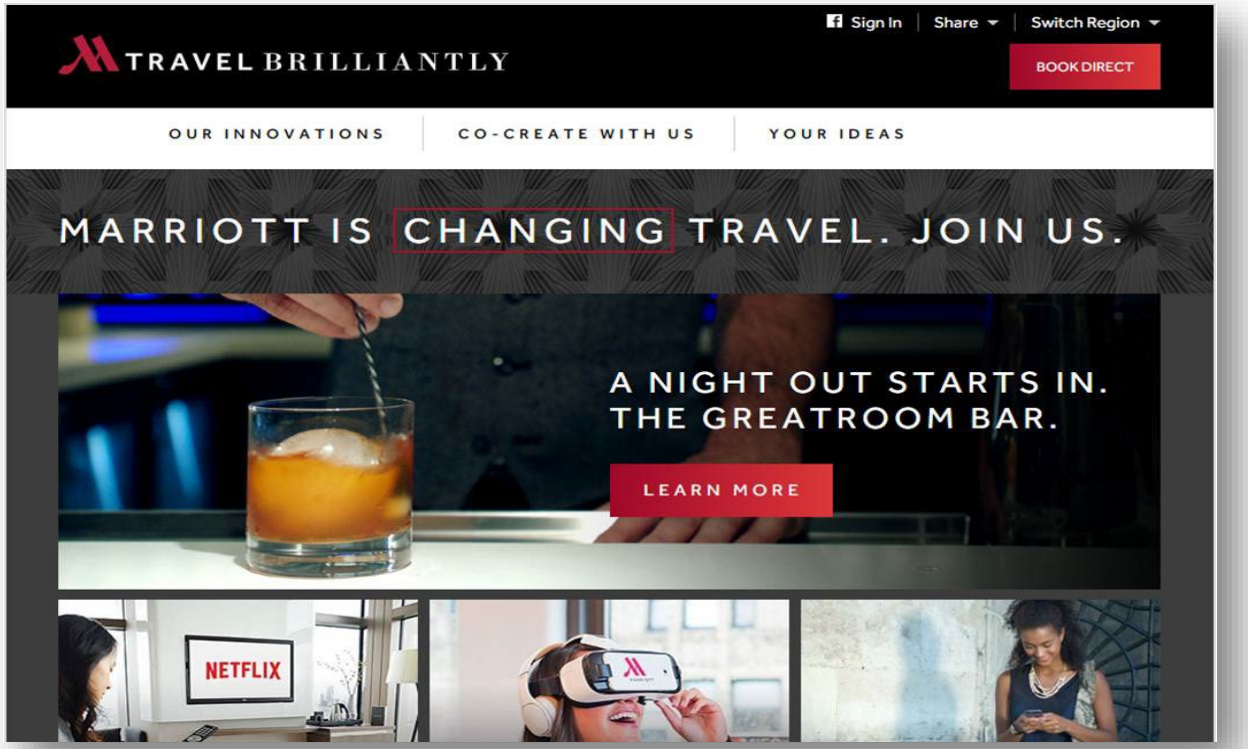
Experience Design | Opinion & Idea Sourcing Platforms



Starbuck's MyStarbucksIdea

- https://stories.starbucks.com/stories/2013/starbucks-celebrates-five-year-anniversary-of-my-starbucks-idea/
- https://d3.harvard.edu/platform-digit/submission/my-starbucks-idea-crowdsourcing-for-customer-satisfaction-and-innovation/

Experience Design | Opinion & Idea Sourcing Platforms



Marriott's Travel Brilliantly

- https://www.hospitalitynet.org/news/4061971.html
- https://youtu.be/Qx2ILoNwQEk

Part 1: Technology Application in the Service Provision of T&H industry

Part 2: Technology Application in the Experience Design & Optimization of T&H industry

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

shtm
SCHOOL OF HOTEL & TOURISM MANAGEMENT

Thank You

Dr Daniel Leung
Assistant Professor
School of Hotel and Tourism Management
The Hong Kong Polytechnic University
Email: daniel.yc.leung@polyu.edu.hk

Leading Hospitality and Tourism