

IBM API Management

Product introduction

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議程

- APIs Value Recap(API Concept Overview)
- IBM API Management 簡介
- API Management 主要開發流程和運作原理
- 總結
- Q&A

API為企業數位化商品 提供無遠弗界隨選即用的用戶體驗



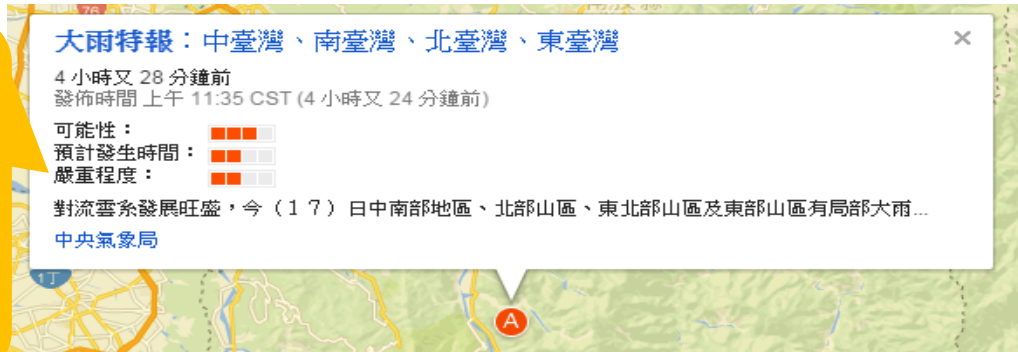
API在我們日常生活中，無所不在



Features	Maps API	Maps API for Business
Street View	✓	✓
Geocoding Web Service	2,500 requests per day	100,000 requests per day
Directions Web Service	2,500 requests per day with 10 waypoints per request	100,000 requests per day with 23 waypoints per request
Distance Matrix Web Service	100 elements per query 100 elements per 10 seconds 2500 elements per day	625 elements per query 1,000 elements per 10 seconds 100,000 elements per day
Elevation Web Service	2,500 requests per day with 25,000 samples per day	100,000 requests per day with 1,000,000 samples per day
Static Maps API maximum resolution	640x640	2,048x2,048
Static Map API maximum scale	2X	4X
Street View Image API maximum resolution	640x640	2,048x2,048
Protected Fusion Tables Layers		✓
Support	Maps API	Maps API Premier
Google Maps API Developer resources	✓	✓
Service Level Agreement		✓
Technical Support		✓
Support portal & usage reporting		✓
Use cases	Maps API	Maps API Premier
Free & publicly available	✓	✓
Internal deployments		✓
Embedding in software and applications for fee		✓
Reselling services with Google Maps		✓
Control of advertising		✓
Private asset tracking		✓

透過快速組裝API即有服務開拓資料服務新商機

Google與台灣政府重大災害防治單位合作，打造Google台灣災害應變資訊平台



景翊科技股份有限公司致力於應用交通領域 Open Data提供便民服務，為台灣地區交通資訊解決方案提供商

我要搭公車 台北版

無論在上班、上學通勤、外出旅遊
我要搭公車絕對是您在台北市搭公車的好幫手！
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Tips

itenki 掌握天氣大小事—天氣風險管理開發公司

天氣風險管理開發公司於2003年氣象法開放後成立，2004年由總經理彭啟明拿到第一張民間預報證照。天氣風險是全台第一家，也是唯一一家成功將氣象加值服務推廣於企業、媒體及產品的本土氣象公司。

天氣風險管理開發公司提供國內外基本預報、特殊景點預報及各類指數預報，同時也提供企業天氣風險控管服務，協助企業在行銷規劃、營運策略、成本及物流控管等各層面執行時，能夠做出最有效益及迅速的決策。



↑天氣風險管理開發公司的 itenki 網站。



Gov Open Data

透過API建立生態圈快速進行異業結盟

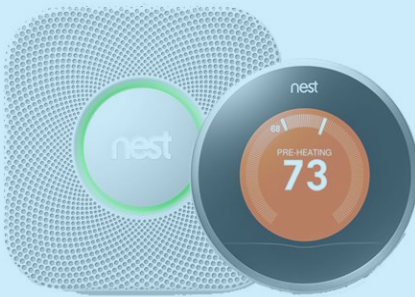
Nest 透過開放API建立家庭生態圈



The key to a more comfortable home.

Kevio Smart Lock tells your Nest Thermostat who's home and what temperature they like. It also helps Nest know when no one's home so your thermostat doesn't waste energy. [Get Connected >](#)

kēvo



hue



On the road to a more comfortable home.

Your car can tell Nest when you'll be home so your thermostat can start heating or cooling at exactly the right time. It keeps you from wasting energy, and means you're comfortable as soon as you walk in the door. [Get Connected >](#)

Mercedes-Benz

Jawbone 建立開放生態圈結合數十種第三方APP,彌補本身數據不足,轉型為資料服務公司



小米

Strava利用API快速建立商機 並將企業能力鑄造為API建立生態圈,增加客戶黏著力

Business Model

- ✓ APP會員費
- ✓ 銷售體育用品
- ✓ 販賣對外銷售匿名的用戶活動信息 (可用於城市規劃, 地圖製圖等)



人潮



開放



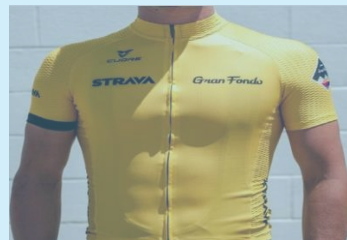
開發者社群



Map API



記錄&競爭



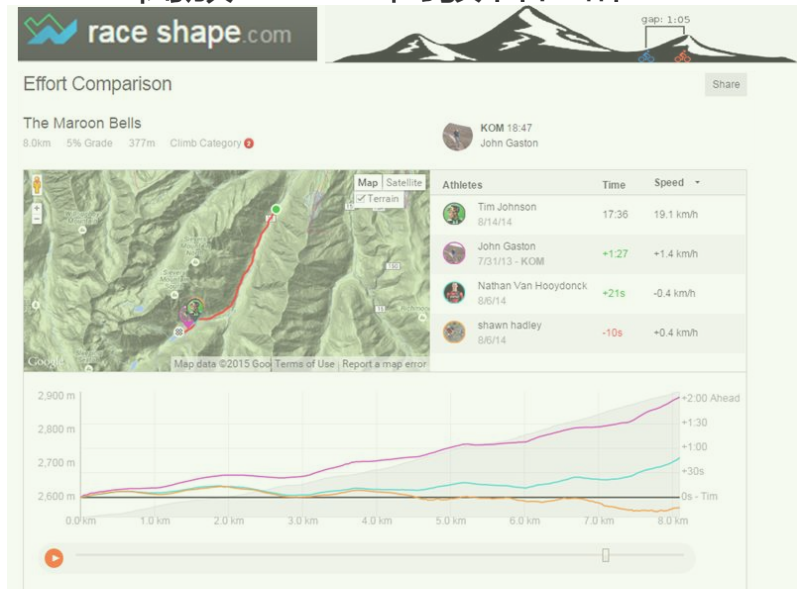
獎勵挑戰紀念衣

Sign up with Facebook

Social API

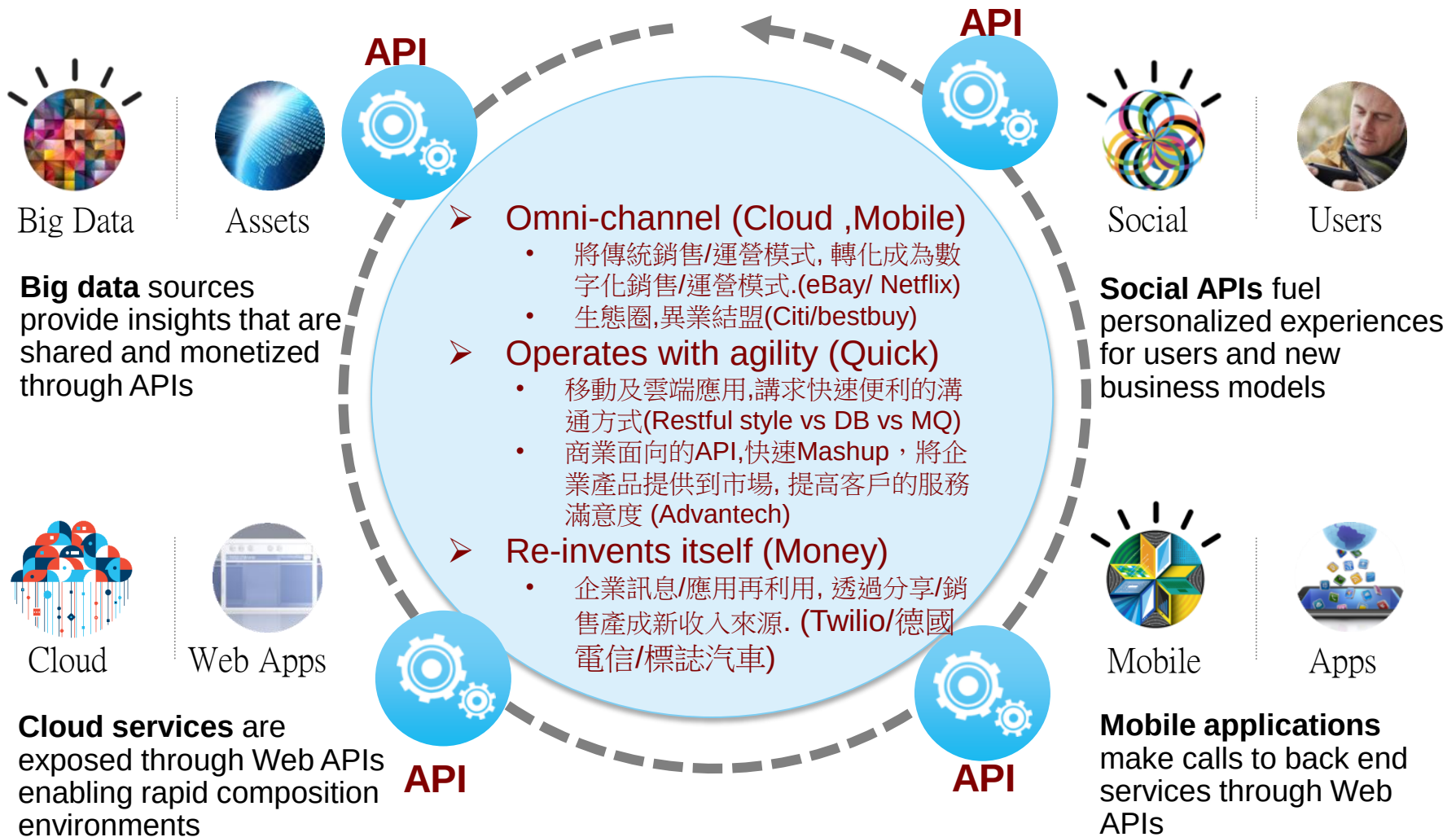


設備



Raceshape (It is now officially part of Strava!)

企業為什麼急於走向API



企業透過APIs 建立價值新渠道並開啟平台服務

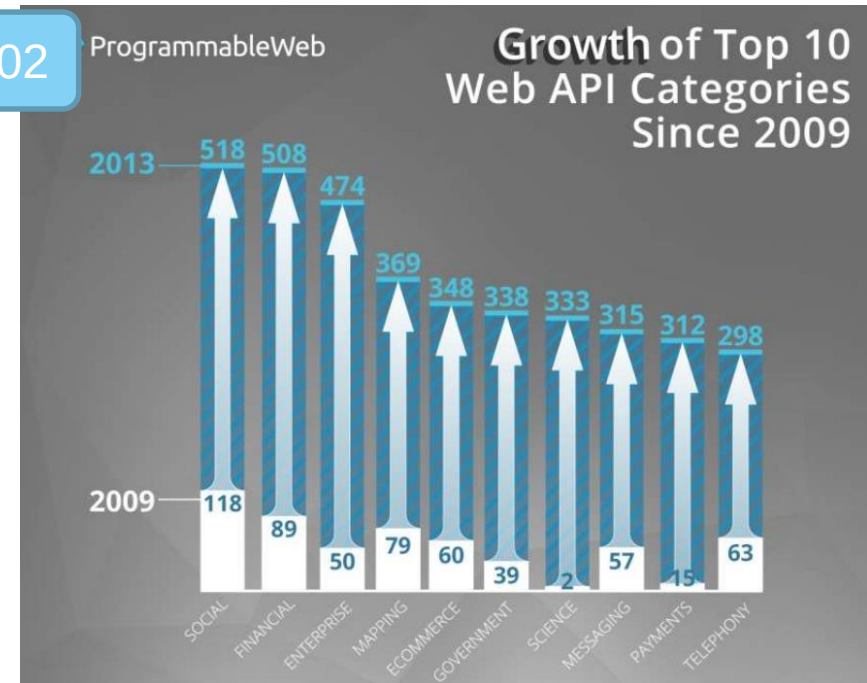
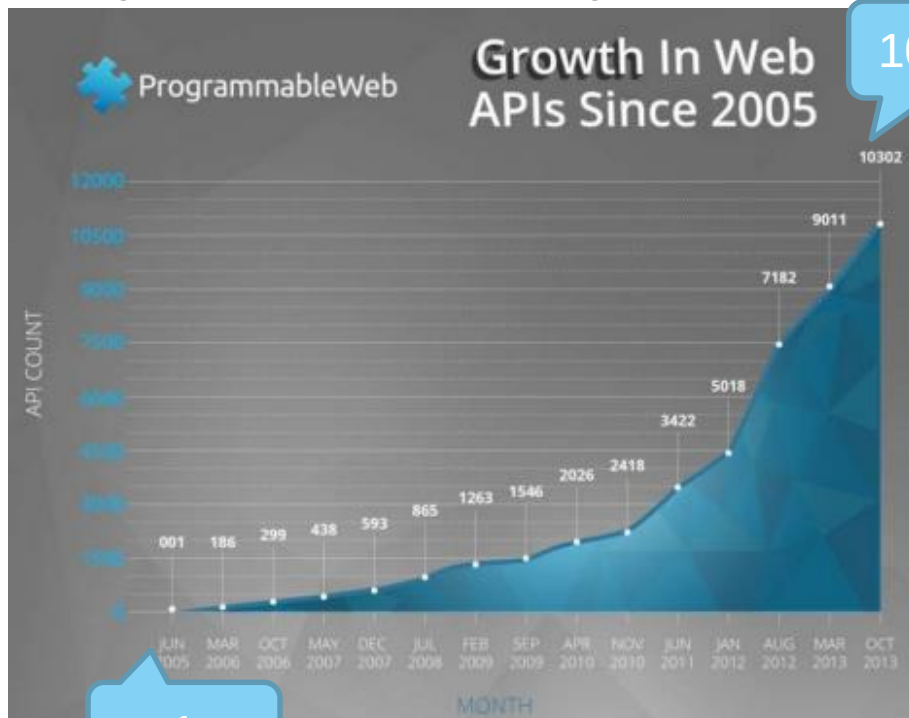
Gartner say: By 2016, 50% of B2B collaboration will take place through Web APIs...

Business models are evolving



APIs represent a new, fast-growing channel opportunity

and growth is accelerating dramatically



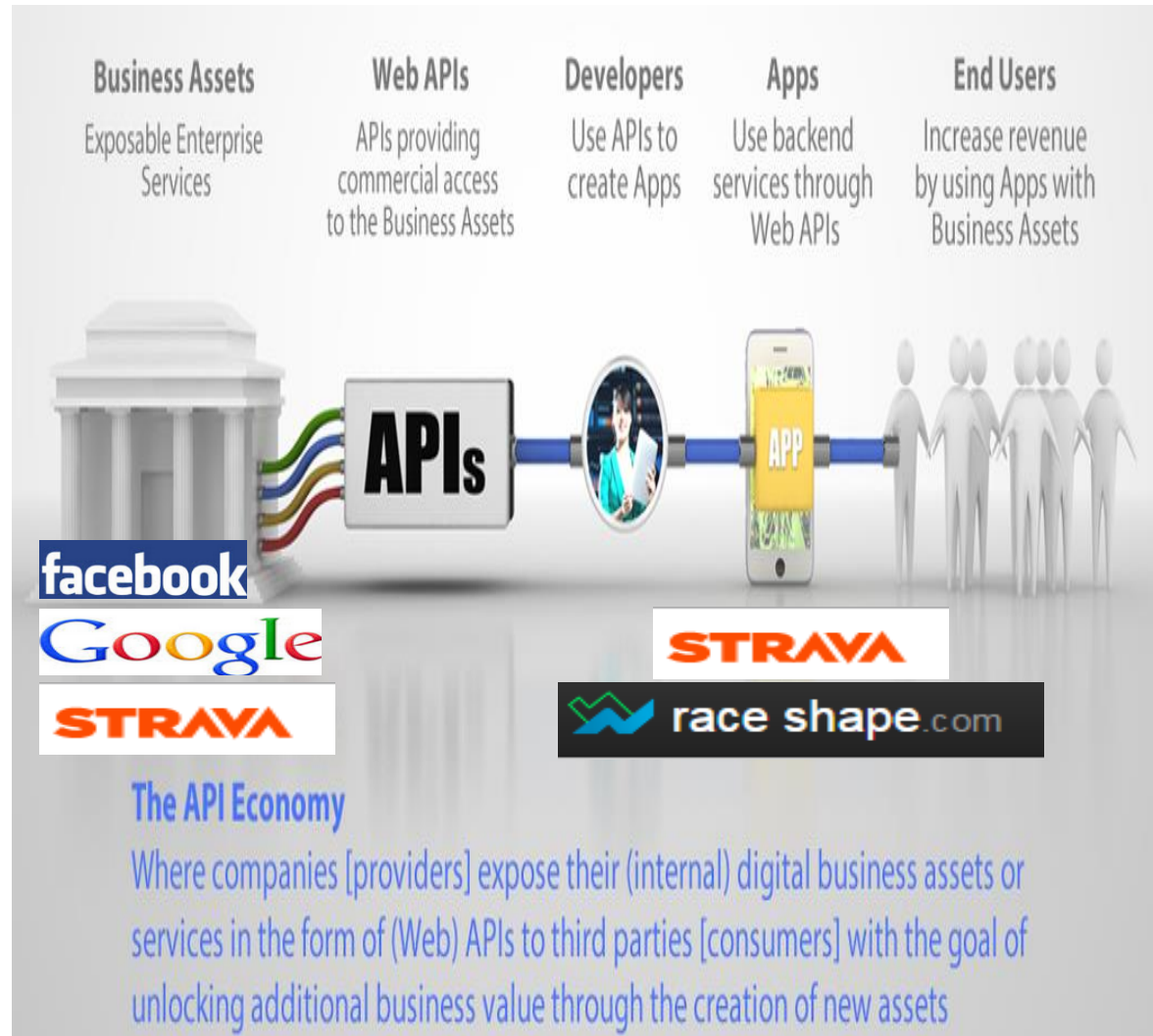
API 經濟價值鏈(快速、自我服務)

快速組裝API, 快速產生增值服務APP, 為企業帶來收入

Programmableweb: **11309** APIs **7413** Mashups

A pps
P artners
I ncome

Adam DuVander, 



The Business of APIs (API為企業帶來價值)



For Free

- ⑩ Drives Adoptions of APIs
- ⑩ Typically low valued assets
- ⑩ Drive brand loyalty
- ⑩ Enter new channels



Developer Pays

- Business Asset must be of high value to the Developer
- For example, marketing analytics, news,
- Capabilities such as credit checks



Developer Gets Paid

- Provides incentive for developer to leverage web API
- Ad placements
- Percentage of revenue sold product or services



Indirect

- Use of API achieves some goal that drives business model.
- E.g. Increase awareness of specific content, or offerings

Example:



Facebook Login API provides free authentication for any Web / mobile app



Example:



Amazon EC2 Web Services – APIs charge per usage to launch and manage virtual servers.

Example:



Google AdSense APIs pay developers who include advertising content into apps



Example:



eBay Trading APIs offer developers access to trading services extending the reach of listings and transactions

APIs Recap: API為企業資產帶來商業面向的思維

What is an Web API?

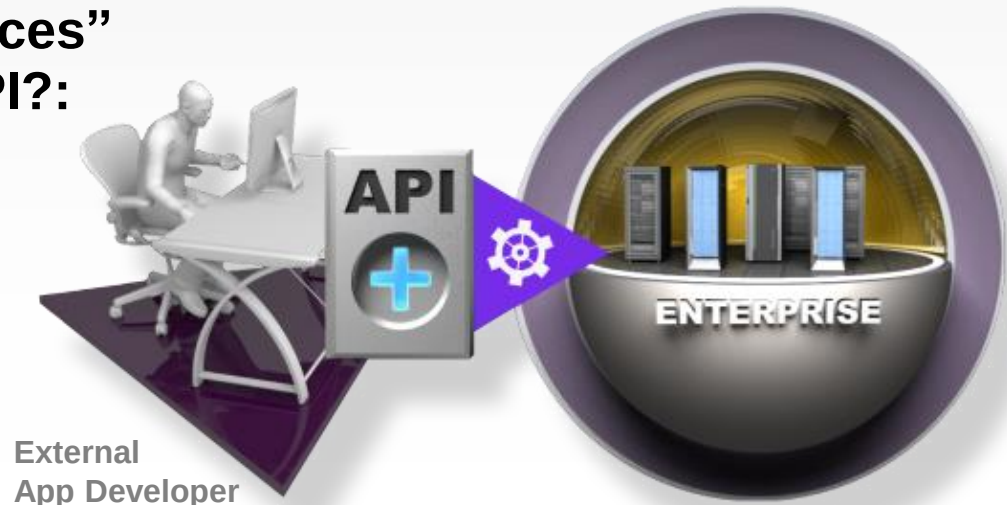
- An web API is a [public persona](#) for an enterprise; exposing defined assets, data or services for public consumption
- An web [API is simple](#) for app developers to use, access and understand
- An web [API can be easily invoked](#) via a browser, mobile device, etc.

What Value Does an Web API Provide?

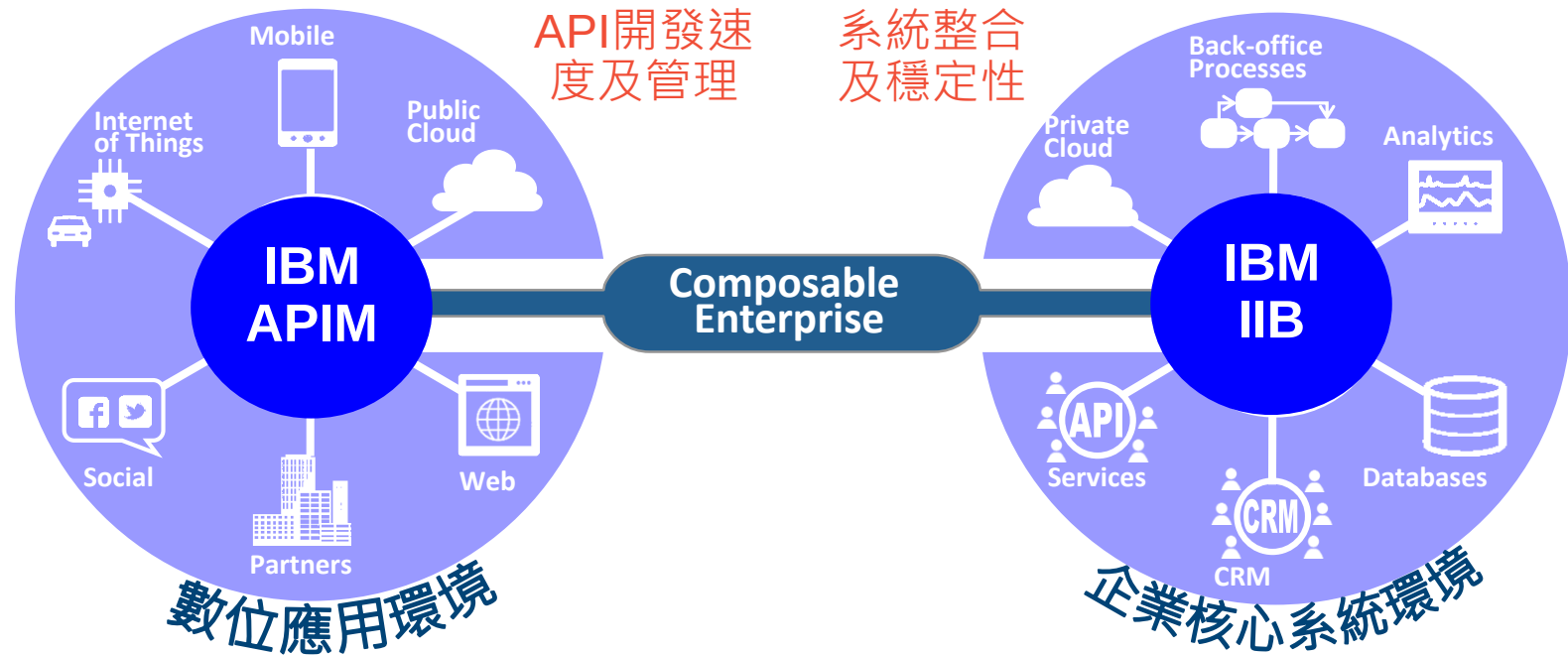
- Extends an enterprise and opens new markets by allowing [external app](#) developers to easily leverage, publicize and/or aggregate a company's assets for broad-based consumption

What “assets, data or services” are exposed via an Web API?:

- [Product catalogs](#)
- Phone listings
- [Insurance cases](#)
- Order status
- [Bank loan rates](#)



企業整合架構方案- 滿足核心系統及數位應用的需求



- ✓ 透過API管理平台轉換或組裝內部服務及外部服務,快速建立業務面向API,以搶佔市場先機。
- ✓ 建立線上服務訂閱平台,提供客戶、伙伴或第三方開發者多樣性服務級距,自我服務的訂閱方式能加速服務的提供速度。
- ✓ API開發者社群入口網,建立API經濟生態環境,為企業創造營收

- ✓ 提供多樣協定轉換、格式轉換、訊息路由,增加系統間整合靈活性。
- ✓ 降低系統間耦合性,簡化了維護工作,減少Cost。
- ✓ 企業訊息backbone,常應用於SOA架構中

核心系統及數位應用差異點

Digital
app



Business led
(CMO, Sales, LoB)

Business goal

“How can we increase revenues by re-inventing ourselves through more engaging offerings?”

IT goal

“How can we increase the pace and quality of innovation?”

Reuse → Speed to deliver
Sharing → Expediency
Encapsulate → Less to learn

Enterprise
app



IT led
(Enterprise Architecture)

Business goal

“How can we reduce IT costs while speeding up our ability to change?”

IT goal

“How can we increase consistency and re-use over our IT community?”

Reuse → Effort to deliver
Sharing → Effectiveness
Encapsulate → Less to change

FICO Analytic Cloud- 找到企業核心API建立生態圈

FICO Analytic Cloud Marketplace

- ✓ Access to FICO customers
- ✓ A curated market that is audience focused, to present your solutions in easy-to-understand ways



Ready-Built FICO Solutions

- ✓ can install FICO® Application Fraud Manager on-site or take delivery via Software-as-a-Service (SaaS).
- ✓ Simple and quick solutions for all your analytics needs



Prevent Fraud

To fight fraud effectively takes a fast, flexible and holistic approach. It requires the right combinations of fraud management tools, services and analytics. FICO's superior fraud management tools and unrivaled analytics are now available as a service.

Build Your Own Solutions

- ✓ Rapidly develop your custom applications and components.



Build a Complete Solution

The FICO® Decision Management Platform provides an easy, cost-effective way for you to evaluate, customize, deploy and scale state-of-the-art analytics and decision management solutions.



Build a Modeling Service

The FICO® Analytic Modeler provides predictive model and strategy development and deployment for business analysts with a wide range of experience. Discover how to quickly build and execute predictive models and strategies using scorecards and decision trees.



Build a Decision Service

Build, manage and execute your business decisions with FICO® Decision Modeler to improve every aspect of your business process.

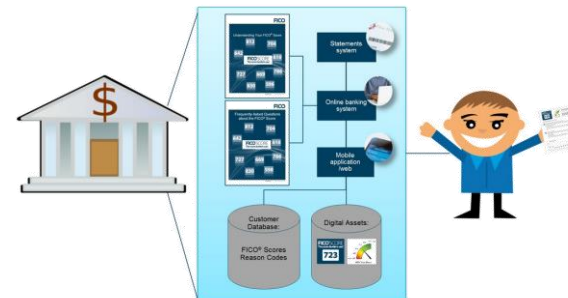


Build an Optimization Service

FICO® Optimization Modeler and FICO® Optimization Executor offer two different ways of accessing the power of optimization within FICO® Decision Management Platform. You can build headless services, optimization focused applications and complex optimization solutions orchestrated using FICO® Application Studio.

FICO® Score Open Access

- ✓ FICO extends the license on FICO®Scores you already purchase for risk management decisions, enabling you to display those scores to your end customers.



Banking is not Bank...銀行面臨大環境與消費者使用行為改變趨勢下，必須更努力開放及擁抱數位經濟的特性，才能成功掌握金融服務趨勢。

Branch Locator / ATM Locator

Let customers search and find a convenient ATM, Branch wherever they happen to be.



Reward Points Management

Onboard partners quickly easily integrate in to your reward system



銀行行動化邁向開放個人化 增值

德國 FIDOR Bank，正是有牌照的純網路銀行，用臉書的按「讚」數量來決定放款利率，就是它的行銷手法之一。並開放API提供第三方開發者創造APP，創造廣大ecosystem。



Forex Exchange Rates

Let customers get to know about your great offers on Forex



Digital Wallet Services

Make more money with your Payment & Wallet APIs

Deposit, Lending Rates, Eligibility Calculators

Market your rates through Multiple Channels



SWIFT Code, BIC Codes

Customers can know your SWIFT, BIC Codes through any channel



Access to Account Data

Get paid when account data is accessed

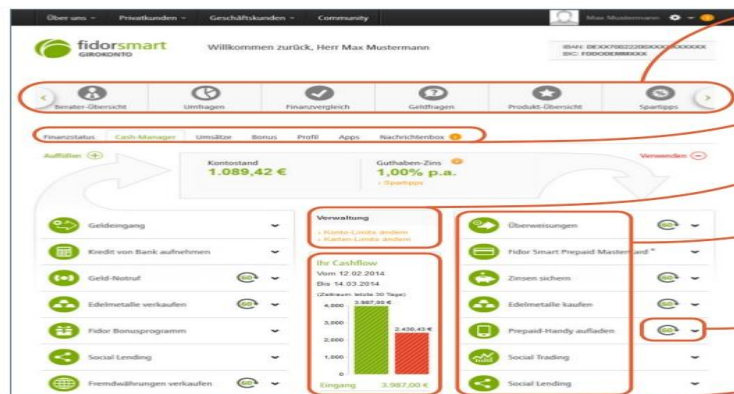


Bill Presentment Services, Corporate Banking Services

Allow Partners & Customers to easily Integrate with your applications

Fidor Smart Account

A market place for financial services



Example 1: Functionalities associated with the Fidor account

Connecting to Community

Navigation

User created tutorial videos

- Fidor offerings and 3rd Party apps (integrated via API)
- Innovation inside like Ripple, P2P lending and crowdfunding

Speed Banking, shown by „60 sec banking“ icon

First steps towards PFM

APIs 從企業內部、伙伴及外部開始,並互相串連

Customers will require a combination of the three types



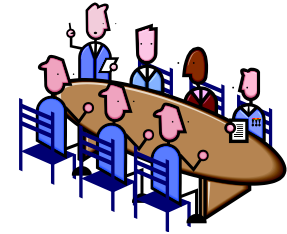
Public, Open-To-All APIs

- APIs are open to any developer who wants to sign up
- Apps are more targeted towards end consumers
- The business driver is to engage customers through external developers



Protected, Open-To-Partner APIs

- APIs are open to select business partners
- Apps could be targeted at end consumers or business users
- The business driver is usually different, based on the data and type of business of the enterprise



Private, Open-To-Employee APIs

- APIs are exposed only to existing developers within the enterprise
- Apps are usually targeted at employees of the enterprise
- The business driver is more around productivity of employees

- APIs Value Recap(API Concept Overview)
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企業走向API 經濟數字化轉型的挑戰

1. 全渠道支持系統改造

- ◆ 支持各種渠道，包括移動、WEB 應用...等
- ◆ 更快速地将企業內系統轉化成API供市場使用

2. API開放後的安全要求及個性化管理

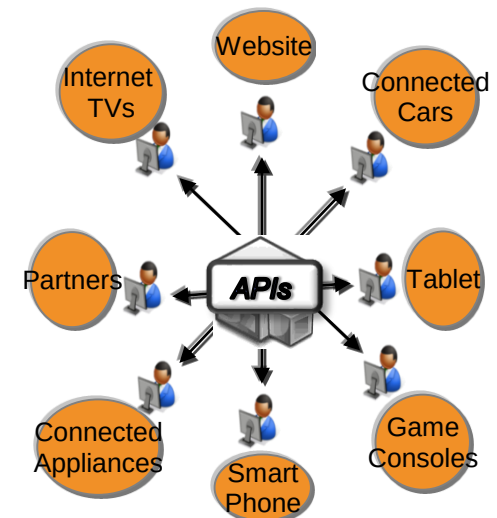
- ◆ 可以滿足更高的信息交互及交易的安全要求
- ◆ 開放、標準的生態圈來管理各種渠道和合作夥伴
- ◆ 提供API不同服務等級給不同的使用者，
- ◆ 能夠提供讓使用者，如：夥伴，部門，開發者，可以自主化服務

3. 有效的管理控制及優化

- ◆ 如何管理、監控、分析API 使用狀況，進而提供不同服務等級；洞察服務使用情況並進行收費，
- ◆ 借助大數據的方式對API調用數據進行分析，持續優化
- ◆ 支持企業整體戰略的統一平台；

4. IT/業務單位對API的梳理

IBM API Management
Fully on-premise, multi-tenant solution,
for API providers

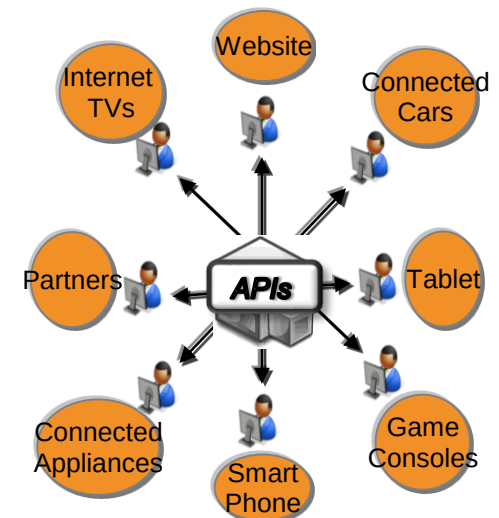


企業走向API 經濟數字化轉型希望達成的目標

1. 擴展新渠道，提高品牌知名度，開拓新的市場空間，協助企業業務轉型
2. 實現更快的業務創新，促進利潤增長
3. 緊密連接客戶、員工、業務伙伴
4. 建立平台標準，實現標準化管理
5. 快速和合作伙伴集成
6. 提高客戶滿意度

IBM API Management

Fully on-premise, multi-tenant solution,
for API providers



IBM API Management

提供敏捷開發、開放社群、分析管理、安全監控的API管理平台

(1) 用開放速度搶市場,能多快?

✓ 線上組裝即有端口

(2) 怎麼建立生態圈,怎麼把API推到市場?

✓ 口耳相傳,自己的數位商店,建立Omni channel

(3) 管理什麼?

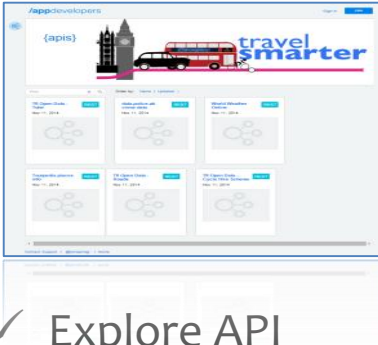
✓ 停用惡意的APP
✓ 管理API呼叫流量
✓ 從呼叫記錄到帳單

(4) 安全嗎?

✓ 支援Oauth2.0,放心相信third-party APP
✓ 優化的Security Gateway



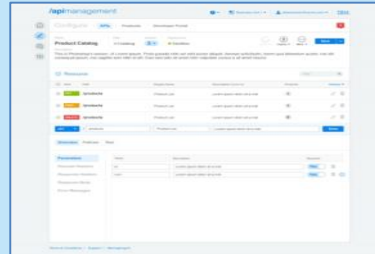
Advanced Developer Portal (optional) (Virtual appliance)



- ✓ Explore API documentation
- ✓ Provision application keys
- ✓ Self-service experience

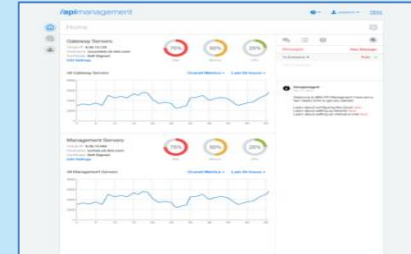
Management layer (Virtual appliance)

API Manager



- ✓ Define and manage APIs
- ✓ Explore API usage with analytics
- ✓ Manage API user communities
- ✓ Basic developer portal

Management Console



- ✓ Provision system resources
- ✓ Monitor runtime health
- ✓ Scale the environment

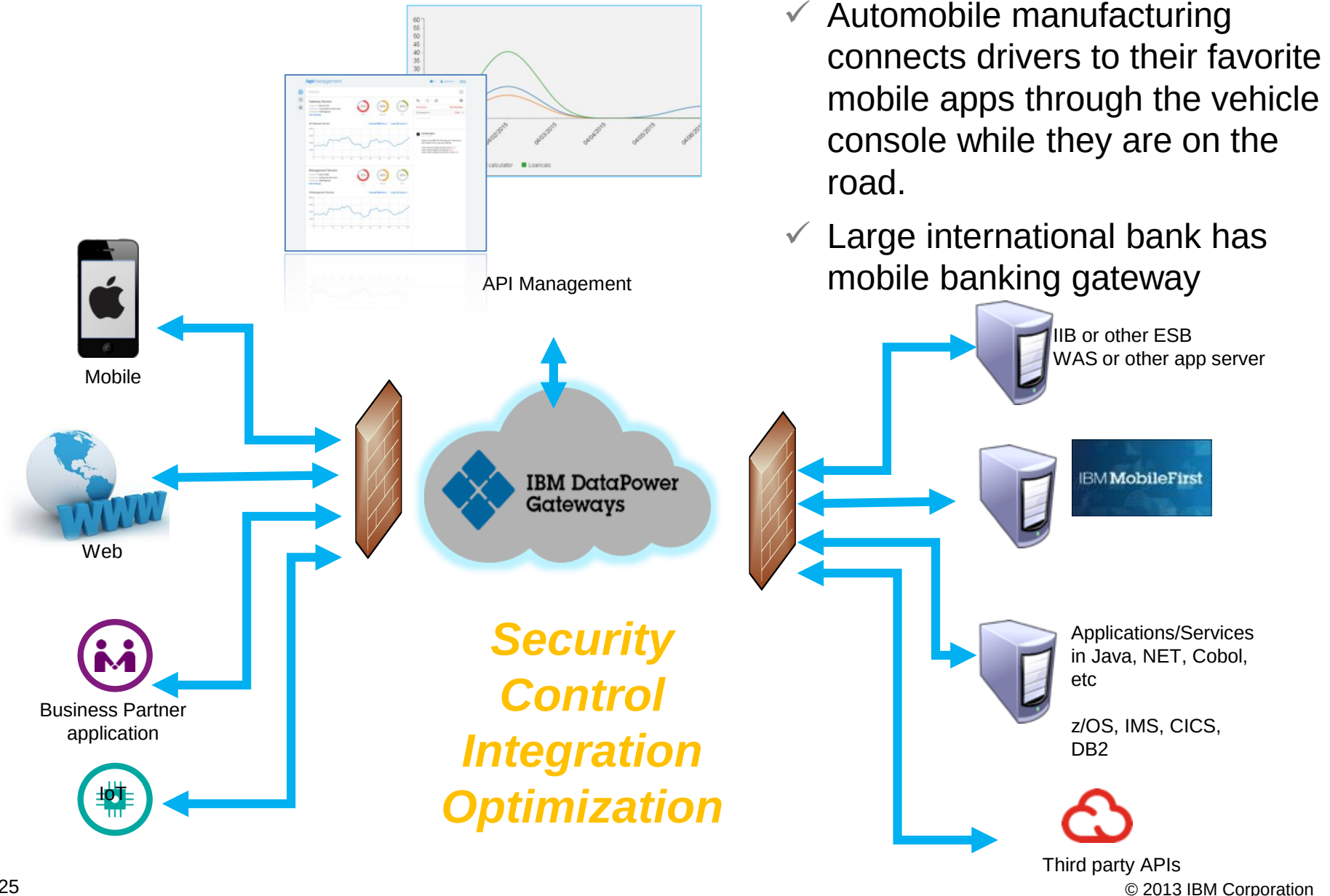
API Gateway(IBM DataPower)



- ✓ Enforce runtime policies to control API traffic
- (Virtual appliance* or physical appliance)

* Requires VMWare ESXi 5.0, vCenter V5.5, Citrix XenServer 6.2, IBM PureApplication System W1500 1.1

IBM APIM平台執行期間



IBM API Management solution 優勢

敏捷開發

開放社群



✓ **API快速開發:** 網頁式開發介面、拖拉式組裝、線上測試、快速發佈

✓ **API完整管控:** API版本管理、升級、新版

✓ **開發者入口網高客製化:** 提供開源(Github)滿足高度客製化需求

✓ **多開發者入口網:** 支援多入口網，API一次開發可部署多個入口網

分析管理



✓ **單一管理介面:** “Single pane of glass”，管理的API，Plan，User及runtime cluster node提供統一的業務視圖

✓ **內建分析功能:** 分析含蓋API、APP、環境資訊

✓ **完善環境支援:** 提供Cloud及on-premise兩種模式，簡單建立環境(Virtual / appliance)

✓ **多租戶機制:** 多組API開發者能共享同一APIM平台

安全監控



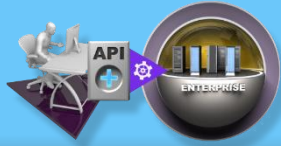
✓ **最佳安全平台:** IBM市場領導**DataPower gateway**

✓ **監控警示:** APP使用API超標警示、APP狀態(suspend)警示

APIM Entry Point

資產流動帶來價值、價值是基於安全、管理帶來效率

企業價值再造



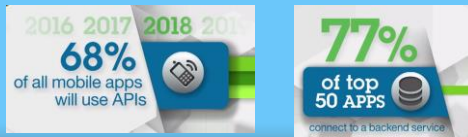
- 梳理IT 內部資產找出商業價值，轉換或組裝出商業API，透過開放API並訂定API使用機制，建立API經濟生態環境，為企業創造營收。

快速建立B2B服務



- 建立線上服務訂閱平台，提供客戶、伙伴或第三方開發者多樣性服務級距，自我服務的訂閱方式能加速服務的提供速度。

數位全通路



- 數位通路(Web、Mobility、Device)管理平台，提供通路功能生命週期管理(創造、審核、版本更新、多版管理)及交易分析擷取Business Insight。

完善的傳輸管道



- 資料安全傳輸管道，提供資料安全(AAA、Signature、encryption)、資料整合(transformation、Transport)、控制及優化功能(SLA、rate limiting、Cache、XSL acceleration)。

Our select customers



Leading Global Commercial Bank
provides easy & secure access to key
financial services



Business Value

- ✓ Offers 3rd party merchants secure standards-based access to key business services as APIs, with a self-service experience
- ✓ Provides a private ecosystem for partners and a central repository with usage analytics
- ✓ API platform and hackathons help drive innovation for Mobile application development

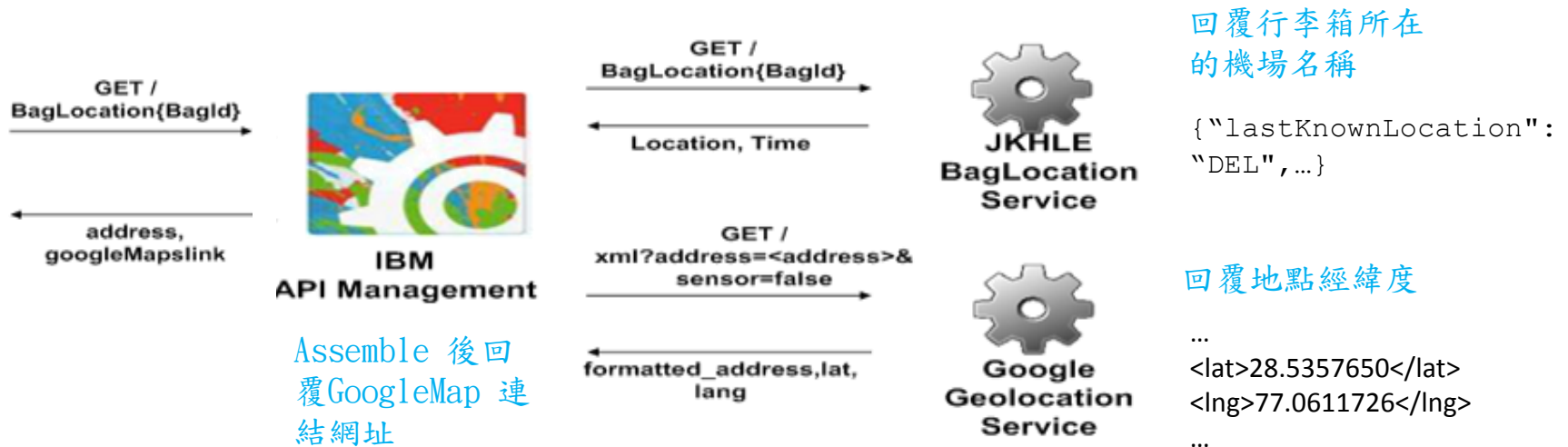


All of these companies have spoken publicly about using IBM API Mgmt at public conferences

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APIM Scenario - JKHLE Airways

- JKHLE Airways **has an existing set of REST based services** that they would like to **expose through APIs** in order to foster growth within the mobile and device market.
- After considering **building their own API management solution**, the JKHLE Airways technology team has decided to implement an IBM API Management solution as it will **allow them to enter the market quickly at a reduced cost**.



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{  
  "address": " Indira Gandhi International Airport (DEL), New Delhi, Delhi 110037, India",  
  "googleMapsLink" : "http://maps.google.com/?q=28.5561624, 77.0999578"  
}
```

API Success Requires Addressing Needs of Multiple Stakeholders

STRAVA

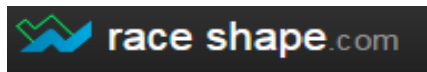
API Product Manager

- How can I rapidly release & update my APIs?
- How do I publicize my API?
- How do I measure success?

STRAVA

API Developer

- How do I assemble APIs?
- How do I manage security?
- Will the infrastructure scale?
- How do I measure performance?



App Developer

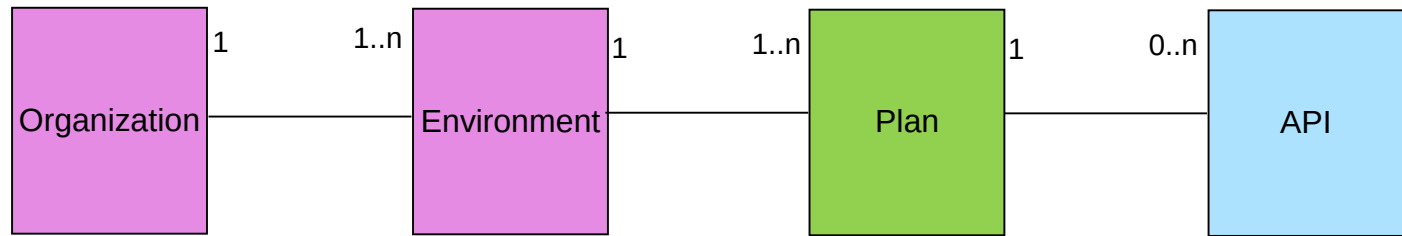
- Where do I access APIs?
- How do I understand the APIs?
- How do I measure success?

STRAVA

Operations Lead*

- How do I manage all the API Environments that are being requested?
- How can I scale each environment?
- How can I easily find and fix issues?

IBM API Management



Operations Lead*



API Product Manager



API Developer



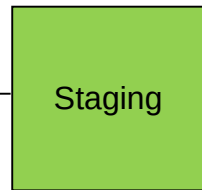
APP Developer



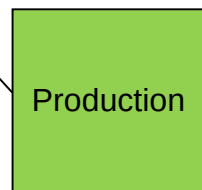
Marketing



Development



Staging



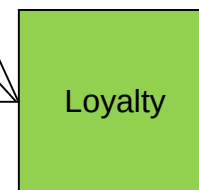
Production



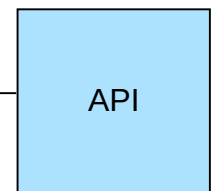
Promotions



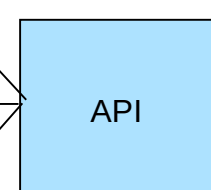
Discounts



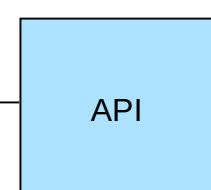
Loyalty



API



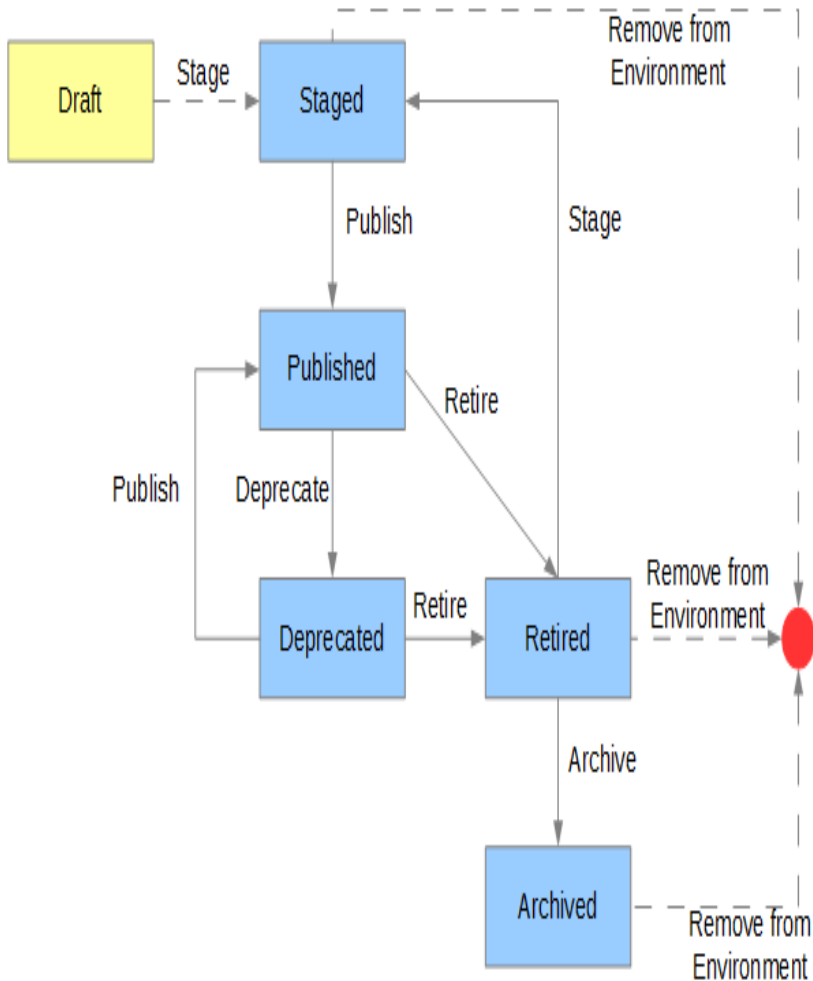
API



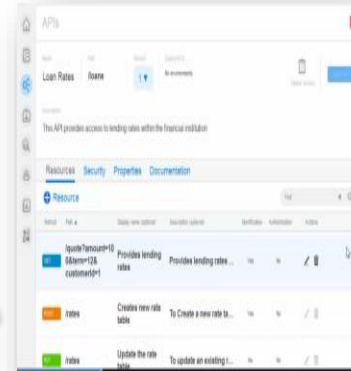
API

Plan 生命週期說明

Lifecycle state diagram for Plan versions



API Manager



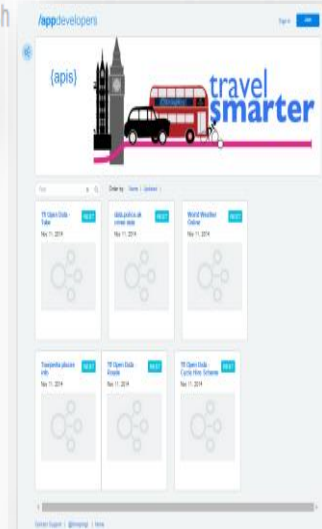
API Provider

Securely share APIs/Plans with various select developer communities

Multiple Developer Portals



App Developers In group 1



App developers group 2

營運及多租戶管理



Gateway Clusters + Cluster

Gateway | Settings + Server |

Status	Name	Address	CPU	Memory	Disk	Actions
Active	DP Gateway	192.168.225.52	0%	0%	0%	

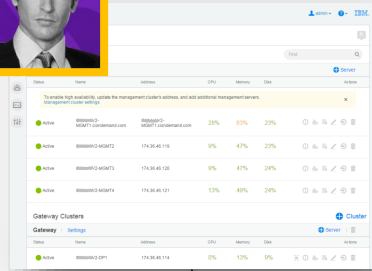
/apimanagement admin

Organizations 0

+ Organization Find

☐	Name ▲	URL Path Segment	Owner	Status	Actions ▶
Before creating an organization, ensure you have configured the correct user registry for API Manager users. You can not change the user registry used for API Manager once users and organizations have been created. Settings To create an organization, select +Organization.					

- ✓ **Multi-tenant** support for multi-provider organizations
- ✓ **Management & Gateway Server utilization** - CPU, Memory, Disk
- ✓ Provider and Consumer **organization Visibility**
- ✓ **Alerts** & notifications
- ✓ Send **email** directly through console

 Fake SMTP Server

Tenant A

/api management

Manage User Accounts

Identity Provider and E-mail Settings

+ Organization

Owner Select	Account Name Acme Business Unit 4	Type API Provider	Status	Actions
Steve Smith	Acme Business Unit 1	API Provider	Active last login: 2 hours ago	Edit Email Delete
Steve Smith	Acme Business Unit 2	API Provider	Invitation Pending... Resend Invitation	Edit Email Delete
Steve Smith	Acme Business Unit 3	API Provider	Active last login: 2 hours ago	Edit Email Delete
Andre Adams	Andre Inc.	Consumer	Active last login: 2 hours ago	Edit Email Delete
Sam Takahashi	Toyota	Consumer	Active last login: 2 hours ago	Edit Email Delete
Kris Knoll	Krispy Inc.	Consumer	Active last login: 2 hours ago	Edit Email Delete
Chris Casper	Cucumber Smith	Consumer Upgrade	Active last login: 2 hours ago	Edit Email Delete
Lillian Lawrence	Lycheelicious	Consumer Upgrade	Active last login: 2 hours ago	Edit Email Delete

Send Message

To:

Message:

[Send](#)

Clusters

Management Cluster

Management | Settings Server

Status Name Address CPU Memory Disk Actions

To enable high availability, update the management cluster's address, and add additional management servers. Management cluster settings

Status	Name	Address	CPU	Memory	Disk	Actions
Active	ibmcloud/v2-MGMT1.cindemand.com	ibmcloud/v2-MGMT1.cindemand.com	28%	63%	23%	Info Logs Edit Refresh Delete
Active	ibmcloud/v2-MGMT2	174.36.46.119	9%	47%	23%	Info Logs Edit Refresh Delete
Active	ibmcloud/v2-MGMT3	174.36.46.120	9%	47%	24%	Info Logs Edit Refresh Delete
Active	ibmcloud/v2-MGMT4	174.36.46.121	13%	49%	24%	Info Logs Edit Refresh Delete

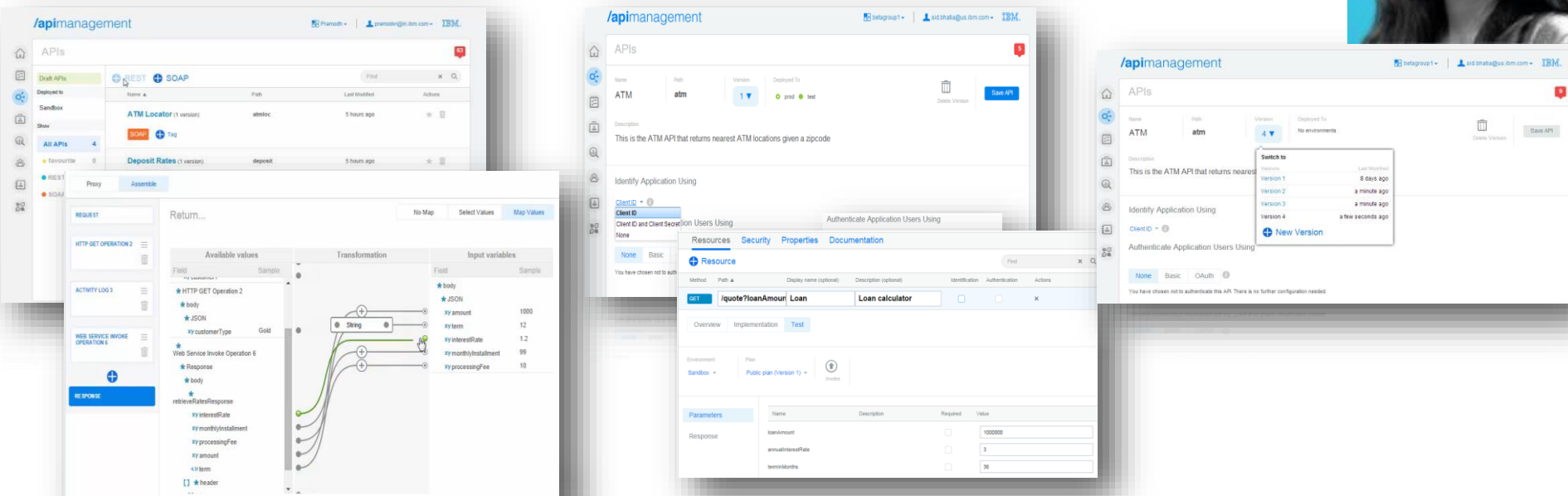
Gateway Clusters Cluster

Gateway | Settings Server Refresh

Status	Name	Address	CPU	Memory	Disk	Actions
Active	ibmcloud/v2-DP1	174.36.46.114	0%	13%	9%	Info Logs Edit Refresh Delete

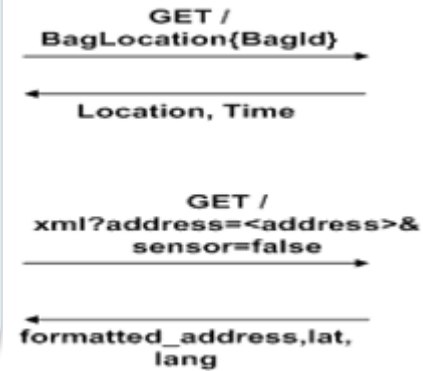
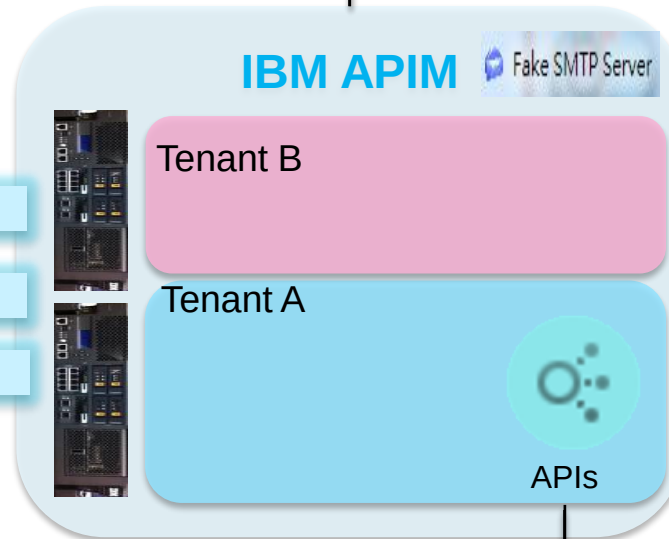
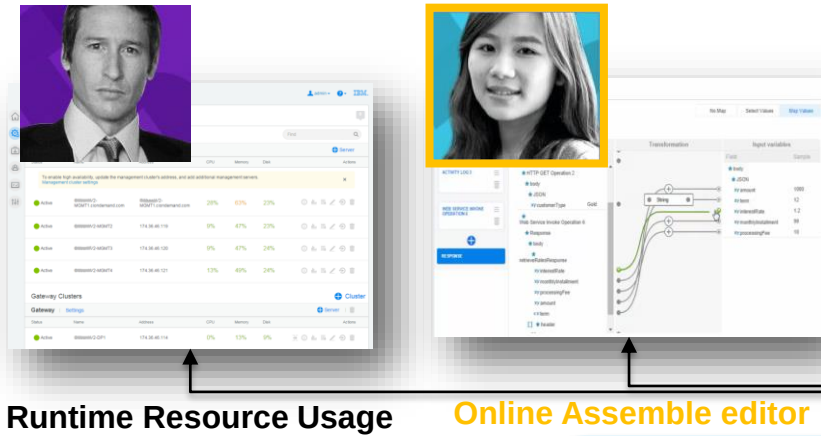
敏捷開發API

提供線上組裝、認證、測試、版控功能



- ✓ Define the **REST** or **SOAP API** you wish to expose
- ✓ **Import** WSDL, Swagger or REST/SOAP APIs from a registry
- ✓ **Assemble** a new API
- ✓ **Drag and connect** linking the request and response messages
- ✓ **Transform** the message elements with a click
- ✓ Identify application with **Client ID & Secret**
- ✓ Authenticate using **LDAP** or **Authentication URL**
- ✓ Authorize using **OAuth 2.0** support with implicit grant type, authorization code, resource owner, client credentials
- ✓ **Interactive test** of an API resource in just one click
- ✓ **Version** the API configuration in just one click
- ✓ **Revert** to prior version
- ✓ Create an API by **copying** a specific version of an existing API

APIM Scenario - JKHLE Airways



Invoke Control

The diagram shows a login form with the following fields and elements:

- LOGIN
- USER NAME:
- PASSWORD:
- Log in button
- ☐ Remember my ID on this computer.



Authentication URL

LDAP

API產品化、管理功能(角色權限, APP Portal Access)、API監控優化、APP開發者友善Portal



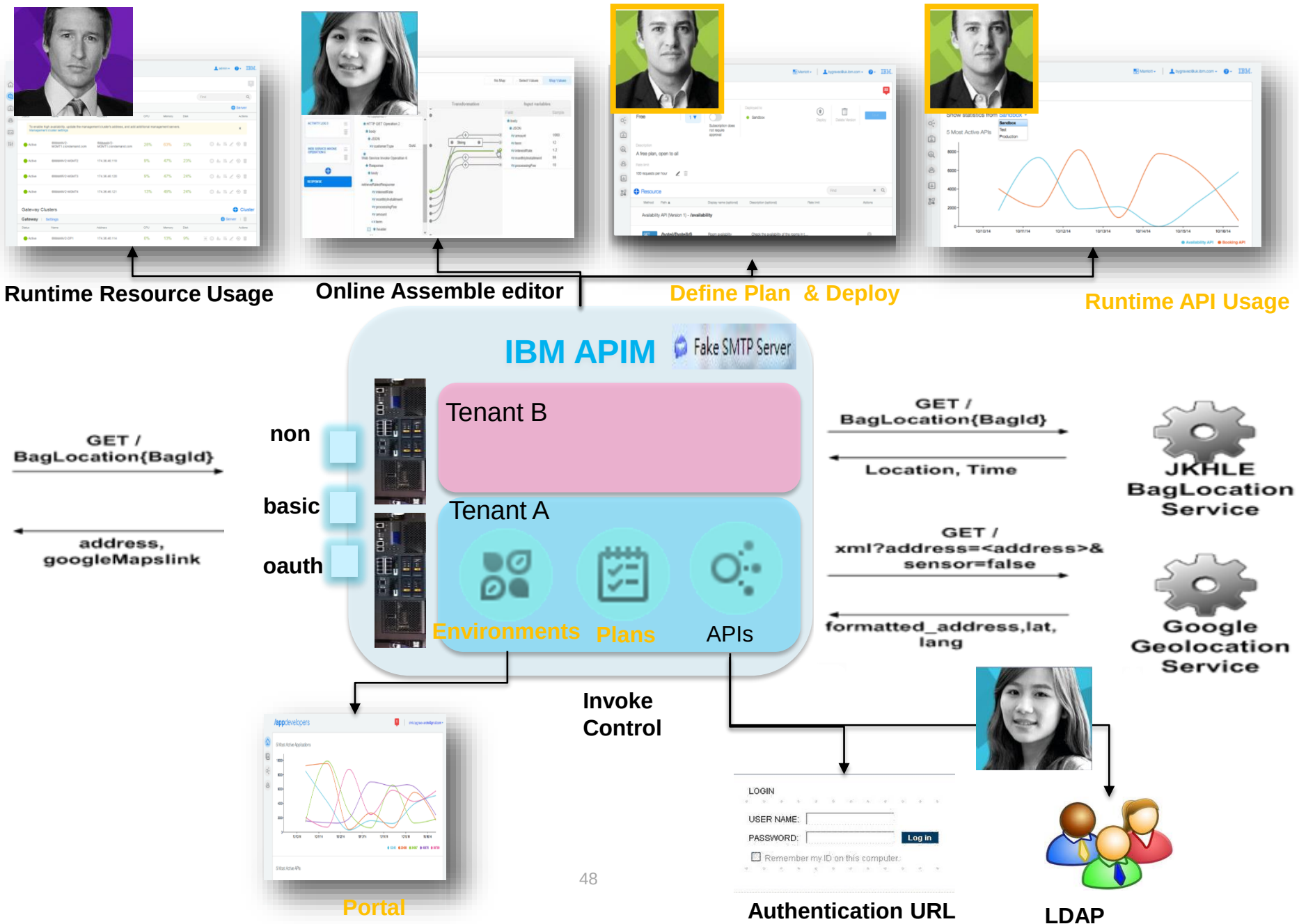
API Product Manager

- ✓ Include multiple **APIs** and **Resources(API)** per Plan
- ✓ Introduce **API Trial Use Free**, limited plans can be made available alongside **premium** plans (Apply **Rate Limit** by Plan or Resource)
- ✓ **Version** your Plans
- ✓ Easily **publish, republish, unpublish, undeploy** Plans
- ✓ **Multiple available plans** presented to developers for comparison
- ✓ **Non-disruptive Publish:** Replace a currently published version of a Plan without any disruption in API availability

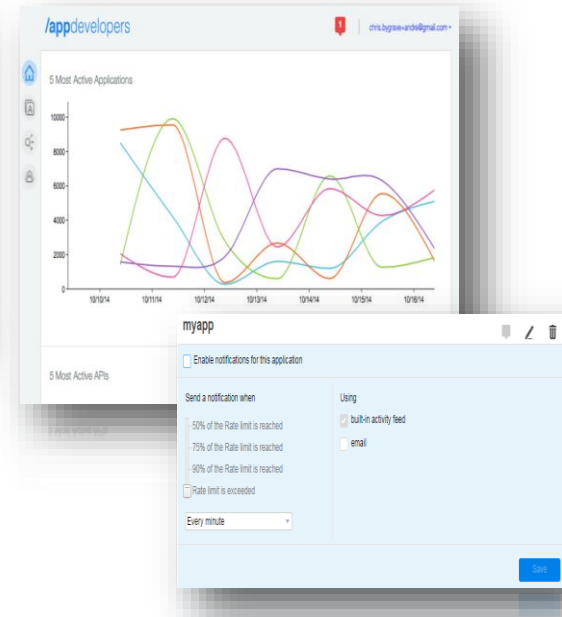
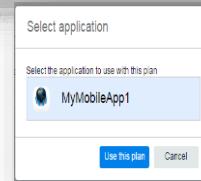
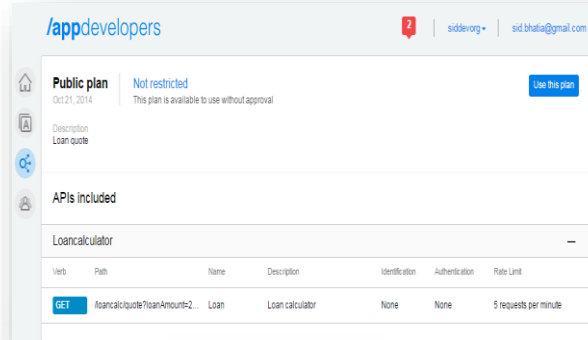
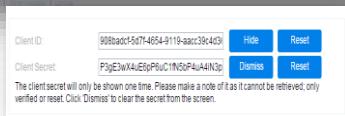
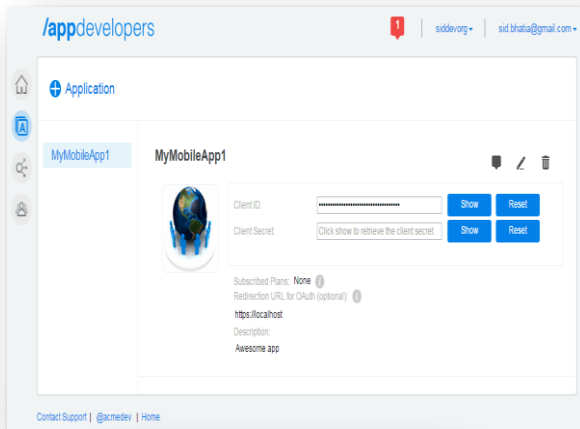
The screenshot displays the API Management console interface. At the top, a 'Create a new plan' dialog is open, showing a 'Partner' plan type with a toggle for 'Subscription requires approval' and a description 'A partner plan, requiring approval for access.' Below this, the 'Plans' section is visible, showing a list of plans. The 'Free' plan is highlighted, with details including 'Version 1', 'Restricted' status, and 'Deployed to Sandbox'. A 'Booking API' modal is also open, showing details for the 'Booking API' (Created 01-15-2019) with a description 'Create and manage room bookings'. The modal includes sections for 'Identify your application using' (Client ID), 'Authenticate using' (None), and a table of 'Resources' with columns for Verb, Path, Name, Identification, Authentication, Details, and Plans. The 'Plans' column shows 'Premium' and 'Free' options.

Verb	Path	Name	Identification	Authentication	Details	Plans
POST	https://cp-15.hursley.ibm.com/marriott/bookin...	Manage booki...	Client ID	None	+	✓
GET	https://cp-15.hursley.ibm.com/marriott/bookin...	Manage booki...	Client ID	None	+	✓

APIM Scenario - JKHLE Airways



開放社群(Self-service)

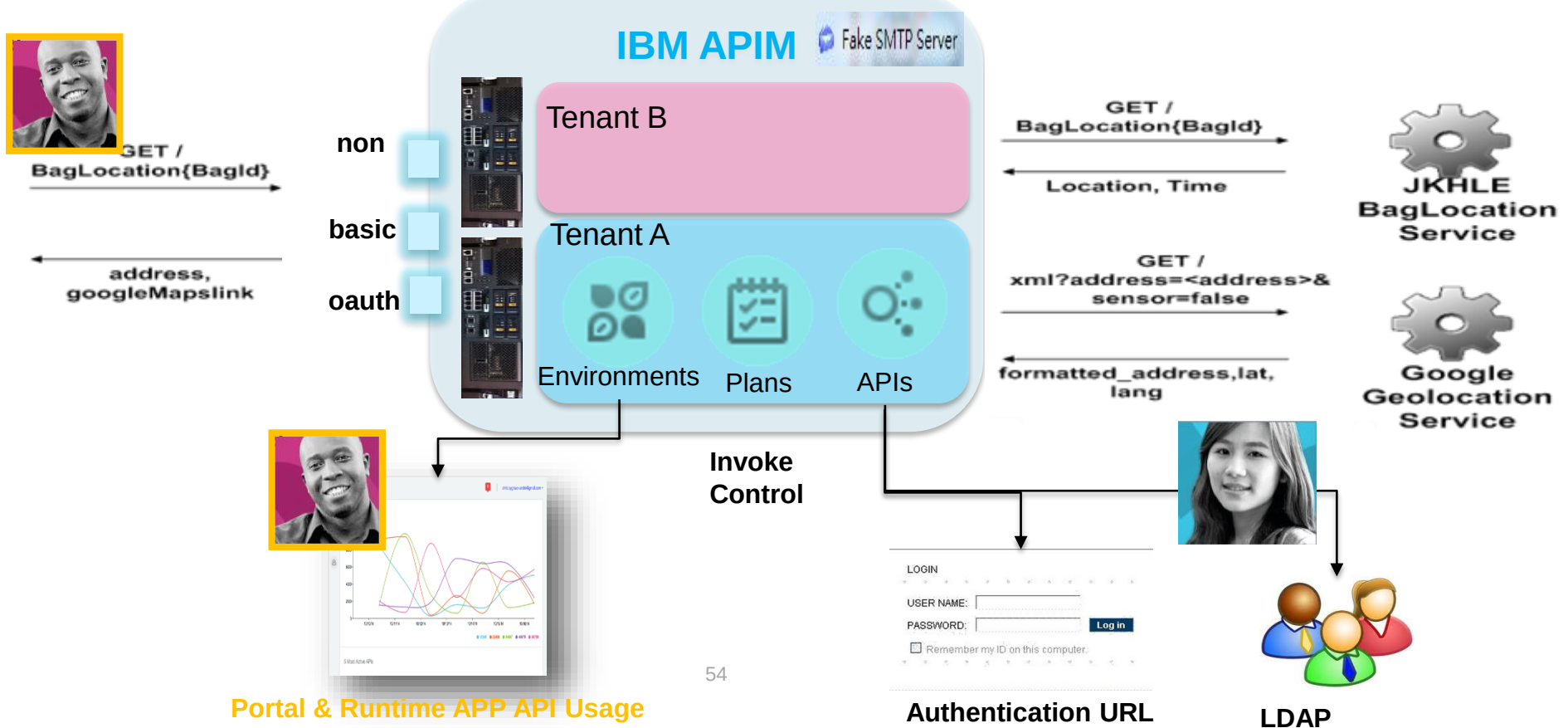
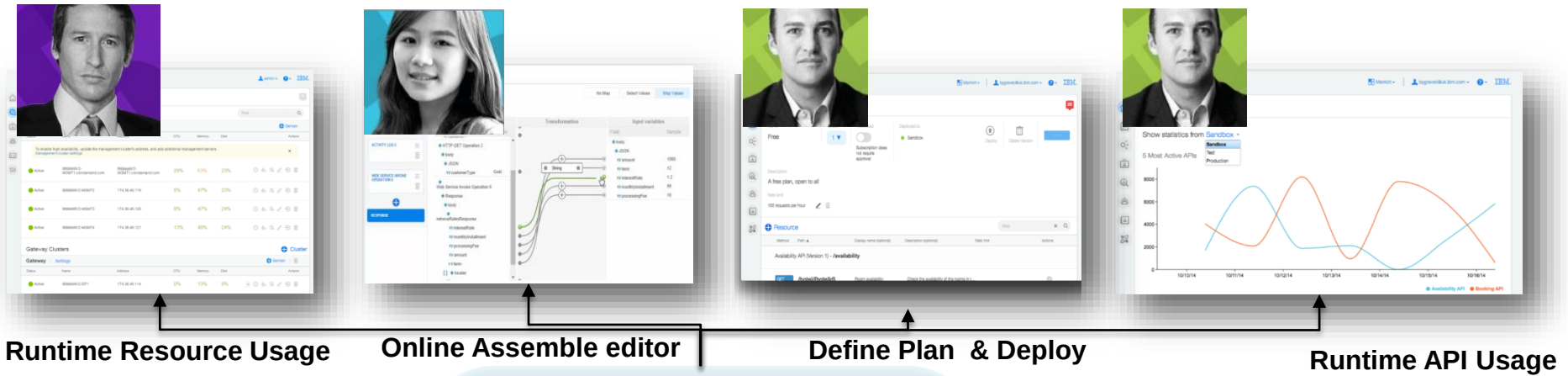


- ✓ Register new application
- ✓ Request security keys with enhanced privacy
- ✓ Deferred retrieval of client secret
- ✓ Create unlimited self-service developer portals to explore APIs
- ✓ Browse API documentation

- ✓ Browse available Plans with limits
- ✓ Use Plan & Select application (subscript)
- ✓ Be notified by email when their application is suspended and/or resumed
- ✓ Call API resource with just one click

- ✓ Monitor most active applications and APIs
- ✓ Rate limit developer notifications

APIM Scenario - JKHLE Airways



APIM Scenario - JKHLE Airways – Page Navigating

**Developer
Portal頁面**

**Plan及Portal
管理頁面**

API Product Manager

- <https://192.168.225.100/apimanager>
student0@tw.ibm.com / Passw0rd!

App Developer

- Basic:
<https://192.168.225.100/studentorg0/dev0@tw.ibm.com/> Passw0rd!
- AD: <https://192.168.225.20/userdev1@tw.ibm.com/> Passw0rd!

API Developer

- <https://192.168.225.100/apimanager>
student0@tw.ibm.com / Passw0rd!

Operations Lead*

- <https://192.168.225.100/cmc/admin> / Passw0rd!

**多租戶及Gateway
資源管理頁面**

**API Assemble
及Security頁面**

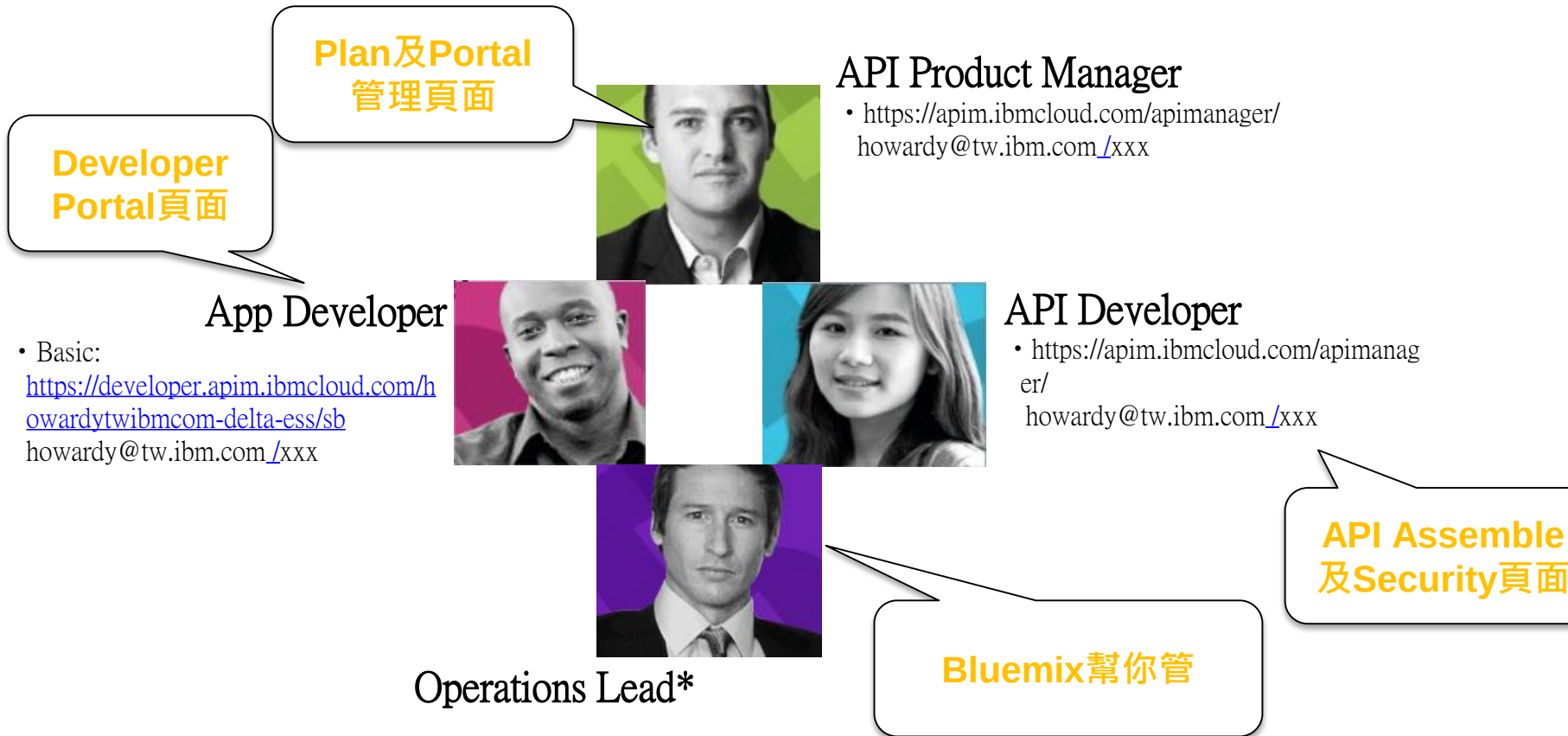


LDAP

apiuser1/passw0rd

apiuser2/passw0rd

APIM Scenario - JKHLE Airways – Page Navigating



LDAP

Server: *ldap.forumsys.com*
Port: 389
Bind DN: *cn=read-only-admin,dc=example,dc=com*
Bind Password: *password*

APP: BPTSEAPIM

ffcfa01e-bb52-4f58-afa6-7ef3394c4ff3/
K7xV1hM3sR6eN5vR8eW3sJ4xG4bF7bJ6IT6gQ0tV1jI2nV7qJ5

APIM Scenario - JKHLE Airways – Security & Plan

- Security with Client ID(APP ID)
 - ✓ none
 - ✓ Basic authentication by LDAP
 - ✓ OAuth authentication by LDAP

- Rate limit & Subscription approve required

3 個 API + API

名稱 ▲	Assemble Type	Security Type
Baggage (1 個版本) To get the bag status REST + 標籤	Proxy	ClientId & Oauth2.0
Bags (1 個版本) Operations related to bags REST + 標籤	Assemble	ClientId
BagStatusBasic (1 個版本) Testing Custom Policy REST + 標籤	Proxy	ClientId & Basic

計劃

名稱	版本	受限	已部署至
TestOAuth	1 ▼ 鎖	 訂閱需要核准	● Sandbox ● Development

說明
TestOAuth

速率限制
每分鐘 4 個要求 

訂閱需被審核

流量控制

APIM Scenario - JKHLE Airways – APP Register

Register application

Application name *

AdvanceApp2

Description

AdvanceApp2

Submit

應用程式註冊

The screenshot shows the 'Show Client Secret' page for the application 'AdvanceApp2'. At the top, a green success message states: 'Application created successfully. Your client secret is:'. A red circle highlights the 'Show Client Secret' link. Below this, the application details are listed: 'AdvanceApp2', '2015-08-26', 'Description: AdvanceApp2', 'Client ID' (with 'Show' and 'Reset' links), 'Client Secret' (with 'Verify' and 'Reset' links), and 'OAuth Redirection URL: https://localhost'. A red circle also highlights the 'Show Client Secret' link in the success message.

應用程式識別碼

The screenshot shows the 'TestOAuth (v1)' page. At the top right, a red circle highlights the 'Subscribe' button. Below the page title, there is a description and a list of 'APIs included': 'Bags (v1)', 'Baggage (v1)', and 'BagStatusBasic (v1)'. A modal titled 'Select an application' is open, showing a list of applications: 'AdvanceApp2' (selected) and 'AdvanceApp'. A red circle highlights 'AdvanceApp2' in the modal. The modal also includes a 'Save' button.

訂閱API計畫

APIM Scenario - JKHLE Airways – Management & Analytics

開發人員組織
Dev1

擁有者
dev1 1

聯絡

刪除

AdvanceApp2

AdvanceApp

用戶端 ID: 顯示

說明:
AdvanceApp2
Subscribed Plans
TestOAuth (版本 1)

暫停

暫停APP

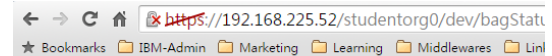
分析



匯出Access Log

APIM Scenario - JKHLE Airways – local Oauth2.0

- ✓ `https://192.168.225.52/studentorg0/dev/bagStatus/v1/oauth/authorize?response_type=code&redirect_uri=https://localhost&scope=/bagStatus/v1&client_id=98362498-d60e-4b5c-9d56-533cc5d4b321`
 - input : `apiuser1/ passwd`
 - output : `https://localhost/?code=AAKdD66sXwMuMszx9294Uzla6QBW-1JREiMnkRCMytzCjOLNoL4nlbDNm98kc1kDqR7CDDMSrxxGJ-CEI2fV6DhC_IAP32RBkm6qLJ0mCLkGav_sQMqKtUzze0g4SI5PNtiN4FFErWEFo3BwJ7fzVL-v-6Xb-xbl9dejhSTIQKAJGQ`
- ✓ `curl -k -u 98362498-d60e-4b5c-9d56-533cc5d4b321:N0oS7nF0hT7oH5al4rA2wV6eY8yl6pF1fN0cT4kK1tS6gB8cE8 https://192.168.225.52/studentorg0/dev/bagStatus/v1/oauth/token -d "grant_type=authorization_code&code=AAKdD66sXwMuMszx9294Uzla6QBW-1JREiMnkRCMytzCjOLNoL4nlbDNm98kc1kDqR7CDDMSrxxGJ-CEI2fV6DhC_IAP32RBkm6qLJ0mCLkGav_sQMqKtUzze0g4SI5PNtiN4FFErWEFo3BwJ7fzVL-v-6Xb-xbl9dejhSTIQKAJGQ&redirect_uri=https://localhost"`
 - output: { "token_type":"bearer", "access_token":"AAEFYy1hbGxTQnl41gp5NFGn-LmLM88uwmc_b0J7objY-EqcqG44elxScv0EeIL1N0w-7iUrbreT9QYiRj3Rt2rqJyM8xVTo8L9Z2o0ZOV0-H5AtTyMhMUyIljIenWfVOT7aPdjcK7nGDJOMK6Pf7wfin39_pPLHFEb8d90eqInTK5fx7sUIA", "expires_in":3600, "scope":"/bagStatus/v1" }
- ✓ `curl -k -X GET -H "Authorization: Bearer AAEFYy1hbGxTQnl41gp5NFGn-LmLM88uwmc_b0J7objY-EqcqG44elxScv0EeIL1N0w-7iUrbreT9QYiRj3Rt2rqJyM8xVTo8L9Z2o0ZOV0-H5AtTyMhMUyIljIenWfVOT7aPdjcK7nGDJOMK6Pf7wfin39_pPLHFEb8d90eqInTK5fx7sUIA" https://192.168.225.52/studentorg0/dev/bagStatus/v1/bagStatus?client_id=98362498-d60e-4b5c-9d56-533cc5d4b321`



Request for Permission

Welcome apiuser1

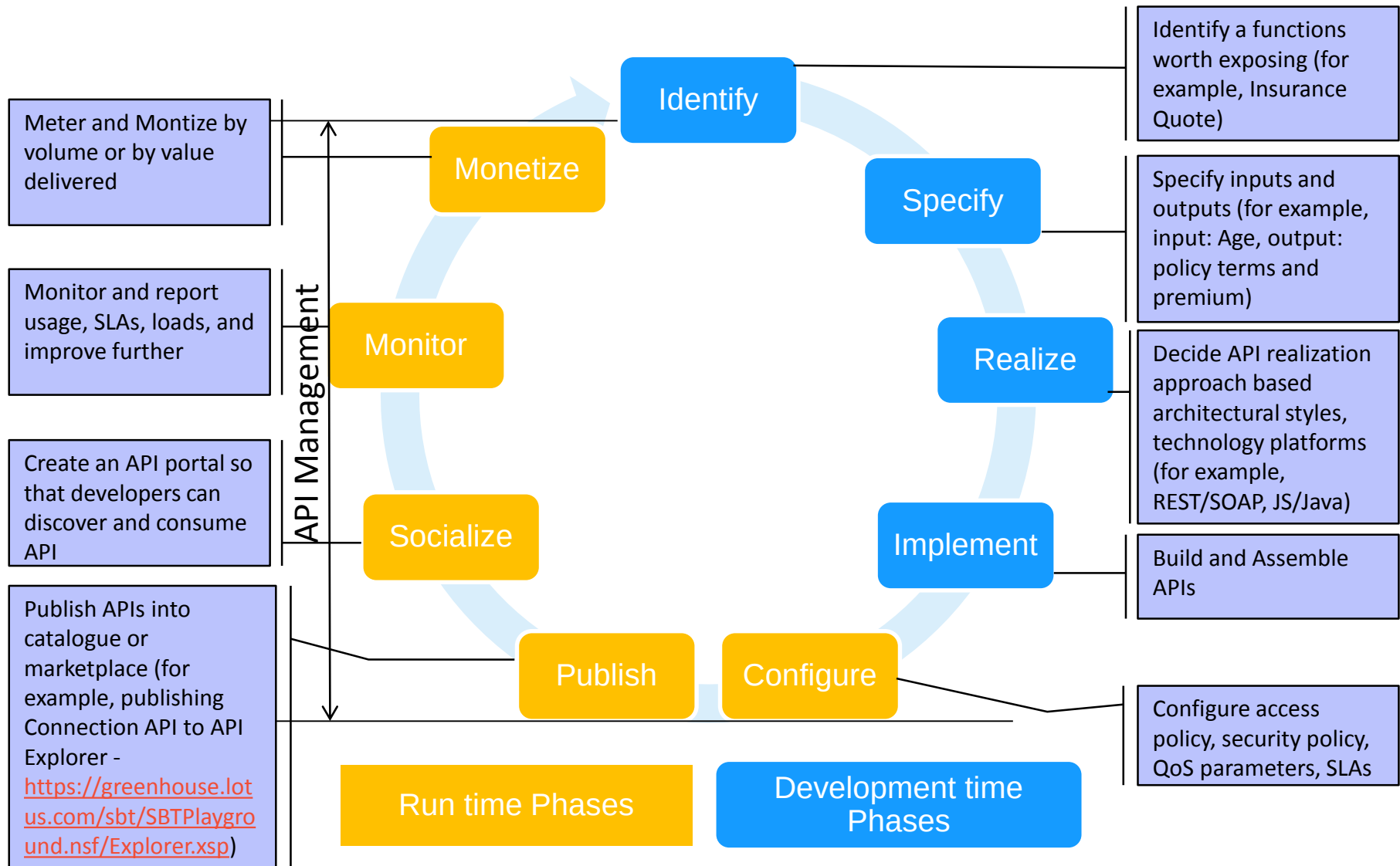
AdvanceApp is requesting your permission to access: /bagStatus/v1
Select "Allow Access" to grant the request or "No Thanks" to reject it.

Clicking "Allow Access" will redirect you to https://localhost.

議程

- APIs Value Recap(API Concept Overview)
- IBM API Management 簡介
- API Management 主要開發流程和運作原理
- 總結
- Q&A

API 開發生命週期是遞迴式的- API Identification 是第一步也是最重要的一步



Citibank Mobile Challenge結合黑客松與創新育成概念

LOB人員快速疏理企業Persona 並快速尋求市場驗證

Citibank 針對數位加速策略推出” Mobile Challenge”

- 開放 Citibank APIs 廣邀開發者開發創意APP
- 收到來自全球 64 個國家、319 個城市，165,000個開發者總共 744 項計畫提案
- 2015 “Join Pay” - 將點子轉換成實際 app 的例子，簡化朋友間吃飯拆帳流程



▼ Global Consumer Banking

- Retail Banking
 - Authenticate User
 - Account Summary
 - Balance Details
 - Transactions History
 - List Payee Types
 - List Payees
 - Transfer Funds to Account or Payee
 - FX Rates
 - Branch and ATM locations

▼ Institutional Clients Group

- Prepaid Cards
 - Authenticate User
 - Create Account
 - Retrieve Profile
 - Update Profile
 - Close Account
 - Add Funds
 - Balance Inquiry
- Corporate Payments
 - Authenticate User
 - Create New Account
 - Retrieve Account Info
 - Update Account Info
 - List Accounts
 - Initiate Payment
 - Retrieve Payment Info
 - List Recent Payments
 - Manage Beneficiaries

▼ Markets and Securities Services

- Capital Markets Trading
 - Authenticate User
 - Request For Quote (RFQ)
 - Place Order
 - Cancel Order
 - Order Status Inquiry
 - Content Services
- Revenue Analytics and Client Relationship Management
 - Retrieve Revenue Analytics
 - Retrieve Activities
 - Retrieve Contacts

API Management Resources

- ▶ Product Page
 - ibm.com/apimanagement
- ▶ API developer community
 - developer.ibm.com/apimanagement
- ▶ Twitter
 - @ibmapimgt
- ▶ YouTube Channel
 - youtube.com/ibmapimanagement
- ▶ Slideshare
 - slideshare.net/ibmapimgmt
- ▶ LinkedIn
 - Private user group 'IBM API Management'





Q&A



Thank
You



Breton

Spanish

French

Arabic

Korean

Hebrew

Hindi

Traditional Chinese

Swedish

**Brazilian
Portuguese**

English

Danish

Italian

Esperanto

**Chinese
Simplified**

German

Japanese

Dutch

Thai

Gaelic

Tamil

Clech