

# Open APIs & Marketing Channels



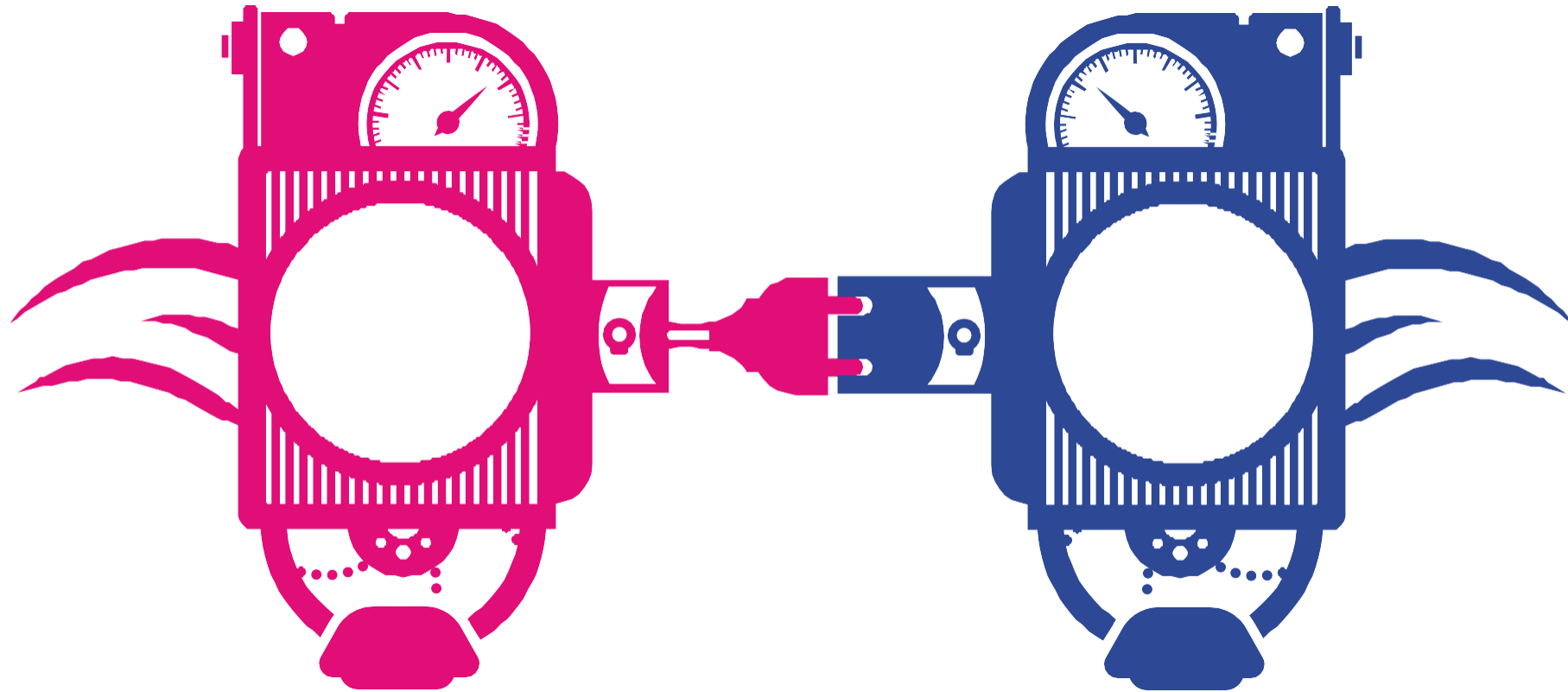
# Content

- What is the Application Program Interface?
- Types of API
- API in Industries
- Use cases
- Business models with API
- Open API & Open Banking
- Data Aggregators
- Financial Data Exchange

# What is an API ?

An **Application Programming Interface** (API) is a specification intended to be used as an **interface** by **software components** to **communicate** with each other. An API may include specifications for routines, data structures, object classes, and variables.

**In other words, APIs are like male and female plugs allowing software to share data and functionalities.**



API Provider Program

Consumer Program

# An analogy: The evolution of the car industry follows the logic of APIs

*Yesterday*

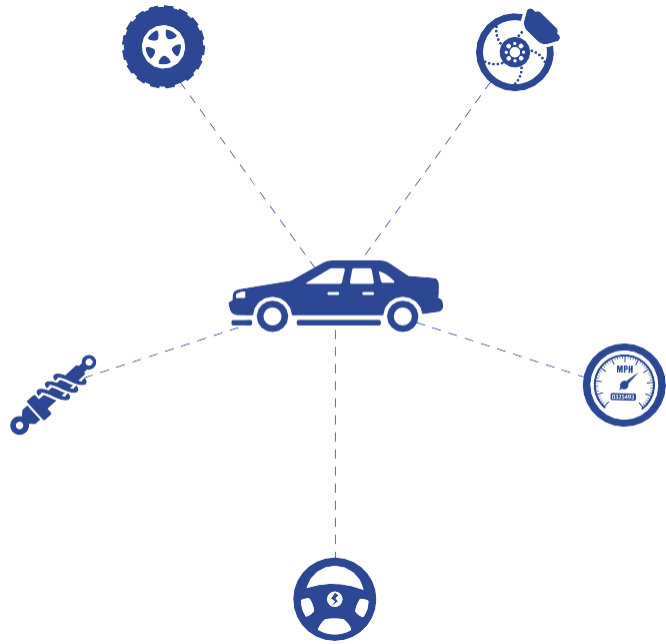


Carmaker = craftsman

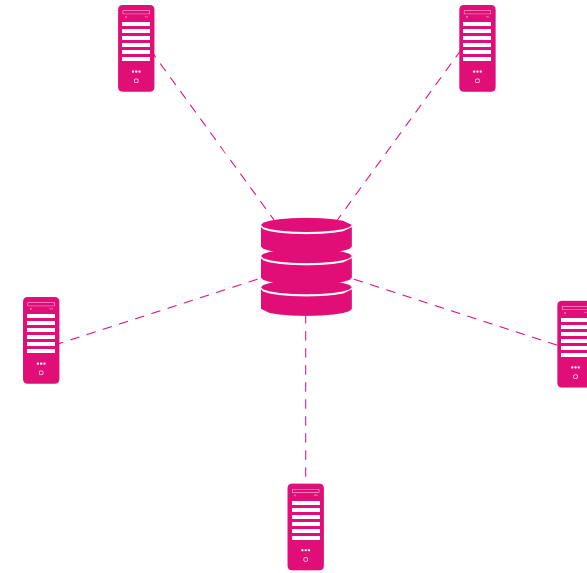
*Today*



Carmaker = system integrator



Just like a car which consists in several **subsystems** designed by different specialized teams (internal or partners) who communicate with each other all along the design process!



! a n API is a **software brick** that allows someone to share data, content and functionalities with others, for them to **build new services** based on this data, content and functionalities (i.e. using one or several bricks). The services built can use **one or several APIs** from the **same or different APIs providers**.

# There are three main types of API



## Private

Private APIs are used **internally** to facilitate the **integration** of different applications and systems used by a company.

### Advantages:

- Rationalized infrastructure
- Reduced costs
- Increased flexibility
- Improved internal operations

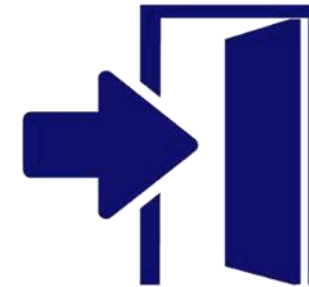


## Partner

Partner APIs are used to **facilitate** communication and integration of software **between a company and its business partners**

### Advantages:

- Value-added service
- Up sell
- Must have for business partners



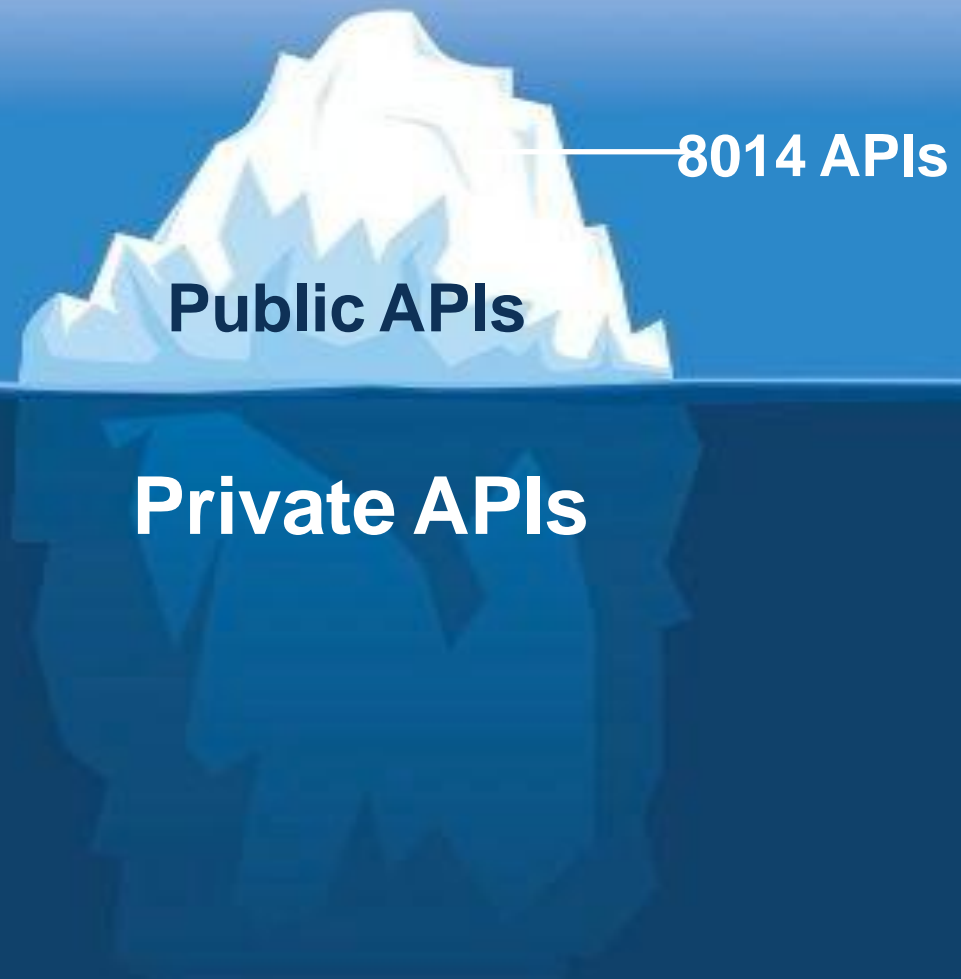
## Public

Public APIs allow companies to **publicly expose information and functionalities** of one or various systems and applications to **third parties** that do not necessarily have a business relationship with them.

### Advantages:

- Delegated R&D
- Increased reach, traffic
- New revenue stream

**However, most APIs are private and thus invisible to the public**



# APIs means a lot of exposure for web giants!



Source: Open APIs, What's Hot What's Not, John Musser

# ! and also significant revenue



Expedia  
Affiliate Network

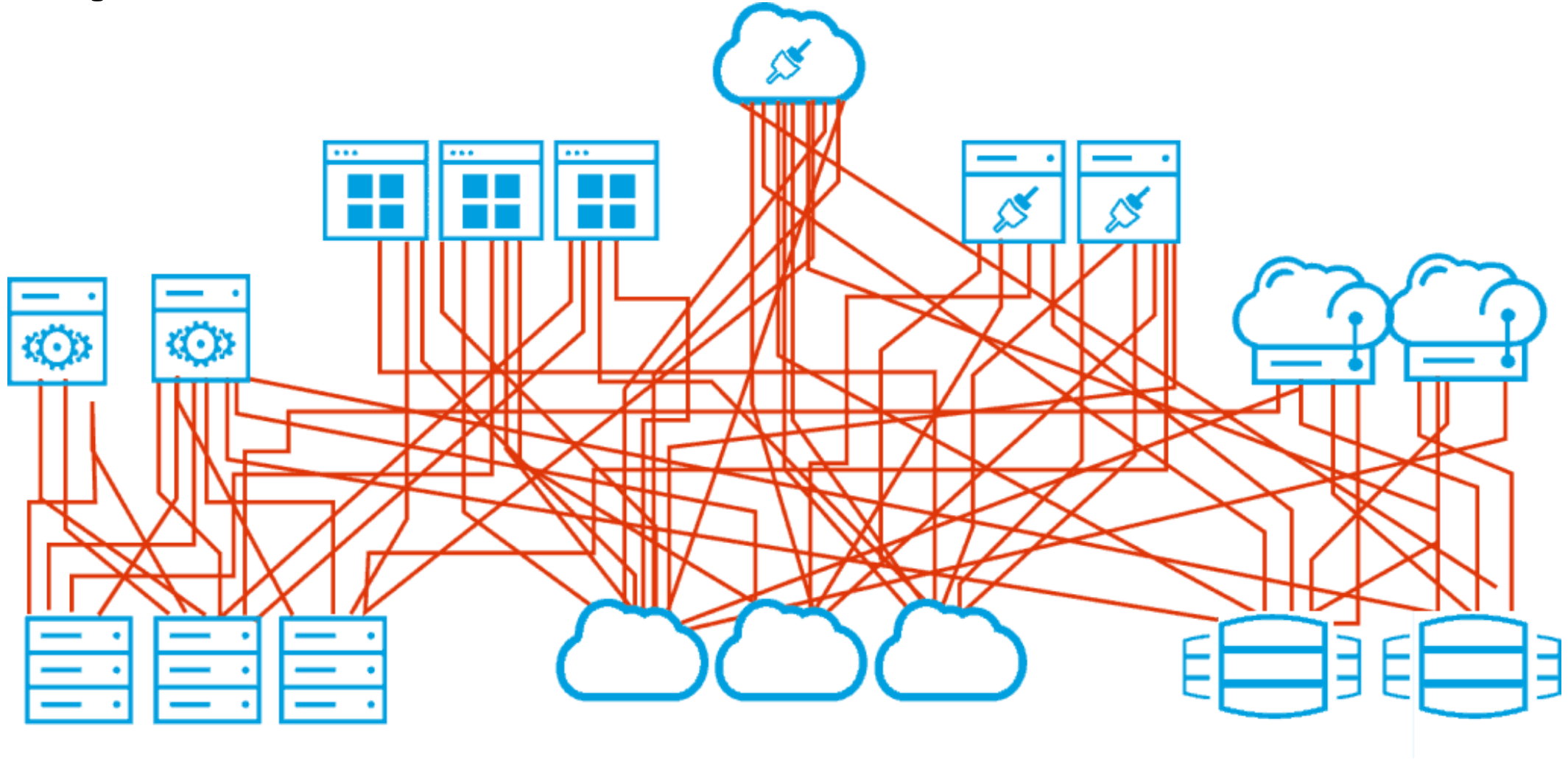
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**\$2**  
billion/year

“  
*90% of what we do is business through APIs*  
”

*John Watton, Expedia Affiliate Network, Travolution.co.uk, April 2012*

# Open API?



Source: 'What is API-led Connectivity', MuleSoft Blog (7/12/17)

# API revolutionized a century old industry: the Canadian Yellow Pages!



*Yellow Pages **book***

Before, **The Yellow Pages** were delivered as a paper directory. Users had to flip pages to find relevant information. The content was not mobile, you had to have a Yellow Pages book at hand to find what you were looking for.

Source: ProgrammableWeb



*Yellow Pages **database***



Today, **The Yellow Pages** data can be accessed via an API, allowing it to be present on any device (PC, smartphone, tablets, etc.) and associated with search, location-based services and other functionalities.

# ! and is expanding its reach to many industries



*Internet*



*Social*



*Tools*



*Mapping*



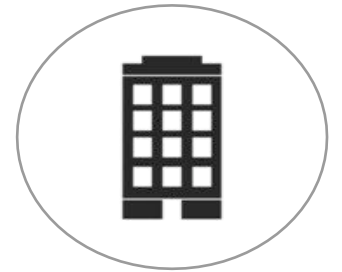
*Shopping*



*Telephony*



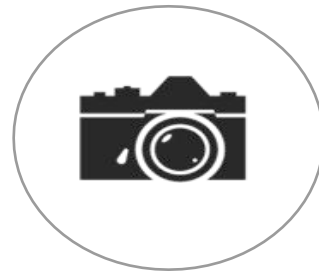
*Finance*



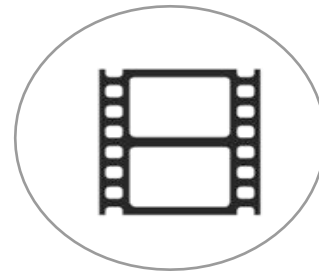
*Enterprise*



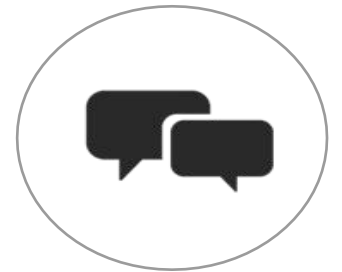
*Music*



*Photos*



*Videos*



*Messaging*

# Did you know? APIs can also be used to do unexpected things



Generates full report of available information about a specific vehicle based on its vehicle identification number.



Users pass CAPTCHAs through the API where they are solved by an OCR or manually. Average solved response time of 15 seconds, and average accuracy rate of 90%.



The FullerData Fortune Cookie API randomly generates a message (a fortune). There are a total of 882 fortunes available.



The KBS API provides users with programmatic access to the KBS's Korean translation of the Bible.



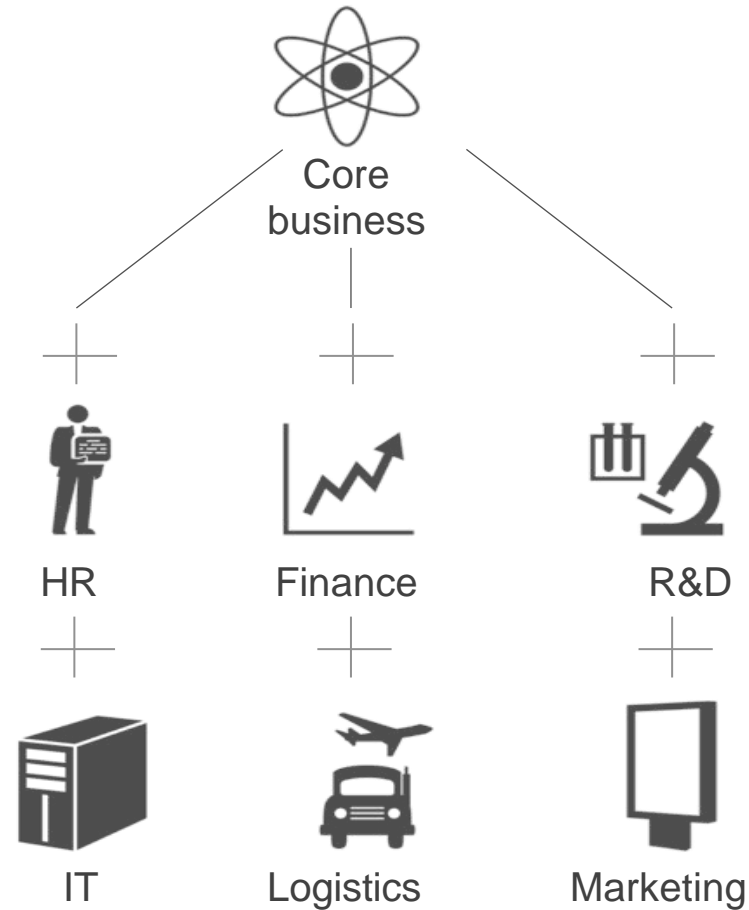
Who's Hurt is an injury reporting service for professional sports leagues, including football, baseball, basketball, hockey, and soccer leagues.



The MyFitnessPal API allows developers to access and integrate the functionality of MyFitnessPal (tracking food and exercise) to create new applications.

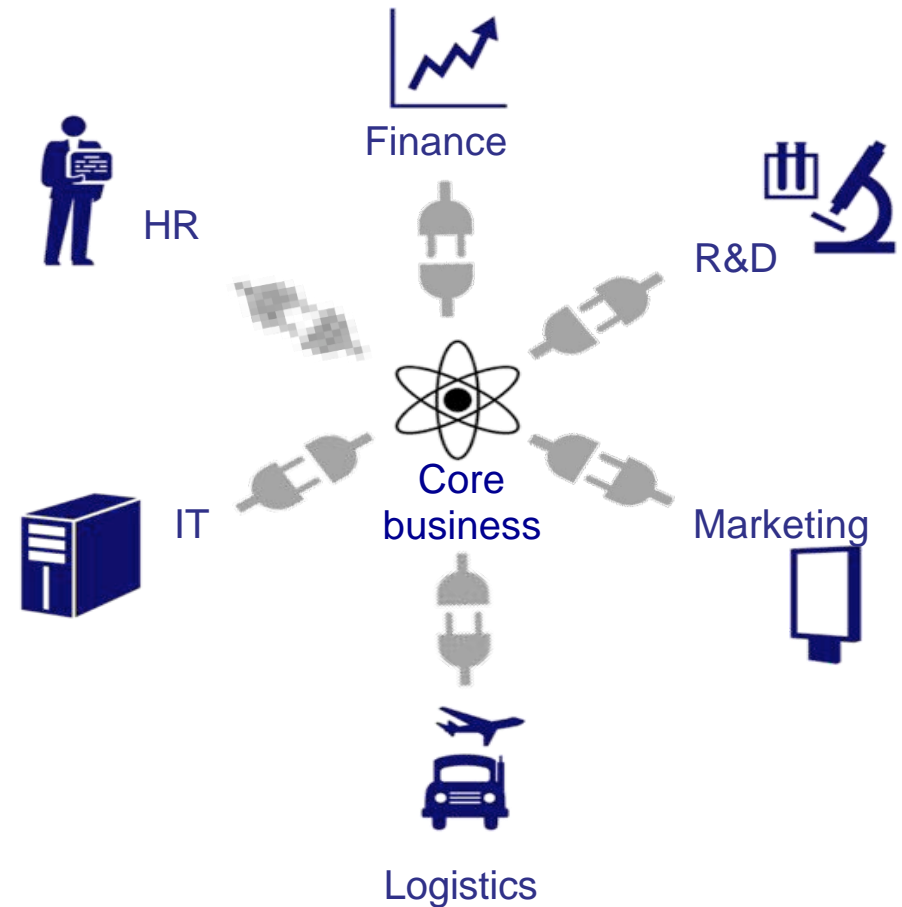
# APIs, an innovative and efficient model allowing companies to managing their core business activities only

## TRADITIONAL COMPANY



US.

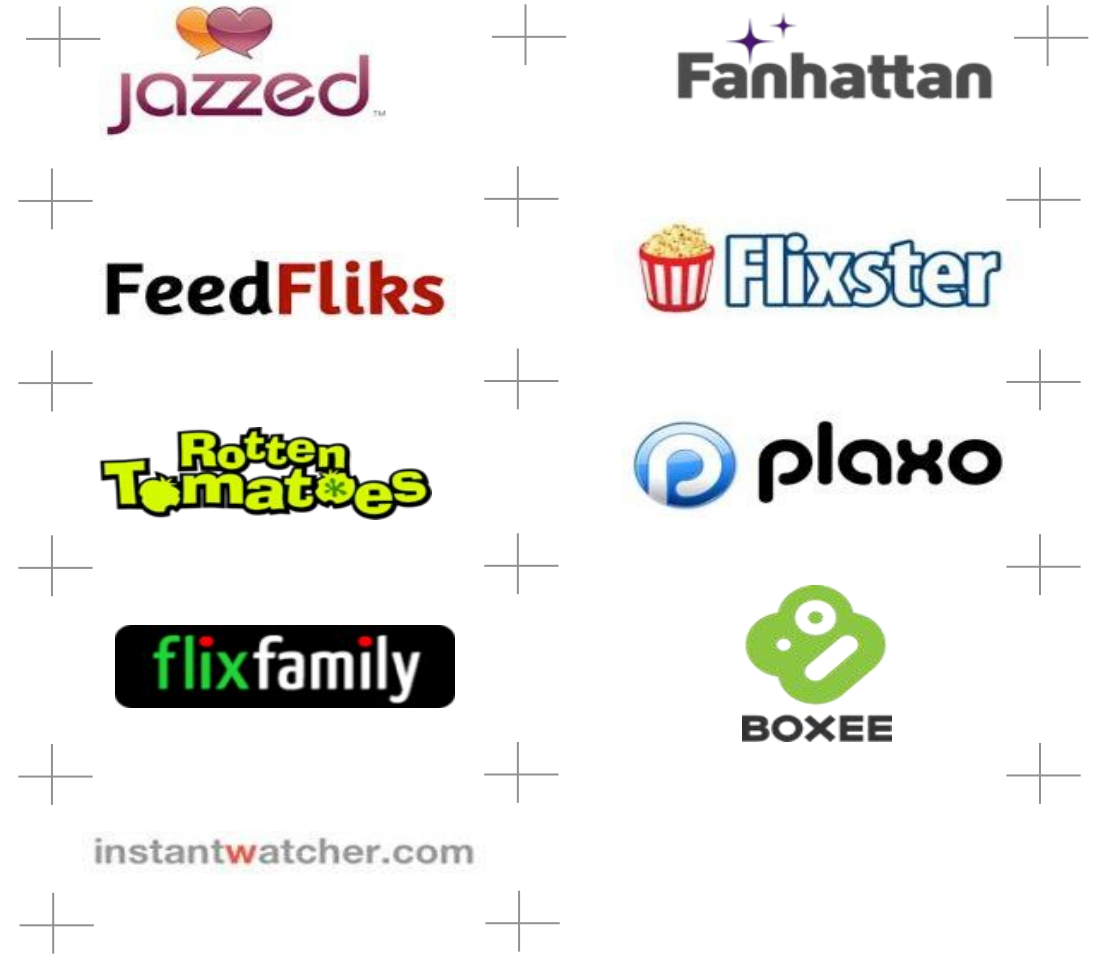
## API-DRIVEN COMPANY



In a traditional company, all functions are **internalized** to support the **core business**

In an API-driven company, support functions are **externalized** via an **API**, **focus** is on the **core business**

# Use Case. Many use case scenarios built on the Netflix API



**800+**

devices can stream  
Netflix content

Source: Redesigning the Netflix API, Daniel Jacobson

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2  
16

**20 000**

developers use  
the Netflix API

# Use cases. Facebook Connect API, partnership on a worldwide scale

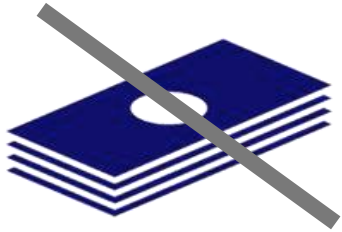


Facebook Connect allows users to **log-in** on any websites or application using their Facebook information.

Third party developers can add a “Connect with Facebook” button by using **Facebook Connect APIs**.

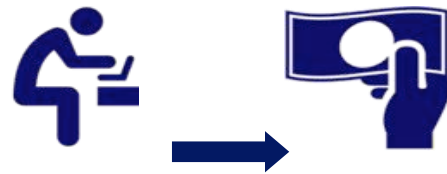
**Facebook Connect API has standardized credentials on the web, creating a universal ID**

# Shift in traditional business models with API



## Free

Any developer who signs up can access the API and use its functionalities. This is the model used by the **Facebook Like API**.

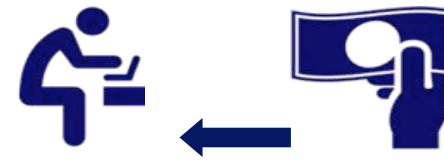


## User pays

API providers **get paid for the use** of their APIs. Different revenue models exist.

### Variants:

- Pay as you go
- Tiered
- Freemium
- Unit-based
- Transaction fee



## User gets paid

API providers **share revenue** with users for leads they bring to their website.

### Variants:

- Revenue share
- Affiliation



## Indirect

API providers receive **indirect revenue** from the use of their APIs. Salesforce for instance sell its API as a SaaS.

### Variants:

- Content acquisition
- SaaS
- Content syndication
- Internal use

# Business model 1. *Free*

## Case Study



The Facebook Like API is **free to use**. Anyone can embed a Like button on their page.

This allowed Facebook to spread very rapidly the Like button everywhere on the web, to enrich the **Facebook Social Graph**, to be present **everywhere on the web**, and to position themselves as **dominant in social recommendation**.

## Key figures

#1

**2,7** billion of Likes/day

#2

**2,5** million websites use the Like button

#3

**+1,000** websites adding the Like button/day

# Business model 2. *User pays*

## Case Study



Amazon Web Services (AWS) offer a wide variety of services (storage, database, computing power, servers, application services, deployment & management) accessible through a set of APIs.

Each of these services is charged following use pricing.

## Key figures

#1

**905** billion objects  
stored in AWS

#2

**\$750** million  
revenue in 2011

#3

**\$1** million savings for  
NASA after moving IT into AWS

Source: Statista. NASA sees \$1 millions savings in moving to cloud, FierceCIO

# Business model 3. *User gets paid*

## Case Study



The **Google AdSense API** allows publishers to automatically serve text, image, video, and rich media on Google's network websites, targeted following content and audience. These adverts are administered, sorted, and maintained by Google, and they can generate revenue on either a per-click or per-impression basis.

Source: Google AdSense Facts

## Key figures

#1

**\$9,71** billion of  
revenue in 2011 for Google

#2

**28%** of Google's  
revenue

# Business model 4. *Indirect*

## Case Study



Comcast, America's largest TV, media, entertainment and cable provider created an internal API for teams to easily share data and solutions.

The API is free for use by internal teams. Today, teams can build new products and user experience faster than ever, generating thus **new revenue sources** for Comcast.

## Key figures

#1

**30** minutes to share resources through internal API compared to months in the past

#2

**x100** increase in the API traffic last year

#3

**\$8,5** billion revenue for Xfinity, a Comcast offer using the API

Source: How an API Can Transform Your Enterprise, RWW. Comcast annual report.

# Open API & Open Banking[1]

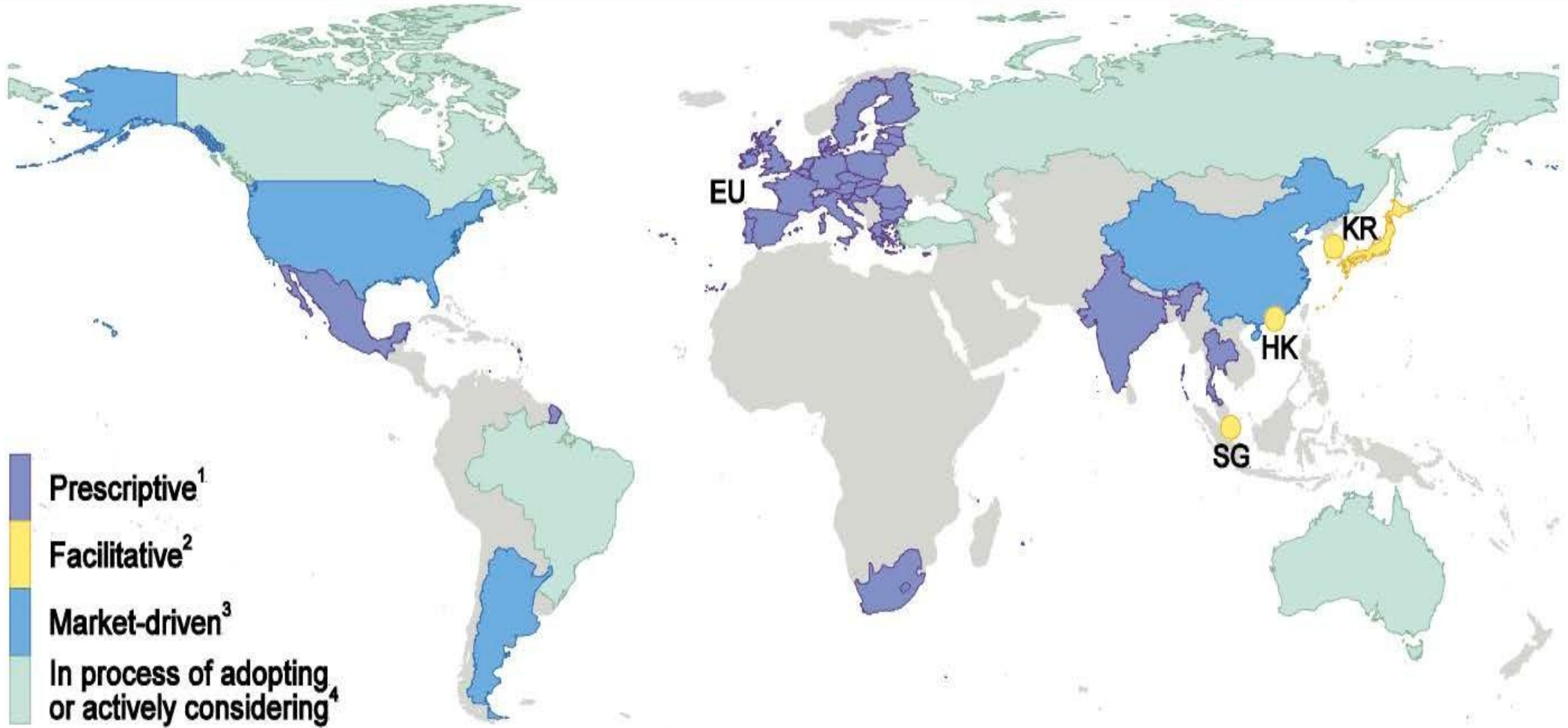
- Open Application Program Interfaces (Open API) allow for the Developers access and an capability to Integrate Permissioned Customer Data into Third Party Applications
- Open Banking encourages or orders Open API for Non-banks to Share Permissioned Bank Customer Data

# Open API & Open Banking[1]

- Arrangement Trade-offs of Advancing Competition & Development, Constraining Cyber security Dangers, and Keeping up Protection & Consumer Protections
- EU Payment System Directive (PSD2), UK Open Banking Initiative, etc.
- Alternatives: Screen Scraping, Reverse Engineering & Robotic Process Automation

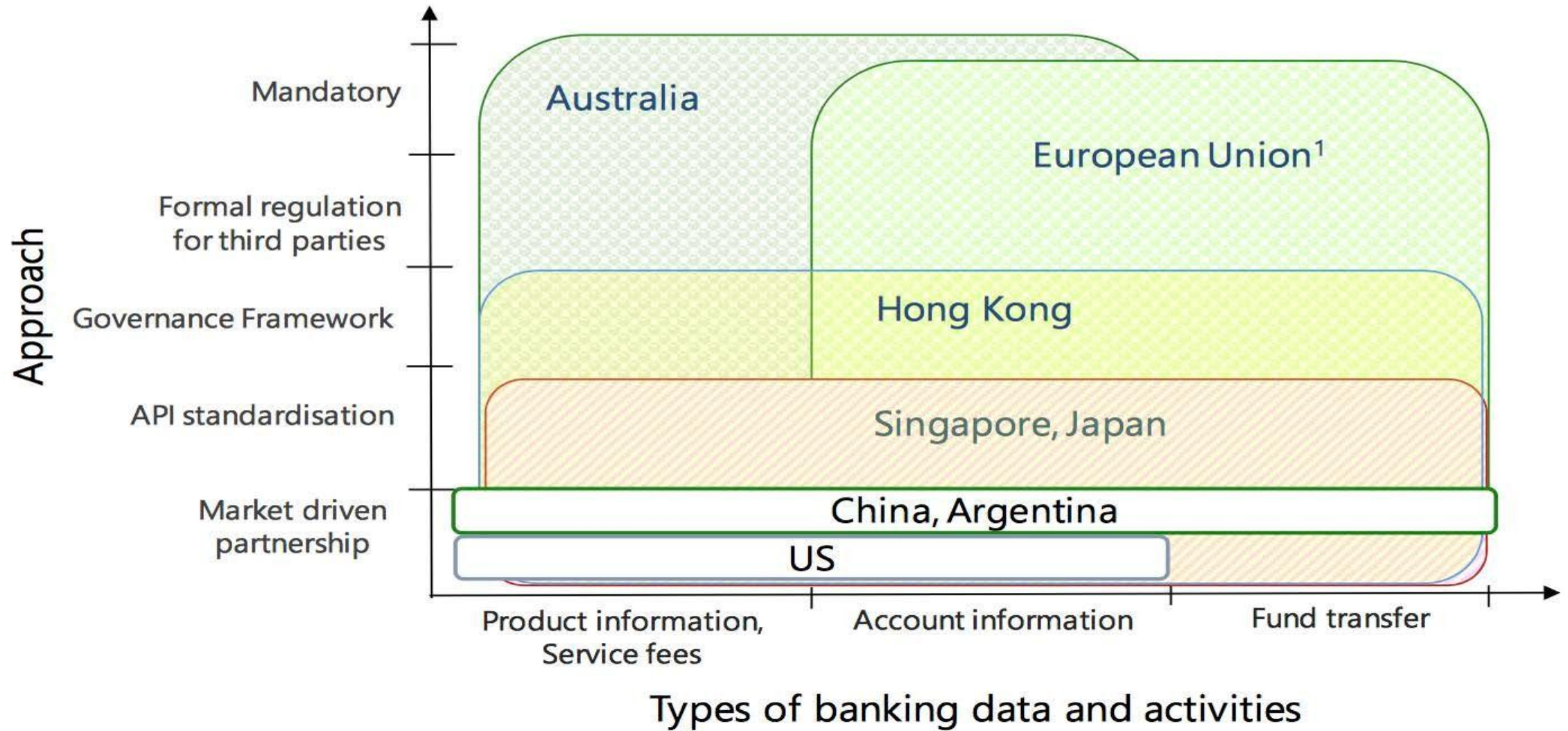
# Global view of open banking developments

Figure 1



<sup>1</sup> Requires data sharing, <sup>2</sup> Encourages data sharing, <sup>3</sup> No explicit rule/guidance requiring data sharing, <sup>4</sup> In process of adopting or actively considering adopting.

Source: 'Report on open banking and application programming interfaces', Bank of International Settlement (November 2019)



<sup>1</sup> EU: perimeter depicted in this figure represents the scope of the EU's PSD2, which only applies to payment services. Individual jurisdictions within the EU may choose to broaden the scope of their open banking frameworks beyond the requirements of PSD2 (eg FR and UK).

Source: 'Report on open banking and application programming interfaces', Bank of International Settlement (November 2019)

# Third Party Banking APIs - Data Aggregators[2]

Investnet (Yodlee)

Finicity

Fiserv (CashEdge)

Galileo

Instantor

Marqeta

MX

Plaid (& Quovo)

SaltEdge

SynapsePay

Tink

## Competitive Landscape

- Analytics
- Coverage
- Developer Service
- Price
- Reliability
- Security
- User Experience

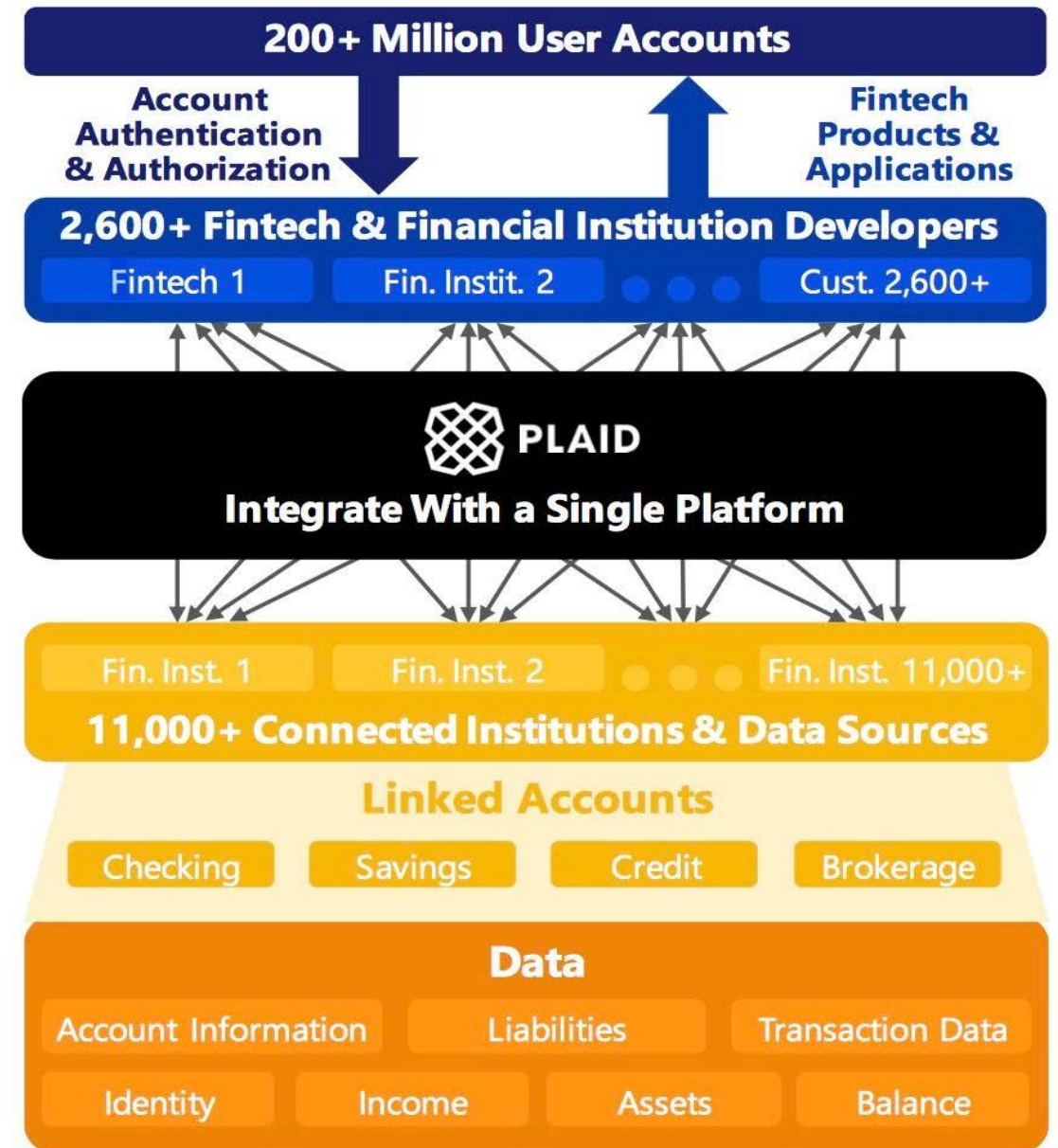
# Third Party Banking APIs - Account Aggregators[2]

**Afterbanks** (Spain, Portugal and Mexico), **Bankin** (Europe), **Basiq** (Australia), **Bud** (UK), **Budget Insight** (Europe), **Canopy** (Singapore), **CreditSense** (Australia and New Zealand), **DirectID** (UK), **Eurobits** (Spain), **eWise** (Australia, Asia & Europe), **figo.io** (Germany and Austria), **FinApi** (Germany, Austria, Czech Republic and Slovenia), **Finicity** (US), **FintecSystems** (Germany and Austria), **FormFree** (US), **Fractal** (UK SMEs), **Instantor** (Europe, Brazil & Mexico), **Klarna** (Europe), **Kontomatik** (Europe, Brazil & Mexico), **Moneyhub** (UK), **Moneytree** (Japan and Australia), **Nordic API Gateway** (Scandinavia), **Plaid** (US), **Proviso** (Australia and New Zealand), **Quovo** (US), **SaltEdge** (55 Countries), **SynapsePay** (US), **Tink** (Europe), **Topicus Finance** (Netherlands), **Token.io** (Europe), **Yodlee** (US, UK, Spain, Australia, India and New Zealand)

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# Plaid

- Founded 2013
- \$5.3B Merger announced with Visa (January 2020)
- 450 Employees
- Estimated \$109M Revenues



# Financial Data Exchange[3]

- “Standards for financial data sharing
- Standards for secure authentication and authorization
- A certification program and standards body
- User experience, consent guidelines and best practices”

Bank of America

Capital One

charles SCHWAB

CHASE

citi

The Clearing House

experian

Fannie Mae

Fidelity

FS-ISAC

Finicity

fiserv

intuit

PLAID

PNC

Quicken Loans

sifma

TD Bank  
America's Most Convenient Bank

TRUIST

usbank

USAA

WELLS FARGO

xero

ENVESTNET  
YODLEE

# References

1. 'Report on open banking and application programming interfaces' Bank of International Settlement
2. 'Fintechs next decade will look radically different' Nik Milanovic
3. 'RPA in Banking Use-cases, Benefits and Steps' Maruti Techlabs