TEMPLE UNIVERSITY

Digital Systems

7.1 Platforms & Digital Business Models, including APIs

FOX MIS

ROADMAP

START

Week 1:
Introduction & Systems Analysis
- Course Description
- Systems Thinking

Assignments #01 & 02

Week 2:
Digital Product Management & Introduction to Process Mapping
- Max Labs 1a & 1b
- Systems & Processes
- Swim Lane Diagrams

Assignment #03

Week 3:
Data Modeling with Entity Relationship Diagrams
- Swim Lane Diagrams
- ERD Diagrams

Assignment #04

Week 4:
Digital Systems – Learn IT! #1
- ERD Diagrams
- Learn IT Kickoff

Assignment #05

Week 5:
Exam #1,
Information Systems: Part I & II
- CRM & ERP

*Exam: check course site
Assignment #06

Week 6:
Information Systems: Parts I - III
- Data Analytics
- SCM

Assignment #07

Week 7:
Platforms & Digital Business Models, plus APIs
- Platforms & Digital Models, APIs
- Cybersecurity

- Assignment #08

Week 8:
Information Systems & Cybersecurity
- Protection Protocols
- Artificial Intelligence

Week 9:
Exam #2 & JavaScript Unit #1
- Parts I & II
- Hello World, Variables

*Exam: check course site

Week 10:
JavaScript Unit #2 Functions
- Values & Variables
- Operator types
- Strings

Assignment #9

Week 11:
JavaScript Unit #3 Logical Operators & Conditional Logic
- Logical Operators
- Conditional Types

Week 12:
JavaScript Unit #4 Loops
- Intro to Loops
- While and Do

Assignment #10

Week 13:
JavaScript Unit #4 Working with Loops & HTML & CSS Unit
- Writing the code
- HTML & CSS Basics

Week 14:
HTML & CSS Unit (continued)
- HTML & CSS Basics
- Course Reflection

Assignments #11
*Final Exam: check course site

FINISH

Current Events

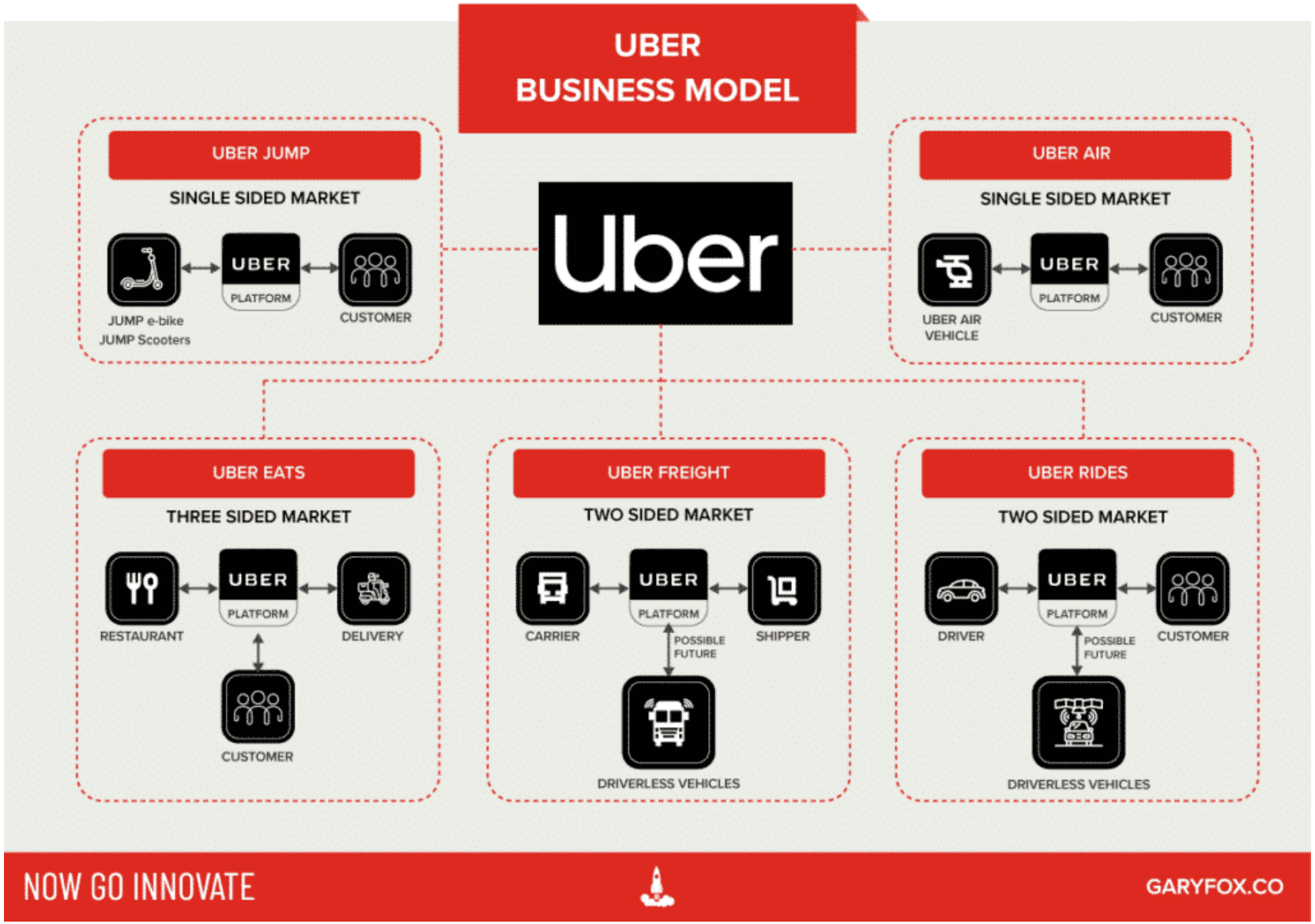
- **What's happening in the world today from an IS perspective?**
  - **How does it relate to this week's discussion?**
  - **How does it impact your industry or profession?**

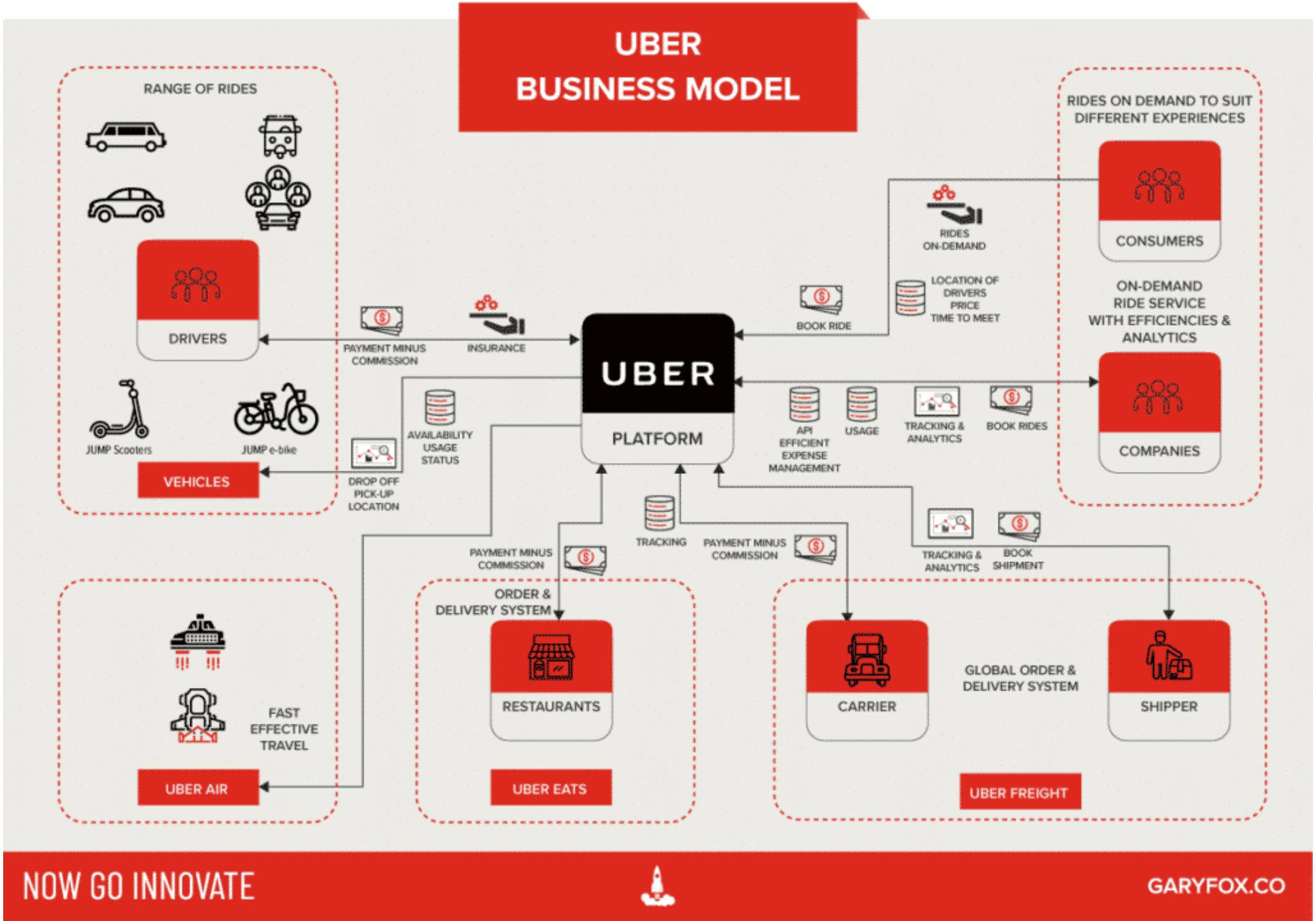
Digital Platforms?

"…facilitates commercial interactions between at least two different groups…"

- What are some core functions of a platform?
  - Audience Building
  - Matchmaking
  - Providing Core Tools & Services

Source: https://thumbor.forbes.com/thumbor/960x0/https%3A%2F%2Fblogs-images.forbes.com%2Fpeterbendorsamuel%2Ffiles%2F2018%2F03%2FDigital-Platform-Strategy-913629568.jpg


UBER
BUSINESS MODEL
Uber
UBER JUMP
SINGLE SIDED MARKET
UBER
PLATFORM
JUMP e-bike
JUMP Scooters
CUSTOMER
UBER AIR
SINGLE SIDED MARKET
UBER
PLATFORM
UBER AIR
VEHICLE
CUSTOMER
UBER EATS
THREE SIDED MARKET
UBER
PLATFORM
RESTAURANT
DELIVERY
CUSTOMER
UBER FREIGHT
TWO SIDED MARKET
UBER
PLATFORM
CARRIER
SHIPPER
POSSIBLE
FUTURE
DRIVERLESS VEHICLES
UBER RIDES
TWO SIDED MARKET
UBER
PLATFORM
DRIVER
CUSTOMER
POSSIBLE
FUTURE
DRIVERLESS VEHICLES
NOW GO INNOVATE
GARYFOX.CO


UBER
BUSINESS MODEL
RANGE OF RIDES
DRIVERS
JUMP Scooters
JUMP e-bike
VEHICLES
PAYMENT MINUS COMMISSION
INSURANCE
AVAILABILITY USAGE STATUS
DROP OFF PICK-UP LOCATION
UBER
PLATFORM
BOOK RIDE
RIDES ON-DEMAND
LOCATION OF DRIVERS PRICE TIME TO MEET
API EFFICIENT EXPENSE MANAGEMENT
USAGE
TRACKING & ANALYTICS
BOOK RIDES
RIDES ON DEMAND TO SUIT DIFFERENT EXPERIENCES
CONSUMERS
ON-DEMAND RIDE SERVICE WITH EFFICIENCIES & ANALYTICS
COMPANIES
TRACKING
PAYMENT MINUS COMMISSION
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Digital Platforms

What are the benefits?

- For Companies?
- For Consumers?
- For Industry?

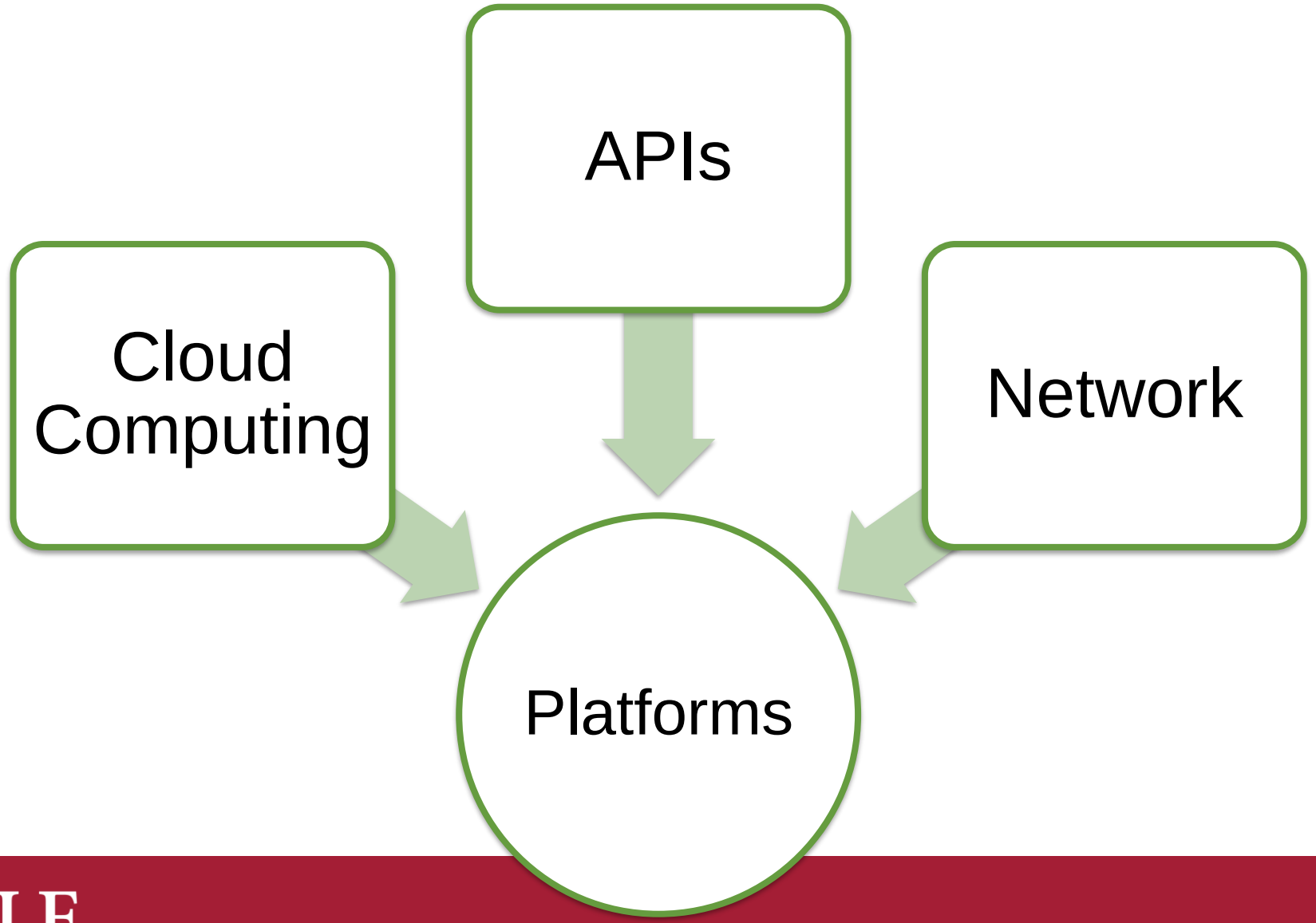
Source: https://www.arup.com/-/media/arup/images/perspectives/themes/cities/how-can-cities-benefit-from-becoming-digital-platforms-2000x833.jpg

Max Labs – 3b Discussion

“The Cloud”

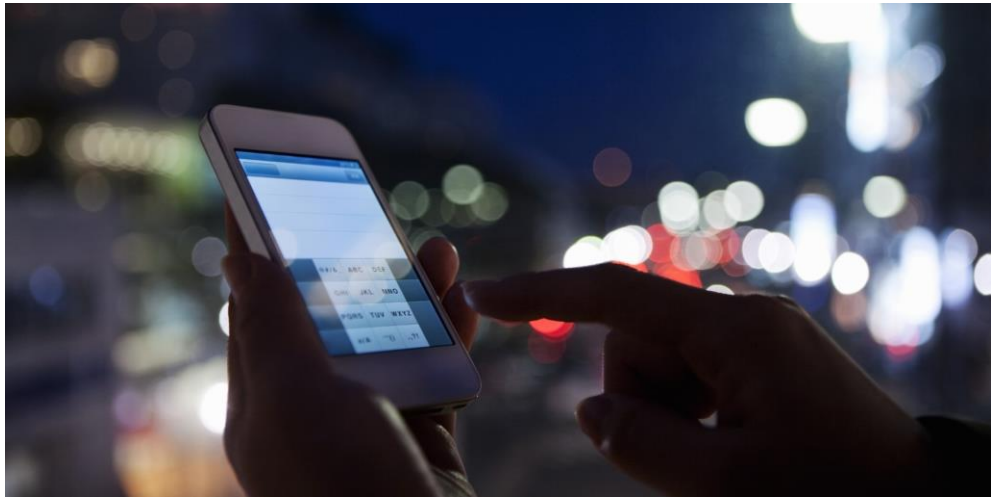
- API’s
- PAAS
- Automation
- Coding
  - HTML

Source: https://i1.wp.com/www.startupmgzn.com/english/wp-content/uploads/2018/06/shutterstock_710262001.jpg?resize=740%2C494&ssl=1


APIs
Cloud Computing
Network
Platforms

Network Effects

What is the impact of Network Effects on the different types of platforms?



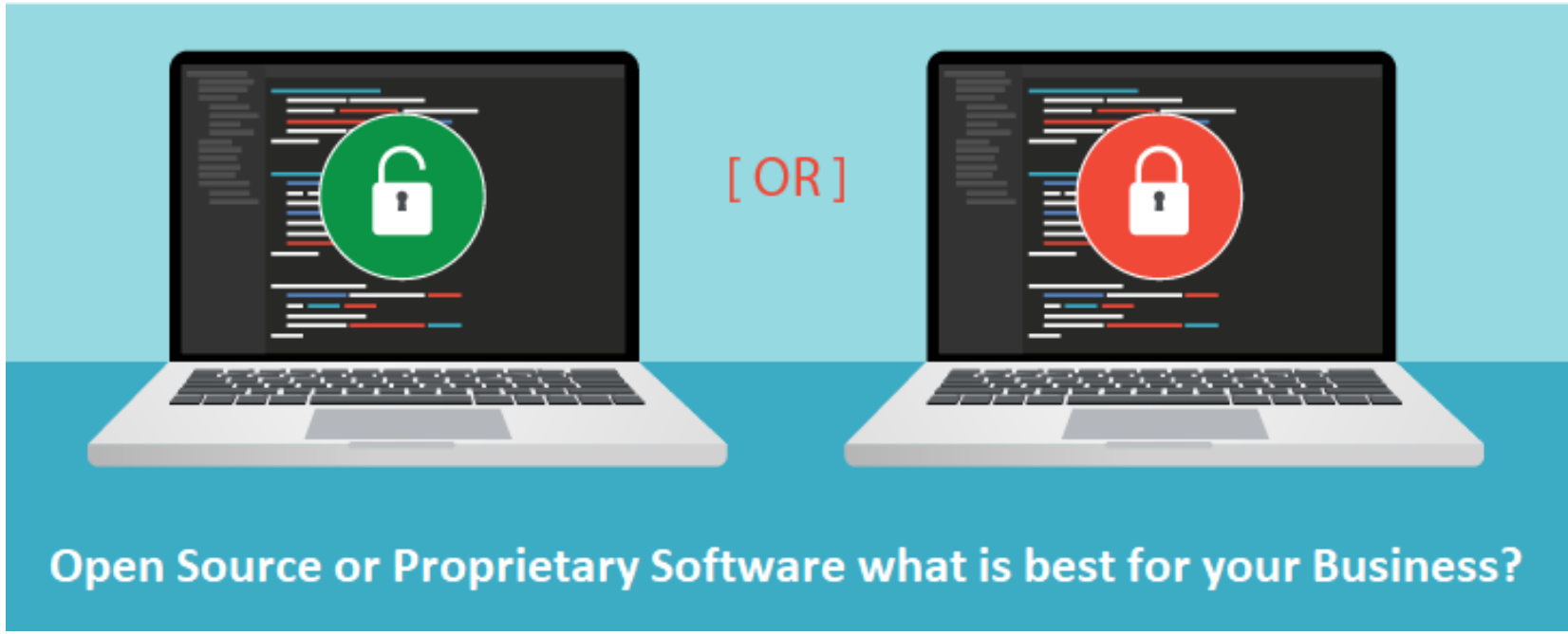
Source: https://www.snapsuites.com/wp-content/uploads/2017/05/o-SMARTPHONE-NIGHT-facebook.jpg

Source: https://g.foolcdn.com/image/?url=https%3A%2F%2Fg.foolcdn.com%2Feditorial%2Fimages%2F428448%2Fthe-network-effect-getty.jpg&w=700&op=resize

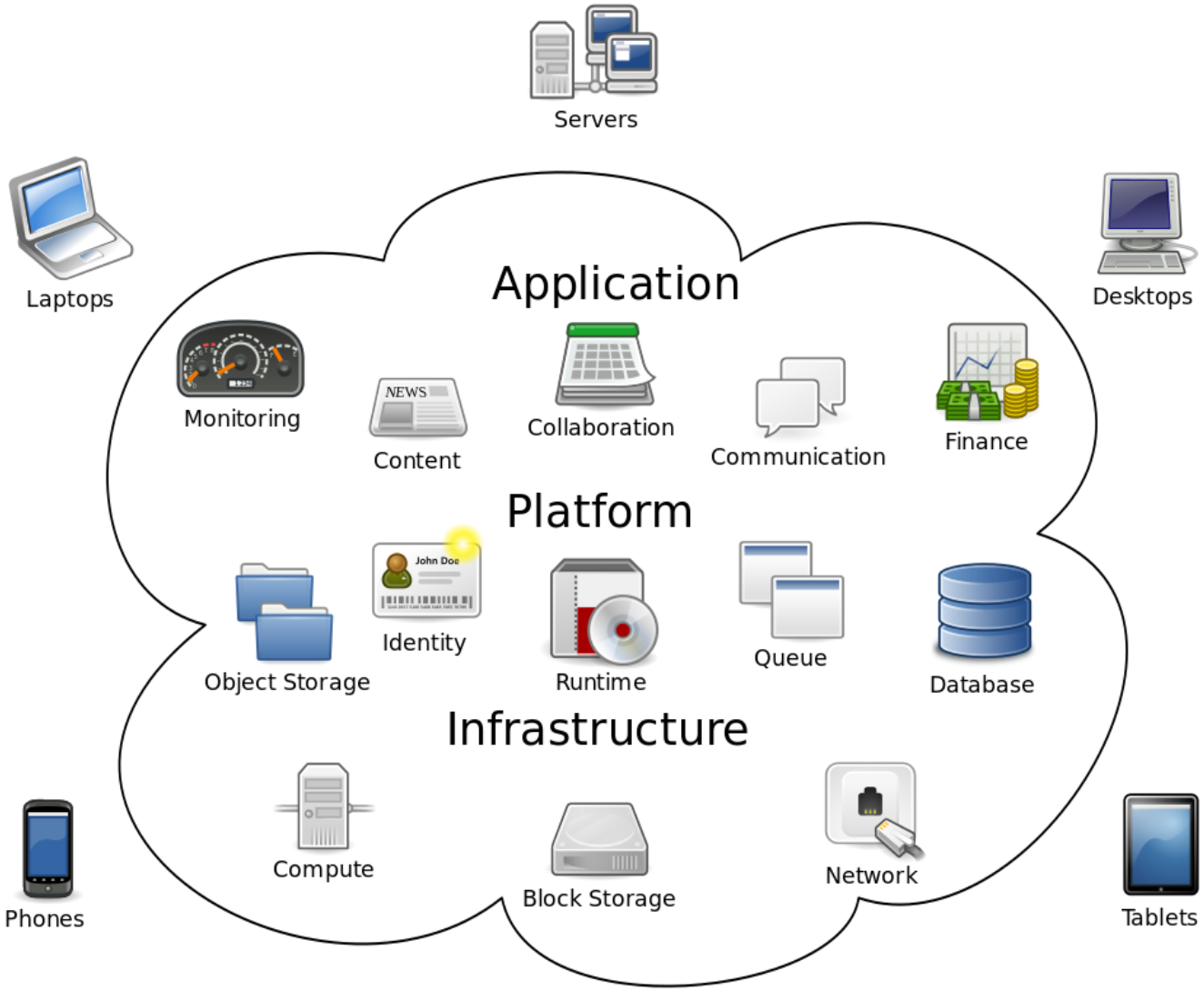
Platform Business Models

Proprietary vs. Shared

1. Examples?
2. Advantages?
3. Disadvantages?



Source: https://www.esds.co.in/blog/wp-content/uploads/2018/04/OPEN-SOURCE-OR-PROPRIETARY-SOFTWARE.png



Cloud Computing

Cloud Computing

Pros

- Collaboration
- Scalability
- Cost
- Ease of use

Cons

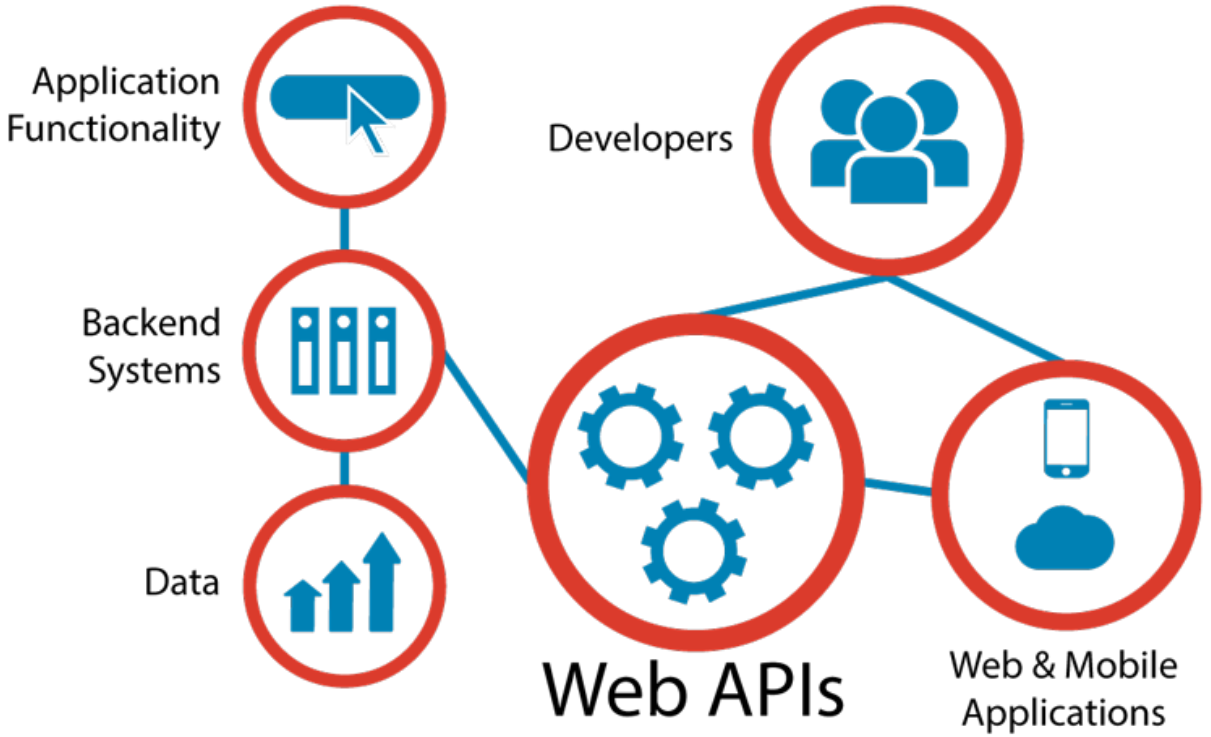
- Security
- Data Integrity
- Availability
- Privacy

Source: http://blog.ionixxtech.com/wp-content/uploads/2017/09/Image_1-2.jpg

APIs: Application Programming Interface

What is an API?

- Connect computer software components
- Contract for Data Interaction
  - Facilitates interactions between front & backend IT systems (Web API's)
- Can you think of any examples???
  - Hint…think smartphones and IoT.

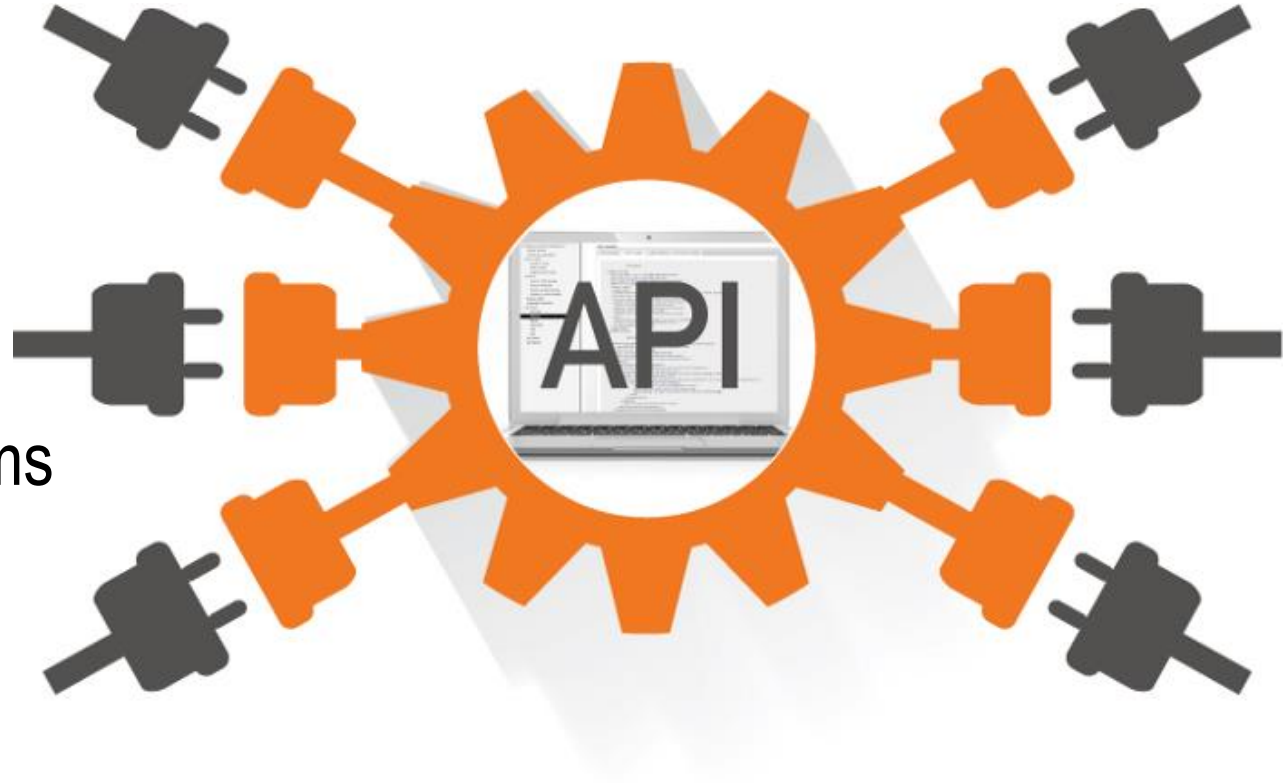


Source: https://www.apiacademy.co/assets/2015/04/Web-APIs-v5_0.png

APIs: "…a strategic business imperative"

API's Key Considerations

- Extract more value from existing assets
- Drive new innovations
- Easier access across multiple ecosystems
- API's are Products – "building blocks"
  - "live beyond any one project"
  - "reusable assets"

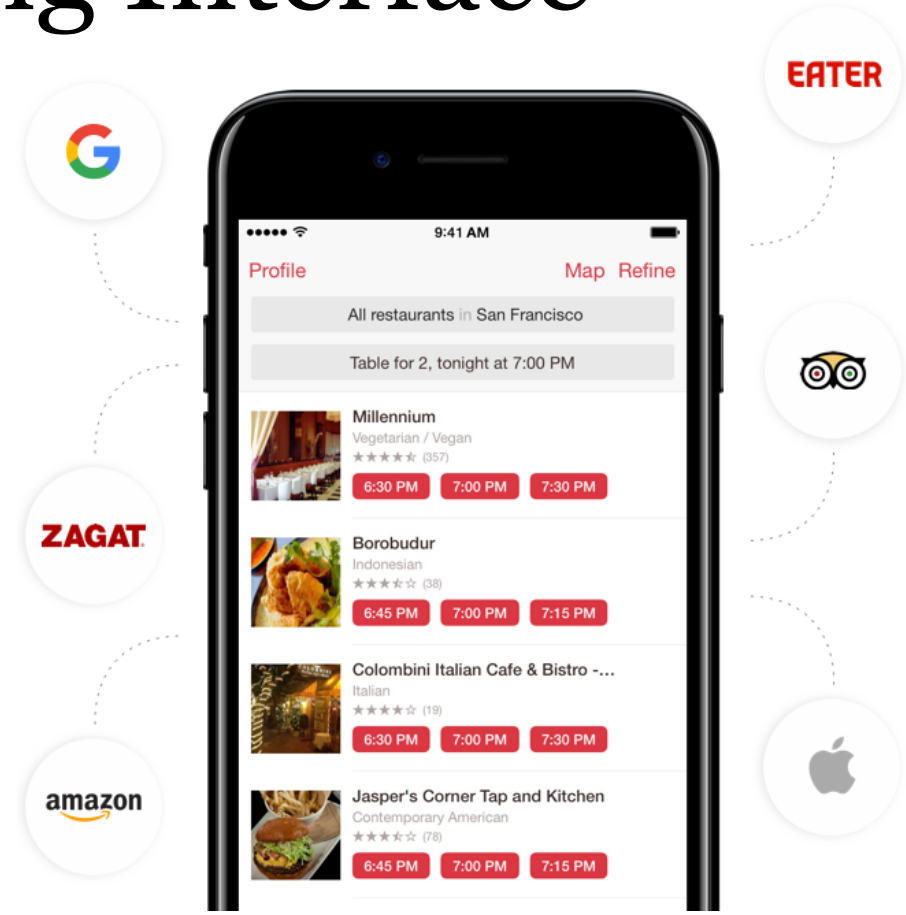


Source: https://miro.medium.com/max/700/1*6K4eQYf0R7cPCzukMCtu7Q.png

APIs: Application Programming Interface

API Case Study: OpenTable

- What happens when you search for a restaurant?
- What types of data is being retrieved?



Source: https://restaurant.opentable.com/assets/fg/g/opentable-iphone-app-partner-logos.png

IaaS (Infrastructure as a Service)

Case Study: AWS and Capital One

1. Run any application anywhere
2. Bring products to market quickly
3. More resilient architecture around systems
4. Design for customer needs
5. Protect customer assets

Source: https://d1.awsstatic.com/case-studies/US/Capital%20One%20Cafe.bb6b7a7a133a573f381e9bb4e6860f68c00fea8c.jpg

SaaS (Software as a Service)

Case Study: G Suite

1. Third Party Provider
2. Subscription based
3. OS-agnostic
4. Runs its software on its own servers in the cloud,
5. Reduced risk of piracy

Source: https://empireflippers.com/9-saas-examples/

Source: https://images.idgesg.net/images/article/2018/11/g-suite-logos-8-rows-100781657-large.jpg

More to Come

Prepare with Readings & Videos before our next class!!!