



Digital Systems

7.1 Platforms & Digital Business Models, including API's

FOX
MIS

ROADMAP

START

Week 1:

Introduction & Systems Analysis

- Course Description
- Systems Thinking

Week 2:

Digital Product Management & Introduction to Process Mapping

- Max Labs 1a & 1b
- Systems & Processes
- Swim Lane Diagrams

Week 3:

Data Modeling with Entity Relationship Diagrams

- Swim Lane Diagrams
- ERD Diagrams

Week 4:

Digital Systems – Learn IT! #1

- ERD Diagrams
- Learn IT Kickoff

Week 5:

Exam #1, Max Labs & Information Systems: Part I & II

- CRM & ERP

Week 9:

Exam #2 & JavaScript Unit #1 - Part I & II

- Hello World, Variables

Week 8:

Cybersecurity & AI – Part I & II

- Protection Protocols
- Artificial Intelligence

Week 7:

Platforms & Digital Business Models: Part I & II

- Platforms & Digital Models
- APIs

Week 6:

Information Systems: Part III & IV

- Data Analytics
- SCM

Week 10:

JavaScript Unit #2 Functions

- Operator types
- Strings

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

Week 13:

JavaScript Unit #4 Working with Loops

- Writing the code

Week 14:

HTML & CSS Unit

- HTML basics
- CSS basics
- Course Reflection

FINISH

Digital Platforms

Digital Platforms

- ❖ A digital platform is a business model that creates value by facilitating interactions between two or more interdependent groups, usually consumers and producers.



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

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>

Digital Platforms

❖ Examples of Digital Platforms

- Uber



- Ebay



- Airbnb



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

Digital Platforms

❖ What are the benefits of digital platforms?

- 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>

Digital Platforms

❖ What are the benefits of digital platforms?

- Make it easier for companies to find customers (and vice versa)
- Reduce transaction costs
- Reduce barriers to entry for many smaller companies to coexist with the “big fish”
- Reduce Search costs
- Monetize underutilized assets



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

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>

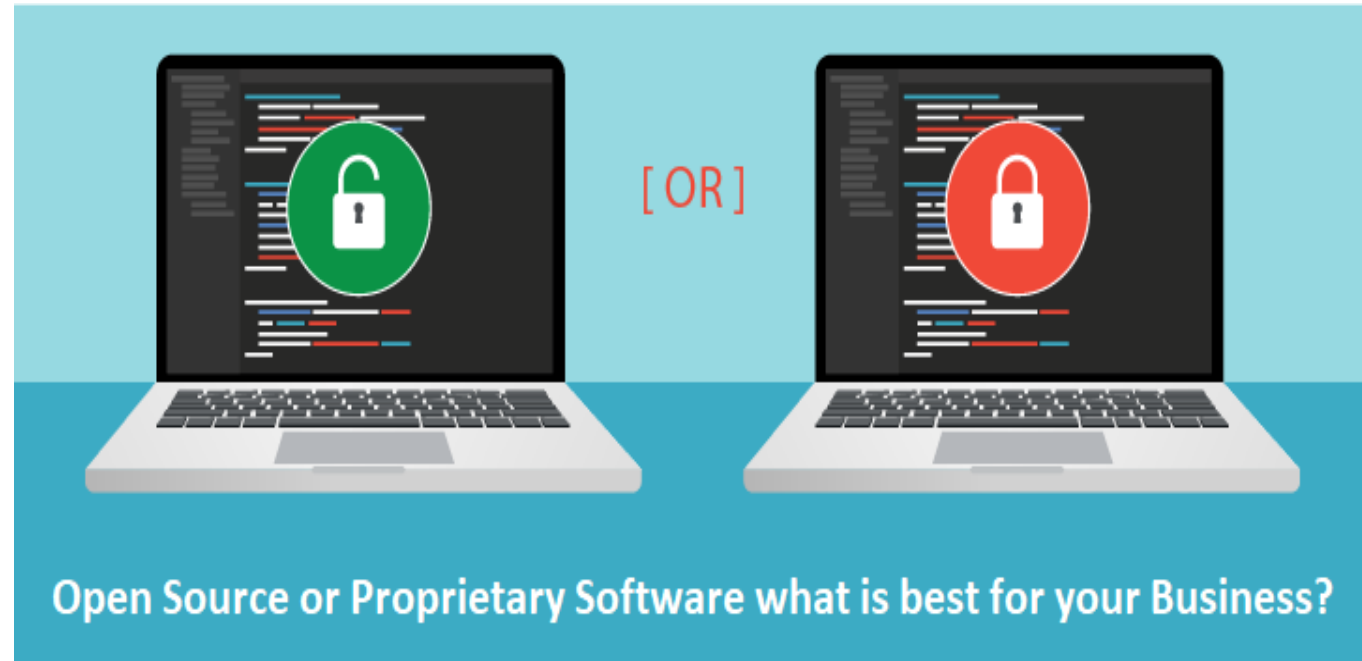


Source: <https://g.foolcdn.com/image/?url=https%3A%2F%2Fg.foolcdn.com%2Feditorial%2Fimages%2F428448%2Fthe-network-effect-getty.jpg&w=700&op=resize>

Platform Business Models

❖ Proprietary vs. Shared

- Examples?
- Advantages?
- Disadvantages?



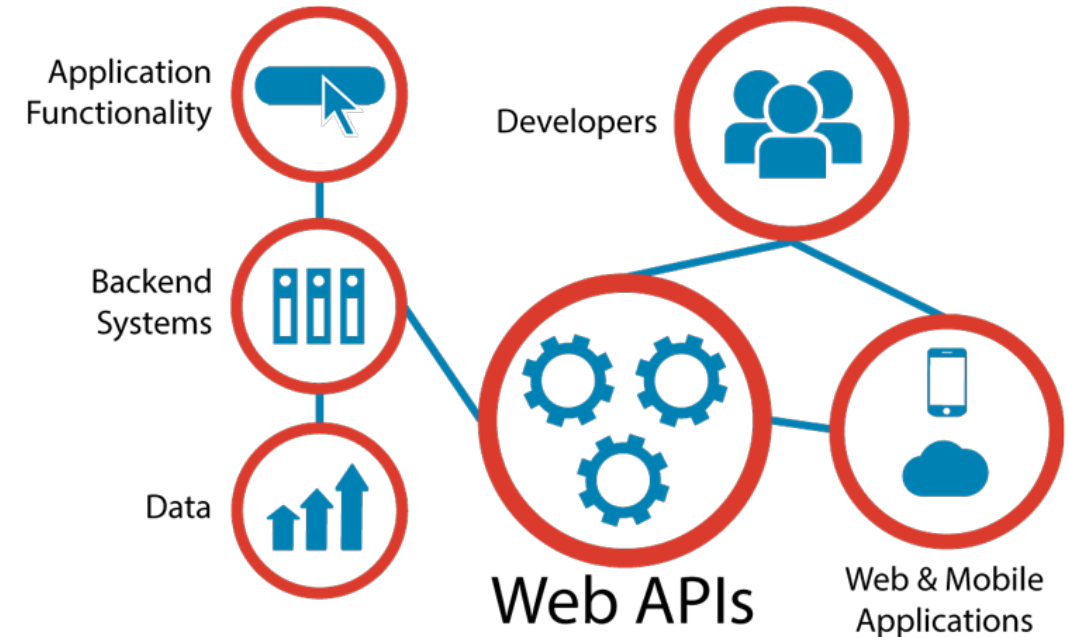
Source: <https://www.esds.co.in/blog/wp-content/uploads/2018/04/OPEN-SOURCE-OR-PROPRIETARY-SOFTWARE.png>

API: Application Programming Interface

API's: 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.

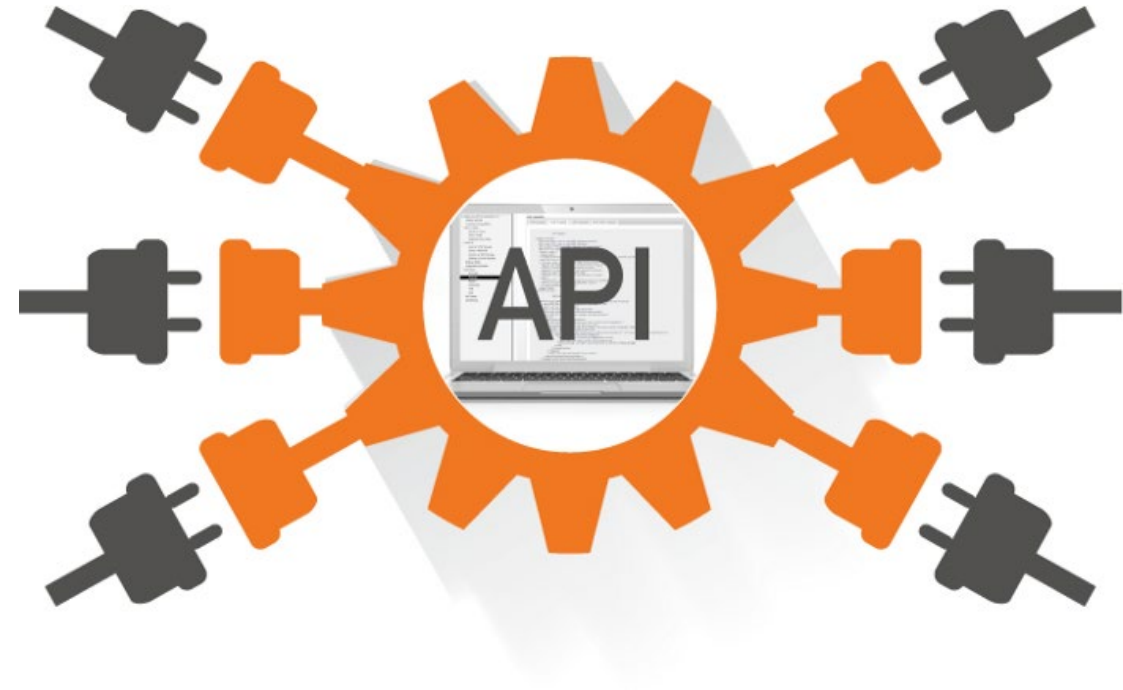


Source: https://www.apiacademy.co/assets/2015/04/Web-APIs-v5_0.png

API's: Application Programming Interface

❖ 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”

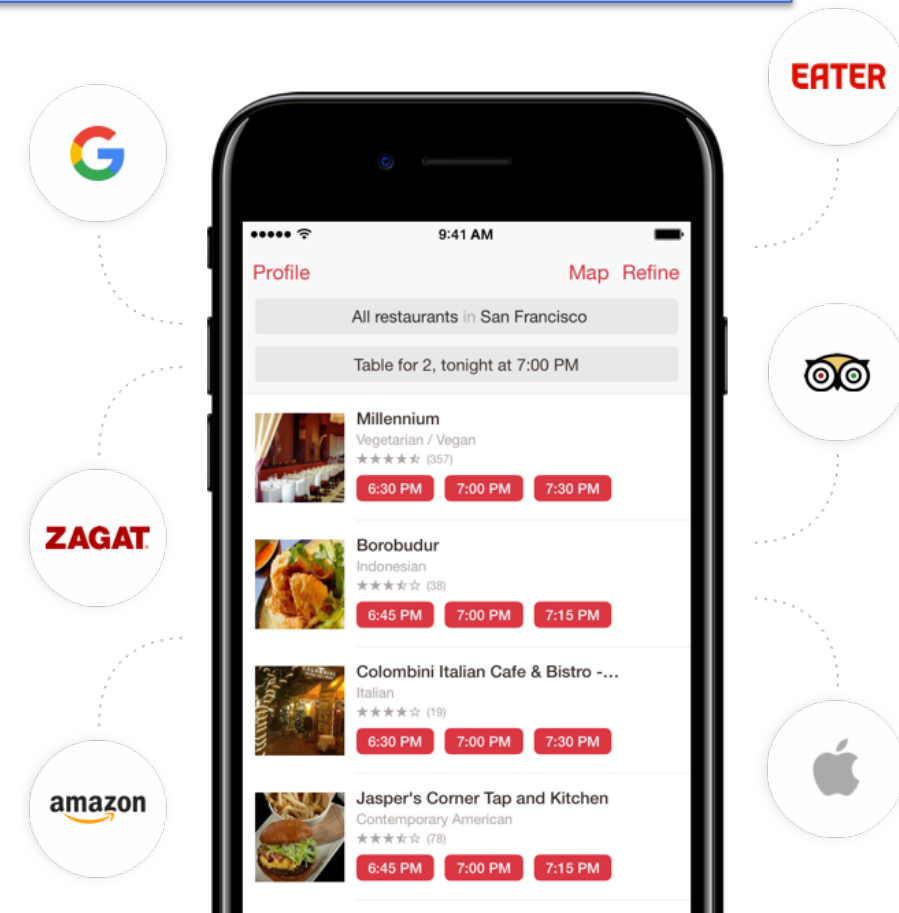


Source: https://miro.medium.com/max/700/1*6K4eQYf0R7cPCzukMCtu7Q.png

API's: 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>

Cloud Computing

Cloud Computing

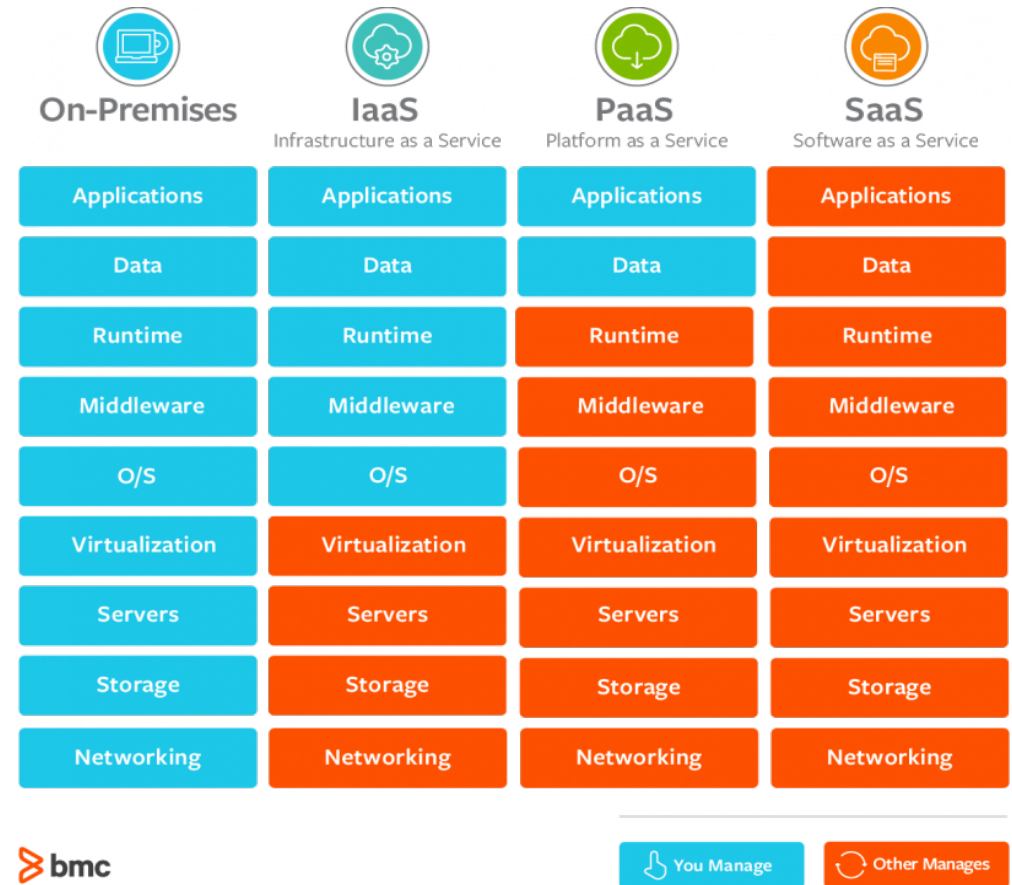
❖ 2 Basic Service types to Consider

✓ Infrastructure as a Service (IaaS)

- Provide an example?

✓ Software as a Service (SaaS)

- Provide an example?



Source: <https://blogs.bmc.com/wp-content/uploads/2017/09/saas-vs-paas-vs-iaas-810x754.png>

Cloud Computing

❖ Pros

- Collaboration
- Scalability
- Cost
- Ease of use



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

Cloud Computing

❖ Cons

- Security
- Data Integrity
- Availability
- Privacy



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

IaaS (Infrastructure as a Service)

❖ Case Study: AWS and Capital One

- Run any application anywhere
- Bring products to market quickly
- More resilient architecture around systems
- Design for customer needs
- 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

- Third Party Provider
- Subscription based
- OS-agnostic
- Runs its software on its own servers in the cloud,
- 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!!!