MIS 2101/2901 Exam 3 Review

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Exam Format

25 Multiple Choice Questions

- ✖ 5 from assigned readings
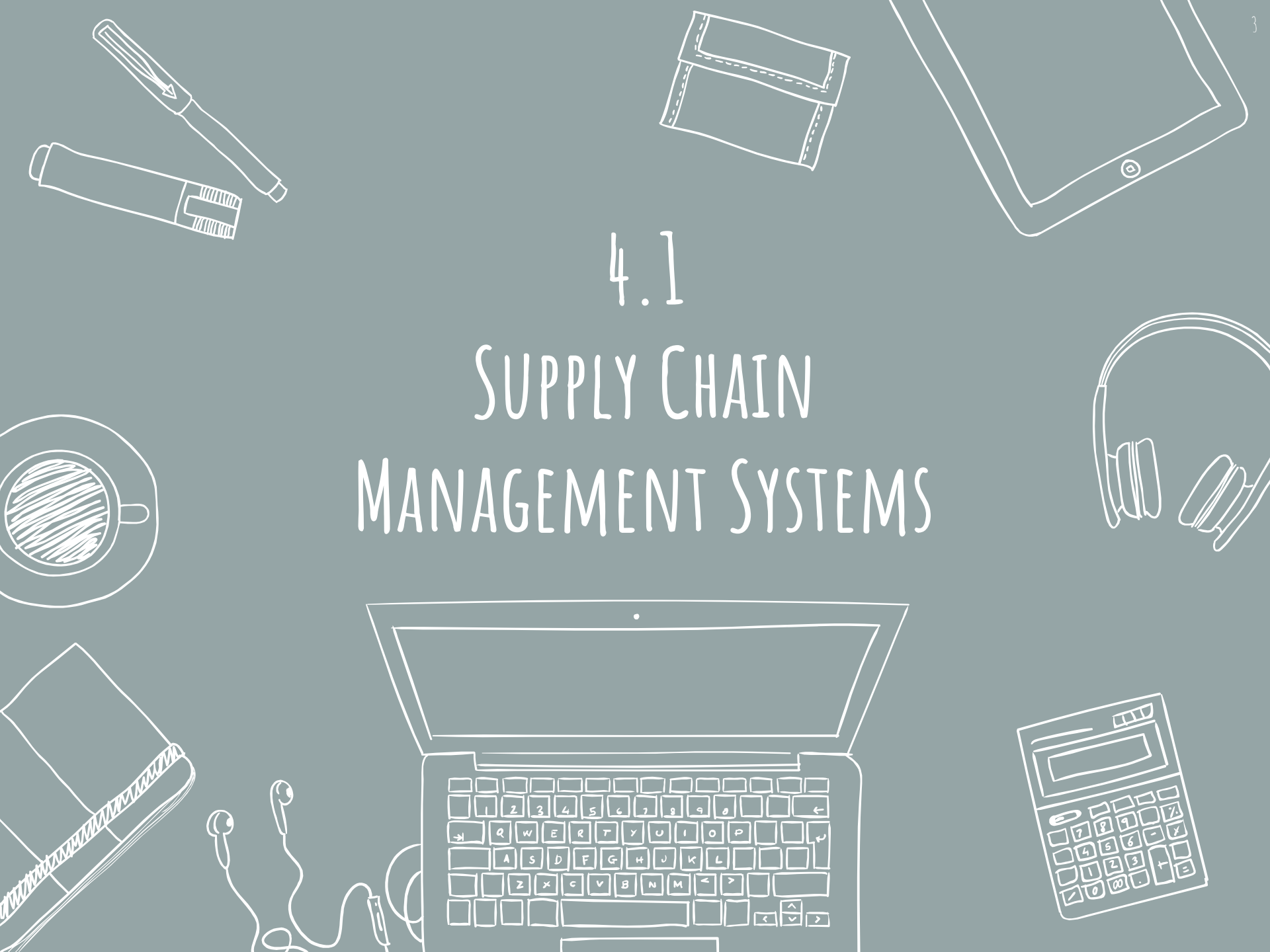- ✖ 10 from assigned videos & lectures
- ✖ 10 from Mini-Case

Topics:

SCM, CRM, Platforms, Cloud Computing, Artificial Intelligence

Reminder:

Bring a #2 pencil and highlighters!

4.1

Supply Chain Management Systems

Supply Chain Management

✖ Design, planning, execution, control, and monitoring of supply chain activities
  ○ Optimizing supply chain operations

✖ Management of the flow of goods and services
  ○ Raw materials
  ○ Work-in-process inventory
  ○ Finished goods

Supplier → Manufacturer → Distributor → Retailer → Shopper

Supply Chain Components

WHY SCM?

*Getting the right product
on the right shelf
at the right time and lowest cost*

- ✖ Integrated approach
- ✖ Increases visibility of inventory
- ✖ Increases speed of inventory movement
- ✖ Realizes long-term performance improvements
- ✖ Minimizes total costs

SCM Architecture

* **Supply Chain Planning**
  * Development of resource plans to support production

* **Supply Chain Execution**
  * Efficient flow of products, information, and financing
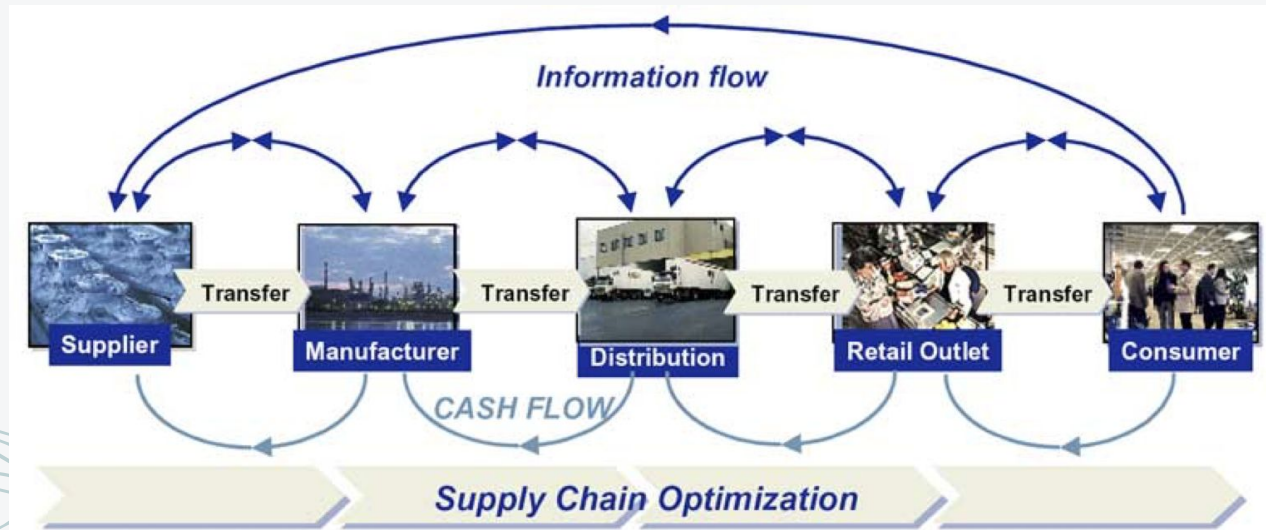
Just-in-Time Inventory

- ✖ Purchase & receive components just before needed on assembly line
- ✖ Relieves manufacturer of cost & burden of managing idle parts
- ✖ "Make to Order" Business
- ✖ Prevents obsolete inventory

Vendor-Managed Inventory

✖ Supplier takes full responsibility to maintain an agreed inventory at buyer's location

✖ Vendor:
- Inventory managed by vendor
- Reduces safety stock
- Increases likelihood customer will use 1 vendor

✖ Customer
- Manufacturer is charged as soon as they pull from shelf
- Relieves burden of managing inventory
- Reduces capital tied up in inventory

Radio Frequency Identification (RFID)

✖ Uses electromagnetic energy to transit energy between a reader (transceiver) & the tag (antenna).
✖ Provides visibility through the supply chain
✖ Programmable tags replace barcodes
✖ Scanning can be done from a distance
  ○ Passive tags – inexpensive, range of few feet
  ○ Active tags – more expensive, range of hundreds of feet

Radio Frequency Identification (RFID)
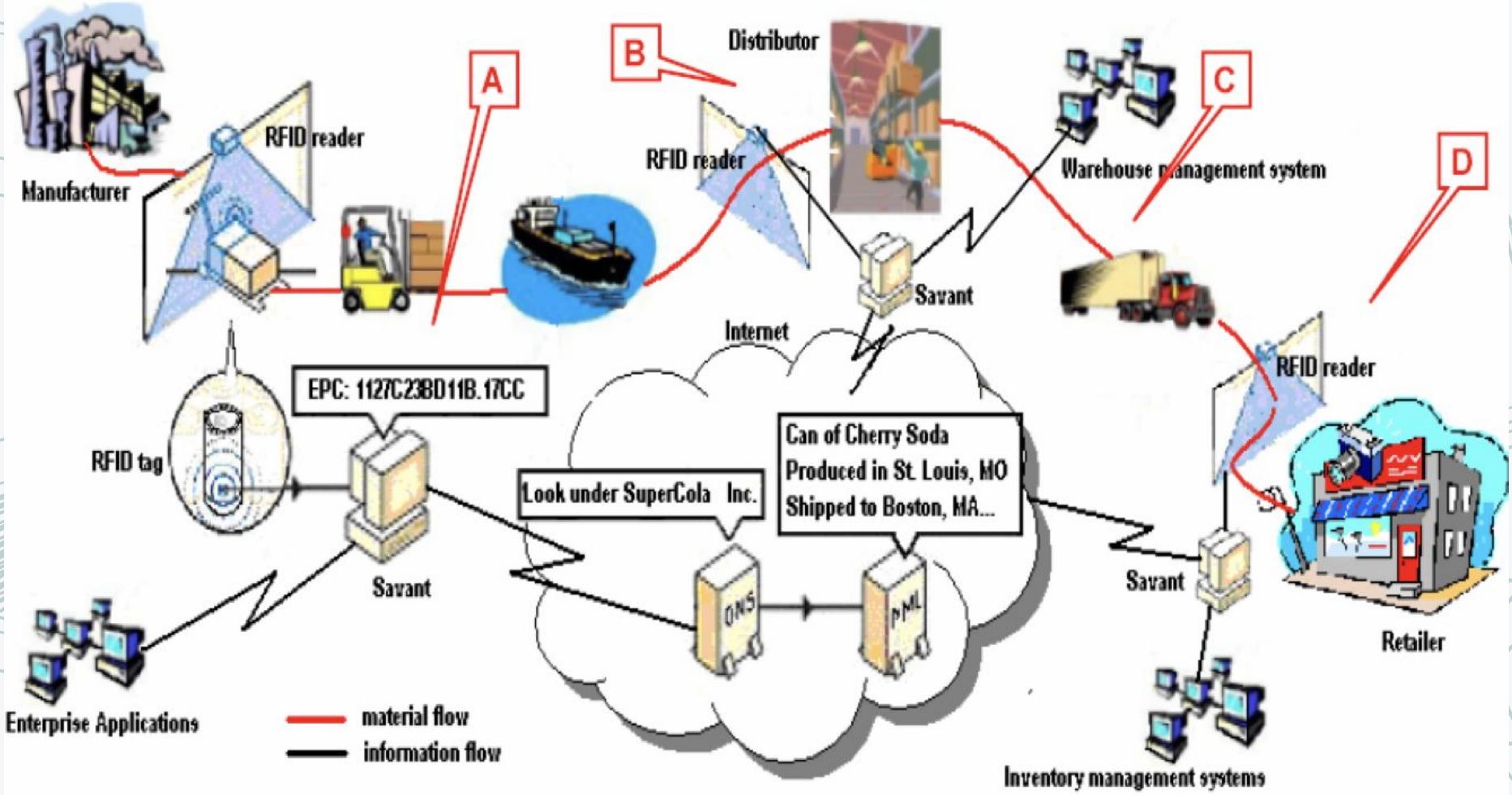
4.2
Customer Relationship Management Systems

Customer Relationship Management

✖ Mix of **strategy, processes, and procedures**
✖ Tracks information → 360° profile
  ○ Contact info
  ○ Purchase history
  ○ Browsing
  ○ Demographics
  ○ Customer service issues
✖ Data is shared and analyzed across business
✖ Communication with customers & leads

Benefits of CRM

✖ Enhances customer service experience
✖ Collaboration & efficiency
✖ Realizes profitable customers
✖ Accountability
  ○ No more finger pointing, only results

ERP vs CRM

ERP

- ✖ Focus on **internal** business processes
- ✖ Back office
- ✖ Reduces costs
- ✖ Enterprise-oriented

CRM

- ✖ Record interaction with customers
- ✖ Front office
- ✖ Increases sales
- ✖ Customer-oriented

Increased Top Line + Reduced Bottom Line → Increased Profitability

5.1
Platforms

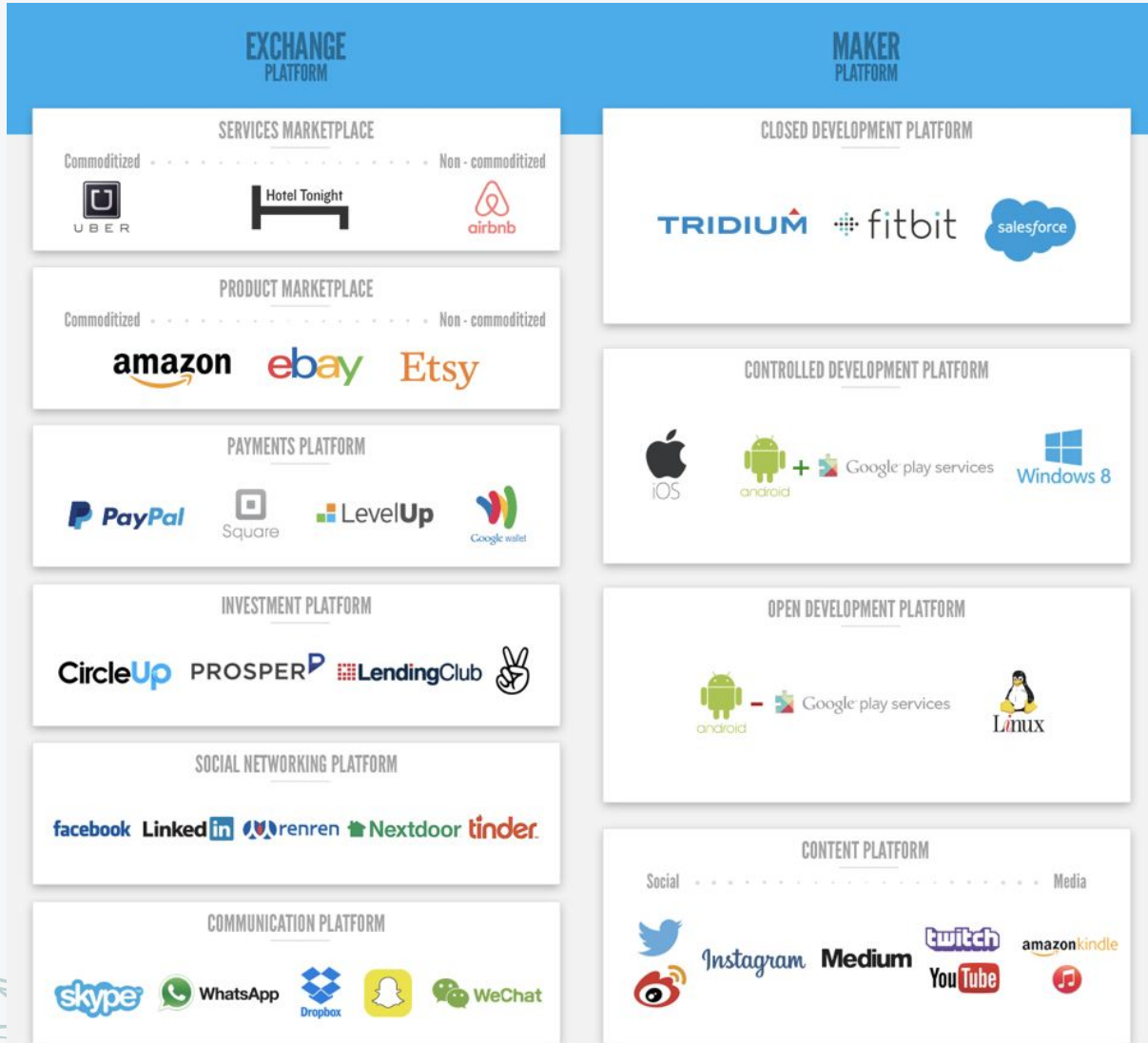# Platforms

✖ Environment provided by hosted infrastructure with rules to facilitate user interactions
✖ Business model facilitating exchanges between 2 + independent groups
  ○ Typically consumers & producers
✖ Network Effects
  ○ The effect that one user of a good or service has on the value of that product to other people
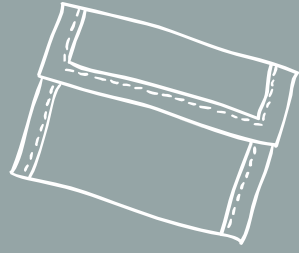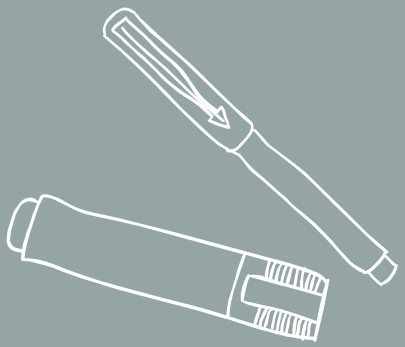
Exchange vs Maker Platforms

Platform Business Models

* **Proprietary**
  * Single provider
  * Exclusive control over technology, standards, and pricing
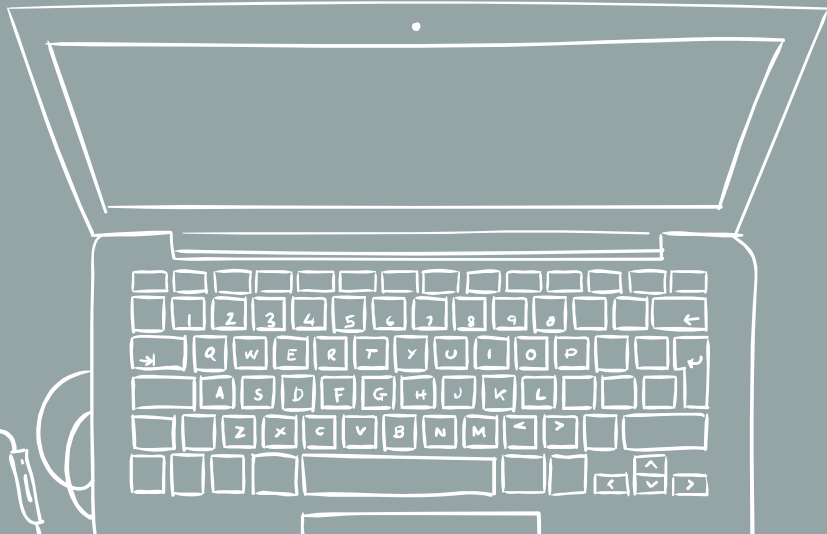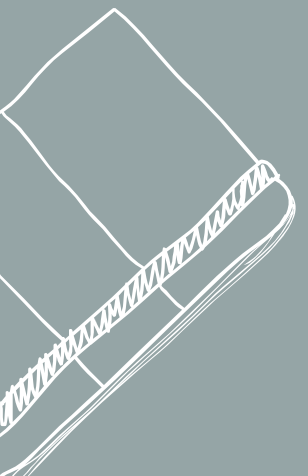 * Google, eBay, FedEx

* **Shared**
  * Multiple providers
  * Collaborate developing tech & compete with different services
  * Xbox, Windows

5.2
Cloud Computing

Pros & Cons

Pro

- ✖ Anywhere, anytime
- ✖ Remote access
- ✖ Reduce Headcount & Hardware
- ✖ Less expensive
- ✖ Increased scalability
- ✖ Green impact
- ✖ Easy to use
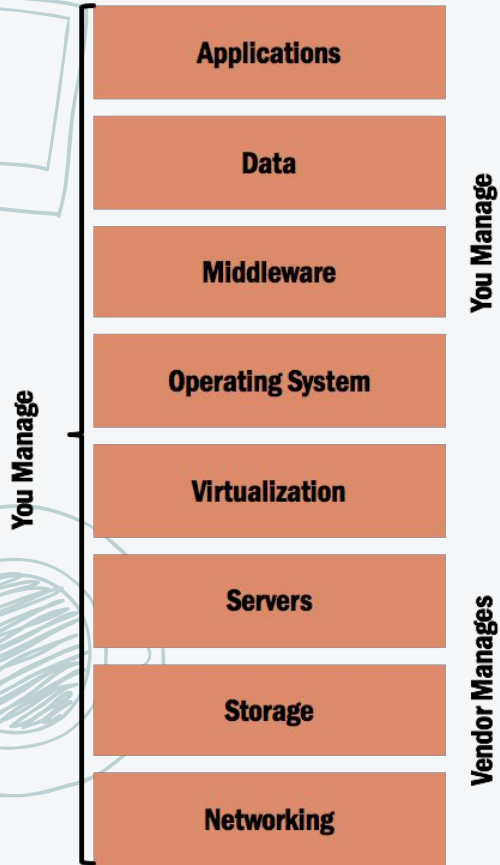- ✖ Improved service & performance

Con

- ✖ Downtime
- ✖ Device security
- ✖ Data integrity
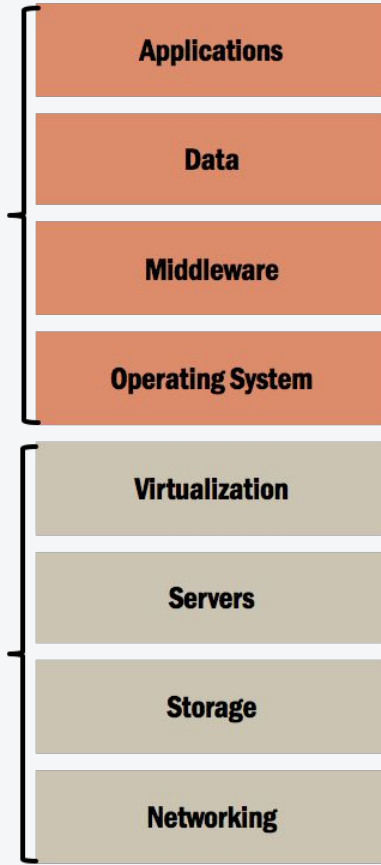- ✖ Privacy & confidentiality of data

Cloud Computing Models

✖ IaaS – Infrastructure as a Service
  ○ "Host" – pay for infrastructure, responsible for **all app development**
✖ PaaS – Platform as a Service
  ○ "Build" – pay for infrastructure & developing platform
  ○ Focus on programming
✖ SaaS – Software as a Service
  ○ "Consume" – pay for entire solution, fully built, deployed, and distributed
  ○ No development or support responsibilities
  ○ Eg. Salesforce (Max Labs!)
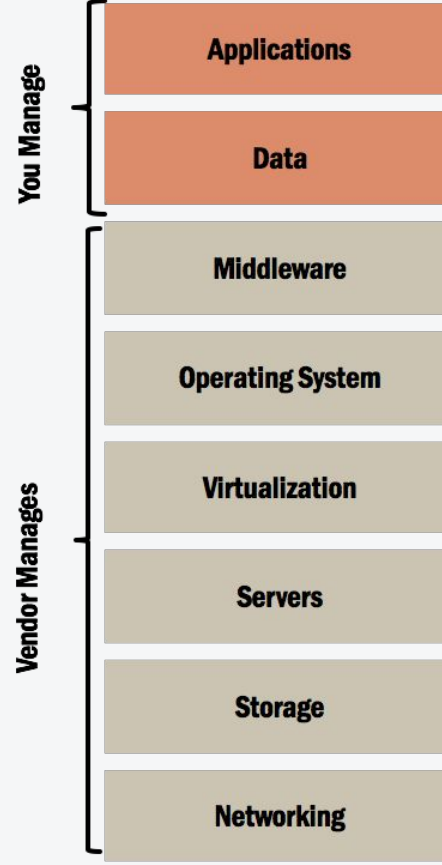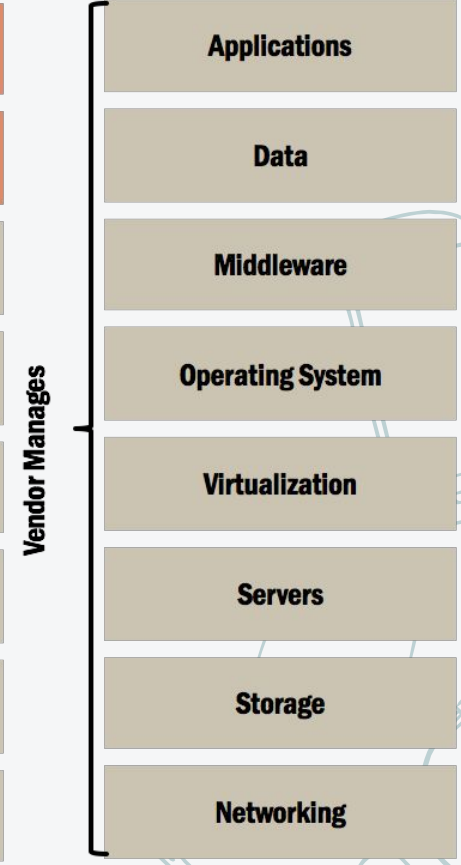
Cloud Computing Models

On Premise	IaaS	PaaS	SaaS
Applications	Applications	Applications	Applications
Data	Data	Data	Data
Middleware	Middleware	Middleware	Middleware
Operating System	Operating System	Operating System	Operating System
Virtualization	Virtualization	Virtualization	Virtualization
Servers	Servers	Servers	Servers
Storage	Storage	Storage	Storage
Networking	Networking	Networking	Networking

On Premise: You Manage (all)

IaaS: You Manage (Applications, Data, Middleware, Operating System) / Vendor Manages (Virtualization, Servers, Storage, Networking)

PaaS: You Manage (Applications, Data) / Vendor Manages (Middleware, Operating System, Virtualization, Servers, Storage, Networking)

SaaS: Vendor Manages (all)

Big Players in Cloud Computing

✖ Amazon Web Service (AWS)
✖ Google Cloud Platform
✖ Microsoft Azure
✖ Oracle
✖ Salesforce

6.1
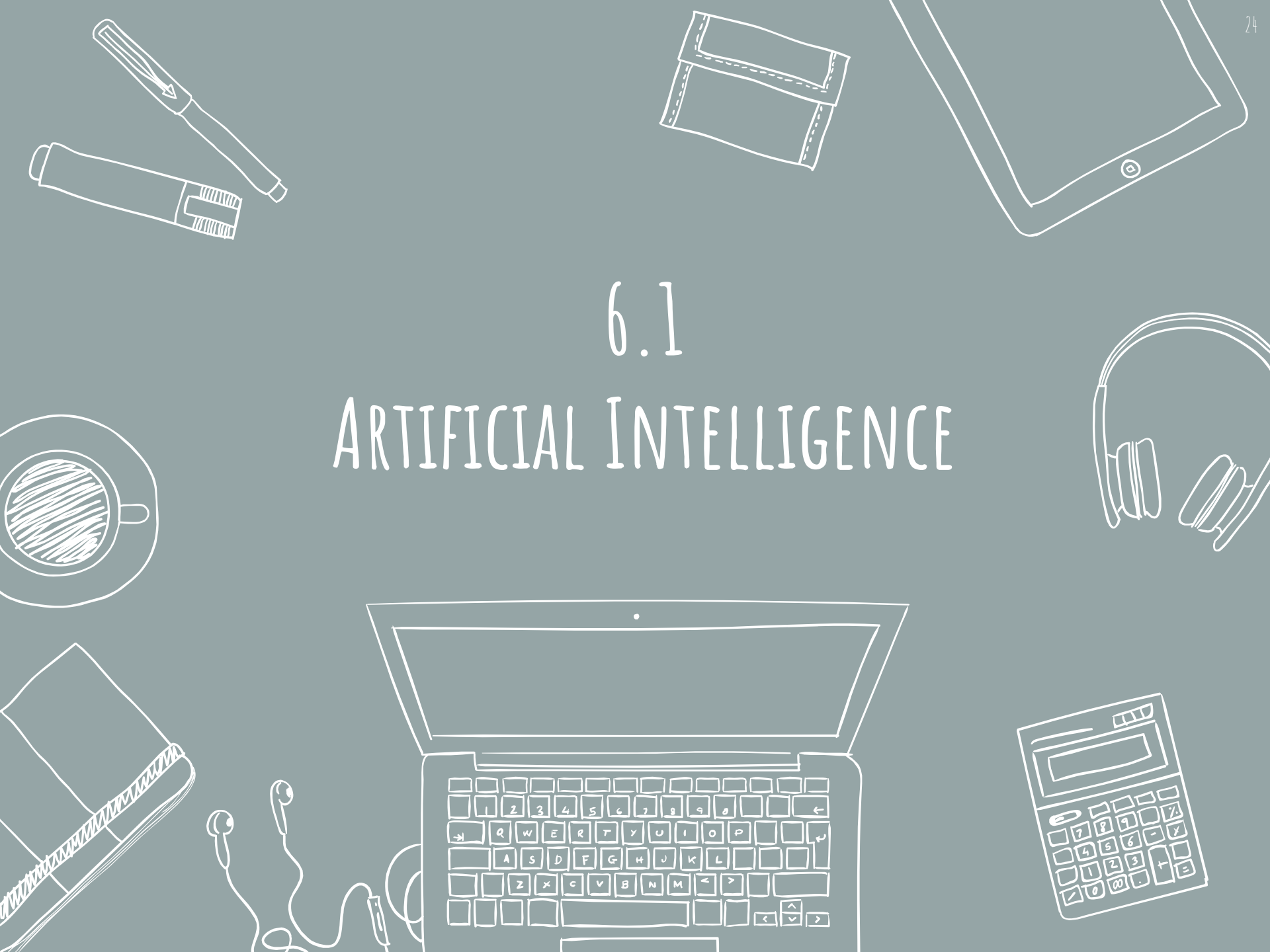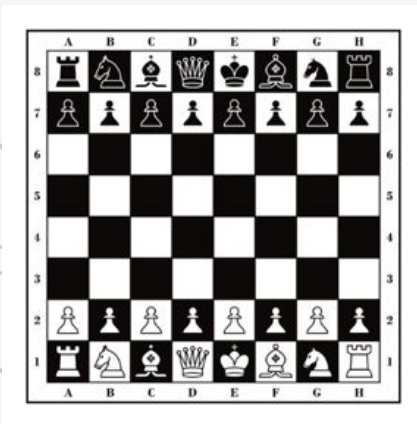# Artificial Intelligence

Types of AI

✖ Artificial **Narrow** Intelligence (ANI)
✖ Artificial **General** Intelligence (ANI)
✖ Artificial **Superintelligence**
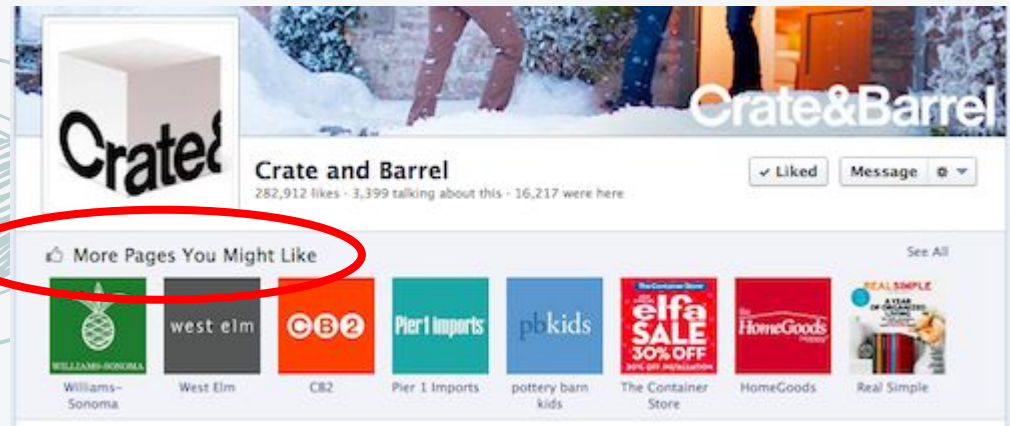

ANI:
Chess Program


AGI:
Human Level Intelligence

ASI:
Superintelligence

Artificial Narrow Intelligence

- ✖ "Weak AI"
- ✖ Specializes in one area ONLY
- ✖ It's everywhere!

Artificial General Intelligence

- ✖ "Strong AI" or "Human Level AI"
- ✖ Equal intelligence to human
- ✖ Ability to reason, plan, solve problems, learn quickly from experience
- ✖ Complex & difficult
  - ○ Requires enormous computational power
    - ■ Moore's Law
  - ○ But it's imminent
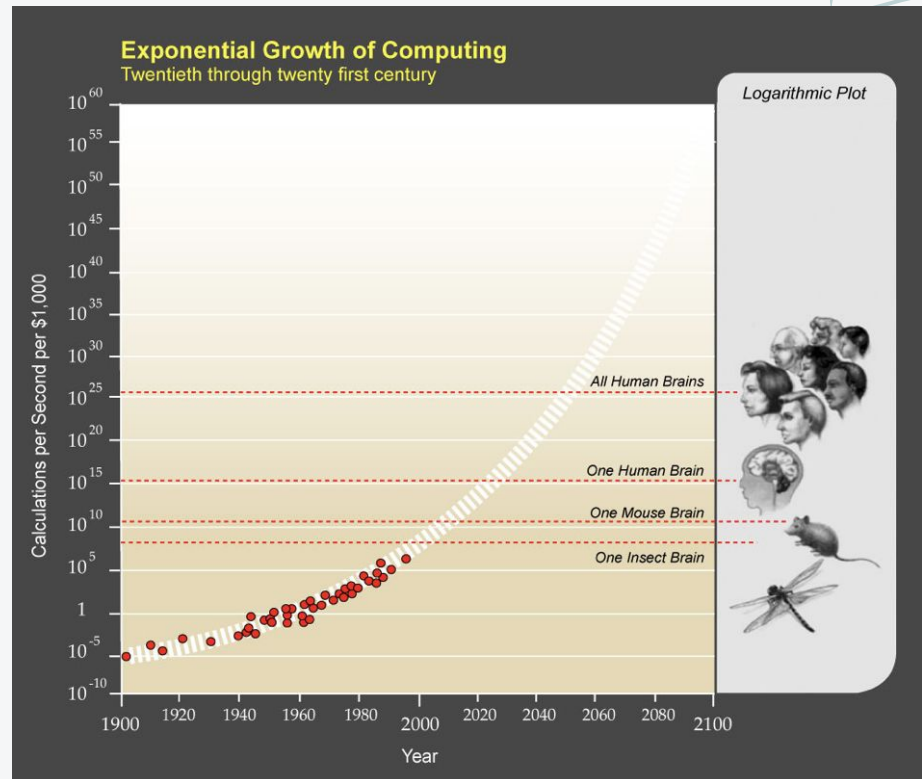
AGI Tests

Turing Test

A machine and a human both converse sight unseen with a second human, who must evaluate which of the two is the machine.

The machine passes the test if it can fool the evaluator a significant fraction of the time.

Coffee Test

A machine is required to enter an average American home and figure out how to make coffee: find the coffee machine, find the coffee, add water, find a mug, and brew the coffee by pushing the proper buttons.

Robot College Student Test

A machine enrolls in a university, taking and passing the same classes that humans would, and obtaining a degree.

Artificial Superintelligence

- ✖ Smarter than humans in everything, including creativity and social skills
- ✖ Difficult for us to grasp concept
- ✖ Could develop in the near future OR years away

IBM Watson

✖ Analyzes unstructured data from human input
✖ Conducts inordinate calculations per second
✖ Understands complex questions
✖ Learns human constructs (language, culture, context)

MINI CASE

Answer Key

1. D – Content Team
2. A – Hotel needs a Retro-Fit Installation
3. B – Send cost estimate, participation agreement, teams and conditions, and the deployment agreement
4. C – Develop mobile message
5. B – Notify guests of Key Mobile installation
6. A – Terms and Conditions
7. A – Conducted by
8. B – Hotel Information
9. C – Number of rooms in hotel
10. A – Reviewed by

Thanks!

Any questions?

"How's studying for finals going?"