

# **WEEK 7: DELIVERY OF INFORMATION GOODS**

**WHAT IF THE PRODUCT  
IS NOT PHYSICAL?**

# LEARNING OBJECTIVES

- What are Information Goods
- Review the transformation of the video rental business
- Explore how the iPod changed the world
- Explore the transformation of the software industry

# INFORMATION GOODS

- A type of commodity whose main market value is derived from the information it contains



- Examples

- Music CDs
- DVDs
- Books



- Not all information goods are digital

- CDs and DVDs are physical products; the information contained in them is digital

# INFORMATION GOODS ARE DIFFERENT

- Increasing digitization → Physical channels can be bypassed
- Where to you access / purchase the music you listen to?
- How often do you purchase a music CD?
- Why?



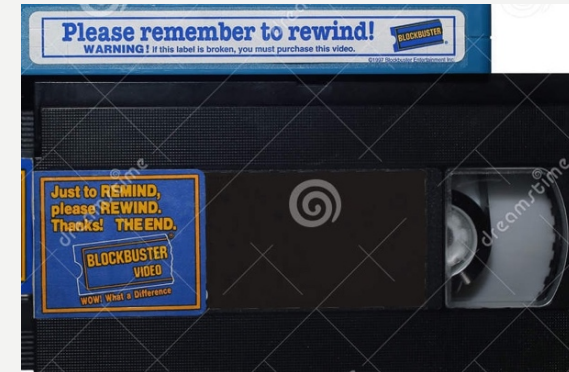
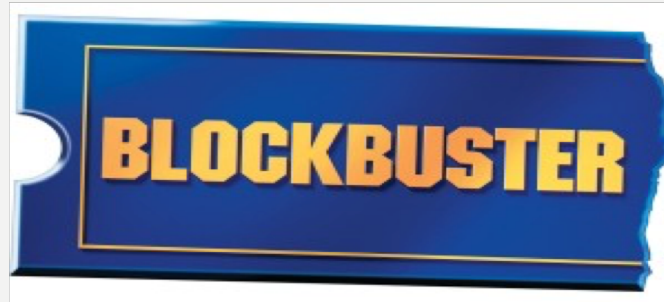
# LEARNING OBJECTIVES

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# INFORMATION GOODS ARE DIFFERENT

- What Video Content do you View?
- Where to you View it?
- Why that channel?





In 2001:

- 33% market share
- Broad physical footprint
  - Many stores
  - Good collection of movies
- Profitable sales



# DISRUPTIVE INNOVATIONS

- New products / technologies that radically change the industry landscape
- Affect
  - Core activities
  - Core assets
- DVDs struck at Blockbuster's core assets





# DISRUPTIVE INNOVATIONS

## Products & Industries Rocked by Disruptive Technologies

Established Technology	Disruptive Technology
Mini-computer	PCs and networked Workstations
Full Service Stock Brokers	On-line Brokers
Bricks And Mortar Retailing	On-line Retailing
Standard Textbooks	Digital Textbook Publishing
Offset Printing	Digital Printing
Open Heart Surgery	Arthroscopic And Endoscopic Surgery
PC Computing	Tablet Computing

# BLOCKBUSTER V/S NETFLIX



- Netflix obviated the need for physical stores → significant cost savings
- Other advantages
  - Bigger selection (not restricted by what is available in the storefront)
  - Customer reviews
  - Movie recommendations



# THE NETFLIX MODEL



- What did Netflix do?
- Competing against Blockbuster, did Netflix...
  - Threaten core assets?
  - Threaten core activities?
- Would Netflix have been able to take on Blockbuster in VHS rentals?

# MANUFACTURING COSTS

- What are the manufacturing costs for video?
- For a DVD ?



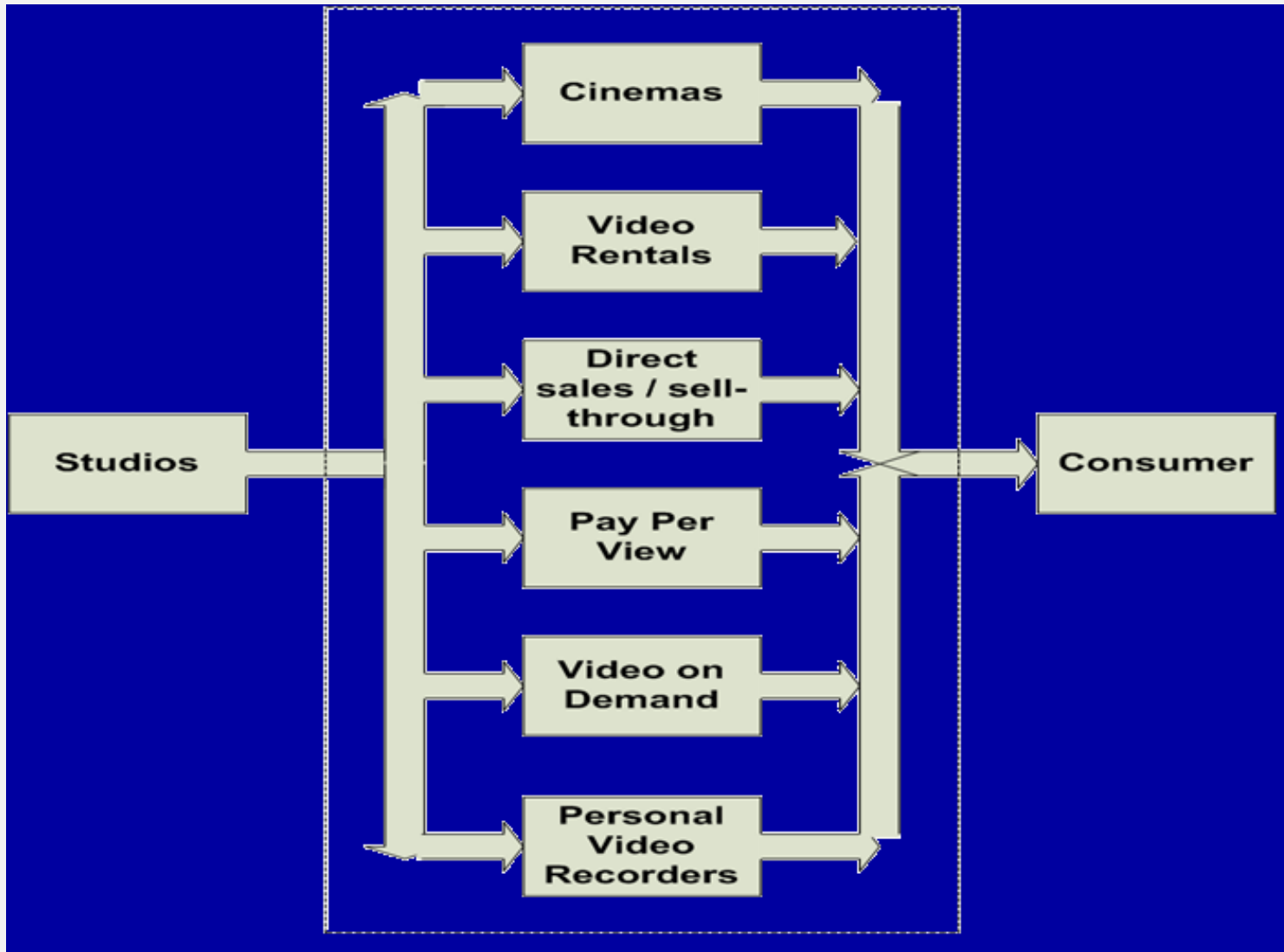
# MANUFACTURING COSTS



- Movie initial Production can be very expensive (\$ 15,000 – \$425,000,000)
- Information goods cost almost nothing to replicate
- A DVD can be copied for less than \$ 1.00 - a car or a bicycle cannot
- How long does it take an artist to cut a disc? How long does it take to copy?



# THE MOVIE INDUSTRY'S VALUE CHAIN



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# THE iPod





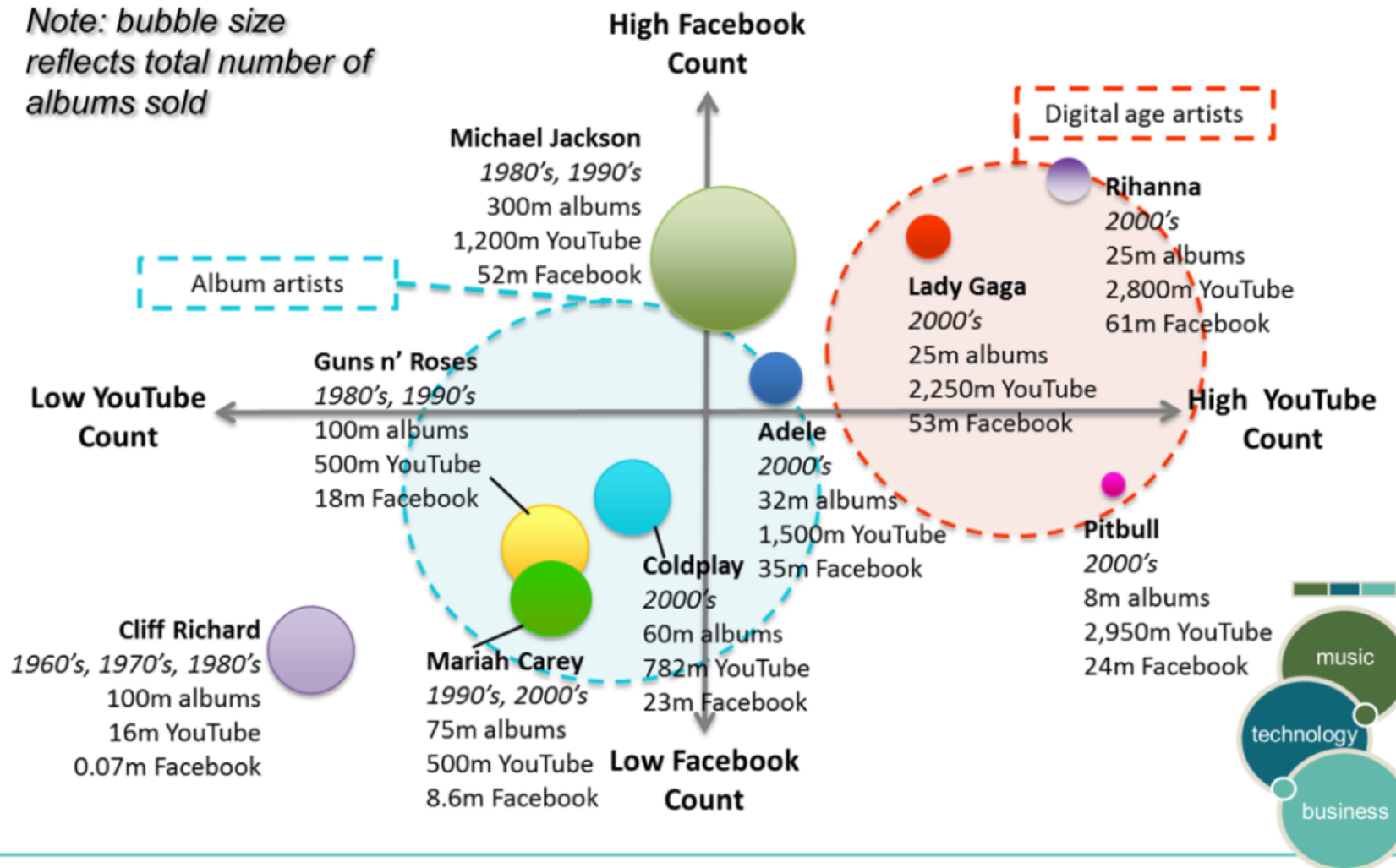
# THE MUSIC BUSINESS

- Who are the various players in the music business?
- Who controls the music business?
- How does piracy affect the industry?



# Selling Albums Is Not the Main Measure of Success for a New Generation of Digital Age Artists

Note: bubble size reflects total number of albums sold

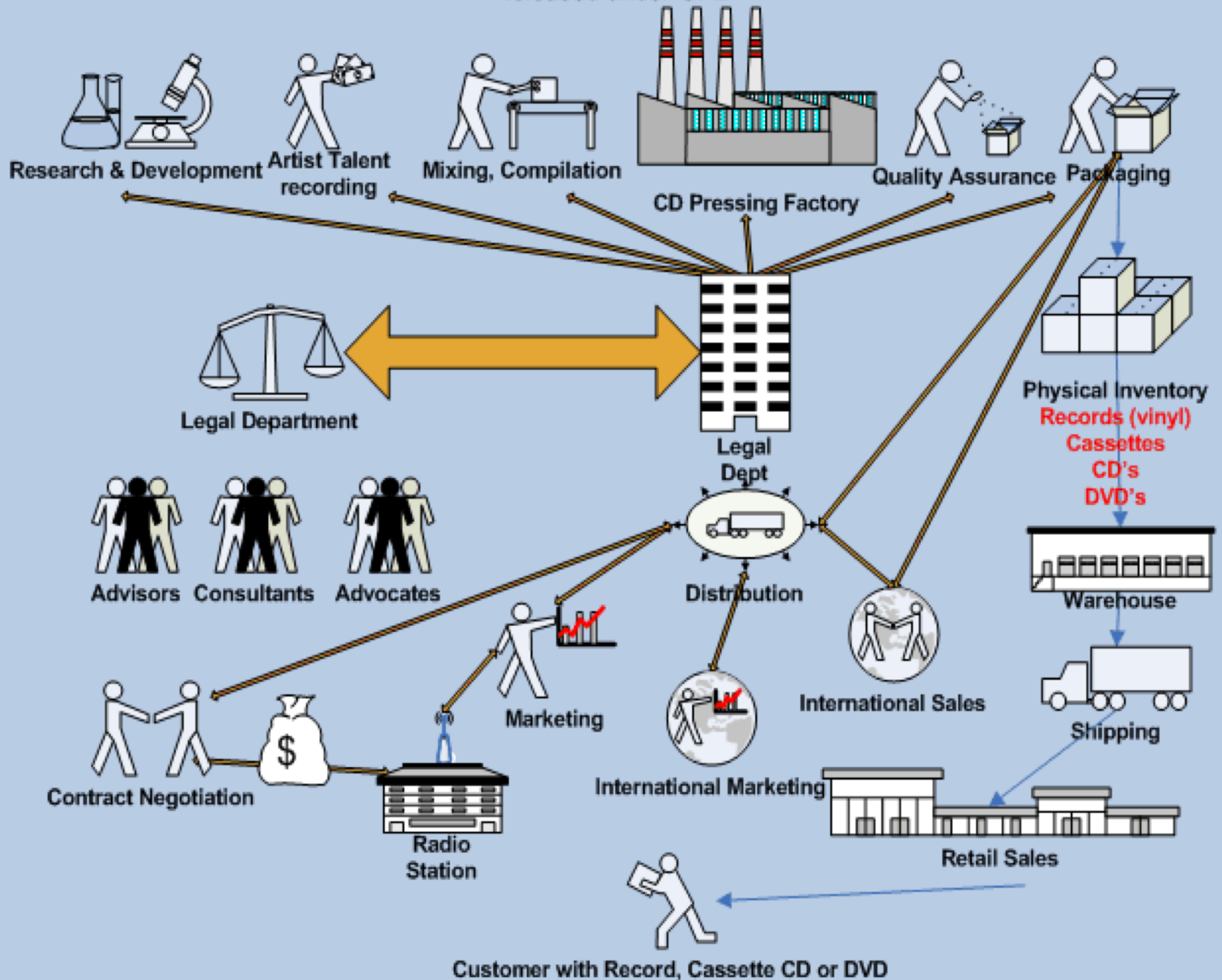


Mark Mulligan – October 2012

music industry blog

# The OLD Music Industry Distribution Model

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**ENTER**



- iTunes store
  - 99 cents / track
  - Compared to \$15.00 for a CD, on which you would listen only to a few tracks
- = consumer segment

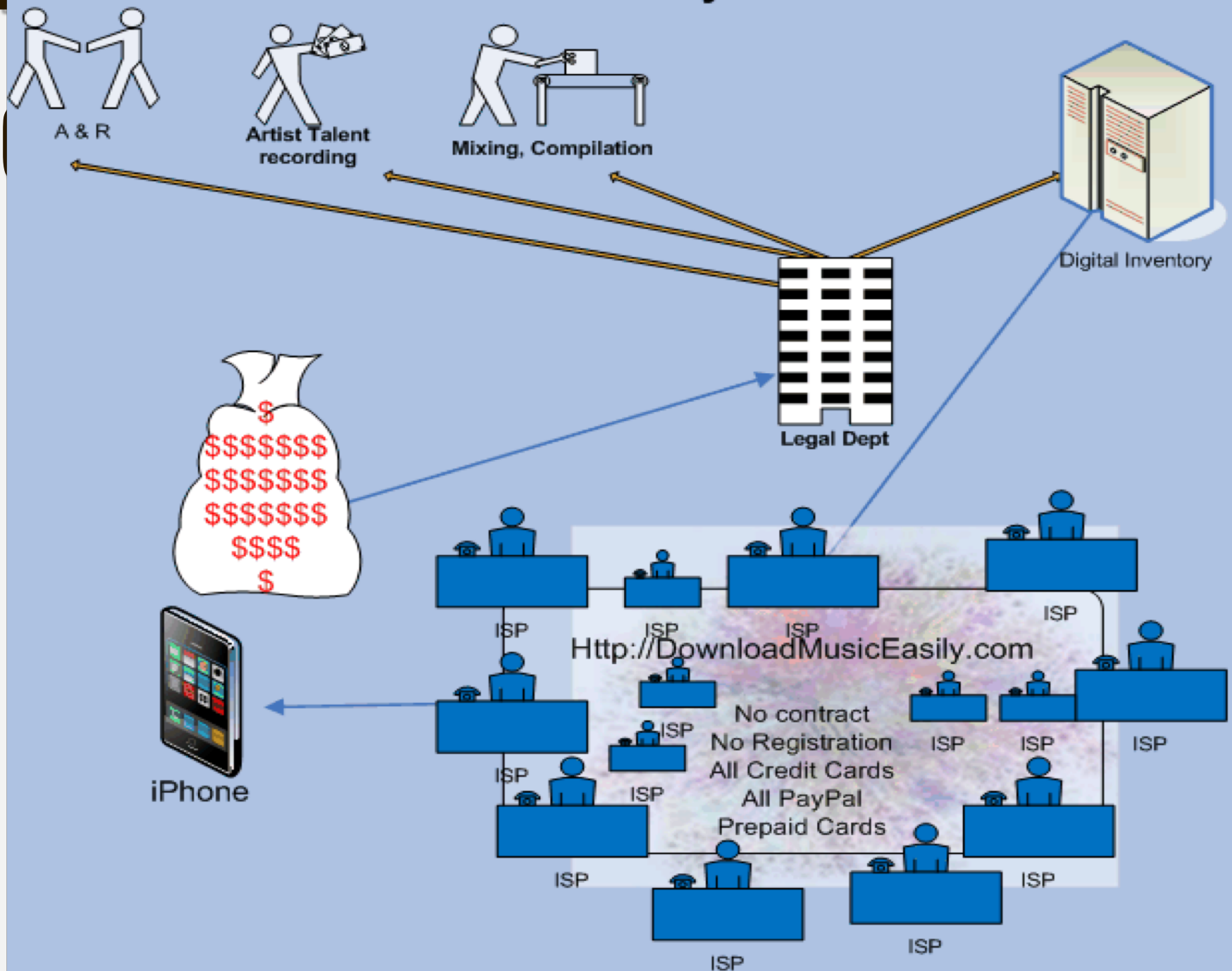
**iPod**

= distribution channel



**iTunes Store**

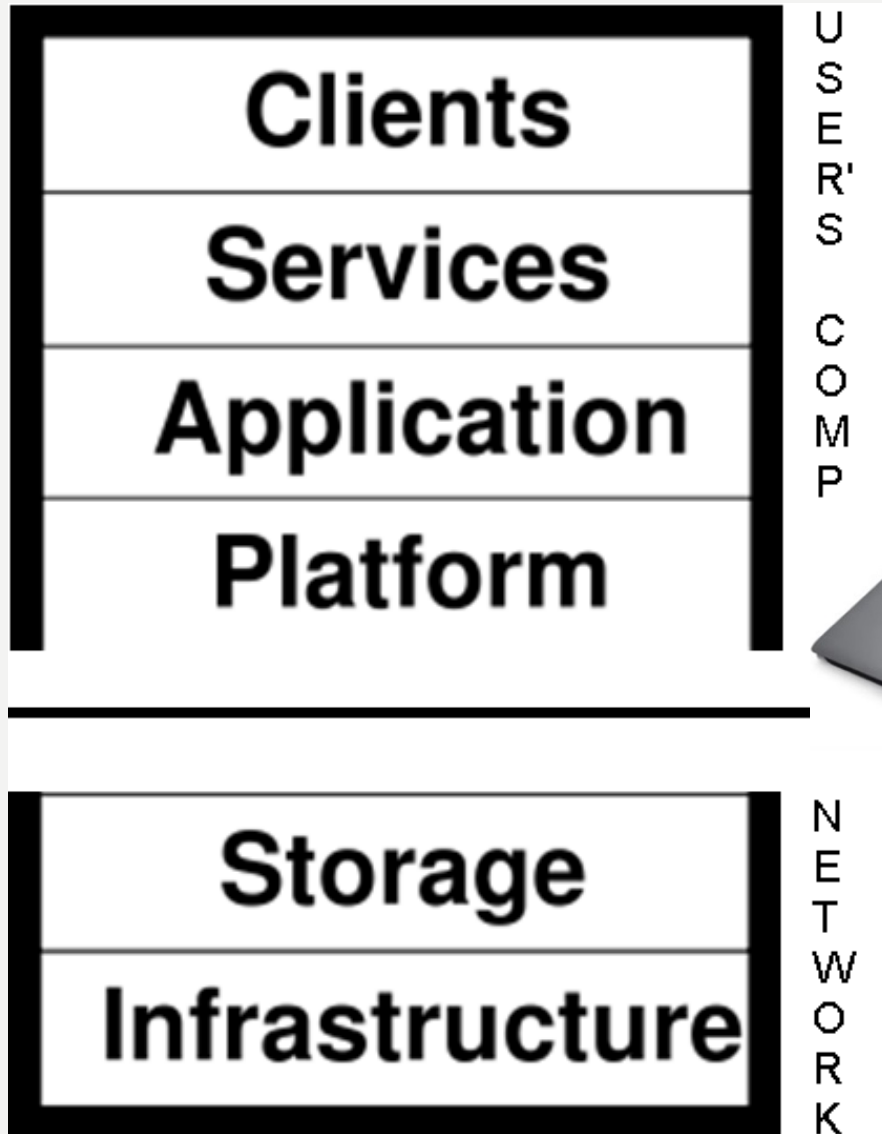
# The New Music Industry Distribution Model



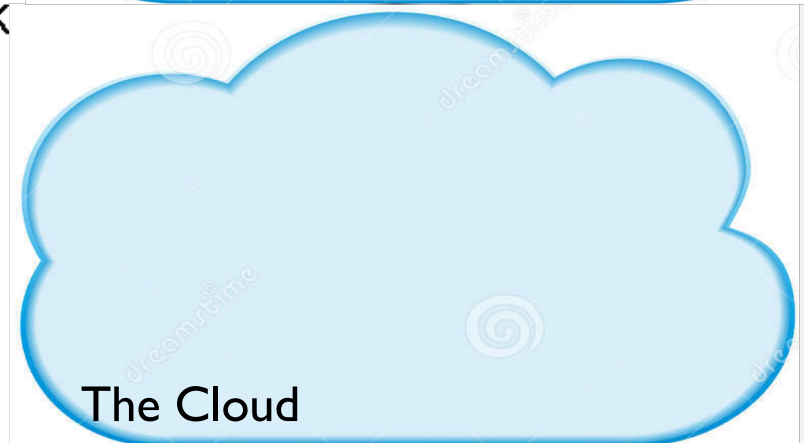
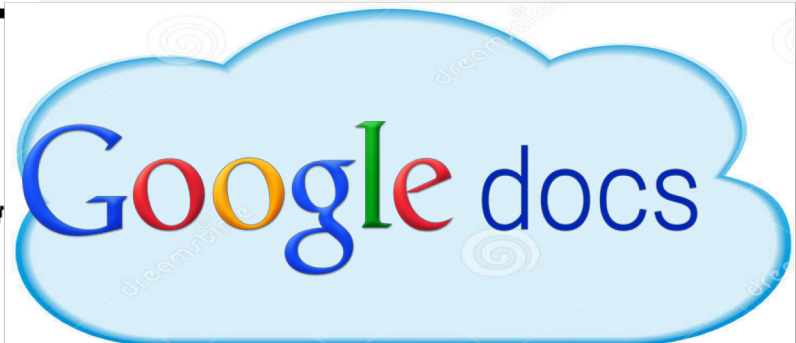
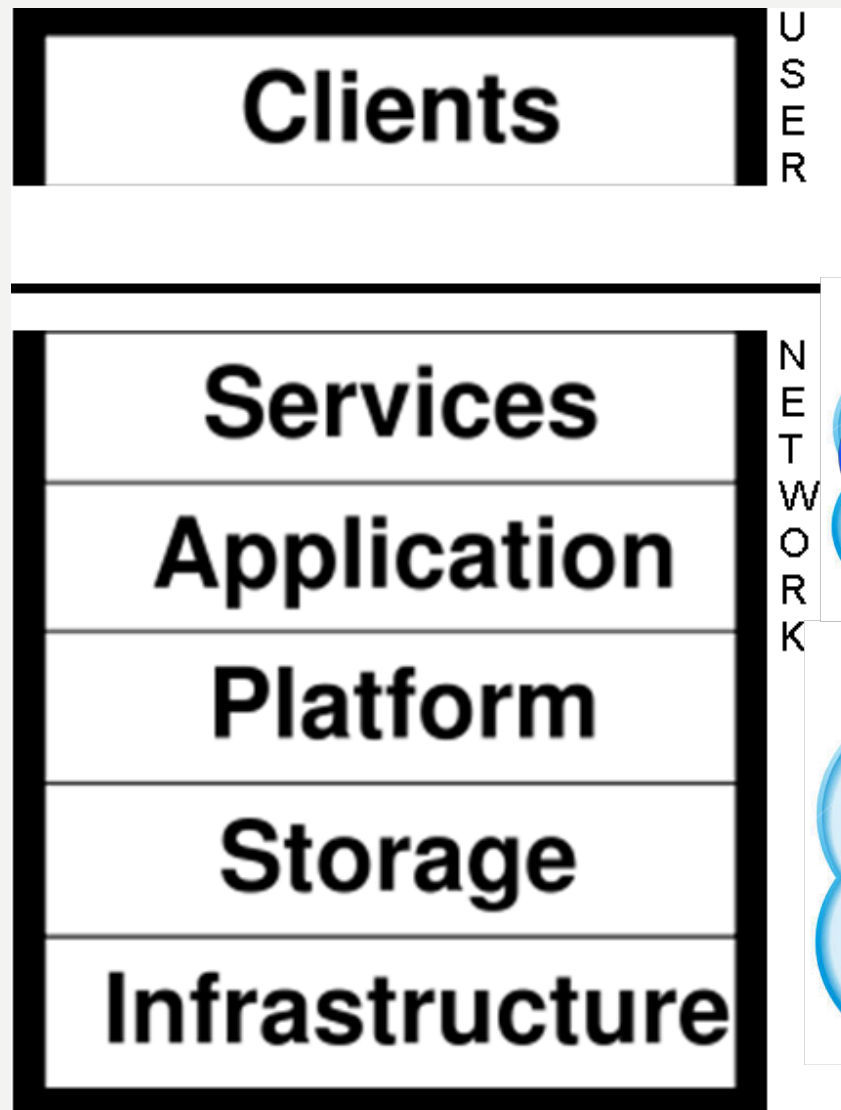
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# TRADITIONAL SOFTWARE MODEL



# SOFTWARE AS A SERVICE (SAAS) MODEL



The Cloud



# SAAS EXAMPLES

- Salesforce.com – CRM on the web
- Quickbooks Online
- GoToMeeting / WebEx – Web Conferencing



The Cloud

salesforce®



# WHAT IS SOFTWARE AS A SERVICE?

- SaaS is a software application delivery model
- The vendor develops a web-native software application
- The vendor hosts and operates the application (independently or via third-party)
- Customers use the application(s) via web-browser
- Customers do not pay for owning the software itself but rather for using it

# CLOUD COMPUTING VS. SAAS

- XaaS - Different Services being delivered
  - SaaS: Software running in the cloud, e.g. Google Docs, Salesforce.com, ...
  - PaaS: Platforms in the cloud, e.g. Google App Engine
  - IaaS: Infrastructure in the cloud, e.g. Amazon EC2



# CLOUD COMPUTING VS. SAAS

## Cloud Computing

- Access only requires Internet and Web browser
- 3rd party service provider where computing occurs (their data center, server, etc.)
- Can run your own applications using the cloud, i.e. using someone else's machine (EC2)
- Typically pay for use (e.g. data volume, time, ...)

**The Cloud**



# BACKGROUND

- Enabling factors for SaaS
  - Computing becomes ubiquitous
  - Multiplicity of devices
  - Unlimited bandwidth; inexpensive storage
  - Popularity of the SoA model (XML-based services)

# KEY CHARACTERISTICS

- Lower capital expenditure
- Location independence
- Device independence
- Sharing of resources and costs



# KEY CHARACTERISTICS (CONTD.)

- Central monitoring of performance
- Reliability, through redundancy
- Scalability
- Security, through centralization
- Sustainability

# ADVANTAGES / BENEFITS

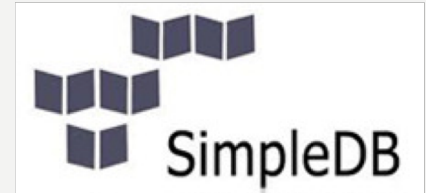
- For software developers / vendors:
  - Software can be developed for a single specification – the browser
  - Open standards lead to more independent developers providing extensions
  - More effective licensing of software
  - Ability to deliver updates on a regular basis



# ADVANTAGES / BENEFITS

- For companies / businesses:
  - Better collaboration
  - Facilitates ubiquity – employees on the go, telecommuters, dispersed teams
  - Effective licensing of software
  - Ability to receive regular updates

# ADVANTAGES



- For small businesses / individuals
  - Enterprise-class software at low prices
    - Salesforce.com, Zoho
  - Almost zero setup costs
    - eg: Amazon SimpleDB
    - (Basically, you don't need to own the phone company to make a phone call!)
- Collaboration



# SAAS IS AN INFORMATION GOOD

- Not a Physical Product
- Type of commodity whose main market value is derived from the information it contains – the Service it provides.



Enjoy your Break

- Questions!

