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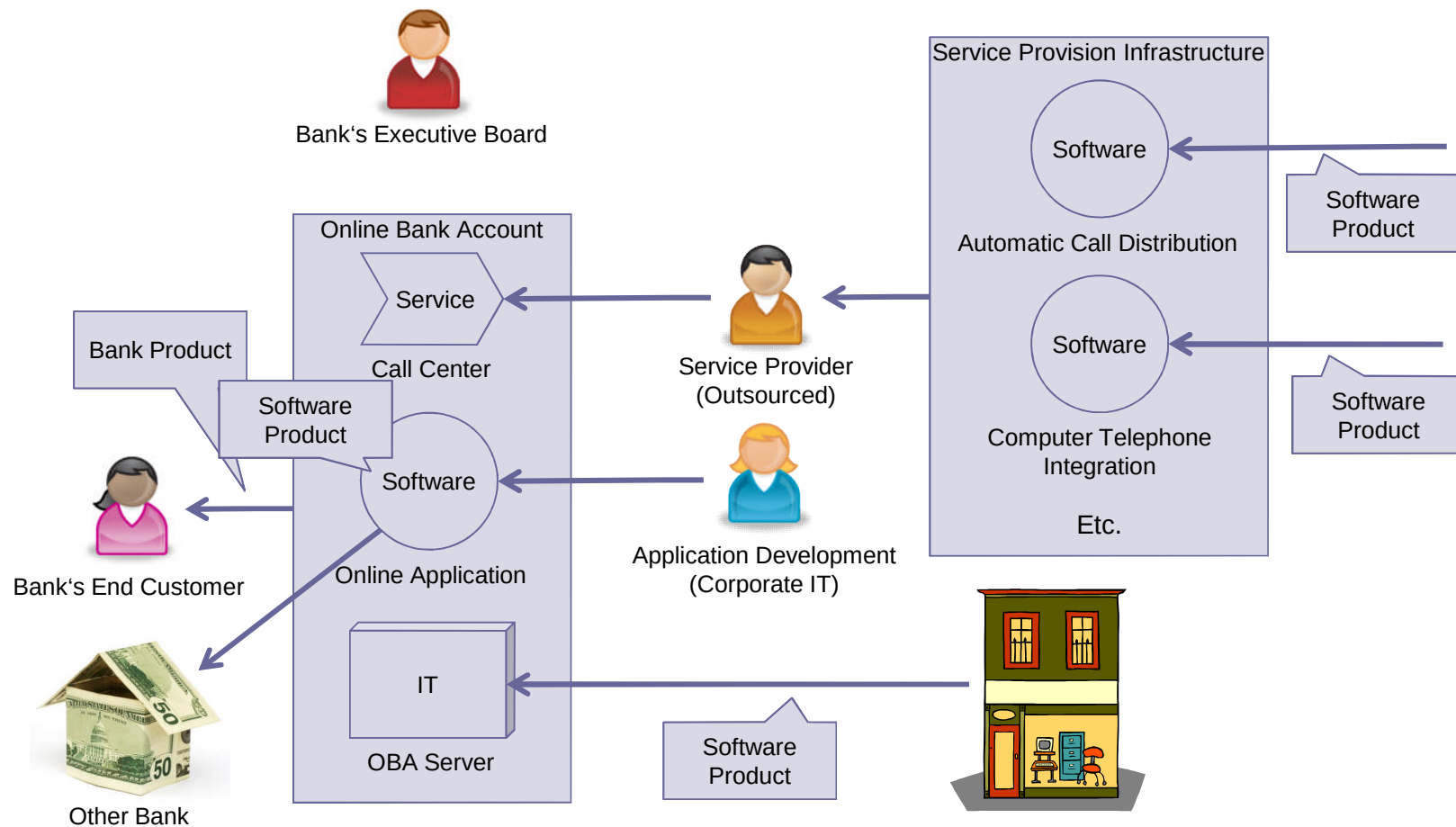
Software Product Management

Business Models and Ecosystems

Dec 14, 2010

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SPM in the Supply Network



Focus

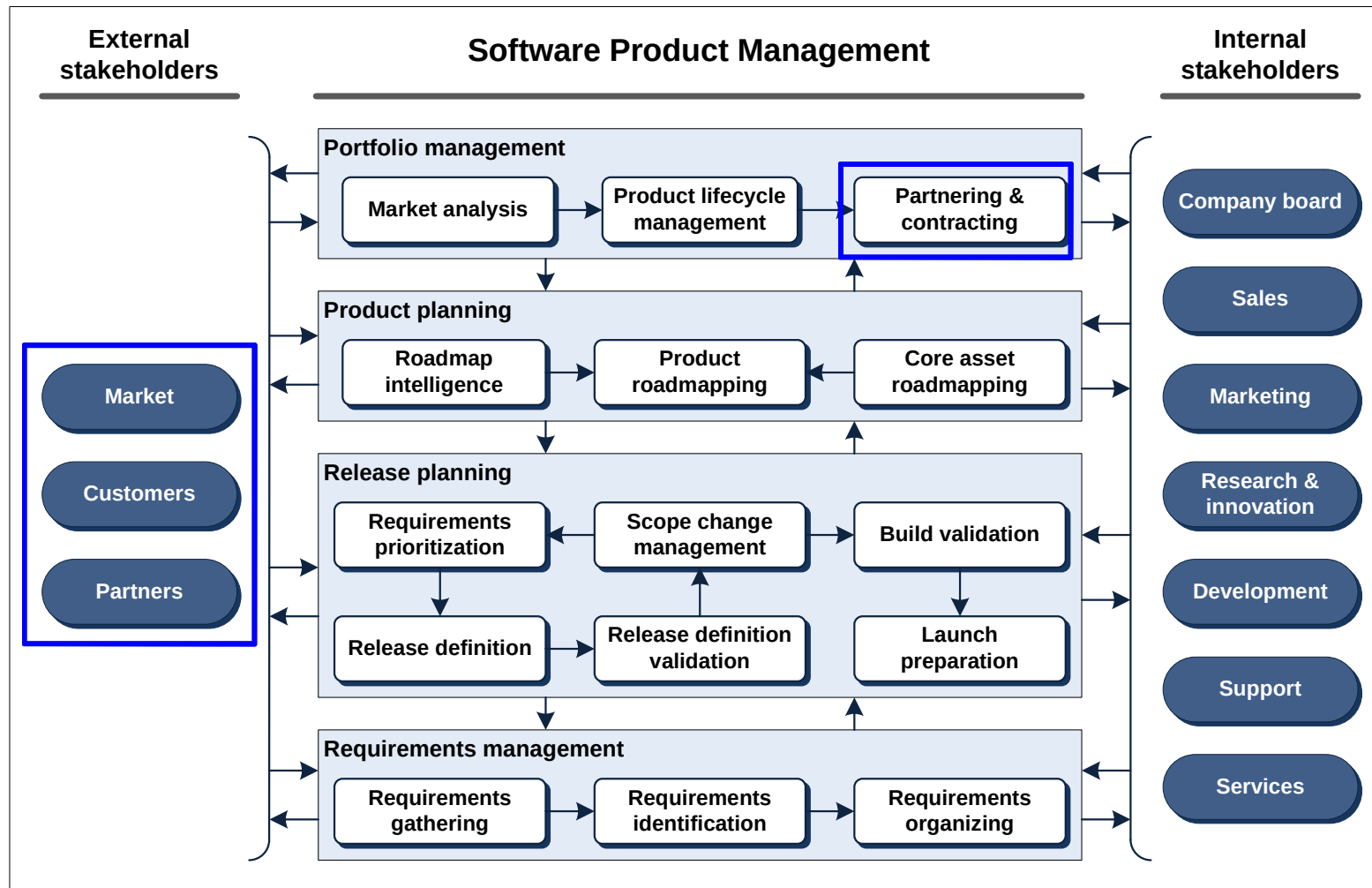


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	Market Analysis	Product Analysis	Product Strategy	Product Planning	Development	Marketing	Sales and Distribution	Support and Services
Often on corporate level			Portfolio Management	Resource Allocation	Resource Allocation	Marketing Strategy and Plan	Sales Strategy and Plan	
Product (family) level	Market Research Market Sizing Market Problems Technology Assessment Competitive Analysis	Product Performance Customer Satisfaction Win/loss Analysis Opportunities	Positioning Delivery Model Pricing Model Pricing Business Case Make or buy Ecosystem Legal terms Protection of Intellectual Property	Roadmap Release Plan Requirements Management Functional Specification	Project Plan Technical Specification Project Requirements Management Implementation Quality Assurance Technology Innovation	Launch Plan Customer Analysis Partner Management Operational Marketing Material	Channel Preparation Operational Sales Operational Distribution Material	Customer Support Technical Support Marketing Support Sales Support Services Preparation Operational Services Provision

Focus





Contents

Learning Objectives

- Understand business models and their relationships to value chains and accounting

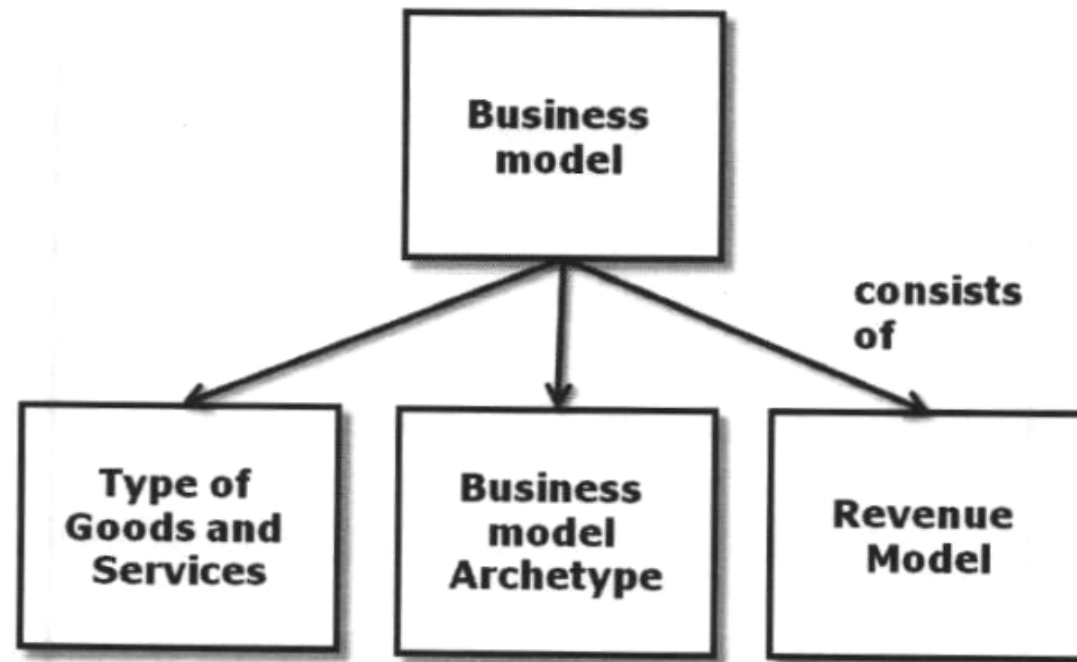
Agenda

- Business Models
- Software Ecosystems
 - Software Supply Networks
 - Software Value Chains



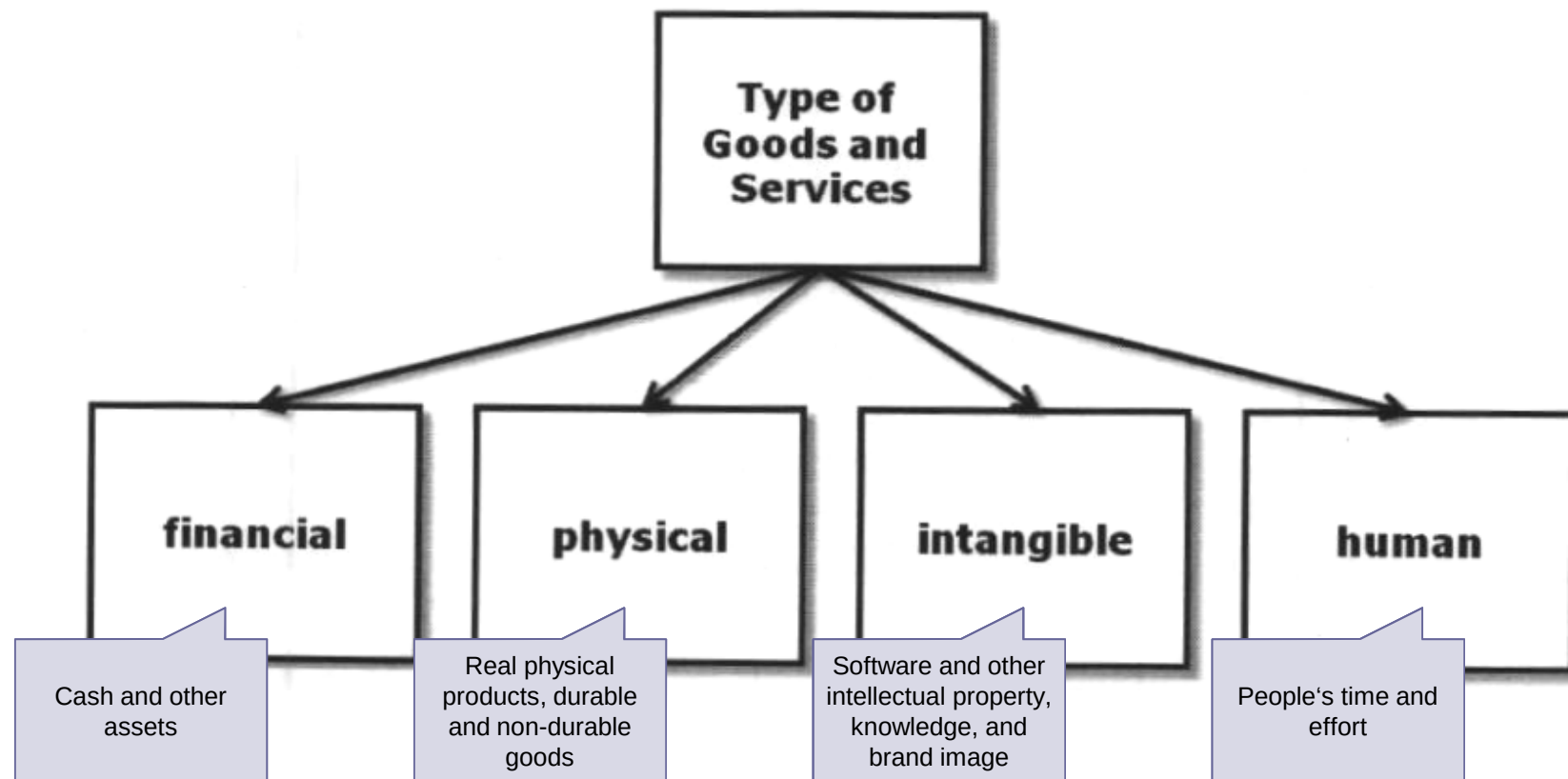
Business Models

- A business model tells you what the business of the company is all about.





Types of Goods





Business Model Archetypes

- Business model archetypes are basic patterns of doing business.

	Type of Products/Services offered			
	Financial	Physical	Intangible	Human
Creator Transforms supplied goods and internal assets to a product sold to customers	Entrepreneur	Manufacturer	Inventor	n/a
Distributor Buys a product and provides the same to customers.	Financial trader	Wholesaler, Retailer	IP distributor	n/a
Lessor Provides temporary right to use a product or service to customers.	Financial lessor	Physical lessor	IP lessor	Contractor
Broker Facilitates matching of potential buyers and sellers.	Financial broker	Physical broker	IP broker	HR broker

Typical Archetypes in the Software Industry



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	Type of Products/Services offered			
	Financial	Physical	Intangible	Human
Creator	Entrepreneur	Manufacturer	<u>Inventor</u>	n/a
Distributor	Financial trader	Wholesaler, Retailer	<u>IP distributor</u>	n/a
Lessor	Financial lessor	<u>Physical lessor</u>	<u>IP lessor</u>	<u>Contractor</u>
Broker	Financial broker	Physical broker	IP broker	

Software vendors offering hosted solutions or SaaS provide hardware usage to customers

Most Software vendors have a consulting business



Inventors

- Invents (designs) a new service or product.
- Cost
 - Sunk cost: cost of development before a software solution can be sold.
 - Sunk cost can be reduced with customer-funded bespoke development and with maintenance revenue.
- Cost savings
 - Automate development (see e.g. software product lines)
 - Hire developers in low cost countries, make use of free open source software, or leverage open source community to build the software.
- Revenue (after invention)
 - Software products are licensed, rented or provided as a service to customers by IP lessors.



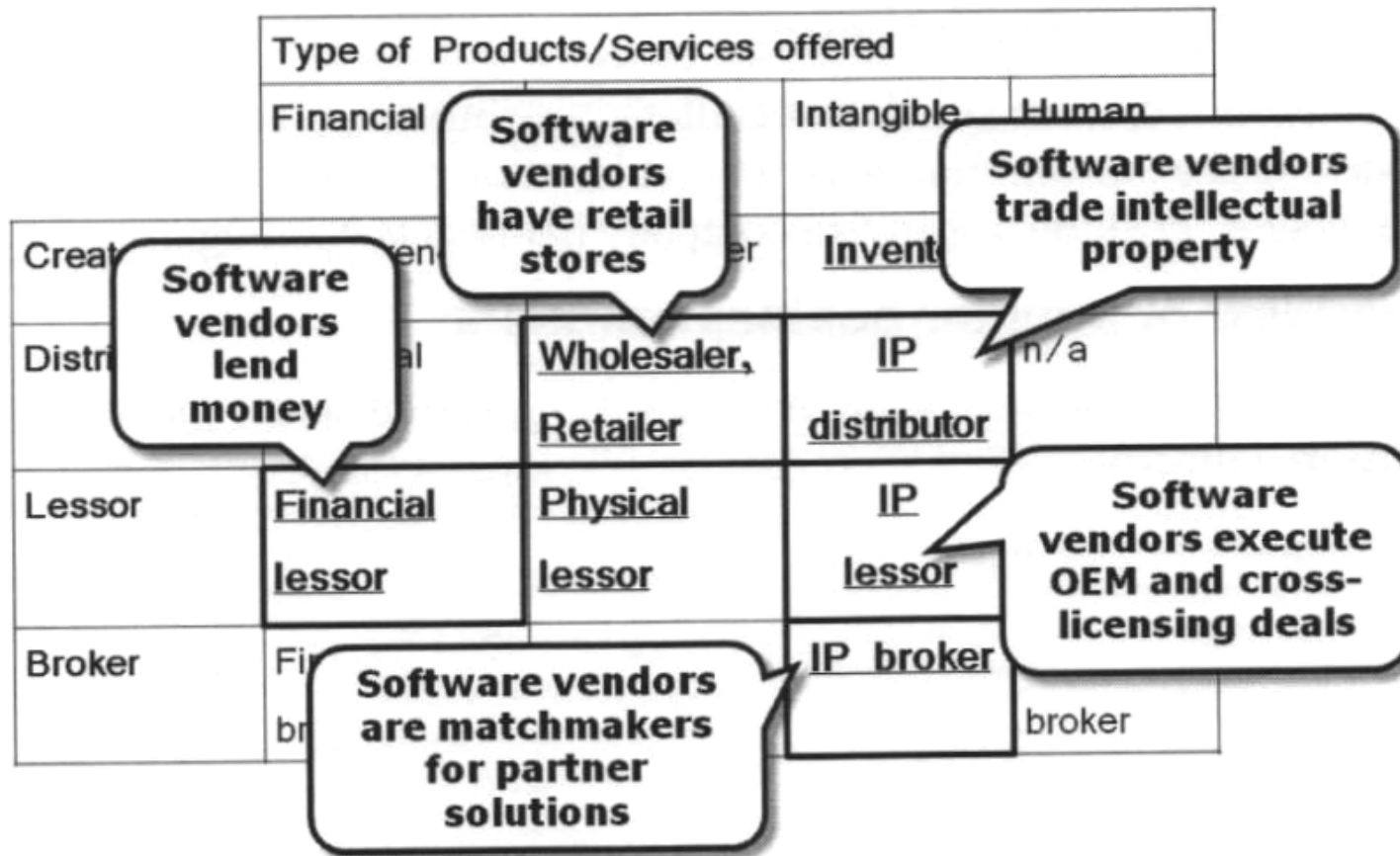
IP Lessors

- Provides intangible goods (software, knowledge, brand image, trade secrets, patents) for rent.
 - Product: software is shipped and installed. IP lessor has support and maintenance cost. Customer has operations cost.
 - Service: software is run at a hosting provider or in the cloud (e.g. Amazon). IP lessor has support, maintenance, and operations cost.
- Most software companies are both, inventors and IP lessors.

Less Common, but Possible Archetype Models



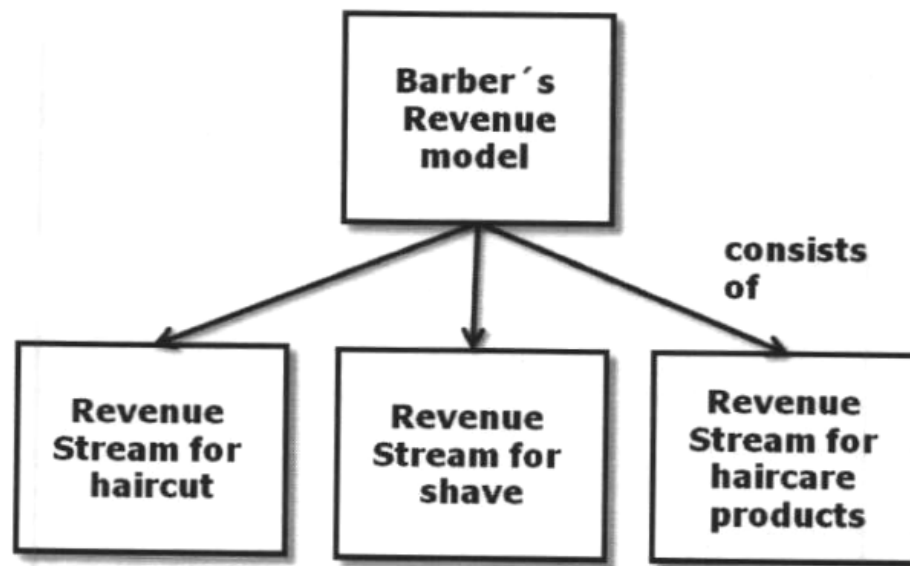
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Revenue Models

- A revenue model defines how a company is compensated for the goods and services provided.
 - A revenue model consists of 1+ revenue streams.



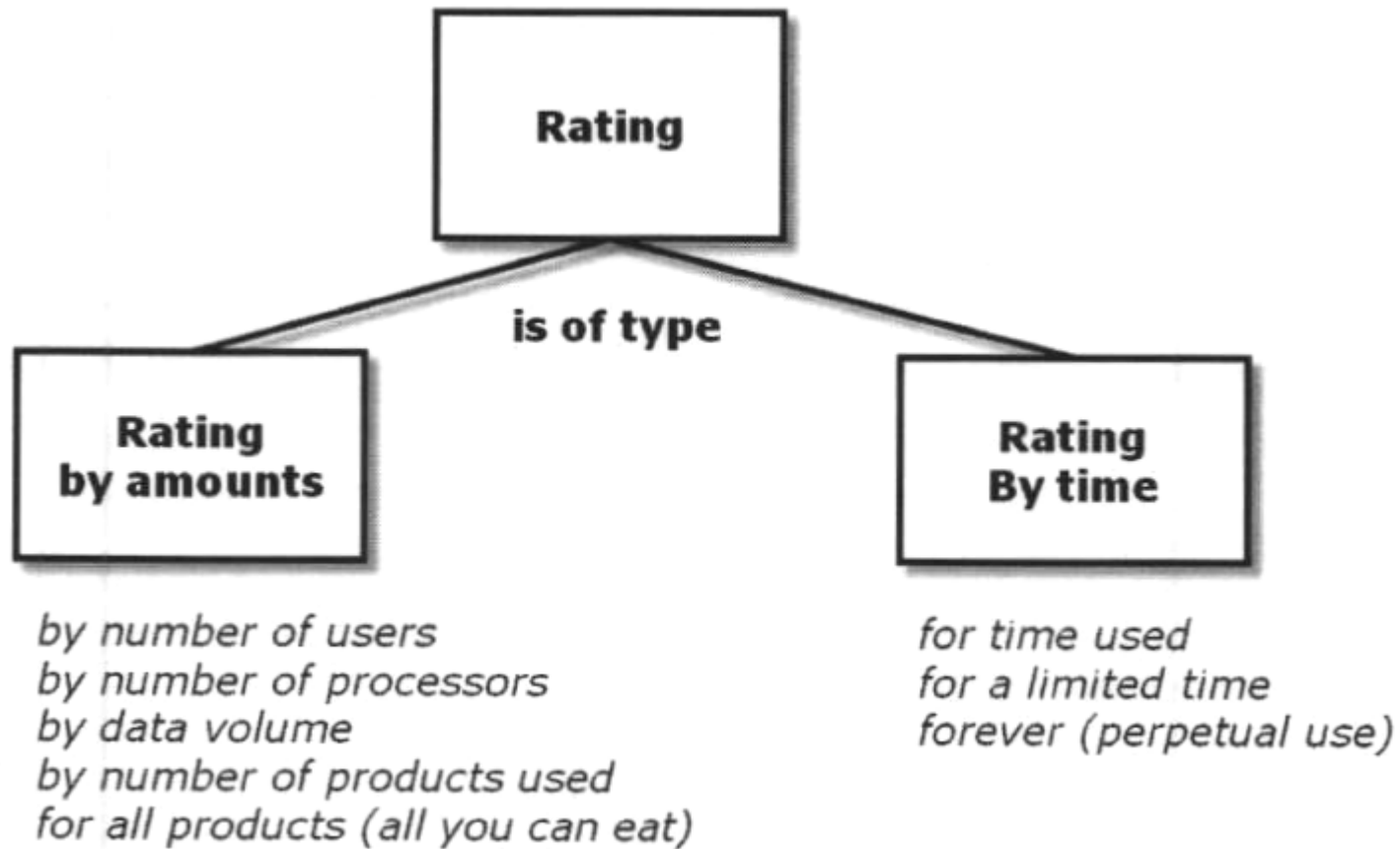


Revenue Streams

- Compensator:
Party (customer or third-party), which provides the compensation
- Effect:
No compensation, with other goods and services, different forms of payment
- Causality:
Compensation per good/service, per bundle of goods and services
- Rating and charging model:
How the good or service usage or consumption is rated and how it is charged for
 - Rating by amount, by time
 - Charging for each transaction, base fees, perpetual, all you can eat
- Pricing:
Pricing mechanisms and strategies
 - Vendor set pricing: proposed price, discounts
 - Customer set pricing
- Timing: prepay, by payment schedule, post consumption



Ratings





Rating and Charging: Example

Calls this month	Rating	Charging
Call 1	Call 1: 10 minutes	Call 1: 10 minutes
Call 2	Call 2: 5 minutes	Call 2: 5 minutes
Call 3	Call 3: 8 minutes	Call 3: 8 minutes
Call 4	Call 4: 7 minutes	Call 4: 7 minutes
Call 5	Call 5: 20 minutes	Call 5: 20 minutes
Call 6	Call 6: 30 minutes	Call 6: 30 minutes

Charge Base Fee,
Not single
calls

Charge single
Call, 5 cents
per call

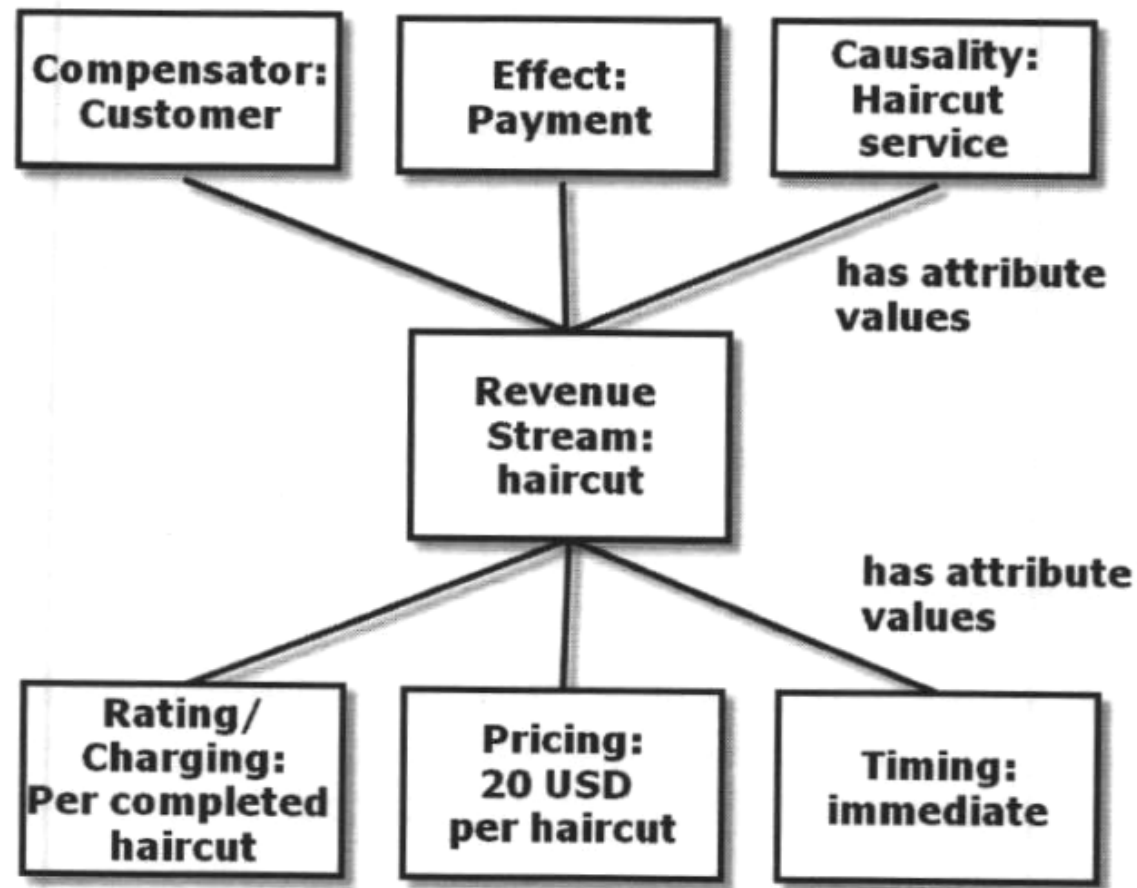


Pricing Examples

Product Pricing	Pricing model	Rating	Charging	Price is set by
Fixed Pricing per used product	Pay per use	By amount of actual use	per product, user and time	Software vendor
	Subscription	By amount and time for use	per product, user and time	Software vendor
	List price	By amount of planned use	per product, user and time	Software vendor
Differential Pricing for products	Feature dependent	By amount of features	Per feature, user and time	Software vendor
	Volume dependent	By amount of volume	By volume and time	Software vendor
	Value based	By amount of value	By share of customer value	Customer



Revenue Stream Example



Typical Business Models in the Software Industry



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	Inventor	IP distributor
Compensator	the inventor or the customer	Licensors
Effect	payment	payment of license fee
Causality	for created goods	for goods distributed
Rating	per good or per development time spent	measurable unit of goods distributed
Charging	internal: fully loaded cost rate of development organization, external: external rate for development services	onetime fee
Pricing	variable	variable
Timing	variable	variable

	IP lessor	Contractor	Physical lessor
Compensator	Licensors	Receiver of service	Receiver of service
Effect	payment of license fee or no payment (open source or seed model)	payment of service fee	payment of service fee
Causality	for usage of intangible goods provided	for service provided	for provisioning of physical items
Rating	measurable unit of usage: per processor, per number of users, per throughput, all you can eat	per hour, per day	per hour, per day
Charging	one-time usage, monthly or yearly usage	per hours used or per project or yearly base fee plus additional charge for hours used above threshold	per hours or per days used
Pricing	variable	variable	variable
Timing	variable	variable	variable



Example: Microsoft

Type of Products/Services offered				
	Financial	Physical	Intangible	Human
Creator	Microsoft builds and sells hardware and appliances	<u>Manufacturer</u>	<u>Inventor</u>	Microsoft has numerous OEM and cross-licensing deals
Distributor		Wholesaler, Retailer	<u>IP distributor</u>	
Lessor	<u>Financial lessor</u>	<u>Physical lessor</u>	<u>IP lessor</u>	<u>Contractor?</u>
Broker	Microsoft is matchmaker for partner solutions and partner services		<u>IP broker</u>	HR broker

Opportunities to Extend Microsoft Business



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	Type of Products/Services offered			
	Financial	Physical	Intangible	Human
Creator	Entrepreneur	<u>Manufacturer</u>	<u>Inventor</u>	
Distributor	Financial trader	Wholesaler, Retailer	<u>IP distributor</u>	
Less			<u>IP lessor</u>	
Broker	<u>Financial broker</u>	<u>Physical broker</u>	<u>IP broker</u>	<u>HR broker</u>

Microsoft should expand its matchmaking business

Microsoft should change its business model where the competition uses penetration pricing



Example: Google



Type of Products/Services offered				
	Financial	Physical	Intangible	Human
Creator	Entrepreneur	<u>Manufacturer</u>	<u>Inventor</u>	n/a
Distributor		Wholesaler, Retailer	IP distributor	
Lessor	Financial lessor	<u>Physical</u> <u>lessor</u>	<u>IP</u> <u>lessor</u>	Contractor
Broker	<u>Financial</u> <u>broker</u>	<u>Physical</u> <u>broker</u>	<u>IP broker</u>	<u>HR</u> <u>broker</u>

**Google builds
and sells
appliances**

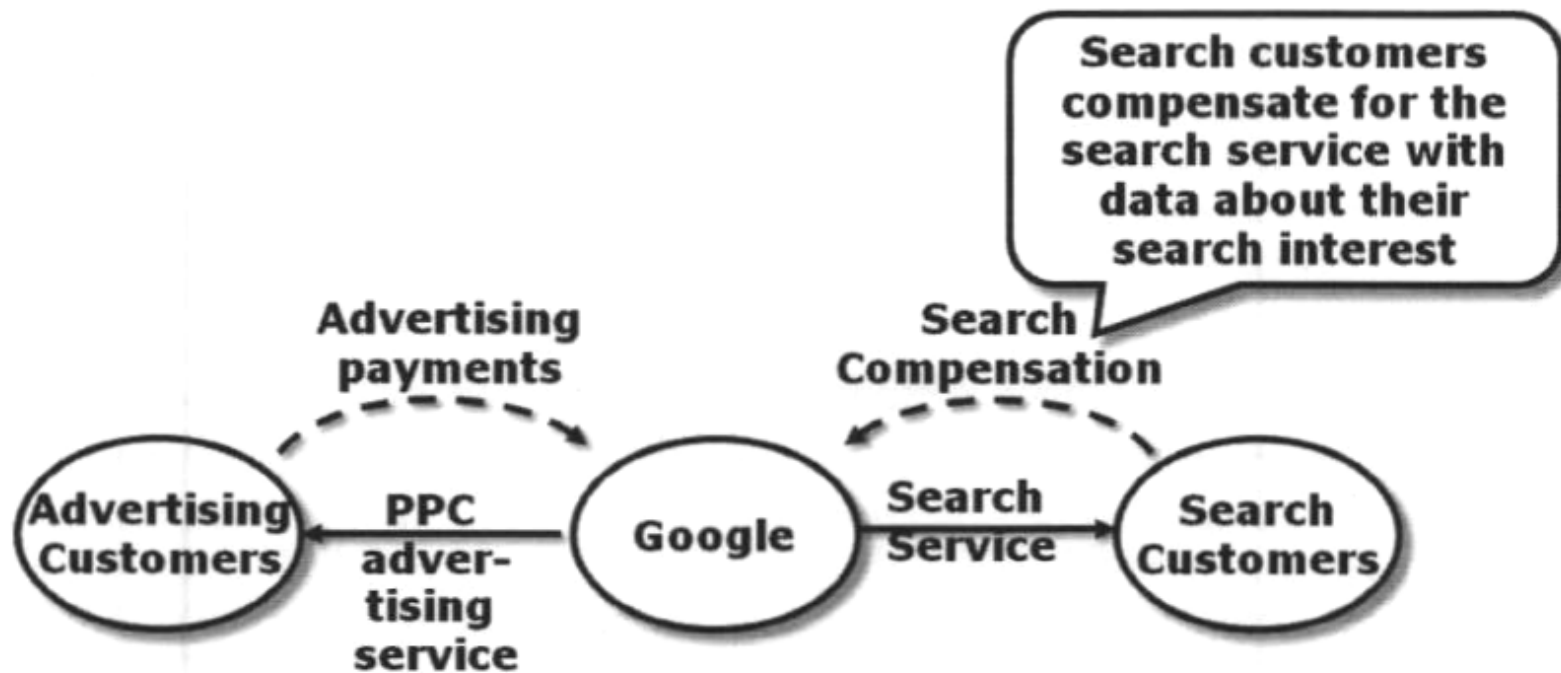
**Google provides
software as a
service (Gmail,
Google Apps)**

**Google is matchmaker between customers
and advertisers based on customer inquiries**





Google Business Model



Opportunities to Extend Google Business



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	Type of Products/Services offered			
	Financial	Physical	Intangible	Human
Creator	Entrepreneur	Manufacturer	<u>Inventor</u>	n/a
Distributor			IP distributor	
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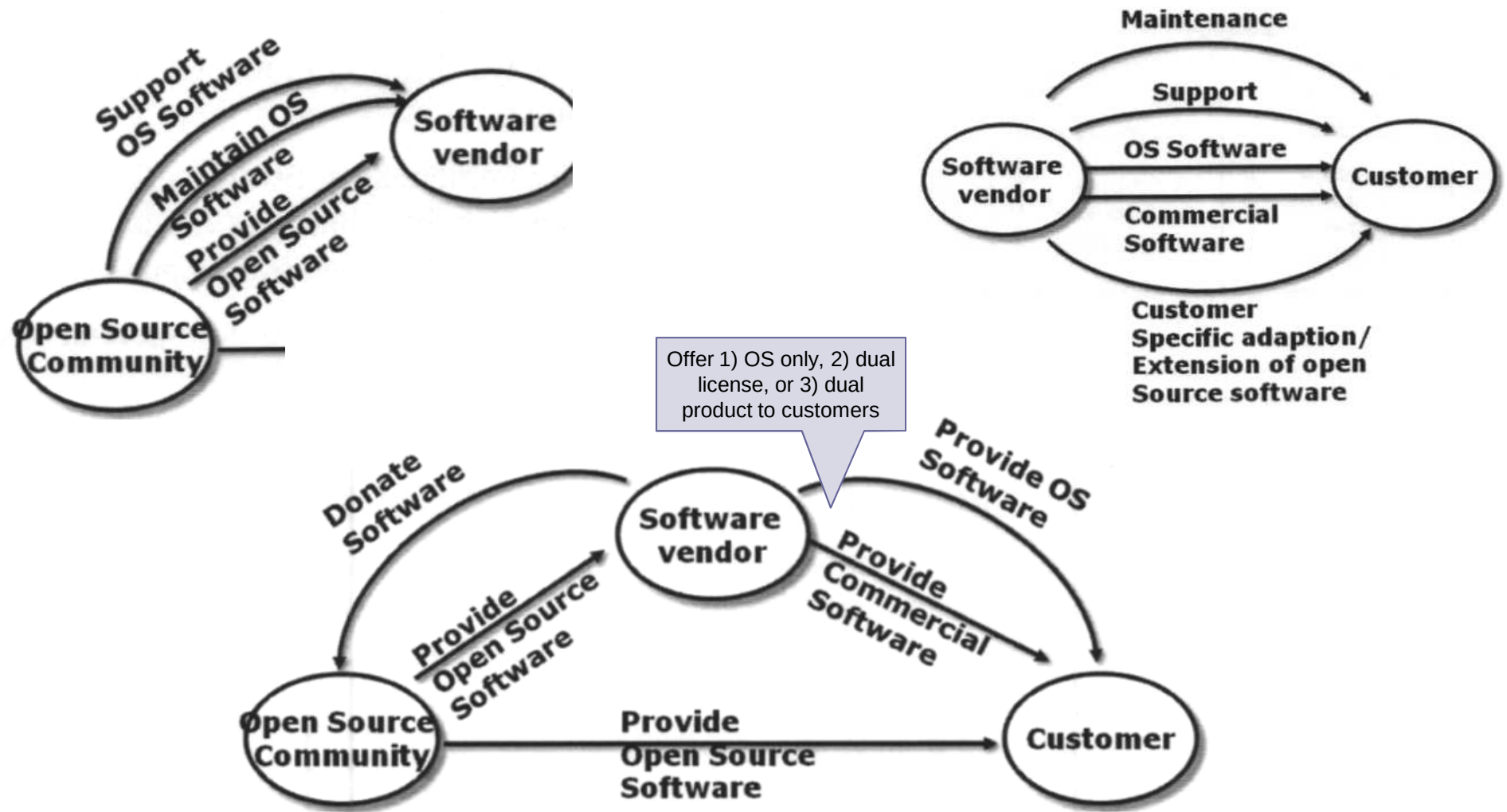
Google should try to get away from on demand use of Google products to ongoing use of Google products, like Android, Chrome OS

Google should cover more areas, where users reveal information like Google voice

Google should expand the matchmaker business to B2B relationships in addition to its B2C business

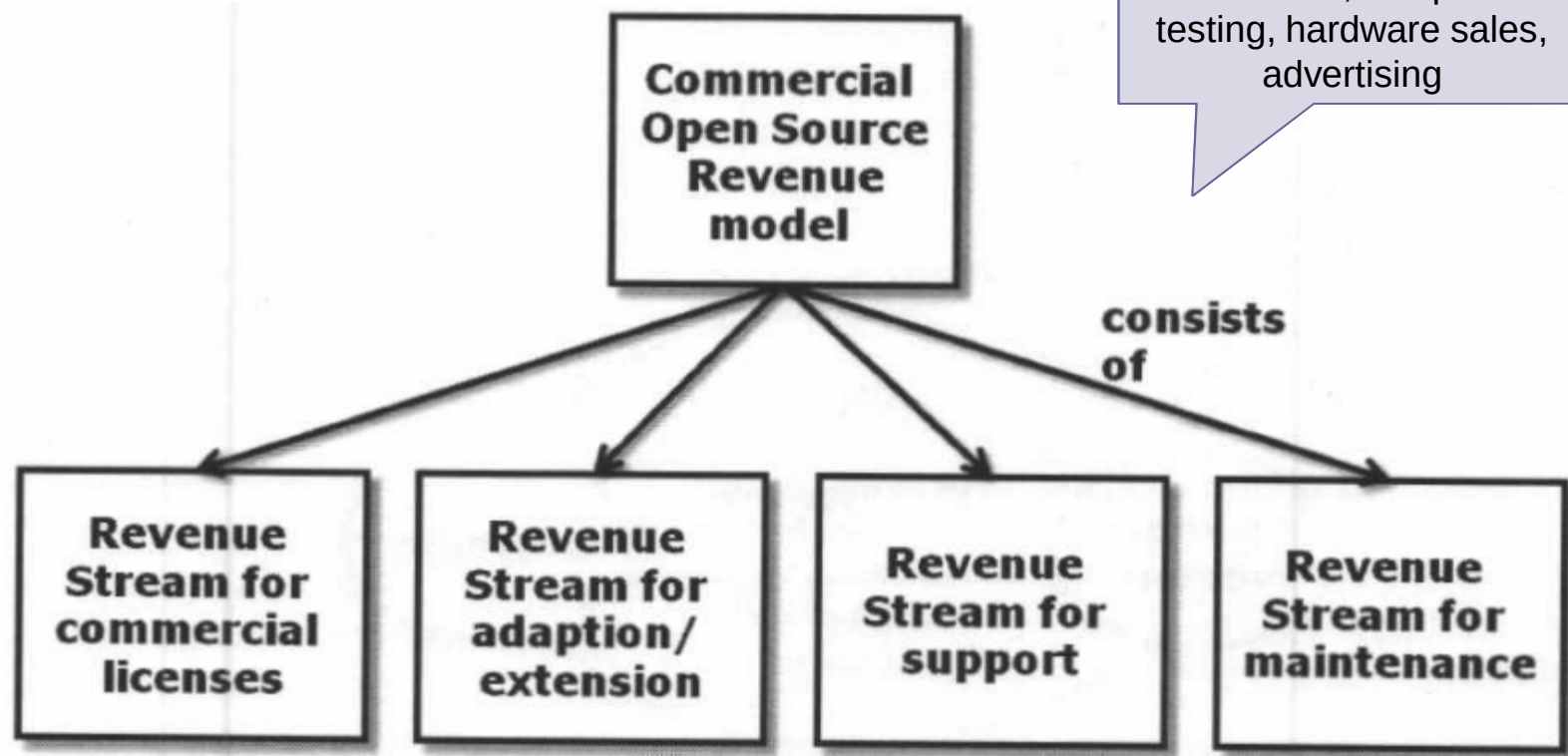


Open Source Business Models





Open Source Licensing



Commercial Open Source Business Models



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	Type of Products/Services offered			
	Financial	Physical	Intangible	Human
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Distributor	Financial trader	Wholesaler, Retailer	<u>IP distributor</u>	n/a
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Broker	Financial broker	Physical broker	IP broker	HR broker



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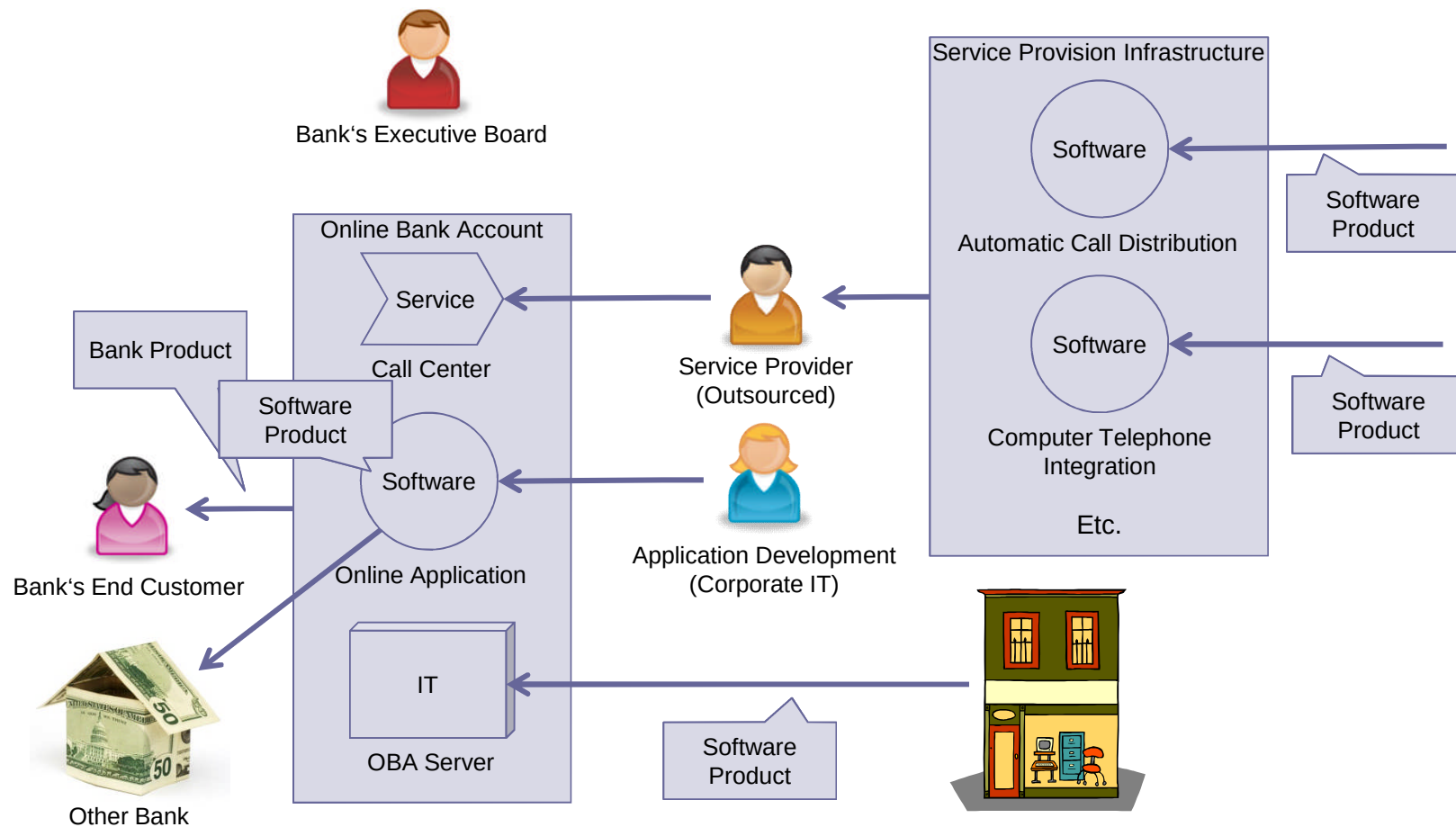
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Agenda

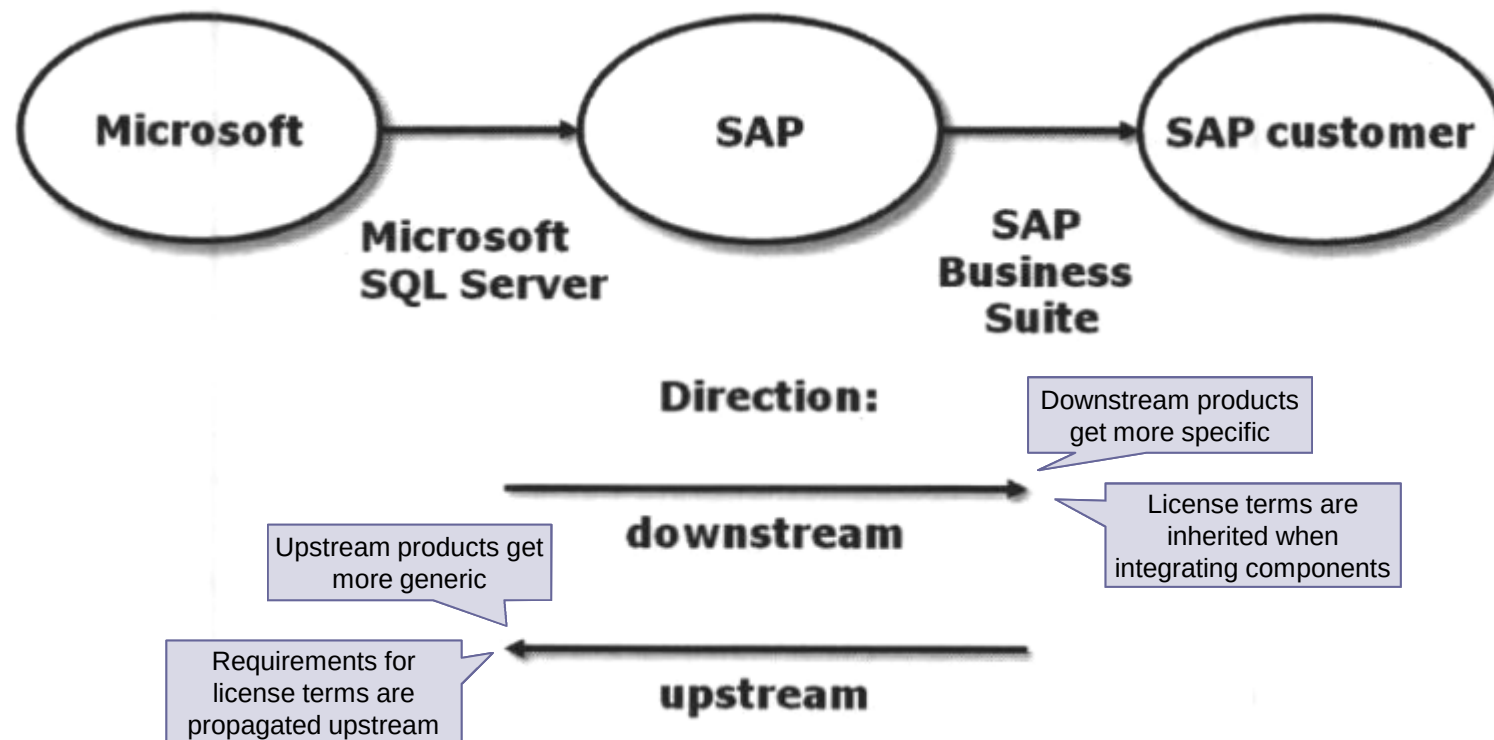
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SPM in the Supply Network



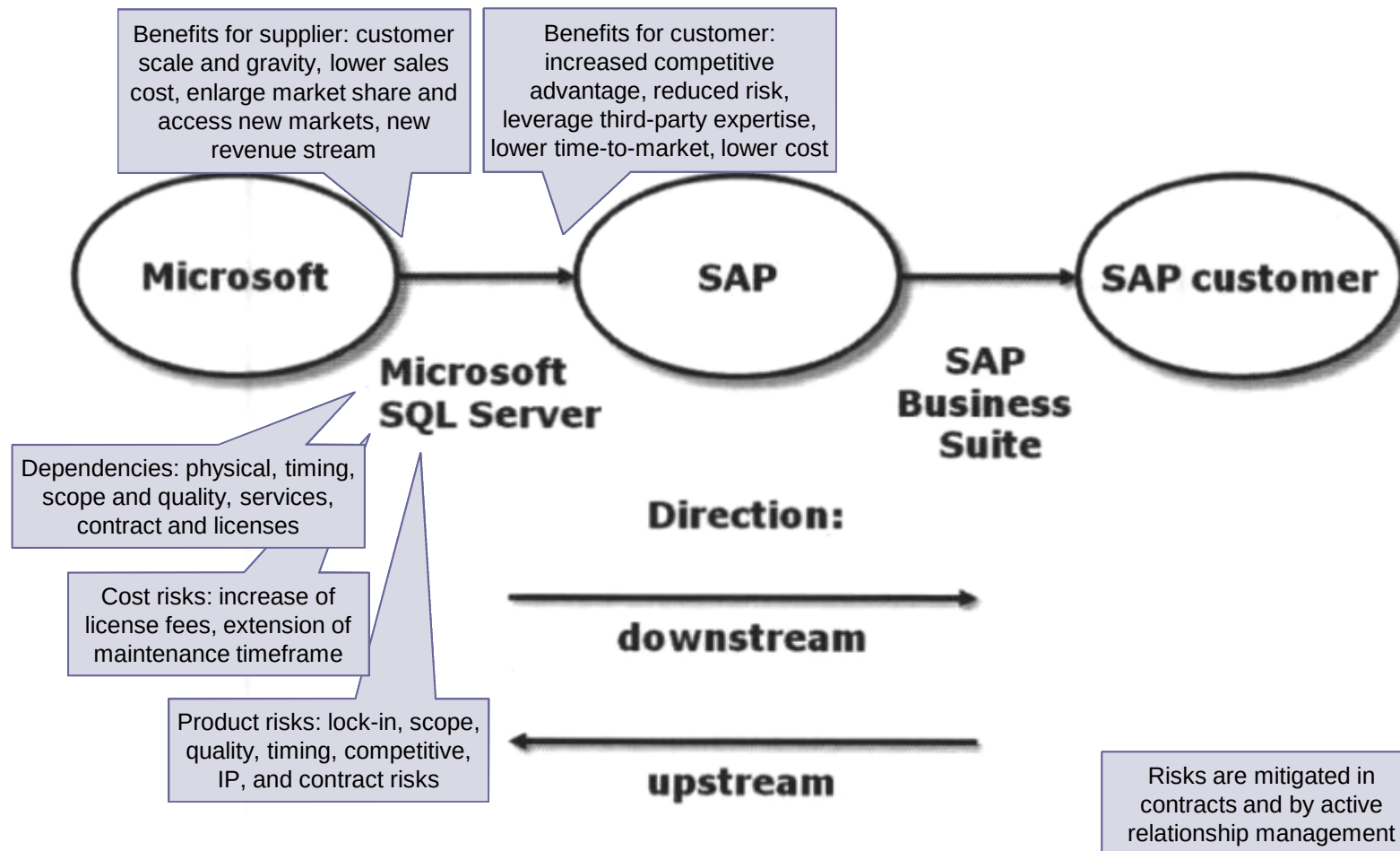


Software Supply Chain



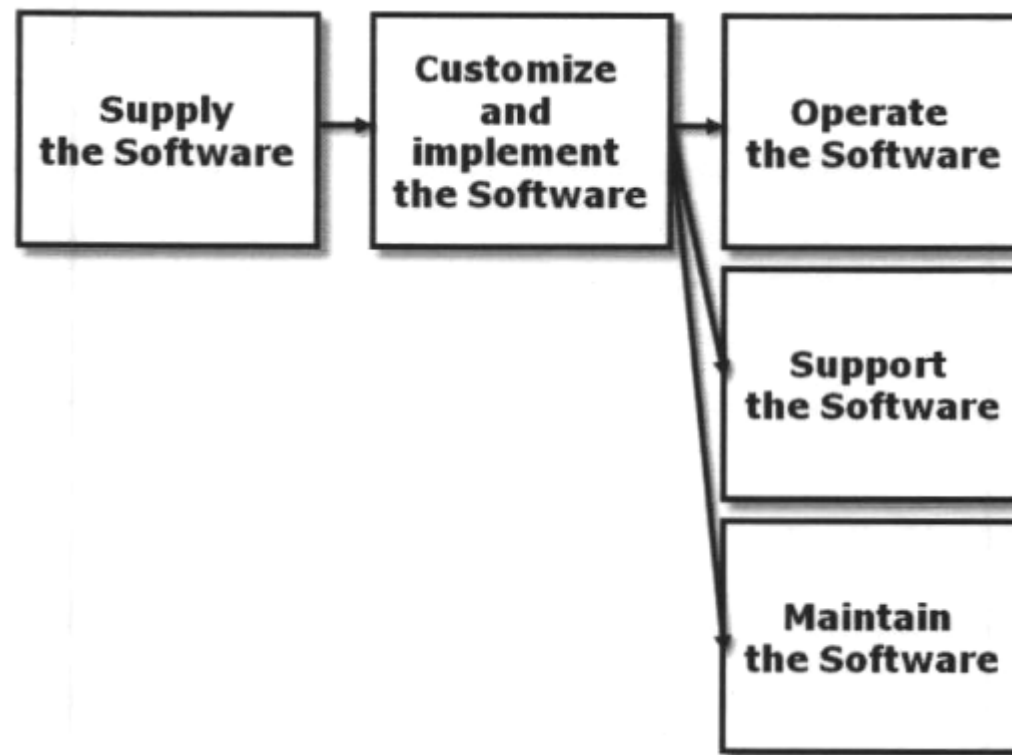


Software Supply Chain



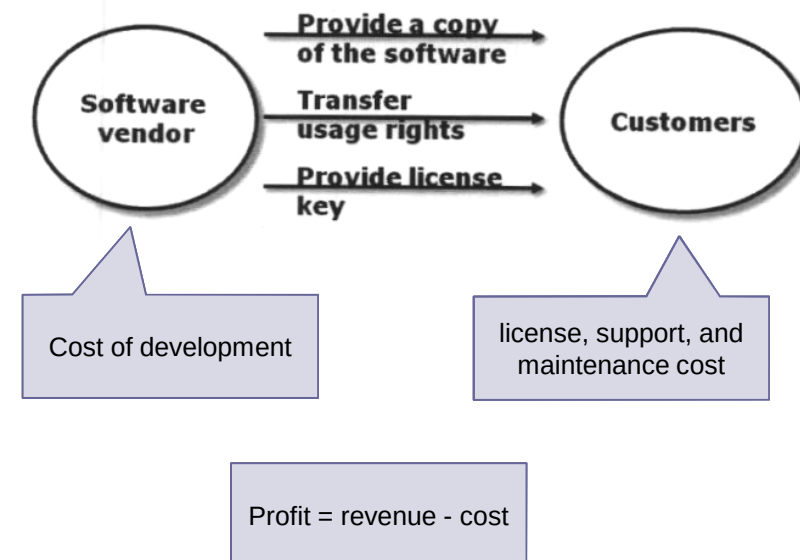
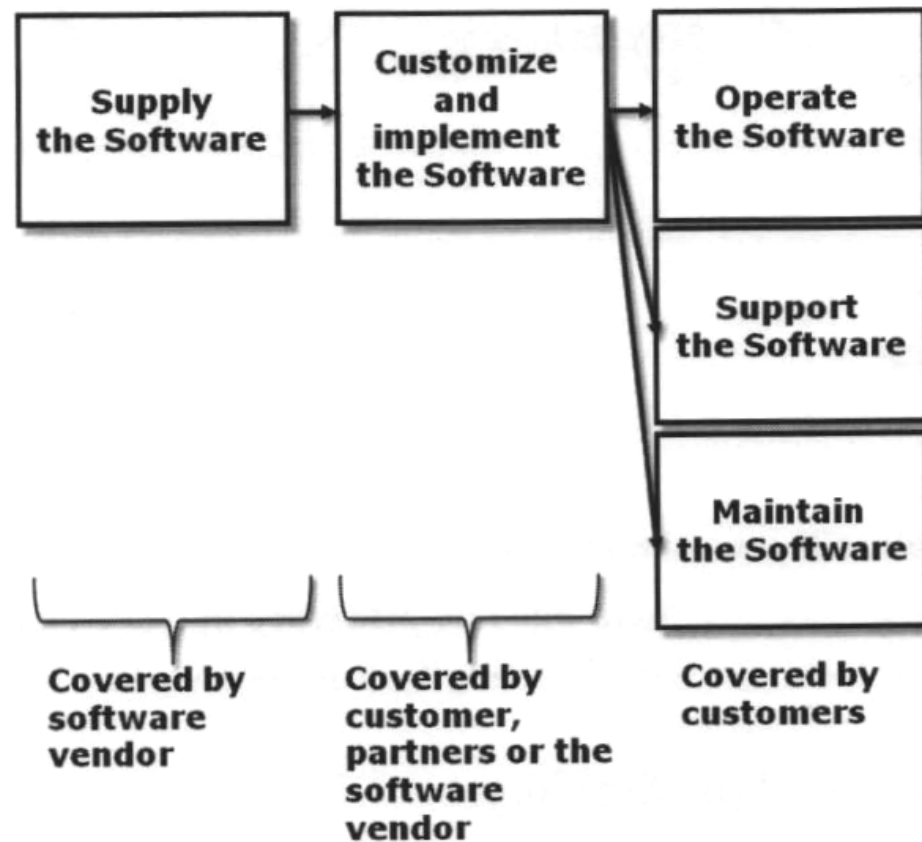


Software Value Chain





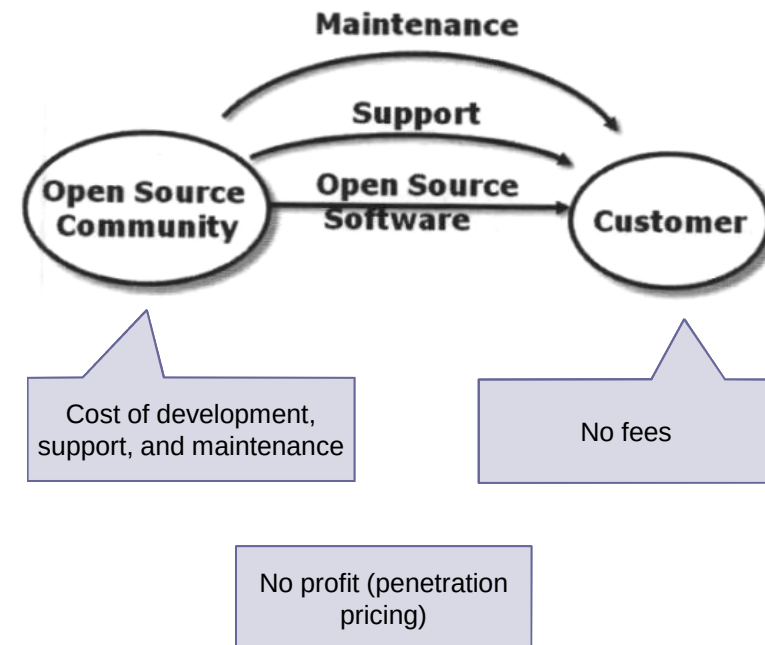
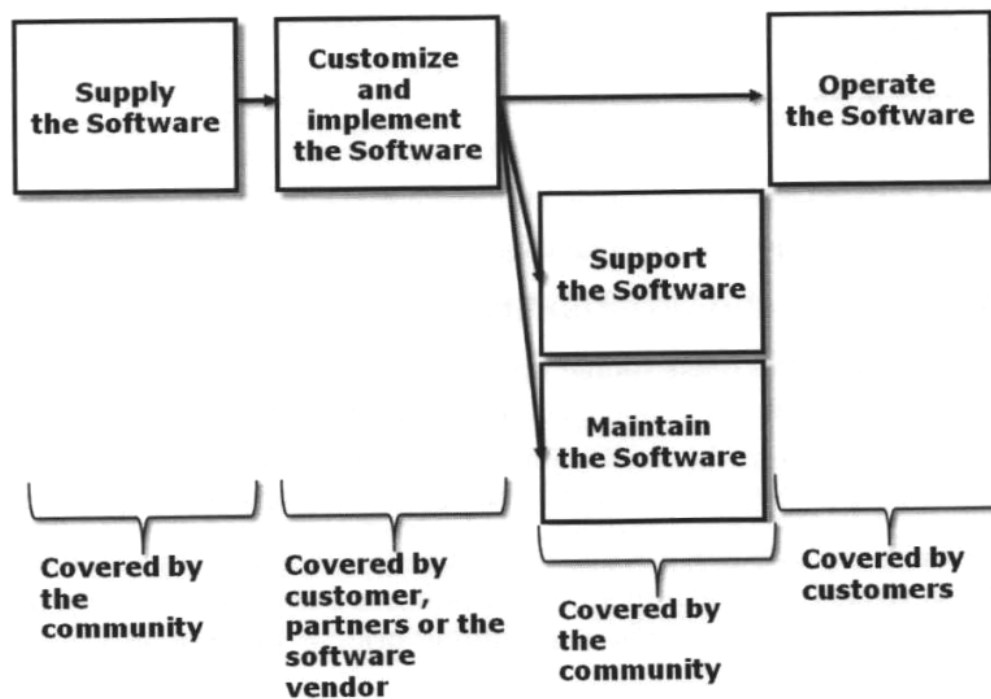
Software Value Chain: Traditional



Software Value Chain: Open Source

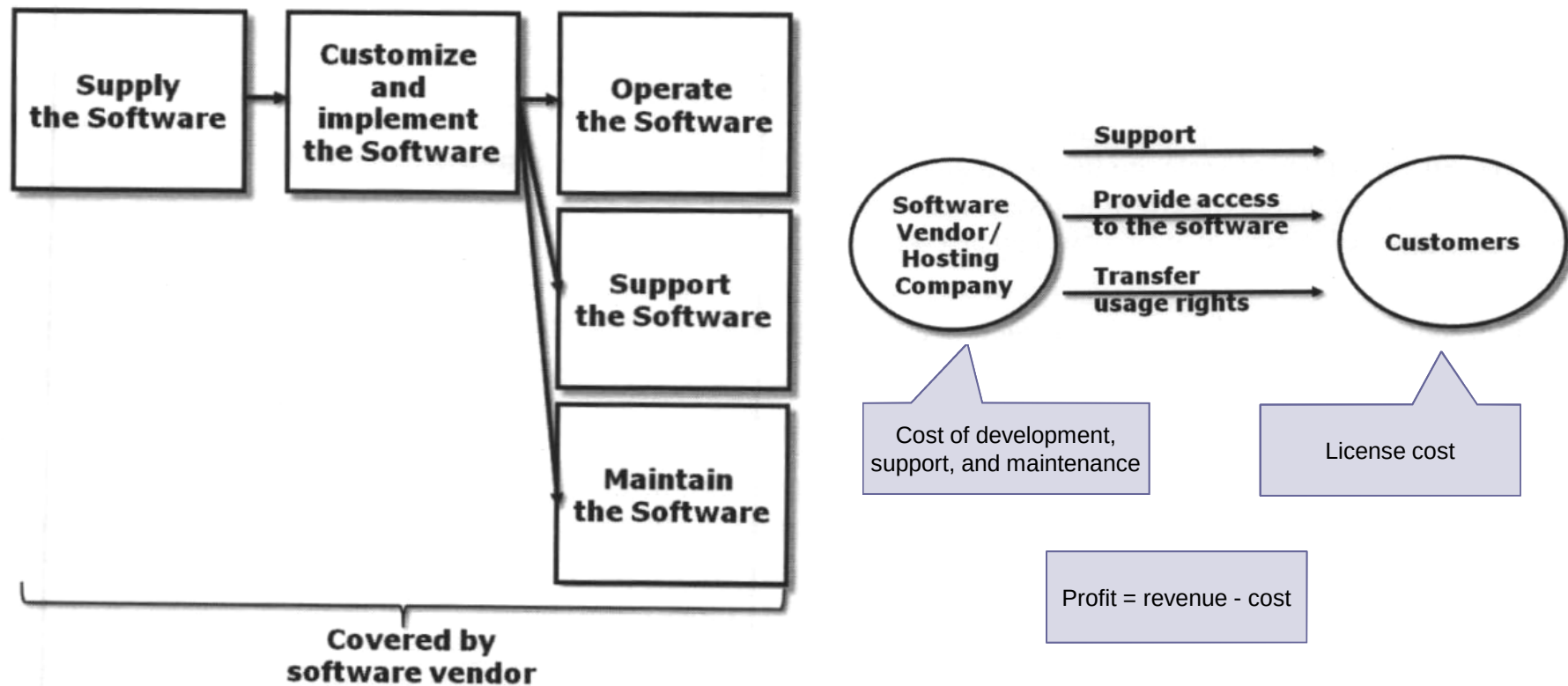


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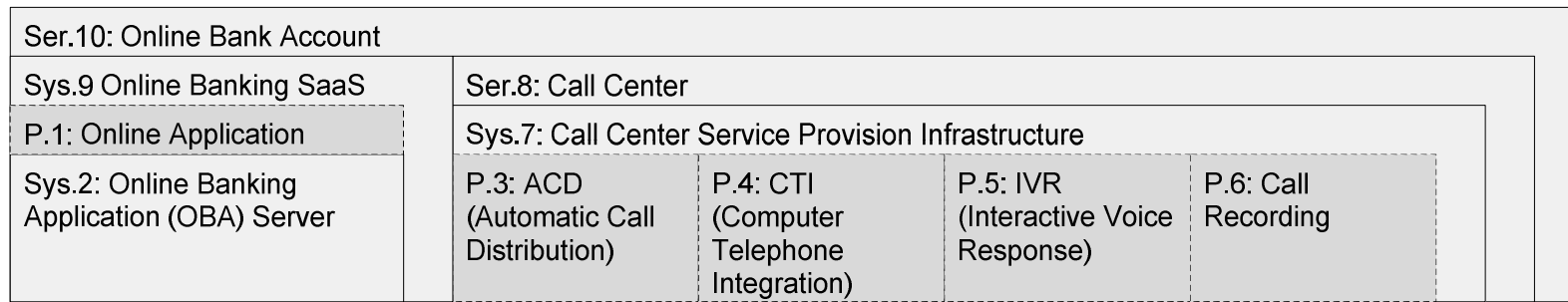
Software Value Chain: SaaS



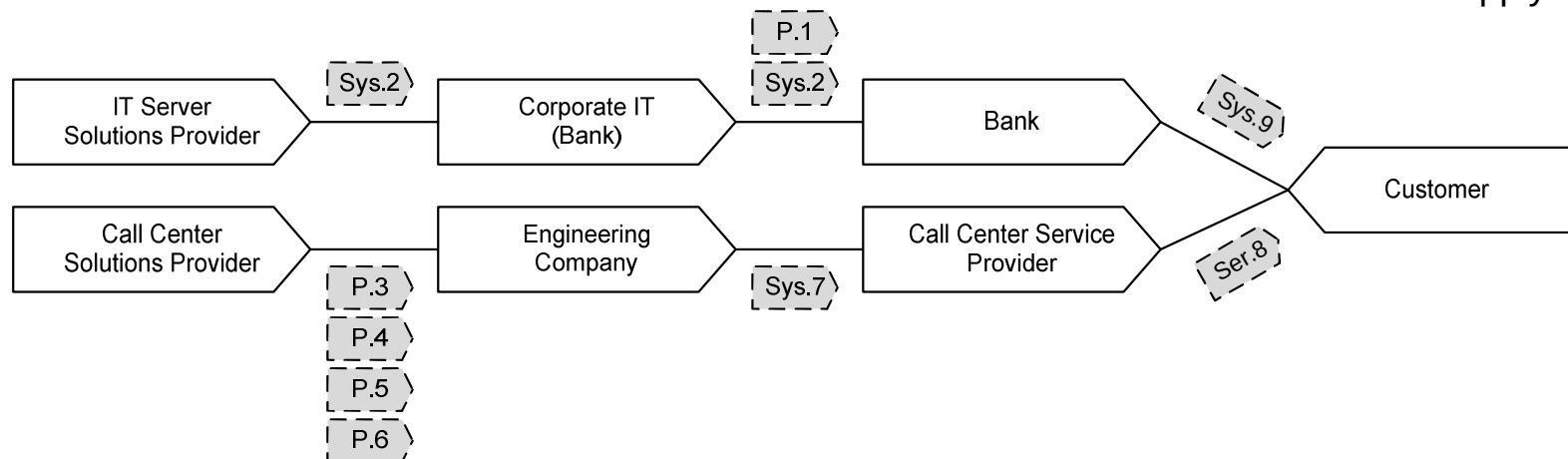
Software Supply Network (SSN) Notation



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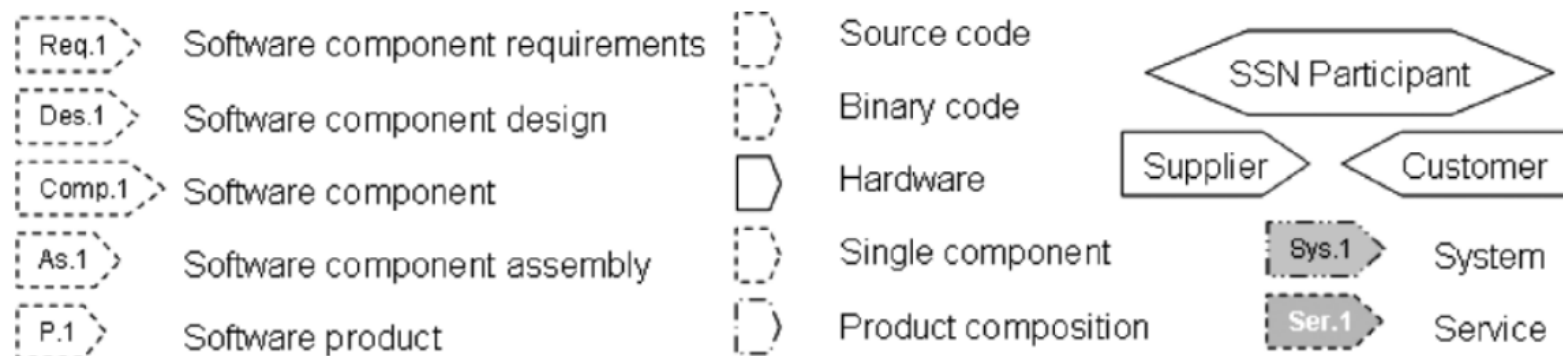


Product Context
Supply Network





SSN Notation



Tribeka: Product Idea



Composition of a
Windows-based Game

Electronic Distribution
of Games and
Business Software

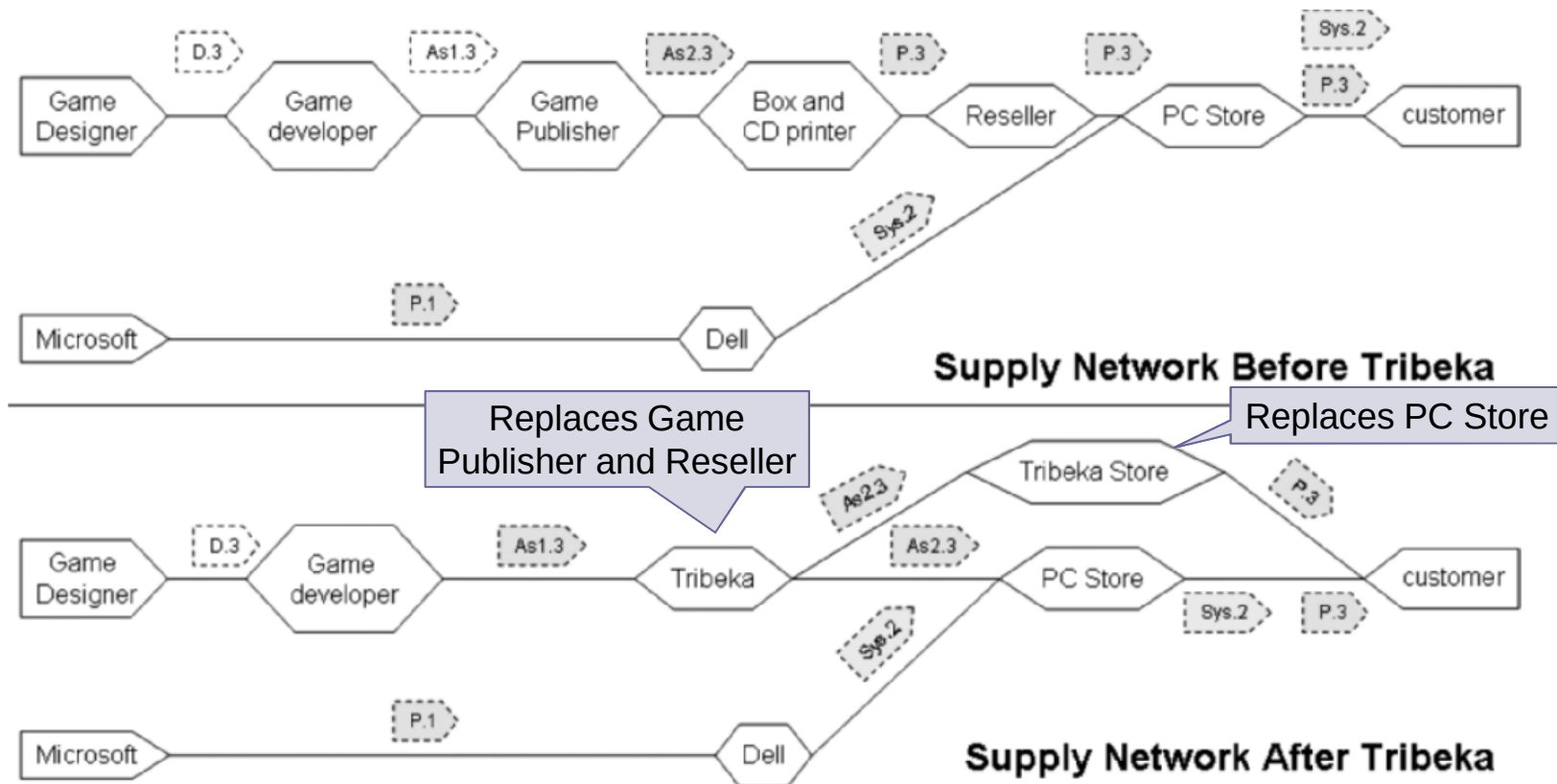
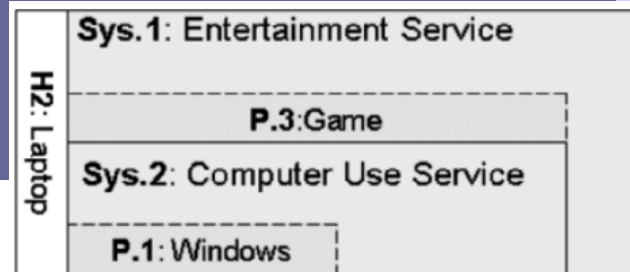
H2: Laptop	Sys.1: Entertainment Service	
	P.3: Game	
	Sys.2: Computer Use Service	
	P.1: Windows	



Tribeka: SSN



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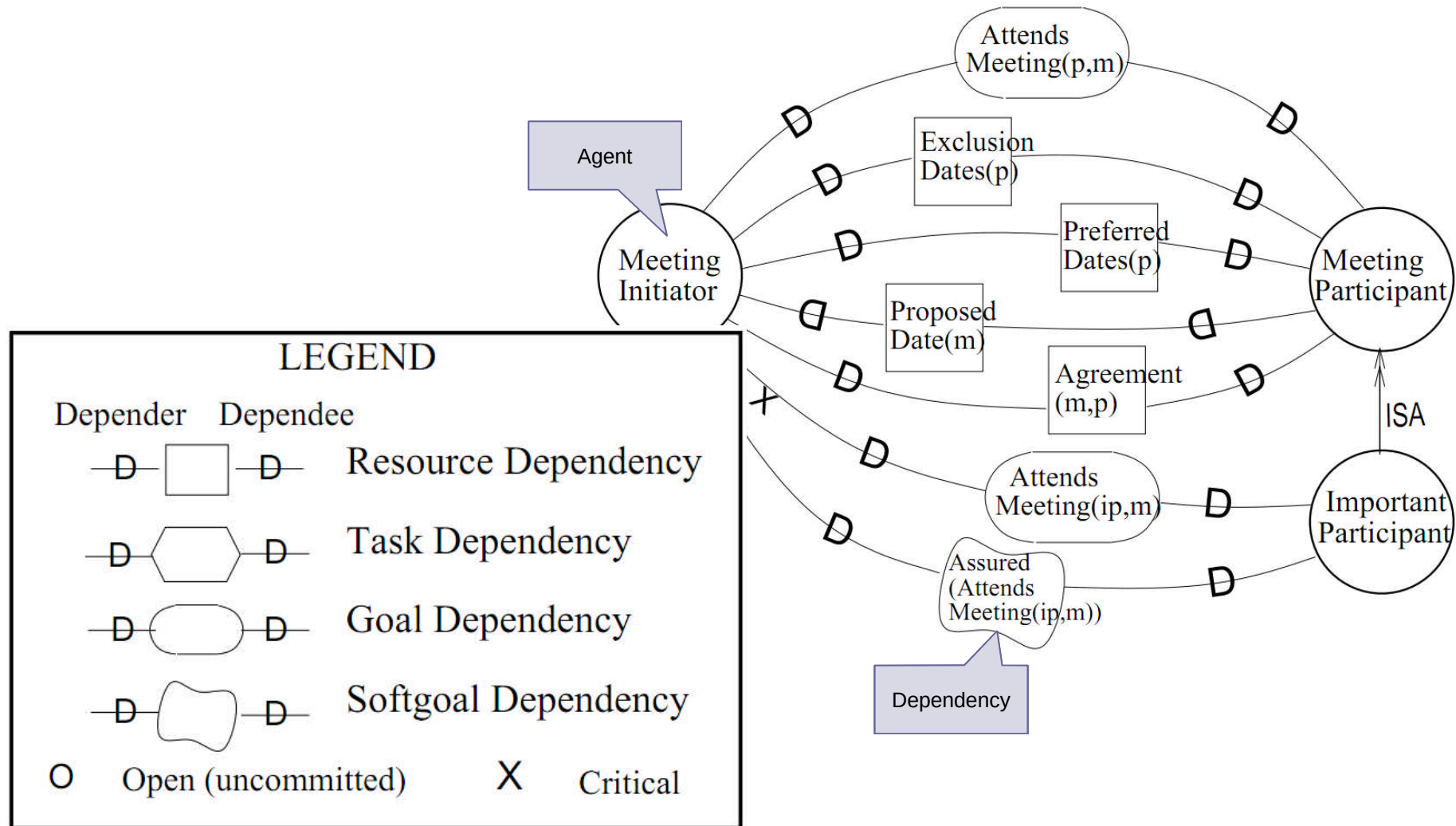
Music Rights Clearance



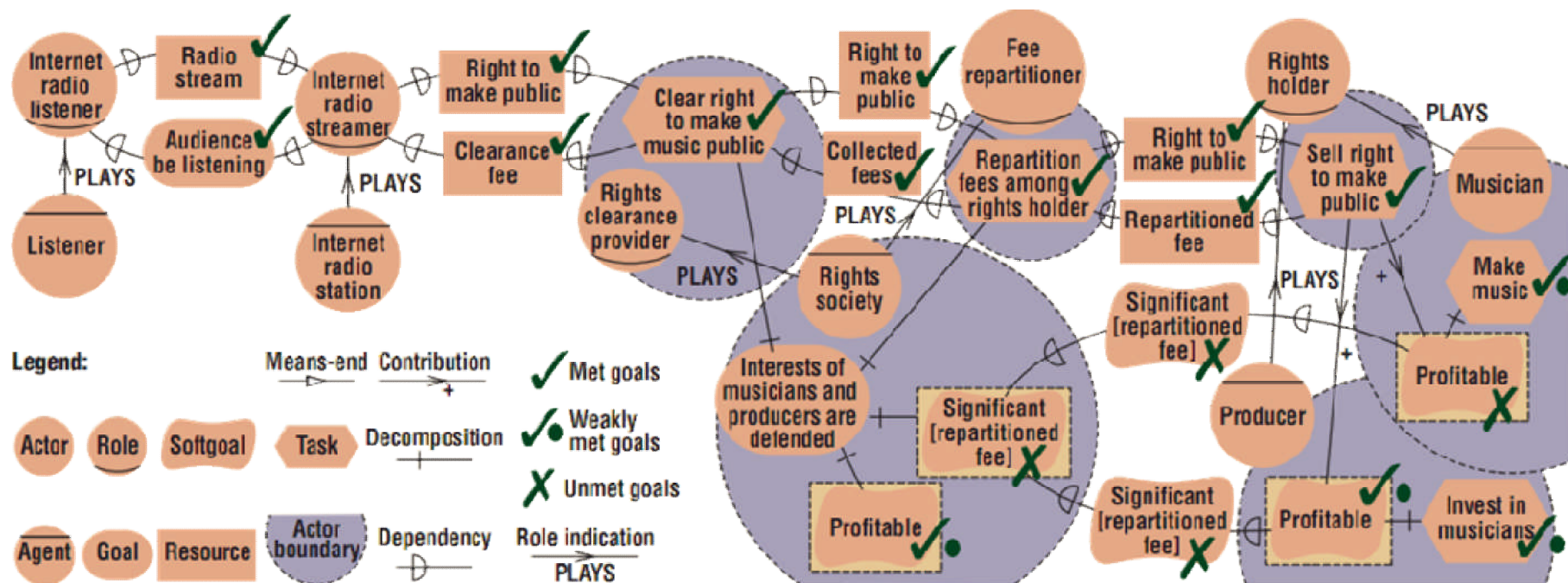
Dependencies between Players: i* Notation



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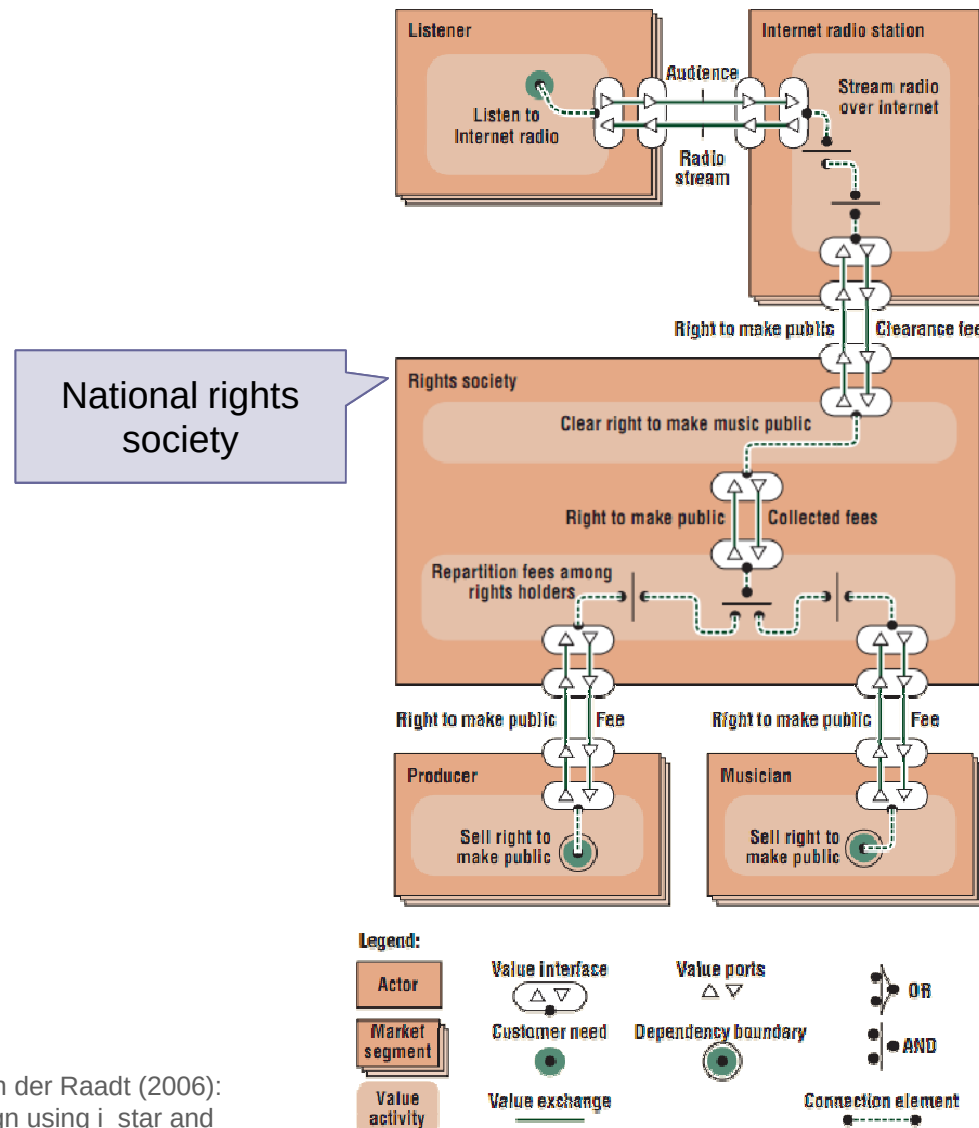
Actor Dependencies and Goals



Value Perspective: e3value Notation



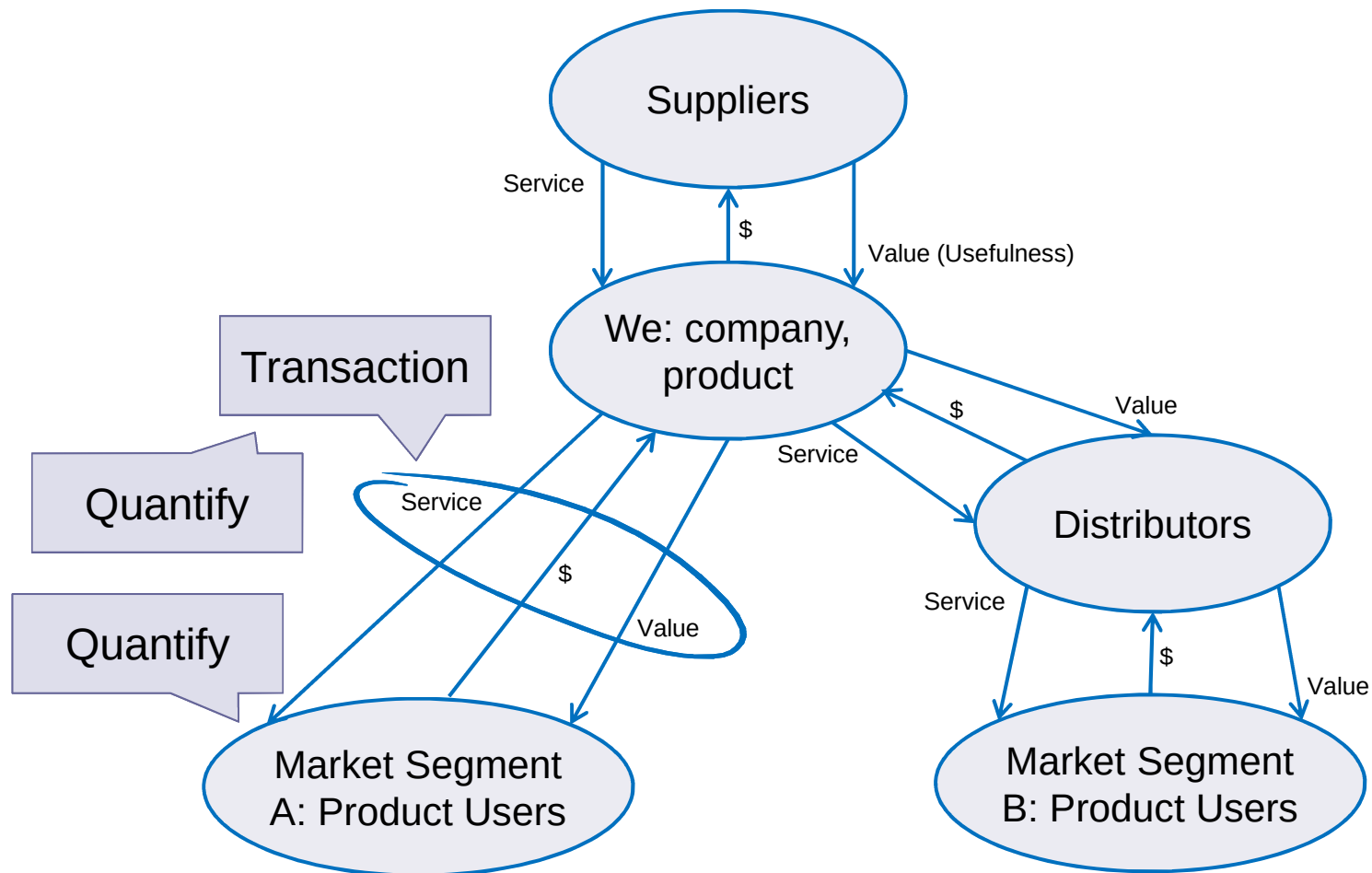
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Gordijn, Yu, van der Raadt (2006):
e-Service Design using i_star and
e3value Modeling. IEEE SW.

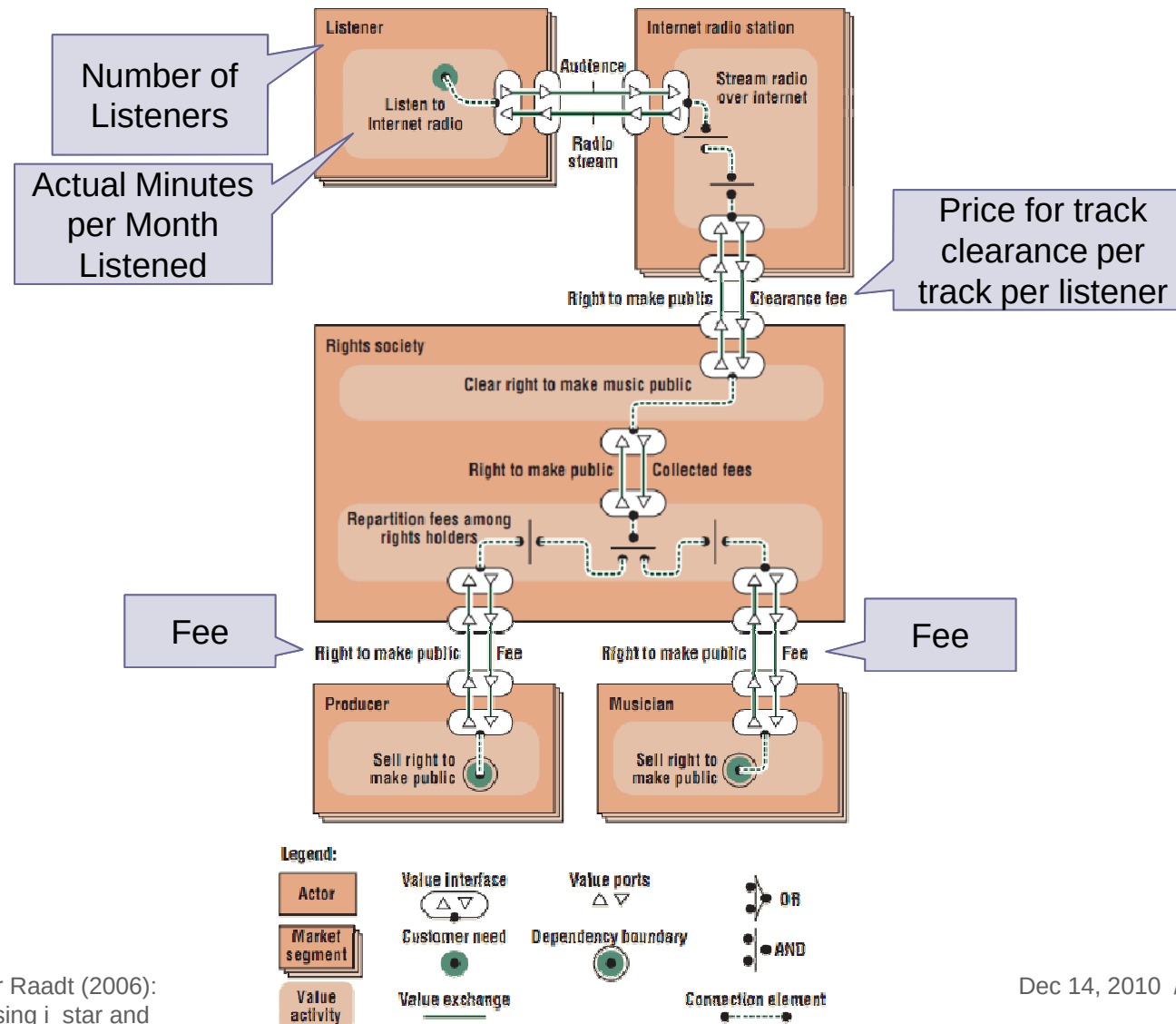


Simplified Notation





Quantitative Profitability Analysis



Net Cash Flow Calculation for the Rights Society



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Automated computation with software on www.e3value.com

Microsoft Excel - Current rights clearing model.xls

File Edit View Insert Format Tools Data Window Help Adobe PDF Type a question for help

F24

	A	B	C	D	E	F
	Value Interface	Value Port	Value Exchange	Occurrences	Valuation	Economic Value
1	with Internet radio station	total for with Internet radio station		19800000		\$13,860.00
2		Right to make public (out)		19800000		\$0.00
3		Clearing fee (in)	Clearance fee	19800000	\$0.0007000	\$13,860.00
4	with Musician	total for with Musician		158400000		-\$6,167.70
5		Re-partioned fee	Fee	158400000	\$0.0000389	-\$6,167.70
6		Right to make public (in)		158400000		\$0.00
7	with Producer	total for with Producer		19800000		-\$6,167.70
8		Right to make public (in)		19800000		\$0.00
9		Re-partioned fee	Fee	19800000	\$0.0003115	-\$6,167.70
10						
11						
12	total for actor					\$1,524.60

Internet radio station / Listener / Producer / Rights society / Mu

Ready

Economic Analysis of a Small Product Company



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	Today	+1 year	+2 years	+n years...	
Turnover	Planned income: quantity x price				
EBIT	Earnings before interests and taxes				Gain
Operative Cashflow	Income – operative expenses				Need for investment: OC-FC
Free Cashflow	Income – operative expenses – investments – taxes				
Cummulative Cashflow	Balance at end of reporting period				Liquidity
FET	Number of employees in %				

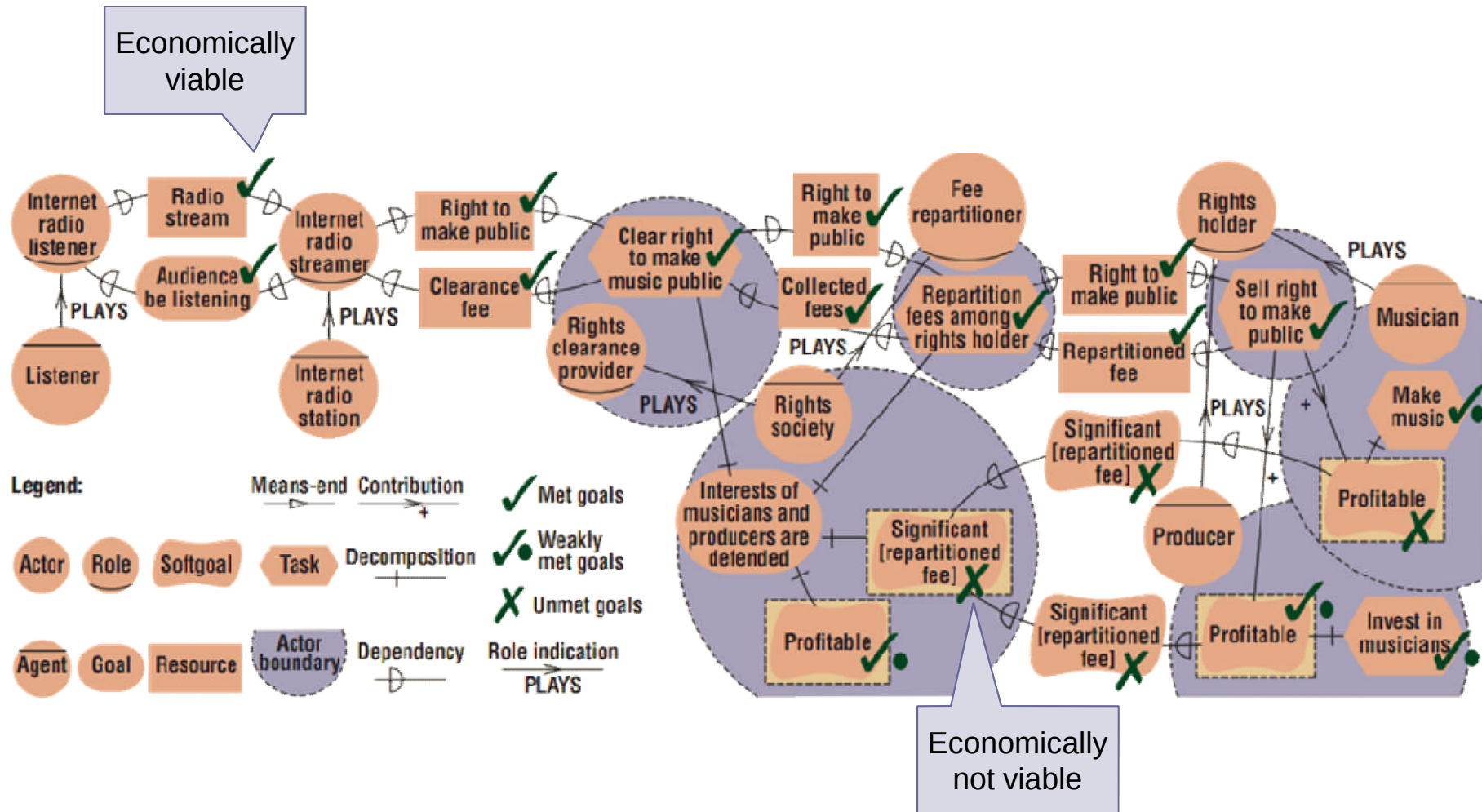
Full-time Equivalent

Break-Even Point:
Moment where CC = 0

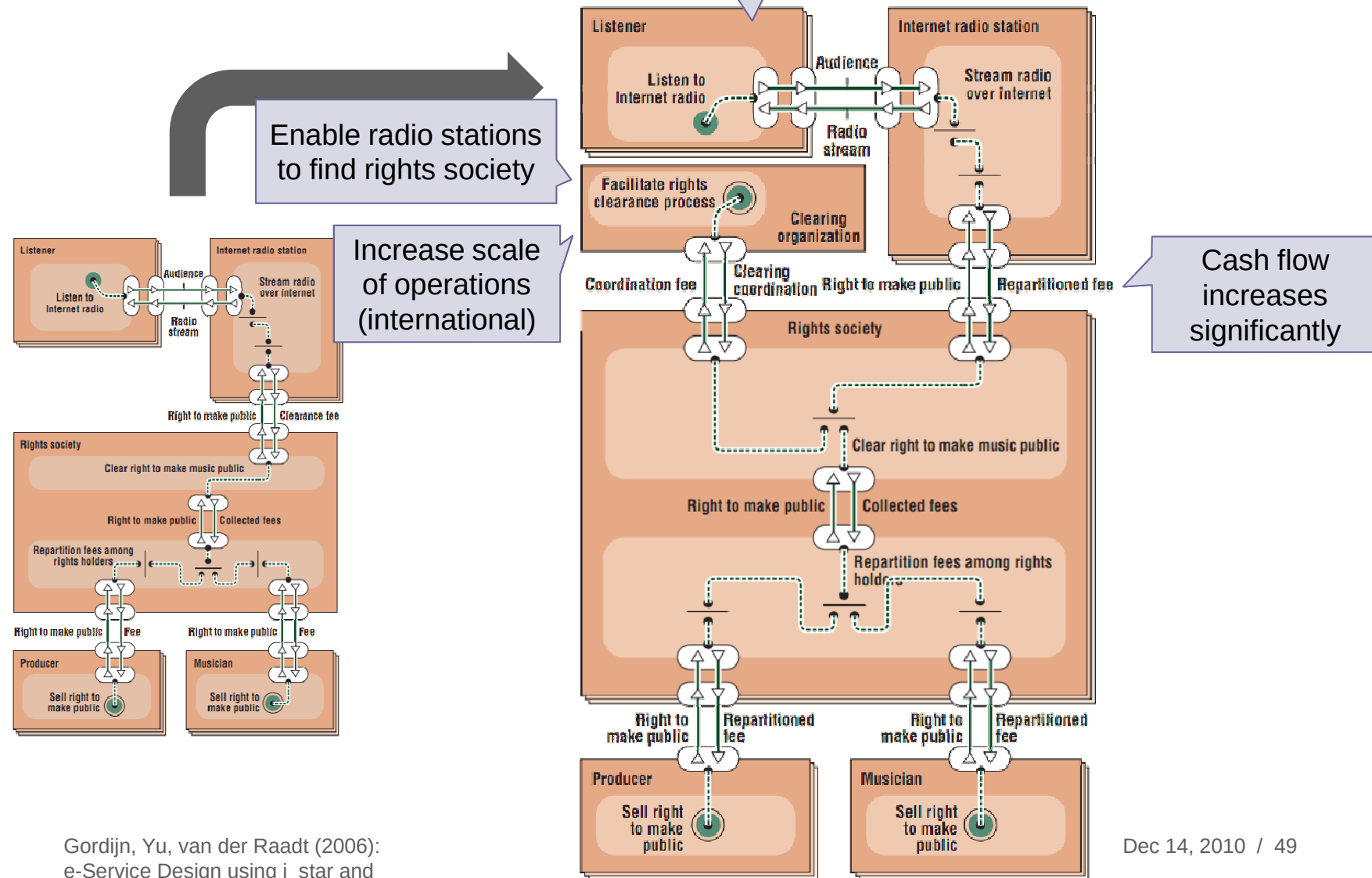
Return of Investment:
Gain / Investment

Scalability of the business:
Turnover / FET

Actor Dependencies and Goals



Changed Value Chain





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