

**MIS 3534 Fall 2016 –  
Strategic Management of  
Information Technology**

***Week 8 – Strategic IT  
Outsourcing***

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***Oct. 24<sup>th</sup>, 2016***

## Today, we will discuss ...

- What are the reasons to outsource IT or not?
- How does a strategy affect IT outsourcing decisions?
- How to select an IT outsourcing vendor?

## Do you fix your car or hire a mechanic? (1/3)

- Do you fix your car by yourself or have a mechanic do maintenance?
- Why?



[http://www.dieselpowermag.com/tech/1206dp\\_world\\_record\\_fuel\\_economy\\_challenge/photo\\_02.html](http://www.dieselpowermag.com/tech/1206dp_world_record_fuel_economy_challenge/photo_02.html)

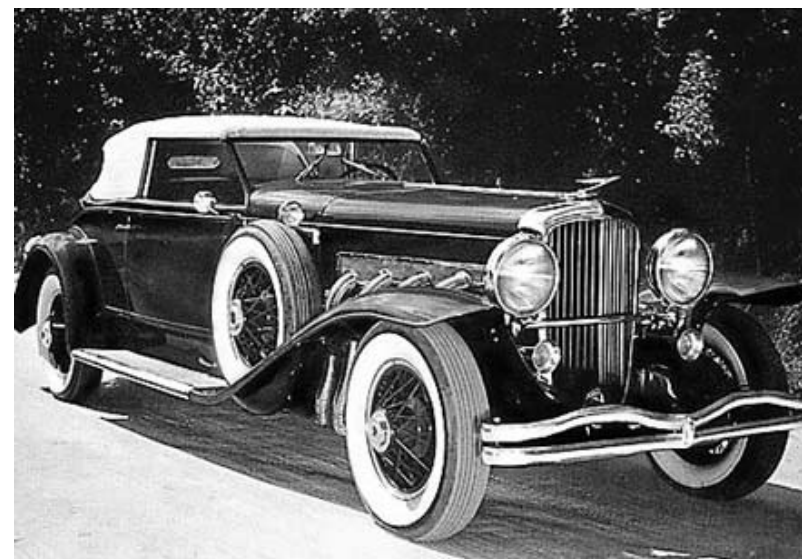
## Why daycare center?



- Why do families outsource childcare to a daycare center?

## Do you fix your car or hire a mechanic? (2/3)

- If you are driving this kind of vehicles, is it a good idea to hire a mechanic?



## Do you fix your car or hire a mechanic? (3/3)

- If you are running a taxicab company with 100 vehicles (or a rental car company),
- would you hire your own mechanics or outsource to external mechanics?
- What if you have only 5 fleets?



<http://www.byd.com/news/news-172.html>

# Apple does no manufacturing in the U.S.

- Why does Apple outsource the entire manufacturing operations to offshore vendors?

## The Man Who Makes Your iPhone

Foxconn founder Terry Gou might be regarded as Henry Ford reincarnated if only a dozen of his workers hadn't killed themselves this year. An ex-a postmodern industrial empire

### Inside the iPhone Maker

2 of 19 ◀ ▶



PHOTOGRAPH BY TONY LAW FOR BLOOMBERG BUSINESSWEEK

[http://www.businessweek.com/magazine/content/10\\_38/b4195058423479.htm](http://www.businessweek.com/magazine/content/10_38/b4195058423479.htm)

[http://images.businessweek.com/ss/10/09/0909\\_foxconn/2.htm](http://images.businessweek.com/ss/10/09/0909_foxconn/2.htm)

## How about cafeteria or on-site health clinic?

- Why do you think Google operates its own cafeterias for its entire employees, instead of outsourcing them to external caterers?
- Why do you think SAS hires its own doctors and nurses for its employees?



[http://www.glassdoor.com/Photos/Google-Office-Photos-E9079\\_P4.htm](http://www.glassdoor.com/Photos/Google-Office-Photos-E9079_P4.htm)

[http://www.canton.edu/health\\_center/](http://www.canton.edu/health_center/)



## Why Outsourcing IT?

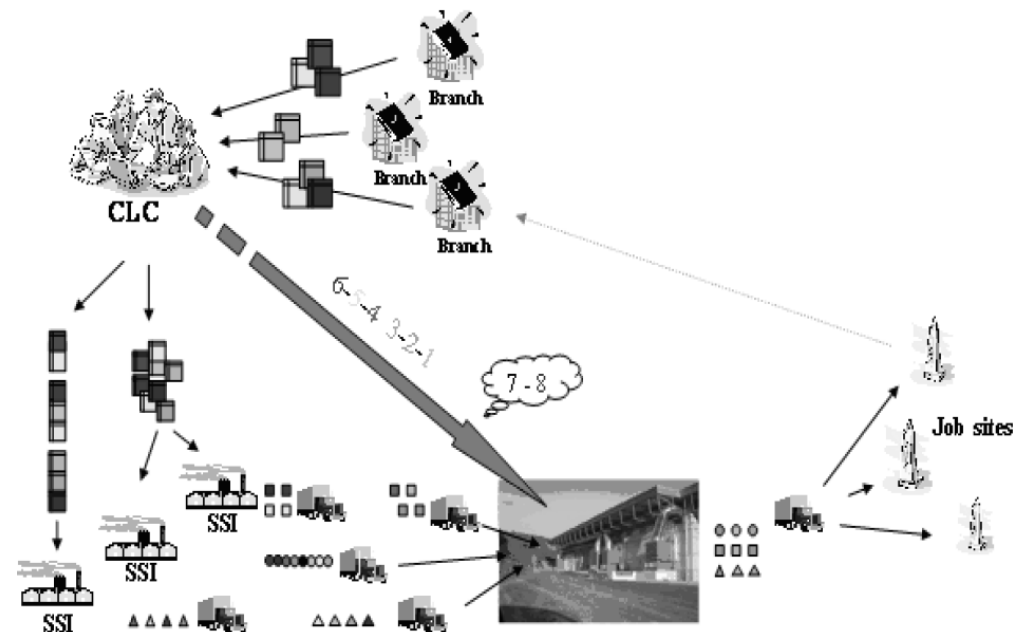
- Why would a company outsource IT operation and development to an external vendor?
- What would be the benefits to a client from IT outsourcing?



<http://phoenix.about.com/od/highwaysroads/ss/ADOTTOC.htm>

## Why Not Outsourcing IT?

- What would be the reasons that Otis DID NOT outsource the development of e\*Logistics?
- e\*Logistics was too *strategic and confidential* for Otis to outsource.



## From Otis Case (p. 13)

Beaver had dotted- or direct-line responsibility for 450 Otis IT employees, in addition to 250 contractors. He had budgetary responsibility for all major IT expenditures.

About 70 people from Beaver's organization were dedicated to the e\*Logistics project, reporting to Di Francesco. Beaver described the integration of e\*Logistics with legacy systems: "The goal of having a single finance and/or manufacturing system in Otis is not achievable in the short term. Therefore, building the e\*Logistics system to be ERP [enterprise resource planning] system-agnostic was essential to obtaining the business benefit quickly."

Beaver's staff was also responsible for a middleware broker used on the e\*Logistics program—much of it custom coded for Otis, with some development taking place in an Otis-owned, India-based software company. Internal sales modules were built with Microsoft .NET development tools. The supply chain and field systems were built around JD Edwards ONEWORLD® software. Systems access, security, and connectivity relied on the UTC employee portal.

# Doctor-Patient Confidentiality

- What's a doctor-patient confidentiality?
- Why is this needed?
  - so that the patient confidential medical information is not seen by a third-party such as the patient's employer.

## Reasons for Outsourcing

- Outside vendors can offer services with lower prices than internal functions.
- Outside vendors can offer services with higher quality than internal functions.
- The function for outsourcing is not a key strategic asset or not with confidential information/secret.
- A client's function is not big enough to achieve economies of scales.
- A client knows how to control vendors and how to manage contractual relationships with them.

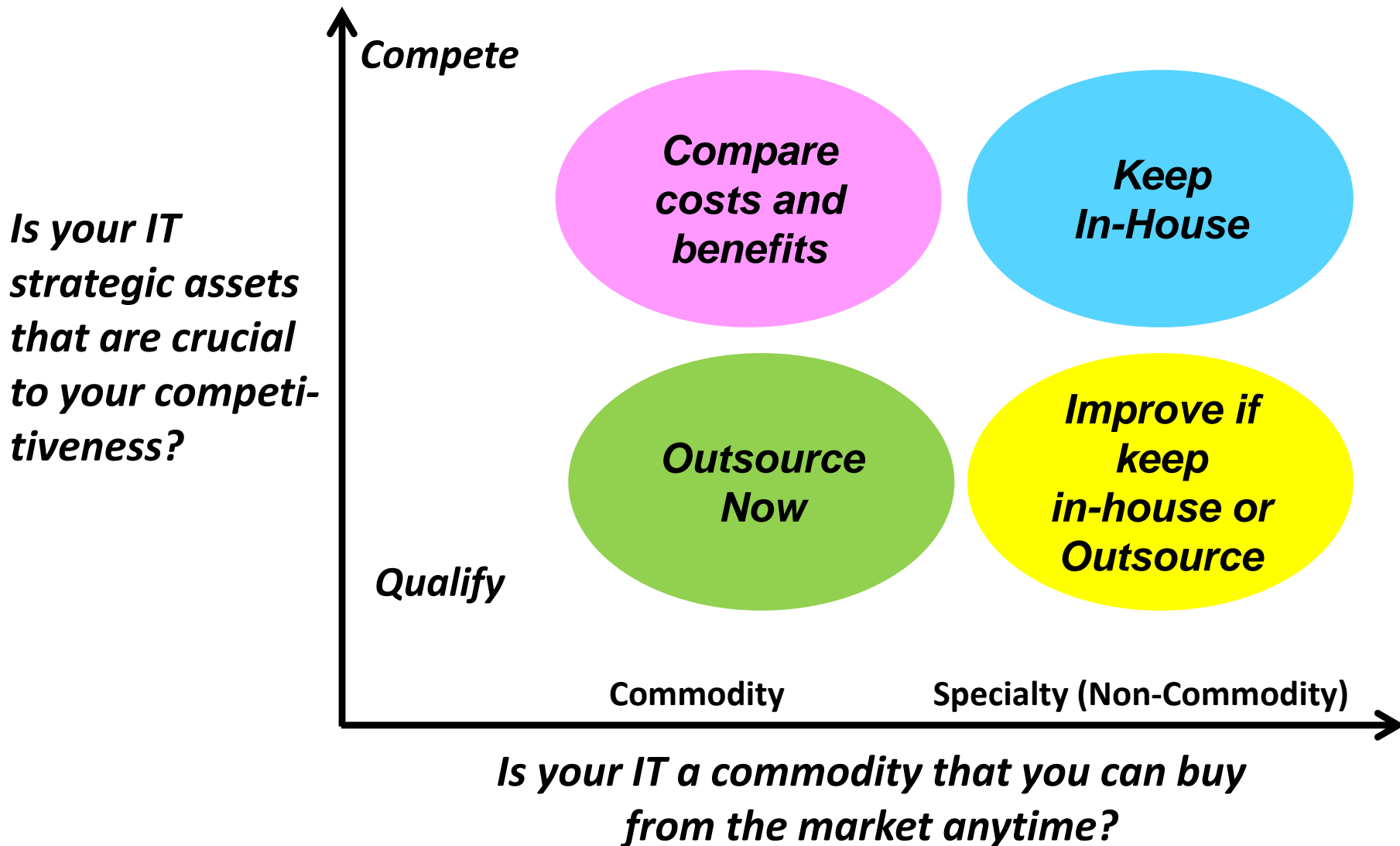
## Why Outsourcing?

- Why should a company outsource IT development and/or operation to an external vendor?
  - to reduce costs in IT management and development
  - to access to current technologies and high quality IT staff that the client does not possess
  - to free up resources and investments to IT, so that the client can use them for more valuable and strategic purposes

## Why Not Outsourcing?

- Why should NOT a company outsource IT development/operation?
  - IT is a key strategic resource and a pillar for competitive advantages (“Compete”).
  - Business processes are so unique and idiosyncratic that outside vendors cannot offer cost savings.
  - Confidential information or intellectual properties
  - IT operation is large enough
  - The client does not know how to control a vendor and manage the contract with the vendor.

# IT Outsourcing Decision Matrix





## IT Outsourcing Decision Criteria

- Is your IT strategic assets (*Compete*) that are crucial to your competitiveness?
- Does your IT have key intellectual properties and confidential information?
- Can an outside IT vendor develop and operate IT cheaper than the internal IT group?
- Can an outside IT vendor develop and operate IT better than the internal IT group?
- Do you know how to control and manage the relationship with the vendor?

# Infrastructure Replacement at IVK (1/3)

- What is the Infrastructure Replacement (IR) project for?
- Is the project going well?
  - Why not? What are the technical reasons?
  - What are the non-technical reasons?



<http://pmtips.net/dealing-project-failure/>

## Infrastructure Replacement at IVK (2/3)

- Why did IVK select NetiFects for the IR project vendor?
  - Who selected NetiFects?
- When selecting NetiFects, what “homework” did IVK?
  - Did they do enough homework?



<http://speakwellpartners.com/a-duck-walks-into-a-bar/salesman/>

## In selecting a mechanic,

- How do you choose your mechanic? Based on what?
- If you did not do “due diligence,” what would happen to you?



[http://www.dieselpowermag.com/tech/1206dp\\_world\\_record\\_fuel\\_economy\\_challenge/photo\\_02.html](http://www.dieselpowermag.com/tech/1206dp_world_record_fuel_economy_challenge/photo_02.html)

## Infrastructure Replacement at IVK (3/3)

- The IR project at IVK was going nowhere. It did not demonstrate sufficient process and value to justify the \$3m spending to the vendor (NetiFects).
- Without sufficient research and homework, IVK picked a vendor that primarily offers a system incompatible with IVK's system.
- It was not a bad idea to put a business leader in charge of leading the project, but IT should have been involved in.
- IVK should have done due diligence (homework) in selecting the vendor and let both business units and IT lead the project together.

## Think about your mechanic, contractor, or doctor. (1/3)

- Do you think if your mechanic, contractor, or doctor is competent, trustworthy, and reliable?
  - Are you sure?
  - Who can tell if they are skilled or amateur?
- When you meet them for a service, do you think if they make as the best efforts as possible for you?
  - Are you sure?
  - Who can tell if they work hard for you or not?



[http://www.123rf.com/photo\\_8738268\\_handsome-smiling-contractor-isolated-over-white-background.html](http://www.123rf.com/photo_8738268_handsome-smiling-contractor-isolated-over-white-background.html)

## **Think about your mechanic, contractor, or doctor. (2/3)**

- Before allowing your contractor to come to your home,
- What are your interests? What do you want?
  - Improved home, lower spending
- What would be your contractor's interests? What does he/she want?
  - Maximizing revenues, reducing costs
  - Selling more services and products than are actually needed for the client

## Think about your mechanic, contractor, or doctor. (3/3)

- Does your contractor have the same interests with yours?
- What would the contractor do?
  - He/she primarily fulfills his/her own private interests than the client's interests.
- What should you do?
  - The client needs homework/research to control and monitor the vendor.



## What is going on here?

© Cartoonbank.com



*“Try this—I just bought a hundred shares.”*

- The doctor’s primary interest is not to make the patient healthier, but to make more money!
- The patient is not able to see the doctor’s intention.

## Relationship between IVK and NetiFects

- What are IVK's interests? What does it want?
  - Project success, Improved IT infrastructure, Reduced spending
- What are NetiFects's interests *before* winning the contract? What does it want?
  - Winning the contact
- What are NetiFects's interests *after* winning the contract? What does it want?
  - Maximizing profits
  - Selling products that are not compatible with IVK's current systems but are more profitable to themselves.

## The Contract Theory (1/2)

- In a typical contractual relationship between a client and a vendor,
- Information Asymmetry : The client does not have as sufficient knowledge and expertise as the vendor does for the nature of the vendor's work.
  - The client cannot tell who is the most capable and skilled vendor with a 100% certainty.
  - The client cannot evaluate the efforts that the vendor makes with a 100% certainty.

## The Contract Theory (2/2)

- In a typical contractual relationship between a client and a vendor,
- Conflict of Interests (moral hazard) : The vendor does not necessarily fulfill the client's best interests. He works for his own private interests.
  - Again, because of the information asymmetry, the client cannot judge whether the vendor works for the client's best interests with a 100% certainty.
  - The more accurate information the client has, the easier it can monitor the vendor's quality and efforts, and the more likely the vendor works for the client's best interests.

## According to the Contract Theory ... (1/2)

- Why should the IT group at IVK be involved in the IR project?
- Why is Mr. Barton trying to hire Mr. Ash Srinivasa, a NetiFects engineer who's been working for the IR project?
- Why is the “homework” important?



## According to the Contract Theory ... (2/2)

- The IT group should have been involved in the IR project to reduce the *information asymmetry* between IVK and NetiFects.
- Mr. Barton trying to hire Mr. Ash Srinivasa, a NetiFects engineer to reduce the information asymmetry.
- The “homework” is important for the client
  - to reduce the information asymmetry and the chance of conflict of interests
  - to control and monitor the vendor more effectively
  - to make sure the vendor work for the client’s best interests.

# The Vendor Selection for IVK IR Project

- What would be your choice?
  - Based on what?
- How can we apply the contract theory in the selection?
  - Which one seems to be the most capable and qualified and the best match with IVK?
  - Which one is the least likely to be unskilled and inexperienced?
  - Which one is the most likely to work for IVK's best interests?
  - Which one is the easiest for IVK to control and monitor?

## A Contract Structure (1/2)

- For most contractual relationships to be effective, both the client and the vendor need to be diligent and work hard.
- A contract is a key enforcement mechanism that, theoretically, ensures that each party makes the best efforts for the other and the contract is *mutually beneficial*.
  - It is the law.
- What is the difference between “hard-line” and “soft-cooperation” (p. 225)?
- Why is a “real teeth” needed?
  - What would happen without a real teeth?



## Do friends need a contract?

- Should two roommates write and sign an agreement?
- Can two roommates/friends write an agreement?
  - Would it be possible that such an agreement stipulates all the *imaginable* contingencies and the required actions?
  - What do close friends usually do after they fight each other?



[http://bigbangtheory.wikia.com/wiki/File:The\\_Launch\\_Acceleration\\_Amy\\_and\\_Sheldon.jpg](http://bigbangtheory.wikia.com/wiki/File:The_Launch_Acceleration_Amy_and_Sheldon.jpg)

## A Contract Structure (2/2)

- Service level agreements are one of the crucial features in any outsourcing contract.
- How detail or specific should service level agreements be?
  - Could IVK and its vendor specify service levels that would be effective and valid *for the next five years*?
- As Mr. Barton, which model would you prefer – “hard-line” and “soft-cooperation”?
  - what if you prefer a long-term contract to a short-term one?
  - what if service levels are hard to be defined and measured?
  - what if you prefer flexibility in IT services?

Can you guess what this means?



## This is what really happened.

- According to the textbook authors, this case is based on a real situation.
- There was a strong orientation towards VerxaWeb.
- But the contract was awarded to HiOSoft!
- Can anyone guess why?

