Chapter 7
Sourcing Information Systems Around the World

Managing and Using Information Systems: A Strategic Approach

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Learning Objectives

- Describe the Sourcing Decision Cycle Framework.
- Explain the differences between - insourcing and outsourcing, inshoring and offshoring, and nearshoring and farshoring.
- List the major drivers for outsourcing.
- Describe how offshoring must be managed.
- Define the different ways of outsourcing including ASPs.
- Understand the difference between full and selective outsourcing.

Real World Examples

- When JP Morgan decided to outsource its IT to IBM in 2002 it signed a 7-year contract.
- The goal was to improve the company's technology infrastructure.
- JP Morgan terminated the outsourcing contract only 21 months later.
- Reasons included the stagnation of IT at the company, and the merger with Bank One in 2004.
- The global outsourcing market was at $9 billion in 1990, but has grown to $256 billion in 2008.

SOURCING DECISION CYCLE FRAMEWORK

Sourcing Decision Cycle Framework

- Sourcing involves many decisions (Figure 1).
- The first step is the make or buy decision.
- If buy is selected then the company must decide where.
- If the company decides to go offshore it must decide if the offshore company is near or far.
- Periodic evaluation must take place.
- Continual evaluation is needed to determine if the arrangement is satisfactory or not (either for outsourcing or insourcing).

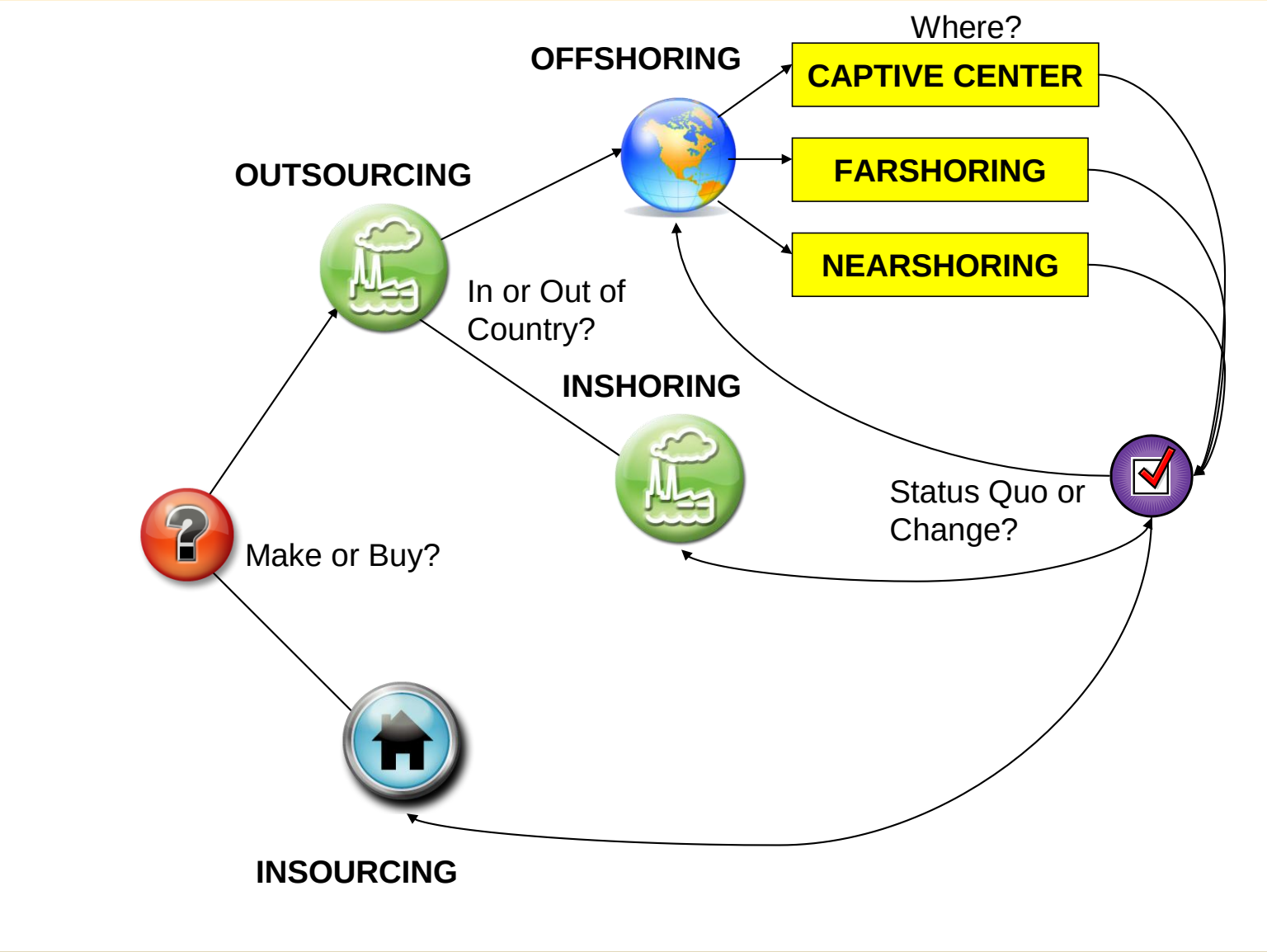

FIGURE 7.1 SOURCING DECISION CYCLE FRAMEWORK

INSOURCING

Insourcing

- A firm provides IS services or develops IS in its own in-house IS organization.
- This is the “make” decision.
- Drivers that favor this decision:
  - Keep core competencies in-house.
  - IS service or product that requires considerable security or confidentiality.
  - Time available in-house to complete IS projects.
  - In-house IT personnel.
- Challenges to insourcing (Figure 7.2):
  - Getting needed IT resources from management.
  - Finding a reliable competent outsource provider.

Insourcing Drivers	Insourcing Challenges
Good for core competencies Good for confidential or sensitive IS services or software development Time available in-house to complete software development projects In-house IT professionals have adequate training, experience or skills to provide service or develop software	Dealing with Inadequate support from top management to acquire needed resources Finding a reliable, competent outsourcing provider that is likely to stay in business

Figure 7.2 Insourcing drivers and challenges

OUTSOURCING

Outsourcing Drivers

- Definition: The purchase of a good or service that was previously provided internally, or that could be provided internally.
- Drivers include (see Figure 7.3):
  - Cost reduction achieved through economies of scale (outsourcer may be able to negotiate lower prices on hardware and software)
  - Help a company transition to new technologies through access to larger IT talent pools.
  - Bringing in outside expertise can help management focus more attention on core activities rather than on IT issues.
  - Outsourcing companies know how to hire, manage, and retain IT staff.
  - Greater capacity on demand.
  - Overcome inertia to consolidate data centers

Outsourcing Drivers	Outsourcing Challenges
Offers costs savings	Maintaining an adequate level of control
Eases transition to new technologies	Maintaining ability to respond to technological innovation
Offers opportunity for better strategic focus	Avoiding a loss of strategic advantage
Provides better management of IS staff	Avoiding overreliance on outsourcing provider
Offers better ability to handle peaks	Mitigating outsourcing risks
Makes it easier to consolidate data centers	Ensuring cost savings while protecting quality
Provides a cash-infusion	Working effectively with suppliers

Figure 7.3 Outsourcing drivers and challenges

Outsourcing Challenges

- A degree of control is surrendered.
- Lack of adequate anticipation of new technological capabilities when negotiating outsourcing contracts.
- Company gives up any real potential to develop them for competitive advantage.
- Contract terms may leave clients highly dependent on their providers.
- Competitive secrets will be harder to keep.
- Savings may never be realized.
- Other challenges of working with outsourcing firms.

Avoiding Outsourcing Pitfalls

- Do not negotiate solely on price.
- Craft full life-cycle service contracts that occur in stages.
- Establish short-term supplier contracts.
- Use multiple, best-of-breed suppliers.
- Develop skills in contract management.
- Carefully evaluate your company's own capabilities.
- Thoroughly evaluate outsourcing providers' capabilities.
- Choose an outsourcing provider whose capabilities complement yours.
- Base a choice on cultural fit as well as technical expertise.
- Determine whether a particular outsourcing relationship produces a net benefit for your company.
- Plan transition to offshoring.
- Use SOAs to increase agility.

Figure 7.4 – Steps to avoid pitfalls

OUTSOURCING ABROAD

Offshoring

- Short for **outsourcing offshore**
- Definition:
  - When the MIS organization uses contractor services, or even builds its own data center in a distant land.
- Substantial potential cost savings through reduced labor costs.
- Some countries offer a very well educated labor force.
- Implementation of quality standards:
  - Six Sigma
  - ISO 9001

Selecting Offshoring Destination

- About 100 countries are now exporting software services and products.
- What makes countries attractive for offshoring?
  - High English language proficiency.
  - Countries that are politically stable.
  - Countries with lower crime rates.
  - Countries with friendly relationships.
  - Security and/or trade restrictions.
  - Level of technical infrastructure available.
- Once a country is selected which city in that country needs to be assessed as well.

Selecting Offshoring Destination

- Countries like India make an entire industry of offshoring.
- Software Engineering Institute's Capability Maturity Model (CMM).
  - Level 1 means that the software development processes are immature, bordering on chaotic.
  - India is well known for their CMM Level 5 software development processes, making them extremely reliable, and, thus, desirable as vendors.

Selecting Offshoring Destination

- Level of development of a country will determine if the location is appropriate.
- Carmel and Tjia suggest that there are three tiers of software exporting nations:
  - **Tier 1**: Mature Software Exporting Nations.
    - Highly industrialized nations (US, UK, Japan, India, etc.)
  - **Tier 2**: Emerging Software Exporting Nations
    - Up-and-comers, small populations, political instability (Brazil)
  - **Tier 3:** Infant Stage Software Exporting Nations
    - Not significantly impacted the software industry (Cuba, Jordan)

Cultural Differences

- Carmel and Tjia
  - Examples of communication failures with Indian developers due to differences in language, culture and perceptions about time:
    - Indians are less likely than Westerners to engage in small talk.
    - Indians often are not concerned with deadlines.
    - Indians, like Malaysians and other cultures, are hesitant about saying ‘no.’
    - What is funny in one culture is not necessarily funny in another culture.
- Figure 7.5 show best practices for sourcing.

Table 1: Sourcing Best Practices

Sourcing Challenge	Practices to Overcome the Challenge	Equally Important for Both Domestic & Offshore	More Important For Offshore	Unique to Offshore
How can we swiftly move through the learning curve?	1. Create a centralized program management office to consolidate management	X		
	2. Hire an intermediary consulting firm to serve as a broker and guide		X	
	3. Select locations, projects, suppliers, and managers to leverage in-house sourcing expertise	X		
How can we mitigate risks?	4. Use pilot projects to mitigate business risks	X		
	5. Give customers a choice of sourcing location to mitigate business risks			X
	6. Hire a legal expert to mitigate legal risks		X	
	7. Openly communicate the sourcing strategy to all stakeholders to mitigate political risks		X	
	8. Use secure information links or redundant lines to mitigate infrastructure risks		X	
	9. Use fixed-price contracts to mitigate workforce risks		X	
How can we effectively work with suppliers?	10. Elevate your own organization's CMM certification to close the process gap between you and your supplier			X
	11. Negotiate the CMM processes you will and will not pay for to avoid wasting money			X
	12. Cross-examine or replace the supplier's employees to overcome cultural communication barriers		X	
	13. Let the project team members meet face-to-face to foster camaraderie		X	
	14. Consider innovative techniques, such as real-time dashboards, to improve workflow verification, synchronization, and management		X	
	15. Manage bottlenecks to relieve the substantial time zone differences			X
How can we ensure cost savings while protecting quality?	16. Consider both transaction and production costs to calculate overall savings realistically		X	
	17. Size projects large enough to receive total cost savings		X	
	18. Establish the ideal in-house/onsite/offshore ratio only after the relationship has stabilized			X
	19. Develop meaningful career paths for subject matter experts, project managers, governance experts, and technical experts to help ensure quality	X		
	20. Create balanced scorecard metrics	X		

Figure 7.5 – Sourcing best practices

Government Involvement with Offshoring

- Government actions to support offshoring.
  - Countries must invest in infrastructure and in human capital, particularly in IT education.
  - Can offer specific incentives to countries offshoring.
  - Assure political stability for their country.
- Government actions to protect against offshoring.
  - Loss of jobs in countries offshoring (500,000 US jobs in 2004, expected to reach 3.4 million in 2015).
  - US congress proposed 20 federal law proposals to restrict offshoring.
  - States have proposed laws to limit and or restrict offshoring.

Nearshoring

- Definition: sourcing service work to a foreign, lower-wage country that is relatively close in distance or time zone.
- Client company hopes to benefit from one or more ways of being close:
  - geographically, temporally, culturally, linguistically, econociamlly, politically or from historical linkages.
- Distance and language matter.
- There are three major global nearshore clusters:
  - 20 nations around the U.S., and Canada
  - 27 countries around Western Europe
  - smaller cluster of three countries in East Asia

Captive Centers

- An overseas subsidiary that is set up to serve the parent company.
- Alternative to offshoring or nearshoring.
- Four major stategies that are being employed:
  - **Hybrid Captive** – performs core business processes for parent company but outsources noncore work to offshore provided
  - **Shared Captive -** performs work for both parent company and external customers.
  - **Divest captive -** have a large enough scale and scope that it is well-positioned to be sold for a profit by the parent company.
  - **Terminated Captive -** has been shut down, usually because its inferior service was hurting the parent company's reputation.

BACKSOURCING

Backsourcing

- When a company takes back in-house, previously outsourced, IS assets, activities, and skills.
- Partial or complete reversal
- Many companies have backsourced such as Continental Airlines, Cable and Wireless, and Halifax Bank of Scotland.
- 70% of outsourcing clients have negative experiences and 25% have backsourced.
- 4% of 70 North American companies would not consider backsourcing.

Backsourcing Reasons

- Mirror reason for outsourcing.
- Higher than expected costs.
- Poor service.
- Change in management
- Change in the way IS is perceived within the company.
- Sometimes was not problems but provided opportunities (mergers, acquisitions, etc.).

OUTSOURCING MODELS

ASP Model

- **Application service provider (ASP)** is a company that “rents” the use of an application to the customer.
- Outsourcing occurs application by application.
- Useful for the IS that are necessary, but not core.
- May use to:
  - Free up IT staff
  - Combine data resources
  - Rapidly deploy new applications
  - Implement new technologies.

Crowdsourcing

- Definition:
  - Taking a task traditionally performed by an employee or contractor, and outsourcing it to an undefined, generally large group of people, in the form of an open call.
- Used by companies to increase productivity, lower production costs, and fill skill gaps.
- Can be used for a variety of tasks.
- Companies do not have control over the people doing the work.
- Has cost more than traditional methods.

Full vs. Selective Models

- Once outsourcing has been determined, then must determine if it is to be complete (full) or partial (selective).
- Full implies that all IS can be outsourced.
- Selective picks certain functions to outsource.
- Sometimes a company may outsource all or most of its IS but selectively (to multiple companies).
  - BP did this with their IS function.

Single vs. Multiple Vendors

- Multiple vendors allows client companies to distribute work to the “best in breed.”
  - Requires more coordination.
  - If problems may be a tendency to finger point.
- Single vendor model is simpler but riskier.
  - Only one company to coordinate.
  - All IS “eggs” are in one basket.

FOOD FOR THOUGHT: OUSOURCING AND STRATEGIC NETWORKS

Strategic Networks

- Many issues and risks involved with outsourcing.
- A strategic network is a long-term, purposeful web of close relationships for providing a product or service in a coordinated fashion.
- The company becomes a hub with suppliers as part of its network.
- Lowers the cost of working with other in the network.
- Company can become more efficient than its competitors (and very flexible).
- Japanese *keiretsu* is similar to a strategic network.

SUMMARY

Summary

- Firms typically face a range of sourcing decisions.
- Cost savings or filling the gaps in the organization's IT skills are powerful drivers for outsourcing.
- Offshoring may be performed in a country that is proximate along one or a number of dimensions (nearshoring) or that is distant (farshoring).
- Different ways of outsourcing include Application Service Providers (ASPs) and crowdsourcing.
- Full or selective outsourcing offers organizations an alternative to keeping top-performing IS services in-house.