CHOICES IN SYSTEMS ACQUISTION OPTIONS AND PRIORITIES

Outsourcing, Licensing, Using software as a service (SAAS) , Having the users develop the system

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The four alternatives to in-house development by IT specialists are

- Outsourcing
- Licensing
- Using software as a service (SAAS)
- Having the users develop the system.

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Options and priorities

•If an application of the desired features and quality can be obtained from more than one of these sources, then the major factor left to be considered is usually cost. The preference then would be to license, because of immediate availability and low cost.

• If the application cannot be licensed, the next choice would usually be to obtain the use of the system as a service from an application service provider (ASP) because the system is immediately available for use and the organization does not have to lay out a large sum up front for such use.

•If ASPs do not offer the desired IS and it can be developed by non IT employees, then this would usually be the chosen alternative. If non-IT employees cannot develop the IS, the choice might then be to outsource IS development.

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OUTSOURCING

Outsourcing in general means hiring the services of another organization or individual to perform some of the work that otherwise would be performed by you or your employees.

In the IT arena, outsourcing has two meanings.

- One is to commission the development of an application to another organization, usually a company that specializes in the development of this type of organization.
- The other is to hire the services of another company to manage all or parts of the services that otherwise would be rendered by an IT unit of the organization.

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Outsourcing Custom-Designed Applications

•An organization might have a need that no existing software can satisfy. For example, if the cost-accounting procedures of a particular company are so specific that no commercially available software can perform them, the company must develop custom-designed or tailored software.

Advantages of Outsourcing Custom-Designed Applications

•Good fit of features to business needs- apps that meet user needs

•Good fit of features to organizational culture- apps to fit work of employees

•Personnel available for maintenance- experienced with wider variety of problems and techniques

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Advantages of Outsourcing Custom-Designed Applications cont'd

- Smooth interfaces with other information systems- can communicate smoothly with existing systems
- Availability of special security measures- integrated into apps and known only to organization.
- Potential for a strategic advantage e.g. CRM that competitors don't have

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Disadvantages of Outsourcing Custom-Designed Applications cont'd

- High Cost i.e. Tailored development requires organization to fund all costs
- Long wait for development if IS personnel are busy with other project
- Applications may be too organization-specific to interface with systems of other organizations i.e less compatible
- Countries have outsourced development of well-defined applications to professionals in other countries, an act often referred to as off-shoring.

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Outsourcing IT Services

- In considering whether to outsource IT services, management should ask the following questions:

- What are our core business competencies? Of the business we conduct, what specialties should we continue to practice ourselves?

- What do we do outside out specialties that could be done better for us by organizations specializing in that area- cost and quality

- Which of our activities could be improved if we created an alliance with IT organizations

- Which of our activities should we work to improve internally? Strategic IS

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Business process outsourcing: this is outsourcing routine processes

- Some companies realize IT is not primary focus
- Pace of development in IT requires high level of expertise
- Growing portion of IS budget allocated for outsourced services
- Outsourcing companies known as vendors
- Typically long-term contractual relationship- 7-10 years
- Clients often bound by obsolete contracts - Can renegotiate

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Typical outsourced IT services

- Application development and software maintenance
- Hardware purchasing and hardware maintenance
- Purchasing and maintaining hardware
- Telecommunications installation and maintenance
- Help desk services
- Running IT daily operations
- Web site design and maintenance
- Staff training

IT outsourcing contracts are typically signed for long periods of time, usually for 7 to 10years.

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Advantages of Outsourcing IT Services

•Clients contract for IT services to offload in-house responsibility and to better manage risks. When a client outsources, management knows how much the outsourced service will cost: thus, the risk of miscalculation is eliminated. Additional advantages make the contracting option attractive:

•Improved financial planning: Outsourcing allows a client to know exactly what the cost of its IS functions will be over the period of the contract, which is usually several years. This allows for better financial planning.

•Reduced license and maintenance fees: Professional IS firms often pay discounted prices for CASE (computer-aided software engineering) tools and other resources, based on volume purchases; they can pass the savings on to their clients.

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Advantages of Outsourcing IT Services cont'd

- Increased attention to core business: Letting outside experts manage IT frees executives from managing it. They can concentrate on the company's core business – including developing and marketing new products.
- Shorter implementation cycles: IT vendors can usually complete a new application project in less time than an in-house development team can.
- Reduction of personnel and fixed costs: In-house IS salaries and benefits and expensive capital expenditures for items such as CASE tools are paid whether or not the IS staff is productive. IS firms, on the other hand, spread their fixed and overhead costs (office space, furnishings, system development software and the like)over many projects and clients, thereby decreasing the expense absorbed by any single client.

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Advantages of Outsourcing IT Services cont'd

- Increased access to highly qualified know-how: Outsourcing allows clients to tap into one of the greatest asset of an IT vendor: experience gained through work with many clients in different environments.
- Availability of ongoing consulting as part of standard support: Most outsourcing contracts allow client companies to consult the vendor for all types of IT advice. Such advice might include guidance on how to use a feature of a recently purchased application or how to move data from one application to another.

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Risks of Outsourcing IT Services

- Loss of control- High risk in quickly changing industry
- Loss of experienced employees- Transfer employees to vendor
- Risk of losing a competitive advantage- May disclose trade secrets e.g. strategic IS
- High price- Outsourcing may cost more than in-house development. It is important to clearly define contract terms

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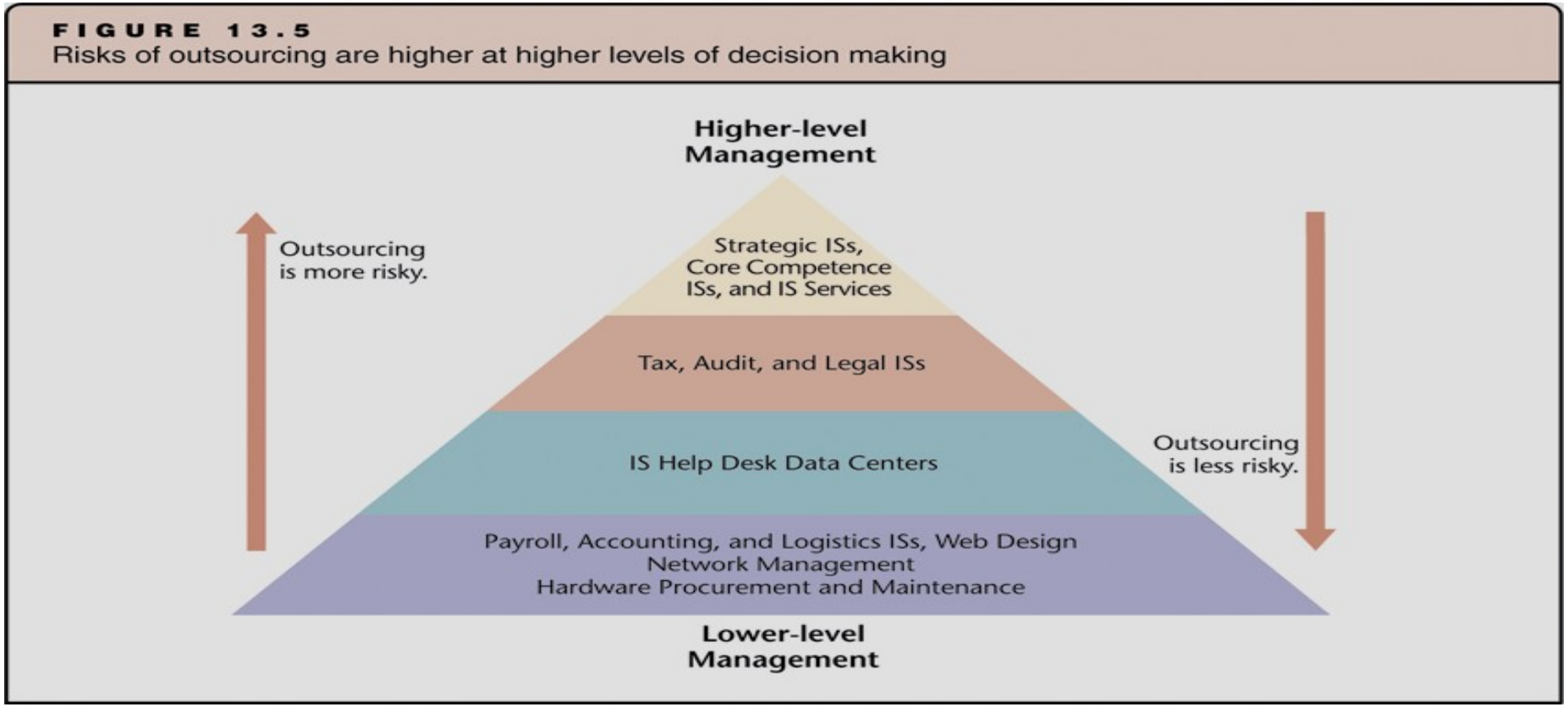

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Service-Level Agreement (SLA)

- The most important element of an outsourcing agreement for both parties, but mostly for the client, is what professionals call the service-level agreement.
- It is a document that lists all the types of services expected of an outsourcing vendor as well as the metrics that will be used to measure the degree to which the vendor has met the level of promised services. Usually the client makes the list.

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ADVANTAGES OF A SERVICE LEVEL AGREEMENT

- It reduces finger pointing i.e. if a product fails to function, we will know the person who is responsible
- Provides a structure for design and delivery of end user services
- Incentives are created for end users to improve computing practices
- Coordination of end user computing by monitoring and reporting end user activities

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SLA Cont’d

- The negotiators for the client must carefully list all types of services expected of the vendor as well as the metrics to be used to measure the degree to which the vendor has met the level of promised services.
- Clients should not expect vendors to list the service level and metrics, the clients must do it.
- It is in the client’s interest to have a specific a contract as possible, because any service that is not included in the contract, or is mentioned only in general terms, leaves the door open for the vendor not to render it, or not to render it to a level expected by the client.

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LICENSING APPLICATIONS

- Businesses can select from a growing list of high-quality packaged software, from office applications that fit on a CD to large enterprise applications. Therefore, purchasing prepackaged software should be the first alternative considered when a company needs to acquire a new system.
- “Purchased software” is almost always licensed software. The term “licensing” means purchasing a license to use.

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Licensing cont’d

Ready-made software can be classified into two groups:

- The relatively inexpensive software that helps in the workplace, such as Microsoft Office and similar suites, including software that supports more specific tasks such as project management and tax preparation.
- The other group includes large software applications that support entire organizational functions, or enterprise applications that span the entire organization. Such packages include ERM, SCM and CRM applications and typically cost millions of dollars.

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Software Licensing Benefits

- When licensing a software package, the buyer gains several benefits: immediate system availability, high quality, low price (license fee), and available support.
- Immediate availability helps shorten the time from the decision to implement a new system and the actual implementation.
- Large developers often distribute prerelease versions, called beta versions, or simply betas, of software to be tested by companies (called beta sites), that agree to use the application with actual data for several months.
- The beta sites then report problems and propose improvements in return for receiving the fully developed software free or for a reduced license fee. By the time the software is released to the general market, it has been well tested.

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Software Licensing Risks

- Loose fit between needs and features- Might not comply with company needs including organization culture
- Difficulties in modifications- packaged software has to be modified to meet specific needs
- Bankruptcy or Dissolution of the vendor- Maybe left without support and maintenance
- High turnover of vendor personnel- Turnover among IS professionals is high

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Steps in Licensing Ready-Made Software: Procurement process

- Identifying the problem or opportunity- Define functional requirements
- Identifying potential vendors- Trade shows, internet, other organizations with similar technology
- Soliciting vendor information: The project manager sends a request for information (RFI) to the vendors identified, requesting general, somewhat informal information about the product.
- Defining system requirements- functional and technical requirements
- Requesting vendor proposals: The team prepares a request for proposal (RFP), a document specifying all the system requirements and soliciting a proposal from each vendor contacted.

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Steps in licensing Ready-Made Software cont'd

- Evaluation process or reviewing proposals and screening vendors: The team reviews the proposals and identifies the most qualified vendors. Vendor selection criteria include functionality, architectural fit, price, services and support.
- Visiting sites- see a copy of the application in use
- Selecting the vendor- The vendors are ranked and selection factors are weighted. The vendor with the highest total points is chosen for contract negotiation.
- Benchmarking: Before finalizing the purchasing decision, the system should be tested using benchmarking, which is comparing actual performance against specific quantifiable criteria. If all other conditions are the same for all the bidders, the vendor whose application best meets or exceeds the benchmarks is selected.

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Steps in licensing Ready-Made Software cont'd

- Negotiating a contract- The contract should clearly define performance expectations and include penalties if requirements are not met. Special attention should be given to the schedule, budget, responsibility for system support and support response time.
- Implementing or delivery of the new system- Supplier preparation, delivery and payment for the products are completed, based on contract terms. Installation and training may also be included.
- Managing post-implementation support (maintenance)- the Company evaluates the performance of the product and any accompanying service support, as they are consumed.

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How IT managers rank the importance of product purchase factors (in descending order):

Factor Rating

- Quality and reliability _____
- Product performance _____
- Quality of after-sale service and support _____
- Trustworthiness of vendor _____
- Price/Performance ratio _____
- Ease of doing business with vendor _____
- Vendor’s support for industry standards _____
- Openness of future strategies and plans _____
- Vendor financial stability _____

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SOFTWARE AS A SERVICE

- An organization that offers the use of software through communication lines is called an application service provider (ASP). **(ASP)**: organization that offers software on Web
- The concept is called software as a service (SAAS) or software on demand or applications through Web
- No software installed at client’s computers
- Files may be stored on local storage device
- ASP may rent software

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Benefits of Software as a Service (SAAS)

- No need to learn or maintain the application
- No need to allocate hardware for the installation
- No need to hire experts for installation and maintenance
- Timely availability

Risks of Software as a Service (SaaS)

- Possible long transaction response time on the Internet
- Security risks, such as interception by competitors

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Caveat Emptor

Managers in organizations considering application service provider (ASP) should heed the following “commandments”:

1.Check the ASP’s history. Ask the provider for a list of references, and contact these customers to ask about their experience. Ask how soon the provider switched to a new version of the application they rented.

2.Check the ASP’ financial strength. Request copies of the ASP’s financial reports. Ensure that it has enough funds or secured funding to stay in business for the duration of your planned contract.

3.Ensure you understand the price scheme. Ask whether the price changes when you decide to switch to another application. Ask whether the price includes help desk services.

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Caveat Emptor cont’d

4. Get a list of the provider’s infrastructure. Ask to see a list of the ASP’s hardware, software and telecommunication facilities. Ask the ASP to identify its business partners for hardware, software and telecommunication services. Ask how data, including sensitive data such as credit-card account numbers, are stored and protected. Ask about security measures.

5. Craft the service contract carefully. Ensure that the contract includes penalties the ASP will pay if services are not rendered fully. Ensure that your organization will not have to pay penalties for early termination. One important point to check when examining the list of facilities is uptime. Uptime is the proportion of time that the ASP’s systems and communication links are up and running.

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Who hires the service of ASPs? The majority of clients fall into four categories:

- Companies that are growing fast and rely on software for deployment of their operations.
- Small companies that do not have the cash to pay up -front, but who must use office, telecommunications, and basic business operations applications.
- Medium-sized companies that need expensive software, such as enterprise applications, for their operations but cannot afford the immediate payment of large sums.
- Organizational units at geographic sites where it is difficult to obtain desired software or personnel to install and maintain the software. These sites are typically located far away from a regional headquarters in a less-developed country. The office at that site can then use applications from a more developed country.

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USER APPLICATION DEVELOPMENT

- In user application development, Non- programmer users write their own business applications.
- **Guidelines for end-user development of applications**
- End- users should develop if
- End users have the necessary skills
- The application is small
- The application is needed immediately
- The application can be maintained by the users
- The application will be used briefly and discarded

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USER APPLICATION DEVELOPMENT CONT'D

- End- users should not develop if…..
- The application is large or complex
- The application interface with other systems
- The application is vital for the organization's survival
- The application will survive the user-developed tenure

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Managing User-Developed Applications

•The proliferation of user-developed applications poses challenges to managers, both in IT units and other business units. Management must cope up with the following challenges:

•Managing the reaction of IT professionals- negative reaction due to perception

•Providing support- managers to designate technical contract for users. IT staff to help solve problems or enhance applications when user’s skill are not adequate

•Compatibility- adopt and supply standard development tools to users

•Managing access- control access to database to manage integrity

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Advantages of User-Developed Applications

- Shortened lead times- apps developed more quickly
- Good fit to needs- user develops apps which satisfies his needs
- Compliance with culture- closely conforms to industry units sub culture and makes transition easier
- Efficient utilization of resources
- Acquisition of skills- more employees developing apps enriches organization skills inventory
- Freeing up IS staff time- is staff can develop more complex and sophisticated systems

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The risks of User-Developed Applications

- Poorly developed applications- most don’t have necessary skills
- Islands of information- dispersed private databases not under control of IS managers
- Duplication- wastage of resources developing apps that are identical or similar to those in existence
- Security problems- access to organization database might result in violations of security policies
- Poor documentation- users don’t know how to write documentation, and want system ready soonest