Student Self-administered case study

Choices in systems acquisition_Tedia Case Study

Case duration (Min): 45-60

Management Information Systems (MIS)

Choices in systems acquisition

Worldwide

Case summary:

This case outlines the activities and events surrounding the acquisition of a software system by a chemicals manufacturer. Different acquisition methods and the acquisition process are considered.

Learning objectives:

Explain and evaluate the different system acquisition methods.
Describe which systems acquisition approach is appropriate for a particular set of circumstances.

Case problem:

How do organizations come by information systems to solve their business problems?

Company

Chemicals - Major Diversified

Tedia

www.tedia.com

A chemicals manufacturer based in the US.

First, if you are taking a taught management course then consult with your tutor and ensure that the case has not been scheduled into a teaching class or tutorial. If it has not:
1. Play/ read the media associated with the case. You may need to access the Internet and enter a URL to locate any video clips.
2. Attempt the Case study questions.
Consider attempting the case study as a group exercise; you could form a study group with fellow students.
3. Check the suggested answers - remember these are suggestions only and there are often many possible answers.
Discuss questions and answers with other students.
4. If you feel your answer(s) were weak then consider reading the relevant suggested readings again (also see the case study suggested references).

Title/ Media type	URL/ Media description
Tedia Case Study.	http://www.yourtechtv.com/viewVideo.php?video_id=318&title=Tedia_Case_Study
Film	This case outlines the activities and events surrounding the acquisition of a software system by a chemicals manufacturer. Different acquisition methods and the acquisition process are considered.

NOTES:

Case study questions...

	Action	Pre/During/After class
1	**ALTERNATIVE ACQUISITION METHODS :** Why do organizations initiate IS projects? Acquisition refers to the approach for sourcing the Computer Based Information System (CBIS). Describe the alternative acquisition methods.	During
2	**EVALUATING ALTERNATIVE ACQUISITION METHODS :** What criteria may be used to compare the acquisition methods cited?	During
3	**PREFERRED ACQUISITION METHOD :** Consider the case study organization, Tedia. Critically discuss the likely PREFERRED ACQUISITION METHOD for the organization.	During
4	**DISCUSS THE SYSTEMS ACQUISITION PROCESS & KEY ACTIVITIES** In cases other than end-user development or development by the IT department, the organization will either search for and select an off-the-shelf solution or find a developer to build one for them. First, describe how the IT manager went about the acquisition process then, drawing on IS theory and best practice, discuss the stages of the process used to acquire a system from outside of the organization. Finally, discuss what organizations can do to ensure a better fit between the solution and the problem it is supposed to address.	During
5	**APPROACH TO SYSTEMS ACQUISITION** Consider the centralised (IT led) versus the decentralised (sponsoring unit) APPROACH TO SYSTEMS ACQUISITION. With reference to the case study and your wider reading, evaluate the relative advantages and disadvantages of the two approaches	During

Answers...

ACQUISITION METHOD

Defines whether the system is purchased outright or developed from scratch.

INFORMATION SYSTEMS ACQUISITION.

Acquisition describes the method of obtaining an information system for a business. The main choices are off-the-shelf (packaged), bespoke applications developed by an in-house IT department or a software house, and end-user developed systems.

BESPOKE DEVELOPMENT.

An IS is developed 'from scratch' by an IS professional to suit the business requirements of the application.

END-USER DEVELOPMENT (EUD).

End-user development is programming undertaken by non-IS staff. It typically involves development of small applications for solving departmental problems rather than cross-departmental applications.

SYSTEMS DEVELOPMENT

the activities that go into producing an information systems solution to an organizational problem or opportunity

USER APPLICATION DEVELOPMENT

Development of corporate applications by employees rather than IT professionals.

OFFSHORE OUTSOURCING

Use of vendors in other countries, usually where labour is inexpensive, to do programming or other systems development tasks.

OUTSOURCING

Acquiring IS services from an external organization rather than through internal employees.

Question/ Answer

1 **ALTERNATIVE ACQUISITION METHODS :**

Why do organizations initiate IS projects? Acquisition refers to the approach for sourcing the Computer Based Information System (CBIS). Describe the alternative acquisition methods.

In some cases projects are "Failure Driven" i.e. faults in existing system(s) and in other cases may be "Aspiration driven" i.e. new opportunities are presented.
Alternative acquisition methods include: procurement off-the-shelf— purchased from a software vendor; bespoke development— 'built from scratch' and end-user-developed — either built by the IT department (internal developers) or by the end-user themselves. Off-the-shelf may, in some cases, be customised either by the vendor/supplier or the customer. Systems built from scratch may either be outsourced or built by the company's own IT specialists.

2 **EVALUATING ALTERNATIVE ACQUISITION METHODS :**

What criteria may be used to compare the acquisition methods cited?

The acquisition methods cited may be compared using criteria such as delivery time, cost, quality (bugs) and how closely they meet needs i.e. are fit-for-purpose. Bespoke solutions score better with this latter criterion but are poor when judged against the others. The standard, off-the-shelf solution tends to be the opposite i.e. Good on all criteria except the fit with business needs. Acquisition method is therefore linked with generic strategy – a tailor made system supporting a differentiation and an off-the-shelf supporting a cost advantage.

3 **PREFERRED ACQUISITION METHOD :**

Consider the case study organization, Tedia. Critically discuss the likely PREFERRED ACQUISITION METHOD for the organization.

Acquiring a CBIS is not unlike purchasing a new suit of clothes. In some cases the suit fits perfectly but costs more, takes time to create and may have particular flaws.
Students should list the acquisition methods in one column of a table and then create columns for each evaluation criteria: quality, cost and time.
In this case, functionality (quality) fit is most important. Whilst this would normally rule out off-the-shelf, a customised off-the-shelf could be considered. In terms of cost, a customised off the shelf should be cheaper than one built in house as the vendor can spread development costs over many sales. Off-the shelf is immediately available whilst home grown could take years to develop in this case. Finally, an off-the-shelf should be better quality as the vendor has many chances to iron out bugs and flaws.

4 **DISCUSS THE SYSTEMS ACQUISITION PROCESS & KEY ACTIVITIES**

In cases other than end-user development or development by the IT department, the organization will either search for and select an off-the-shelf solution or find a developer to build one for them. First, describe how the IT manager went about the acquisition process then, drawing on IS theory and best practice, discuss the stages of the process used to acquire a system from outside of the organization. Finally, discuss what organizations can do to ensure a better fit between the solution and the problem it is supposed to address.

In such cases, the organization will typically conduct a feasibility study (to include a cost-benefit-analysis) in order to justify and secure funding for the project. Interactions with external suppliers often take the form of the request for information (RFI); request for proposals (RFP) or request for quote (RFQ). The purpose of the RFI and RFP is to identify possible solutions to the IS problem; they typically constitute a detailed list of questions submitted to vendors of packaged software or other computer services to determine if the vendor's product can meet the organization's specific requirements. The RFQ is a request for pricing quote(s) specifications related to a required product, by a prospective purchaser. Such requests mark the beginning of the selection process. From here, as with the generic problem solving process, companies will select their preferred solution through a competitive tendering process and mechanisms to identify the solution that most meets their requirements. A variety of stakeholders may become involved in the acquisition process, depending upon the culture of the organization. In some cases this may be a centralised and in other cases a decentralised activity. External consultants and consultants from the solution provider may also support the process.
Students should discuss Systems Investigation. What system do we need and why? Typically, this stage includes a cost/benefit analysis as part of a feasibility study. Systems Analysis. This stage seeks to answer the question, what exactly should the system do? This stage includes a detailed analysis of the information needs of end users, the organisational environment, and any system currently used to develop the functional requirements of a new system.

CUSTOM-DESIGNED (TAILORED) SOFTWARE

Software designed to meet the specific needs of a particular organization or department; also called tailored software.

CUSTOMIZATION

The modification of a software package to meet an organization's unique requirements without destroying the integrity of the package software.

REQUEST FOR INFORMATION (RFI)

A request to vendors for general, somewhat informal, information about their products.

REQUEST FOR PROPOSAL (RFP)

A document specifying all the system requirements and soliciting a proposal from vendors who might want to bid on a project or service.

REQUEST FOR QUOTATION (RFQ)

A formal request for sup-pliers to prepare bids based on the terms and conditions set by the buyer.

REQUIREMENTS SPECIFICATION.

The main output from the systems analysis stage. Its main focus is a description of what all the functions of the software will be.

FUNCTIONAL REQUIREMENTS

describes the functionality desired of a problem solution; fully describes what the software will do

INFORMATION REQUIREMENTS

A detailed statement of the information needs that a new system must satisfy; identifies who needs what information, and when, where, and how the information is needed.

5 **APPROACH TO SYSTEMS ACQUISITION**

Consider the centralised (IT led) versus the decentralised (sponsoring unit) APPROACH TO SYSTEMS ACQUISITION. With reference to the case study and your wider reading, evaluate the relative advantages and disadvantages of the two approaches

Whilst the centralised approach may be informed by the IT and corporate strategy and will consider integration issues, support and maintenance, the decentralised approach ensures requirements are best understood and met and that change has a greater chance of success through problem ownership, involvement and commitment.

REQUIREMENTS ANALYSIS

The stage in a system development life cycle in which the goals (outputs) of a system are evaluated against the needs of the users.

SYSTEM REQUIREMENTS

The functions that an information system is expected to fulfil and the features through which it will perform its tasks.

FUNCTIONALITY.

A term used to describe whether software has the features necessary to support the business requirements.

Case study references

Cole, G A. and Kelly, P P. (2011) 'Management Theory and Practice', Ed. 7. Cengage EMEA.

Kelly, P P. (2009) 'International Business and Management', Cengage Learning EMEA.

Oz, E. and Jones, A. (2008) 'Management Information Systems', Ed. 1. Cengage Learning EMEA.