Timing Strategies for Feasibility Studies in Information Systems Development

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Abstract:
The feasibility study has been prescribed and described as an important step in information system development. One of the key issues pertaining to the feasibility study is. its time of preparation and presentation during the system development life cycle. Systems analysis and design texts suggest different timings for its preparation and presentation; informal survey of forty seven organizations reveals that the feasibility studies are not being performed on a formal basis and that the timings used by them are different from the ones recommended by texts; and finally results from our quasi-experimental study indicate that there is a divergence of views among analysts and users regarding the appropriate feasibility study timings. Based on our results, three alternate strategies are recommended for conducting feasibility studies, and a contingency model is proposed for strategy selection.

Article:
One of the central concerns of information system developers and managers over the last three decades has been to develop information systems which meet users' requirements and are developed on time and within budget Developers and managers have taken several steps, over the years, to assure the accomplishment of the above objectives. One of these key steps has been the use of reviews during system development life cycle (SDLC). Feasibility study is one such review.

The importance of the feasibility study has been stressed almost unanimously by most researchers and authors in the information systems field. For example, most text-book authors, researchers, and practitioner methodologies in the area of systems analysis and design identify the feasibility study as one of the important phases of the system development life cycle (Couger et al., 1982; Davis and Olson, 1985; Dickson and Wetherbe, 1985; Gore and Stubbe, 1983;Horsey, 1983; Long, 1983; Robey and Markus, 1984; Semprevivo, 1982; Thierauf, 1984; Wetherbe, 1979). The feasibility study is also considered important from the point of view of user/management involvement (Debrabander and Edstrom, 1977; Edstrom, 1977) . In fact, in most organizations, it is common to include some kind of feasibility study as part of any major system development effort. In spite of this agreement, the research literature does not provide much insight into the contents and timing of feasibility studies. For example, Ives and Olson (Ives and Olson, 1984), while reviewing the "user involvement" literature, did not cite a single paper directly related to feasibility studies. However, a recent study (Palvia and Palvia, 1988) has examined the desirable evaluation criteria and contents of a feasibility study.

One of the key issues about feasibility studies is its timing of preparation and presentation during the system development life cycle. While the sequence of the various stages in the system life cycle is pretty much defined, there are many views on the stage where the feasibility study should be conducted. As DeMarco (DeMarco, 1978) succinctly puts it:

"Management would like to see the cost-benefit study completed during the survey phase. .... But the sober fact is that you cannot analyze the trade-offs until you have something to analyze. The idea of performing an early cost-benefit analysis is largely a fiction."

This paper addresses the feasibility timing issue; specifically it includes the following:

1. Reviews the literature and identifies the various timings suggested in the literature.

2. Reports on an informal survey of companies to determine the scope and timing of feasibility studies in their organizations.

Then using a rigorous quasi-experimental study,

3. Identifies suitable timing strategies for feasibility study preparation and presentation.

4. Identifies differences in preferred feasibility study timings based on system type and orientation of the evaluation team.

5. Develops multiple strategies for appropriately addressing the feasibility study timing issue.

6. Proposes a contingency model for timing strategy selection.

The next section is devoted to the literature survey and the informal survey of several companies. Subsequent sections report the results from the detailed study. Note that in the rest of the paper, we do not distinguish between preparation and presentation times; thus the terms "preparation" and "presentation" are used interchangeably.

Literature Survey and Comments on Organizational Use

There is very little reported research findings on feasibility timings. However, authors of systems analysis and design texts have recommended different timings, as shown in figure 1. It is noteworthy that most authors recommend only one feasibility study, to be conducted early in the system development cycle. A few authors suggest multiple studies at different points in the life cycle. There is considerable difference of opinion as to how early the study should be conducted. A rough tabulation from figure 1 indicates the following textbook preferences for the feasibility timing:

- 28% at investigation proposal time
- 24% at requirements study time
- 48% at system proposal time

Furthermore, an informal survey of companies in the Greater Boston area and in the Memphis area was conducted to determine the feasibility study timings used in recently completed system development projects. Of the responses on 42 projects, a feasibility study was done on twenty nine projects (69%). Of these' tune (31%) were formal feasibility studies, and the remaining twenty (69%) were informal feasibility studies. Nineteen companies provided more data on feasibility timings. Of these nineteen, twelve (63%) used one feasibility study: nine (75%) in the initial investigation stage, one (8.3%) in the requirements stage, and two (16.7%) in the system proposal stage. Seven (37%) reported using multiple feasibility studies (at different stages of the life cycle).

The above data from the literature and the companies suggest a state of confusion and a lack of firm direction in the proper sequencing and use of the feasibility study. They also indicate a significant gap between prescriptive and descriptive timing strategies. The most utilized feasibility study timing in the practitioners' world appears to be the very first stage, whereas the academicians are divided in their recommendations (about half of the authors recommended the system proposal stage).

Our quasi-experimental empirical study is an objective effort to identify and determine the appropriate feasibility timings. Before presenting the methodology and results of the study, we will identify the possible feasibility presentation times.

Figure 1: Literature Review of Feasibility Study Timings

	INVESTIGATION PROPOSAL TIME	REQUIREMENT STUDY TIME	SYSTEM PROPOSAL TIME	DETAILED SYSTEM DESIGN TIME
BURCH 79			*	
CONDON 85			*	
CONNOR 85			*	
DAVIS 85	*		*	
DeMARCO 78		*		
+PRIDE	*	*		
CARA	*	*	*	*
GILDERSLEEVE 85	*			
HODGE 86			*	
KANTER 77	*			
KENDALL 88	*			
KINDRED 85			*	
LAWRENCE 84			*	
LESILIE 86			*	
LONG 83			*	
LUCAS 85	*			*
MURDLICK 84				
PAGE-JONES 80		*		
SCOTT 82				
SEMPREVIVO 82			*	
SILVER 76			*	
SPECTRUM	*	*	*	*
THEIRA 80	*		*	*
THEIRA 82			*	
THIERA 84			*	
WETHERBE 79	*			

\+ This information (in figure 1) has been obtained from Dickson 85.
Note: The textbooks' authors' names & year of publication are abbreviated.

Possible Feasibility Study Presentation Times

First, in order to enumerate the possible feasibility study timings, it is instructive to examine the definition of a feasibility study. A commonly accepted definition of a feasibility study/analysis is:

A *feasibility study/analysis aids in evaluating the suitability of a single or multiple proposed system solution(s) to an identified business problem according to a set of criteria.*

It is worth noting that the feasibility study itself is generally prepared by the system analysts/technical staff with possible assistance from the user group. The actual evaluation is made by the user management and/or top management, with assistance from systems analysts/technical staff. Thus the feasibility study (including its preparation and evaluation) offers an excellent vehicle for achieving user involvement and commitment, as has been strongly recommended for successful system development (e.g. Debrabander and Ekstrom, 1977; Edstrom, 1977; Ives and Olson, 1984). It also means that the key players affected by the timing issue are the analysts and the user management.

The proposed system alternatives, to be evaluated in the feasibility study, are rough and tentative in the beginning of the system development life cycle and can be made firm and definite as more data is obtained and analyzed during the later stages. Theoretically, the feasibility study can be conducted any time during the systems development phases (before the system is implemented); however, the accuracy of the feasibility study and hence the confidence in the ensuing recommendations would increase as the feasibility study is conducted later in the SDLC. On the other hand, a delayed feasibility study could result in higher sunk costs before making a final decision.

As pointed out earlier, the literature generally suggests only one feasibility study, to be conducted in the early stages of systems development. We wished to examine other mile-stone points as well for conducting the feasibility study. The following phases and milestones of the system development life cycle (SDLC) were used to generate possible feasibility timings:

A. ***Investigating Proposal/Problem Statement:*** This is an agreement between the analysts and the users on the broad problems and expected outcomes.

B. ***Requirements Study:*** The users' specific requirements are captured based on interviews, surveys, documents reviews, observation and subsequent analysis.

C. ***Alternative System Proposals:*** The proposed system propos al(s) are described formally in terms of their precise capabilities and what they will do from the user's perspective.

D. ***Detailed System Design:*** The system is designed in detail at the internal level. Included are system flow charts/data flow diagrams, file designs, form designs, report designs, etc.

Since the feasibility study can be conducted (prepared and presented) at any time during the analysis and design phases, the following possible timings were considered in this study. Note that we purposely allowed more choices to be able to obtain finer data, allowing us more flexibility in interpretation.

1. At Investigation Proposal time
2. Soon after Investigation Proposal
3. Before Requirements Study
4. At Requirements Study time
5. Soon after Requirements Study
6. Before System Proposal
7. At System Proposal Time
8. Soon after System Proposal
9. Before Detailed Design
10. At Detailed Design time
11. Soon after Detailed Design

Research Methodology

The research methodology may be best described as quasi-experimental situation-specific opinion research. An empirical opinion-based study of professionals in the field would have yielded less-than-accurate "perception" data about the issues. A tightly controlled experimental study was deemed impractical because of the enormous effort needed in its preparation, administration and evaluation. Instead, we conducted quasi-controlled experiments, where data was collected from analysts and users at the time of presentation of the feasibility study for actual system development projects. Our approach, the details of which are described later, has elements of both experimental control and opinion research. The situation-specific and in-context collection of empirical data lends greater validity to the results.

The research was conducted in a two-year period, from 1983 to 1985, at two major American universities. The authors taught project-oriented systems analysis and design classes at these universities. Each class was divided into teams of three to five students. Each team worked on developing (i.e. defining, designing and implementing) a real business system for industry or academia (as opposed to working on case studies). Some examples of the business systems developed by the teams are listed in exhibit 1.

The use of student analysts allowed control (a requirement for a scientific study) on the system development process. There may be differences between student and practitioner analysts, but we believe that our results have field relevance for the following reasons: the student analysts were mostly seniors and MIS majors, had several data processing and MIS courses prior to taking this course, were preparing for a career in systems analysis and design, and the applications developed by them were real business applications. A majority of the students had prior work experience; several had data processing related jobs. Also, the students constituted only half of the subjects; the other half were business clients (users) of the systems. Part of the experimental control was exercised in the preparation of the feasibility studies; the analysts prepared the feasibility study according to a comprehensive set of criteria (Palvia and Palvia, 1988). The feasibility study was prepared in conjunction with the system proposal. Once the feasibility study was completed, it was submitted to the user management for review. After this, a formal presentation was made by the analysts to the users, at which point a systems alternative was selected for implementation.

Exhibit 1: Some business systems developed by the project teams.

- Point-of-sales system for a bookstore.
- Order entry, billing, and accounts receivable system for a furniture company.
- Inventory control system for a restaurant.
- Accounts payable system for a retail business.
- Client tracking, mailing, and scheduling system for a law firm.
- Sales and inventory system for a beauty parlor.
- Quote tracking and expediting system for a heat detector company.
- Employee attendance, lateness, and benefits system for a rail car manufacturer.
- Inventory control system for an auto parts store.
- Quality control improvement system for an electronics firm.
- Customer inquiry and response tracking system for a manufacturing company.
- Image enhancement and advertising system for a bus company.
- Undergraduate catalog production system for a university.

After the selection, a survey instrument was administered, both to the analysts and users. The questionnaire included questions on preferred feasibility study timings for preparation and presentation as well as questions about the profile of the respondent. In the next section, we report the results.

Results

There were sixty-eight responses to the questionnaires. The profile of the respondents and the systems is reported in figure 2. Respondents were either clients (users) or analysts. Their orientation to business/data processing was measured and accordingly the respondents are grouped as having more business orientation, more DP orientation or an even balance. The system being developed had features of “automation of manual operations (i.e. transaction processing)” and "information providing (i.e., MIS)". The systems were grouped as Transaction Processing Systems (TPS), Management Information Systems (MIS), or both.

The timing results are reported now. The timing frequencies are first reported on an overall basis (i.e. considering all responses). Then the frequencies are reported by three classifications: by analyst vs. client (user), business vs. data processing orientation of the respondent, and information providing vs. automating systems. For a clearer perspective, the timing data was regrouped into four milestone points: investigation proposal time, requirements study time, system proposal time, and detailed design dine.

Figure 2: Respondent/System Profile

Respondent Class		
	Clients:	47%
	DP Analysts:	53%
Respondent Education		
	High School:	7%
	Some College:	26%
	4 Years College: (including last semester	49%
	More Than 4 Yours:	18%
Respondent Orientation		
	More Business:	41%
	More Data Processing:	30%
	Both:	29%
System Type		
	More Automating:	44%
	More Information Providing:	31%
	Both:	25%

The overall percent frequencies are shown in figure 3. Investigation proposal is the preferred timing for 8% of all respondents, requirements study is the preference for 27.4% respondents, system proposal is the preferred timing for 42% of the respondents, and detail design timing is preferred by the remaining 22.6% respondents. The system proposal and requirements study timings are the most desired timings, followed by system design timing as a close third one. We will discuss the implications of these results in the next section.

Figure 3: Overall Timing Preference

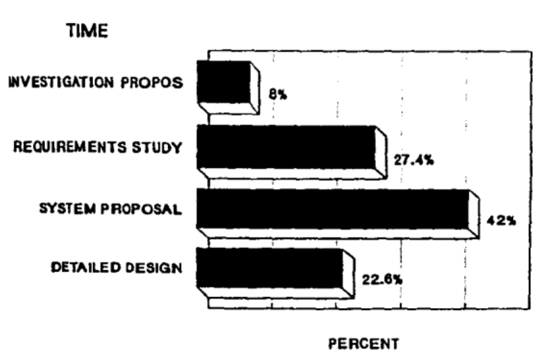
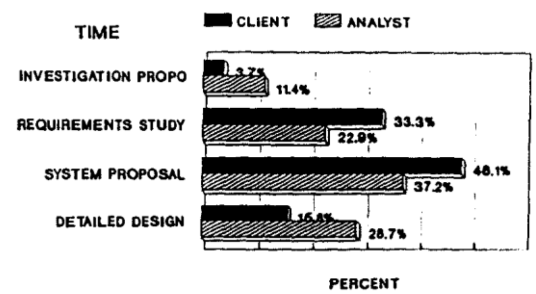


Figure 4: Client/Analyst Timing Preference



The percent preference frequencies according to the time classification factors are presented in figures 4, 5, and 6. First concentrating on the figure 4 data, note that more users than analysts want the feasibility done earlier at the requirements study time. Requirements study time is the choice of 33.3% of the clients vs. 22.9% of the analysts. More analysts wish to defer the feasibility study to the detailed design time; figure 4 shows that system design time is the choice of 28.7% analysts and only 15.8% clients.

The underlying difference between the client and analyst is perhaps their basic orientation. In the past, it could be assumed that the client had a business orientation and the analyst had the data processing orientation. These traditional assumptions are, however, weakening due to the microcomputer revolution and the proliferation of end-user computing. In this context, it is more enlightening to look at the differences based on the orientation (business vs. DP) of the respondent (figure 5). The results are similar but stronger compared to the client/ analyst category. The business oriented respondent prefers to have the feasibility study done much sooner, even at the investigation proposal time (the choice of 13.6% of the business oriented respondents compared to 5.3%

of DP respondents). Along the same lines, more DP respondents want die feasibility analysis done at detailed design time than do the business minded people.

Figure 5: Timing Preferences by Orientation

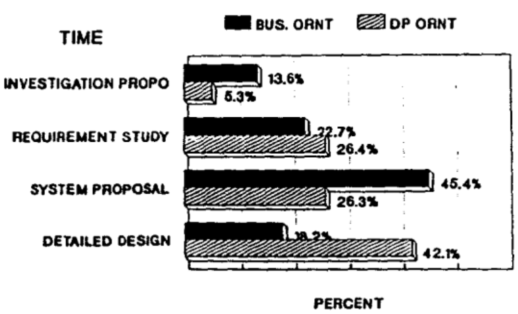
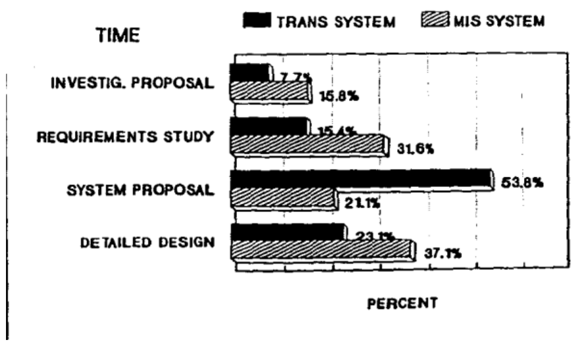


Figure 6: Timing Preferences by System Type



Lastly, looking at the data in figure 6, note that more respondents of MIS systems indicated that the feasibility study should be done sooner than did the respondents of the automating systems. Investigation proposal time was the choice of 15.8% MIS system respondents compared to 7.7% automating system respondents. Requirements study was the choice of 31.6% MIS system respondents compared to 15.4% automating systems respondents. This observation was generally true for all sub-groups (users and analysts); they all indicated doing an earlier feasibility analysis on MIS systems.

Discussion and Utility of the Results

What are the implications of the above results and how they might be used? One of the significant findings is that very few respondents, clients and analysts alike, suggested conducting the feasibility at the outset, at the investigation proposal time. This goes contrary to the practice in many organizations and to the recommendations of several authors (see earlier discussion). We agree with this finding and the earlier quote by DeMarco that a feasibility study cannot do justice to its purpose until more is known about the specifics of what the system is supposed to accomplish. These specifics are only known during the requirements study after the clients have been interviewed and further data has been collected and analyzed.

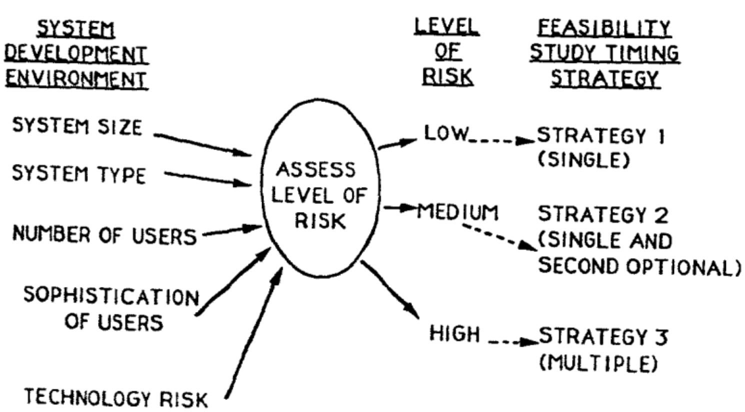
Conducting the feasibility study at requirements study time is the choice of a significant proportion (27.4%) of the respondents. At this point, there is some knowledge of the system requirements in terms of the contents of the output and required processing. Any system solutions generated at this point, howsoever rough and outlined they might be, are meaningful and relevant; and the evaluation team can make informed and judicious decisions. After formal systems proposals have been prepared which will include most of the external interfaces and some internal structure of the system, more uncertainty is taken out of the alternate proposals. For this reason, conducting the feasibility study at or near the system proposal time is the choice of 42% of the respondents which is in agreement with what many authors have advocated (see figure 1). Finally at system design time, most of the internal structure of the system is known and a feasibility study at this time deals with very little uncertainty. This timing is favored by 22.6% of the respondents. Note that even though this time is preferred by many respondents, it is perhaps impractical as considerable expenditure of resources would be required in preparing alternate system designs and a decision to abandon the project at this stage would mean a lot of wasted effort and money.

We now turn our attention to the differences expressed by the clients and the analysts, and the business oriented respondents and the DP respondents. More clients want the feasibility study done earlier (requirements study time and system proposal time), while more analysts want the feasibility study to be done much later (system proposal time and system design time). This is understandable as each group has its own different motives, priorities and utilities. The clients being results oriented, wish to have the feasibility study done as soon as possible, before being committed to any part of the project and expending more resources. On the other hand, the analysts (those who actually perform the feasibility study) will like to delay the study until enough details are known about the alternatives. A similar preference pattern is observed for the business oriented and the data processing oriented respondents. The business-oriented respondents, wanting to see business results, expect the study done sooner, the technical people, understanding the difficulties in doing a thorough analysis, wish to do it later. Again, the mix of people involved in the feasibility study preparation, presentation, and evaluation will determine the best time.

It is reflective to examine the timing data for the respondents according to the type of system developed: MIS systems, versus the TPS systems. For MTS systems, compared to TPS systems, respondents generally preferred doing the feasibility study much earlier (for MIS systems, 15.8% wanted it done at investigation proposal time and 31.6% wanted it done near requirements study time; compared to corresponding 7.7% and 15.4% for TPS systems). TPS systems generally replace clerical and repetitive tasks and therefore most of the uncertainty has been reduced through experience and progressive standardization. Such systems may not require formal and close scrutiny. On the other hand, MIS systems still have to be uniquely tailored to the client's unique information requirements and as such have more inherent uncertainty. Note that, the respondents show more uniform preference for different feasibility study timings for MIS Systems (15.8%, 31.6%, 21.1%, 37.1% respectively) as compared to a definite preference for a single timing in TPS system (i.e., for system proposal time).

The above discussion points to the need for multiple feasibility studies for projects having inherently higher risk. In fact, our results strongly suggest this requirement. Our analysis indicates that requirements study and system proposal timings are the best timings, followed by detailed design timing as a close third. Given these results, how does one answer the question of what is the best overall timing for preparing, presenting, and evaluating the feasibility of a systems project. Rather than selecting one of these as the preferred dining, the following contingency model (figure 7) for selecting appropriate feasibility study timing is suggested. Our model has roots in contingency models proposed in other areas of the MIS literature. For example, McFarlan (1981) has proposed a contingency model for assessing project risk in order to develop a balanced portfolio of applications, and Naumann, et al. (1980) have proposed a contingency model for determining information requirements.

Figure 7: Contingency Model for Selecting Feasibility Study Timing Strategy



The above contingency model helps in explicit consideration of system development environmental variables. These variables, as described below, account for the level of business risk being undertaken by an organization when going through the different stages of sys-tem development.

- ***System Size:*** It is apparent that the larger the system, larger the risk being undertaken. It may be hard to quantify the system size but some measures that might help are: number of reports, number of input and output screens to be designed, number of data files needed, number of independent program modules, development cost of the system, and yet another measure can be the number of primitive bubbles in the data flow diagram (DeMarco, 1978).

- ***System Type:*** A system can be categorized as a TPS system, MIS system, Decision Support System (DSS), Executive Information System (EIS), Strategic Information System (SIS), or Expert System (ES). Generally speaking, the "unstructuredness" of the underlying problem and the level of inherent risk increases as one goes from IPS to MIS to DSS/EIS. For SIS and Expert Systems, the level of risk should be assessed on a case by case basis (Palvia et al., 1988).

- ***Number of Users:*** A rule of thumb is that, the level of risk would increase exponentially as the number of users increases. This is primarily due to the fact that there will be more conflicting and divergent user needs and expectations, and consequently the communication and coordination effort increases exponentially. A system that is designed to meet the needs of a diverse community of users, needs to be carefully planned and analyzed periodically.

- ***Sophistication Level of Users:*** This refers to the degree of familiarity and comfort level that the users have in regard to the computer technology in general and with the business functions being computerized. The more the familiarity, the lesser the risk.

- ***Technology Risk:*** The technology risk relates to the company's technological experience and expertise (McFarlan, 1981). The same technology may pose a lesser risk in a technologically advanced company, and may be a greater risk for a new company or a company in the initial stages of growth. We are referring to information technology (IT); as such the required technology for the proposed system application, as well as the expertise of the IT staff will determine this type of risk.

We consider the above factors to be the primary ones. However, a specific situation may be unique and may require the consideration of other factors to assess the level of risk. Further, in order to assess the level of each factor, only a very high-level and quick analysis needs to be conducted. In other words, no attempt should be made to pin a factor precisely or to a great amount of detail (details will be completed during the actual feasibility study). Each factor needs to be classified only at a very broad level (e.g., system size may be categorized as large, medium, or small).

With the consideration of the above factors and consolidation of their individual risk contribution to the project, the entire project's risk-assessment can be made. Based on a risk-assessment of the project as low, medium, or high, the following three feasibility study timing strategies are recommended. Characteristics of the three strategies are summarized in figure 8.

Feasibility Study Timing Strategy One (Single Feasibility Study)

Under low risk, only one feasibility study is needed which should be conducted at the system proposal stage. Furthermore, since there is only one feasibility study, it must provide an in-depth analysis. An in-depth analysis would require addressing all feasibility criteria (Palvia and Palvia, 1988) in detail. Commonly accepted feasibility criteria include: ability to meet functional requirements, economic factors, technical factors, people factors, operational factors, legal and security considerations, and impact on organization.

Feasibility Study Timing Strategy Two (Single & Second Optional)

When the inherent uncertainty/risk is medium, initially conduct, present and evaluate feasibility options at requirements study time. There are three recommendations possible at this stage: reject all rough proposals and make a NO-GO decision, accept one proposal without qualifications, or accept one proposal tentatively. The level of analysis should generally be broad-based. A broad-based analysis may address only the most important feasibility criteria or may address the criteria at a high-level. If the recommendation is tentative acceptance, then refine the feasibility study while developing the full system proposal(s) and then present it again at system proposal time. Again, the study has to be in-depth. The decision this time should be final i.e., GO with a particular decision or NO-GO. It is further suggested that for systems which have inherently more risk/ uncertainty e.g., MIS systems, DSS systems or other complex systems, the unresolved issues of the feasibility analysis be reassessed at system design time.

Feasibility Study Timing Strategy Three (Multiple Studies)

When the inherent risk/uncertainty is assessed as high, the strategy of several feasibility studies during the systems development life cycle is very useful and should be explicitly used. Each such study will differ in scope, focus, and depth of analysis.

First study should be done after investigation proposal time with minimal data collection about users' requirements. This study consider only broad choices i.e., stay with status-quo or proceed with some automation or proceed with major automation. Furthermore, the focus should be primarily operational feasibility, i.e., ascertaining whether the users are "unfrozen" ("unfrozen" meaning: dissatisfied, unhappy, and ready to change) from their current system or not. If not, all the effort down the road may be futile.

A second feasibility study is made in detail at the system proposal time. The purpose is to evaluate specific system alternatives. At this stage, the focus should shift more to assessing economic feasibility. No organization wants to pour money into black holes; so it is paramount that an exhaustive cost/benefit analysis be done prior to plunging into the de tailed design phase.

Figure 8: Feasibility Study Timing Strategies

	Description	Scope/ Focus	Timing
Strategy One	Single Feasibility Study	In- depth	System Proposal
Strategy Two	Single Feasibility Study + Second Optional	First- Broad based Second- In depth	Requirements Study, optional at System Proposal
Strategy Three	Multiple Feasibility Study	Progress from Broad based to In depth	Investigate Proposal/ Requirments Study, System Proposal, System Design

During general design and detailed design phase, a third feasibility study would consider specific design alternatives, such as batch reports vs. interactive reports, sequential vs. random file organization, relational vs. hierarchical vs. network database implementation, etc. Notice that the focus is shifting more to assessing technical feasibility rather than economic and operational feasibility.

Feasibility evaluations beyond the detail design phase are also possible. For example, coding choice may have to be made between third generation or fourth generation languages, based on existing organizational standards and constraints. One might think there are no choices to be made after coding. But that is not true. For testing, one might use top-down modular testing or bottom-up modular testing. For conversion also, there are options available (Palvia and Palvia, 1989). In the last stage the focus is more on operational feasibility. It is worth noting that the focus, scope, and depth of feasibility study changes as one progresses through the system development stages.

The rationale behind multiple feasibility studies is to minimize the risk of system failure and user dissatisfaction. At any stage in system development, the costs incurred are sunk costs and the management should not be hesitant in parking or stopping the project. This approach makes sense as large development projects can take one to four years; successive feasibility studies offer the opportunity to critically examine the usefulness of continuing the project. Some vendor-supplied project management systems, e.g., SPECTRUM, advocate several funding reviews during system development. Funding reviews are formal checkpoints to make GO/NO-GO decisions. Funding reviews emphasize mainly the cost-benefit aspect of the feasibility study; we strongly recommend evaluating all relevant factors at each feasibility study time.

Summary and Conclusions

This article has addressed a key issue about feasibility studies in the development of business information systems; namely the proper timing of studies during system development. Most appropriate times suggested for conducting the feasibility study are when the requirements of the users are known or when formal systems proposal has been prepared. Systems with greater uncertainty may require multiple feasibility studies. To cope with this uncertainty/risk, we presented three feasibility study timing strategies and a contingency model to select one of the strategies.

As was stated at the outset, research into the various issues of feasibility studies is very limited. We propose that more investigations/ experiments be undertaken to corroborate and expand on the knowledge about feasibility studies. Empirical and/ or survey data may be collected and experiments may be conducted in pure field settings to obtain in-depth information about the role, contents and dining of feasibility studies. Further, while this examination of feasibility study timings was in relation to a standard system development life cycle, it will be valuable to establish the role, contents, and timing of feasibility studies in relation to end-user developed application systems, prototyping and CASE methodologies.

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