

ABC Format:

Feasibility Studies

Much like recommendation reports, feasibility studies guide readers toward a particular action. Another similarity is that both report types can be either in-house or external. However, feasibility studies are usually solicited by the reader who needs to make a decision. Therefore, they do not advocate strongly for a single solution. Instead, they compare alternatives in such a way that a reader can make an informed decision about a course of action. This book uses the following working definition of feasibility studies:

Feasibility study: A document written to show the practicality of a proposed policy, product, service, or other change within an organization. Often prompted by ideas suggested in a proposal, a feasibility study examines details such as costs, alternatives, and likely effects. Although they must reflect the objectivity of a report, most feasibility studies also try to convince readers either (1) to adopt or reject the one idea discussed or (2) to adopt one of several alternatives presented in the study.

ABC Format: Feasibility Study

- **ABSTRACT:** Capsule summary of information for the most important readers (i.e., the decision makers)
 - Brief statement about who has authorized the study and for what purpose
 - Brief mention of the criteria used during the evaluation
 - Brief reference to your recommendation
- **BODY:** Details that support whatever conclusions and recommendations the study contains, working logically from fact toward opinion
 - Organization that compares advantages and disadvantages of each option
 - Description of evaluation criteria used during your study
 - Description of exactly *what* was evaluated and *how*, especially if you are comparing several items
- **CONCLUSION:** Wrap-up in which you state conclusions and recommendations resulting from the study

Feasibility studies are often part of a larger process. They may be preceded by a problem analysis and a recommendation report or proposal. Once a problem has been identified and analyzed and a response has been suggested, a feasibility study may be conducted to determine if the proposed action is appropriate for the particular situation in the organization. If the proposed action is feasible and desirable, the feasibility study may be followed by a plan of action, including the development of guidelines and training materials.

ABC Format for Feasibility Studies

Like other forms of technical writing, good feasibility studies have the basic three-part structure of abstract, body, and conclusion—although the exact headings you choose may vary from report to report. The abstract of your feasibility study should clearly identify the purpose of the study and should briefly summarize your findings and

recommendations. The body should identify the subject of your study, and it should clearly explain the criteria that were used in your evaluation. Feasibility studies use a comparison pattern of organization, presenting the advantages and disadvantages of each alternative. The conclusion section should make your findings and recommendations clear to the reader, while inviting questions and discussion.

M-Global Case Study for a Feasibility Study

Like many feasibility studies, Model 11–7 on pages 388–395 was written as part of a larger process. The writers, members of M-Global’s Information Systems department, had previously submitted an informal proposal, recommending that M-Global begin using open-source software. The proposal cited specific cost savings, but Greg Bass, Director of Information Systems, wanted more information before moving forward. Although this feasibility study does include recommendations, it presents information in a way that allows Greg to make the final decision. It also suggests more actions be taken (the establishment of guidelines) before fully implementing the proposal.

The following guidelines will help you prepare the kinds of feasibility studies requested by your boss (if the study is in-house) or by your client (if the study is external). In either case, your study may be used as the basis for a major decision. Refer to Model 10–5 on pages 402–403 as you read and apply these guidelines to your own writing.

● Feasibility Study Guideline 1: Choose Format Carefully

In deciding whether to use the format of an informal (letter or memo) or formal document, use the same criteria mentioned earlier in the chapter with regard to proposals. As always, the central questions concern your readers:

- What format will give them easiest access to the data, conclusions, and recommendations of your study?
- Are there enough pages to suggest need of a table of contents (that is, a formal report)?
- What is the format preference of your readers?
- What has been the format of previous feasibility studies written for the same organization?

● Feasibility Study Guideline 2: Use the ABC Structure

Like other forms of technical writing, good feasibility studies have the basic three-part structure of Abstract, Body, and Conclusion—though the exact headings you choose may vary from report to report. Here is an overview of what the study would include:

● Feasibility Study Guideline 3: Call Your Abstract an Introductory Summary

This section provides information that the most important readers would want if they were in a rush to read your study. With that criterion in mind, consider including these items:

- Brief statement about who has authorized the study and for what purpose
- Brief mention of the criteria used during the evaluation
- Brief reference to your recommendation

The last item is important, for it saves readers the frustration of having to wade through the whole document in search of the answers to the questions "Is this a practical idea?" or "Which alternative is best?" It is best to mention the recommendation up front, giving readers a frame through which to see the entire report.

● Feasibility Study Guideline 4: Organize the Body Well

More than anything else, readers of feasibility studies expect an unbiased presentation. That means the midsection of your report must clearly and logically work from facts toward recommendations. Here is one approach that works:

1. **Describe evaluation criteria used during your study**, if readers need more detail than was presented in the introductory summary.
2. **Describe exactly WHAT was evaluated and HOW**, especially if you are comparing several items.
3. **Choose criteria that are most meaningful to the readers**, such as:
 - Cost
 - Practicality of implementing idea
 - Changes that may be needed in personnel
 - Effect on growth of organization
 - Effects on day-to-day operations

Of course, exact criteria will depend upon the precise topic you are investigating.

4. **Discuss both advantages and disadvantages** when you are evaluating just one item. Move from advantages to disadvantages. The conclusion will allow you to come back around to supporting points.
5. **Follow organization guidelines for comparisons** when evaluating several alternatives (see chapter 5). You can discuss one item at a time OR you can discuss one criterion at a time.

● Feasibility Study Guideline 5: Use the Conclusion for Detailed Conclusions and Recommendations

Here you get the opportunity to state (or restate) the conclusions evident from data you have presented in the discussion. First state conclusions, and then state your recommendations. Use listings for three or more points, to make this last section of the study as easy as possible to read.

● Feasibility Study Guideline 6: Use Graphics for Comparisons

When comparing several items, you need to consider most readers' preference for tabulated information. Tables can appear either in the discussion section or in attachments. In both cases, follow graphics guidelines explained in chapter 12.

● Feasibility Study Guideline 7: Offer to Meet with the Readers

Most readers have many questions after reading a feasibility study, even if that study has been quite thorough. You score points for eagerness and professionalism if you anticipate needs and express your willingness to meet with readers later. Such meetings give you another opportunity to demonstrate your understanding of the topic.

SUMMARY

Proposals and feasibility studies stand out as documents that aim to *convince* readers. In the case of proposals, you are writing to convince someone inside or outside your organization to adopt an idea, a product, or a service. In the case of feasibility studies, you are marshalling facts to support the practicality of one approach to a problem—sometimes in comparison with other approaches. Both documents can be either informal or formal, depending on length, complexity, or reader preference.

This chapter includes lists of writing guidelines for informal proposals, formal proposals, and feasibility studies. For informal proposals, follow these basic guidelines:

1. Plan well before you write.
2. Use letter or memo format.
3. Make text visually appealing.
4. Use the ABC format for organization.
5. Use the heading “Introductory Summary” for the generic abstract section.
6. Put important details in the body.
7. Give special attention to establishing need in the body.
8. Focus attention in your conclusion.
9. Use attachments for less important details.
10. Edit carefully.

In formal proposals, abide by the same general format presented in chapter 9 for formal reports. To be sure, formal proposals have a different tone and substance because of their more persuasive purpose. Yet they do have the same basic parts, with minor variations: cover/title page, letter/memo of transmittal, table of contents, list of illustrations, executive summary, introduction, discussion sections, conclusion, and appendices.

Feasibility studies demonstrate that an idea is or is not practical. Also, they may compare several alternatives. Follow these basic writing guidelines:

1. Choose format carefully.
2. Use the ABC structure.
3. Call your abstract an introductory summary.
4. Organize the body well.
5. Use the conclusion for detailed conclusions and recommendations.
6. Use graphics for comparisons.
7. Offer to meet with the readers.

Feasibility of Using Open-Source Software at M-Global

Uses formal document format appropriate for scope of project and length of report.

Prepared for:

Greg Bass, Director of Information Systems

Prepared by:

Kellen Holmes and Kate Newman

April 20, 2012

MEMO

To: Greg Bass
From: Kellen Holmes and Kate Newman
Date: April 20, 2012
Subject: Feasibility Report for Open-Source Software

Enclosed is the study that you requested of the feasibility of open-source software at M-Global. There are many options available to us, but we believe that some open-source software could meet our needs and save on license fees.

Explains context of the feasibility study.

We should, however, be aware of the limitations of such software and of the different nature of technical support with this kind of software. We will not be able to turn to a vendor for technical support; instead, we will need to look to the community of users or create our own solutions. We believe that M-Global has the resources to support open-source software and even to contribute to the open-source software community.

Includes sources that are not cited in the report, but that may have provided useful background information.

We will be happy to meet with you to discuss our findings.

Invites follow-up meeting.

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EXECUTIVE SUMMARY

This report explores the feasibility of M-Global's moving from proprietary software, for which we pay license fees, to open-source software, for which no fees are paid. The open-source software movement is growing, and the types of software available through this movement are expanding quickly. Although open-source software is "free," there are costs involved in moving away from proprietary software. First of all, we have a major investment in our current software. Second, by adopting open-source software, we would be assuming the costs of troubleshooting, maintenance, and upgrades ourselves, and we would be losing the technical support of our vendors. However, in some cases, the savings offered by open-source software in cost, customization, upgrade time, and convenience can offset the costs of losing vendor support for our proprietary software contracts. M-Global should adopt some open-source software, but it should do so cautiously, and with clear guidelines for installation, use, and support of this software.

Uses paragraph format.

Identifies key disadvantages.

Identifies key advantages, but makes clear that there are concerns to be addressed.

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INTRODUCTION

The purpose of this feasibility report is to determine whether open-source software is a viable, cost-effective alternative to the current proprietary software, for which M-Global pays licensing and maintenance fees. This report defines open-source software and explains the background of the open-source software movement. It then explains the advantages and disadvantages of using open-source software for a company like M-Global. Finally, it recommends a cautious approach that may make it possible for M-Global to save on software costs.

Lists sections of report.

Defines unfamiliar and easily confused terms.

There are two main types of software: propriety software and open-source software. Propriety software, which is currently used by M-Global, is software that is copyrighted and requires a license to use. Open-source software is “free” and uncopyrighted and does not require a license to operate. Open-source software should not be confused with software in the public domain. Software in the public domain is often software that was licensed at one time but is no longer supported, or it may be software that someone has simply made available to anyone who wants it. Many times, it is made available through file sharing or through a download from unreliable sources. As a result, public domain software may be unreliable and unsecured.

Proprietary Software

Proprietary software requires a license fee, has features available only through the vendors, does not let users modify the installed software, is typically controlled by a corporate vendor, does not have open code, and isn’t always user-friendly (Trappler, 2009). Proprietary software has been the main type of software that companies and corporations have depended on for years, but the development of open-source software and the opportunities it provides have led many institutions to transition from proprietary software to open-source software.

Open-source Software

Open-source software is often made available through a Creative Commons or similar license agreement. Providers of open-source software often ask users to comply with restrictions and stipulations so that the software remains free, safe, and up-to-date. As a result, open-source software is appealing to many companies; however, much debate remains about whether or not this software is actually “free” and advantageous to use (Fishman, 2008).

Provides background information to explain the interest in open-source software.

Emphasizes credentials of those who first developed the concept.

HISTORY

There is much disagreement about when open-source software first became available. Some sources date its origin back to the 1970s (Elmer-Dewitt, Mondi, & Prime, 1984), but most people agree that the true birth of the free/open-source software movement happened around 1985 (Lessig, 2005).

Richard Stallman is credited with creating the concept of open-source software. While he was a researcher on the MIT campus, he invented “a license that would ensure that the code he was building would forever remain free” (Lessig, 2005, p. 48). This license became known as the general public license; it has some limits regarding

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how a person can use a product, as well as the requirement that changes made to items such as program code have to be made available to others (Lessig, 2005). This innovative idea allows users to manipulate the code to improve the software and to share their improvements freely with other users through a “user innovation community.” User innovation communities start out as an idea, like Richard Stallman’s general public license (GPL; Lessig, 2005). The software is then improved with the help of many users, who are willing to spend their time and talent adding their contributions.

ADVANTAGES

M-Global has always considered three criteria when adopting new software: cost, customization, and the ability to upgrade. Open-source software offers advantages for all three of these criteria.

← Clearly identifies criteria.

Cost

Open-source software is theoretically “free.” Many companies offer free software because it is a simple way for them to advertise and spread their brand to many clients (D’Silva, 2010). However, if an organization chooses to use these “free” software products, it may be expected to comply with certain conditions, like downloading a toolbar (D’Silva, 2010, p. 2). If M-Global is willing to accept these conditions, this “free” product will allow us to save money on development and program costs.

Customized Software

In his article “The People Own Ideas,” Lawrence Lessig (2005) lists the promises of free software, including the freedom to “study how the program works and adapt it to your needs” (p. 48). However, as Stephen Fishman (2008) reminds us, open-source software technically doesn’t fall into the public domain in every case. Therefore, it cannot be used in every possible way that a user wants. Yet open-source software provides more flexibility in customization and adaptation than proprietary software because users get the benefit of receiving the source code—the core part of the software—for free (Nagy, Yassin, & Bhattacherjee, 2010). Accordingly, any updates that other users have made to the software are also free to all users.

Development Time

The amount of time spent developing open-source software is significantly reduced, compared to creating and customizing proprietary software. Whereas proprietary software takes a tremendous amount of time to develop and perfect, open-source software begins with a solid version of the product, which becomes perfected as each user adds contributions to the development. This process reduces the amount of time between upgrades.

Convenience

Since a license is not required to use open-source software, it can be downloaded to any location and to an unlimited number of machines. In contrast, proprietary software licenses usually limit the number of installations or restrict access to computers directly tied to a network. Unlimited access makes open-source software an ideal product for many companies.

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DISADVANTAGES

Although installation of open-source software can result in significant savings, it also has important disadvantages. Free software actually creates costs for both the creators and the users.

Defines what may be an unfamiliar term.

→ **Sunk Costs**

Sunk costs occur when a company invests a lot of money in proprietary software (Nagy et al., 2010). These sunk costs are one of the reasons many companies do not want to move to using open-source software. Companies may have invested considerable resources (either the time of their employees or fees paid to vendors) in customizing software so that it meets their specific needs. Companies may see changing their proprietary software for open-source software as a waste of these resources, even if open-source software provides more freedom than proprietary software.

However, Nagy et al. (2010) argue that “cost savings in licensing and using open source systems . . . may potentially be adequate to justify the sunk costs invested in prior proprietary systems” (p. 151). M-Global could continue using the proprietary software already in use but gradually migrate to open-source software as proprietary licenses come up for renewal. This approach would permit M-Global to recuperate the costs of the proprietary software and save money in the future.

Development and Support Costs

Support for open-source software can also be quite costly. External support for open-software products is often minimal, at best. This puts the burden for software maintenance and trouble shooting on in-house staff. Although it may be possible to use existing personnel, and thus to save on maintenance contracts, the current technology support staff must have the resources to manage open-source software (Trappler, 2009). It's also worth keeping in mind that the hiring of consultants falls into the “support cost” category (Nagy et al., 2010). One possibility for M-Global would be to train the current software developers to develop open-source software, thus decreasing or nearly eliminating developmental and support costs.

Another cost of open-source software is the use of company time and resources to provide support to other users of the programs. For example, developers may ask for donations to fund research and development of open-source software (Kelty, 2001). In addition, users of open-source software are expected to provide whatever expertise they have to improve the product for all users. They are expected to share new applications and improve documentation of existing products. As an organization with its own programmers and documentation specialists, M-Global would need to consider the ethical obligations of joining the open-software community.

CONCLUSIONS AND RECOMMENDATIONS

Should companies like M-Global make the change to open source? The main concern in adopting open-source software is the investment in current proprietary software and the time that has to be spent in maintaining and upgrading open-source software. However, M-Global could decrease or nearly eliminate all of the

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negative costs by continuing the use of the current proprietary software, while preparing its programmers to use open-sourcing for future software needs.

Therefore, we recommend that M-Global begin using open-source software in the future. M-Global should begin by exploring the options in productivity software, such as office suites that include word-processing and spreadsheet programs. This type of software can be installed easily on individual machines, and problems with it will not interfere with company systems. Once we have grown more comfortable with maintaining and customizing open-source software and have learned through experience which providers meet our needs most reliably, we can begin exploring other types of software, perhaps even for database servers.

Before M-Global begins widespread use of open-source software, the organization should address the following concerns:

1. We will need to establish clear guidelines for the installation and use of open-source software, including offering employees a way to recommend or request software downloads.
2. We should consider the ethical issues surrounding the use of open-source software. Because we can assume that our programmers and documentation specialists will be creating and improving the products that we use, we should establish guidelines for sharing our improvements with other users of the software.

We do not believe that open-source software will meet all of the needs that are currently met by proprietary software; however, by moving gradually and carefully to open-source software, M-Global should see savings in its software costs.

Outlines a possible course of action.

Urge caution, and suggests policies and procedures that should be in place before widespread adoption of the change.

Emphasizes advantages in final statement.

REFERENCES

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Uses APA style for reference list.

MEMORANDUM

DATE: July 22, 2005
TO: Girish Bansal
FROM: Milap Tanwar *MT*
SUBJECT: Replacement of In-House File Server

INTRODUCTORY SUMMARY

The purpose of this feasibility study is to determine if the NTR PC905 would make a practical replacement for our in-house file server. As we agreed in our weekly staff meeting, our current file-serving computer is damaged beyond repair and must be replaced by the end of the week. This study shows that the NTR PC905 is a suitable replacement that we can purchase within our budget and install by Friday afternoon.

FEASIBILITY CRITERIA

There are three major criteria that I addressed. First, the computer we buy must be able to perform the tasks of a file-serving computer on our in-house network. Second, it must be priced within our Rs. 25,000 budget for the project. Third, it must be delivered and installed by Friday afternoon.

Performance

As a file server, the computer we buy must be able to satisfy these criteria:

- Store all program used by network computers
- Store the source code and customer-specific files for Xtracheck
- Provide fast transfer of files between computers while serving as host to the network
- Serve as the printing station for the network laser printer

The NTR PC905 comes with a 120GB hard drive. This capacity will provide an adequate amount of storage for all programs that will reside on the file server. Our requirements are for 30GB of storage for programs used by network computers and 35GB of storage for source code and customer-specific programs. The 120GB drive will leave us with 55GB of storage for future growth and work space.

The PC905 can transfer files and execute programs across our network. It can perform these tasks at speeds up to five times faster than our current file server. Productivity should increase because the time spent waiting for transfer will decrease.

Gives context for feasibility study.

Summarizes conclusion of report.

Pinpoints three criteria to be discussed.

Shows how NTR PC905 will fulfill performance criteria.

Only covers advantages because there are no disadvantages to buying PC905

The computer we choose as the file server must also serve as the printing station for our network laser printer. The PC905 is compatible with our Hewy Packer laser printer. It also has 2.0GB more memory than our current server. As a result, it can store larger documents in memory and print them with greater speed.

Budget

The budget for the new file server is Rs. 25,000. The cost of the PC905 is as follows:

PC905 with 120GB Hard Drive	14,000
Keyboard	500
Monitor	5,500
Total	20,000

No new network boards need to be purchased because we can use those that are in the current server. We also have all additional hardware and cables that will be required for installation. Thus the PC905 can be purchased for Rs. 5,000 under budget.

Time Frame

Our sales representative at NTR guarantees that we can have delivery of the system by Friday morning. Given this assurance, we can have the system in operation by Friday afternoon.

Additional Benefits

We are currently using NTR PCs at our customer sites. I am very familiar with the setup and installation of these machines. By purchasing a brand of computer currently in use, we will not have to worry about additional time spent learning new installation and operation procedures. In addition, we know that all our software is fully compatible with NTR products.

The warranty on the PC905 is for one year. After the warranty period, the equipment is covered by the service plan that we have for all our other computers and printers.

CONCLUSION

I recommend that we purchase the NTR PC905 as the replacement computer for our file server. It meets or exceeds all criteria for performance, price, and installation.

Makes costs easy to find with simple table.

Highlights major goal—quick installation.

Ends with "extras"—that is, benefits not among major criteria but still useful.

Restates significant point already noted in introductory summary.