the
essential
guide

for selecting today's business software.

**The Essential Guide
for Selecting Today's
Business Software**

by SoftResources LLC

Introduction

Selecting business software can be a challenging task. Some of the issues that can make this a confusing project is that there are more and more options available for software every year, vendors make confusing claims about the products and services they offer, and there are an overwhelming number of alternatives for implementation vendors. This guide has been put together to take some of the mystery out of the process of selecting software. This is the third time we have updated the guide. Each time we write, we update the information with what we have learned over the years from completed software selection projects. Based on our experience, we incorporate new content and ideas that we believe will be useful to other organizations as they go through the process of evaluating and selecting software.

For as long as software vendors and resellers have existed, customers have wondered if the systems recommended to them will live up to the promises presented. Users are also curious if what the vendor recommend to them is truly the best fit for their organization. Therefore, it is important to take into consideration more information than what may be initially presented to you by vendors through product literature or sales demonstrations.

The primary objective of this guide is to address what you need to know to select the right business software for your organization. It will provide you with valuable, street-smart information about the factors to consider as you evaluate software and implementation vendors. After each topic presented, we have identified specific questions to address with vendors as you move through your selection project. The vendors you are evaluating should be able to provide complete answers to each of the questions. The answers to these questions will then help you formulate opinions about the vendors that are the best fit for your organization for software and implementation services.

When you invest in a business software solution, you are buying a relationship, not just a commodity. In our work as a software selection agent, it is imperative to us that our recommendations be supplied by a reputable vendor that offers robust software applications and can provide comprehensive services and support for many years. We search for vendors that can provide our clients the products and support they expect today as well as a vision for the research and development required to enhance the software to remain competitive into the future.

There are no "safe choices" anymore. Your best protection is a thorough due diligence review of all of the vendors and their applications prior to making your final selection. Once you decide on a software vendor, you will become a partner with that vendor, through thick and thin, for three to five years or more.

SoftResources does not expect you to find a software company that meets all of the ideal attributes presented in this guide. Use each topic as an evaluation criterion to help you distinguish one vendor from another. Use them to compare and contrast all of your options. From this information you will also be able to define the decision criteria that are important to your organization and your selection project. This in turn will empower your team to make a confident final decision about the optimal business software solution.

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evaluating the software vendor

The first step in the evaluation of software is a review of the vendor that provides the applications. This chapter will review some of the key areas to research about the vendor during your evaluation project.

Company Vision
Effective business software begins with vision. One factor to consider in the evaluation of a software vendor is company vision.

> *Vision: The intended future position, the end result of carrying out all activities. Having a vision provides a compelling guide, a "north star" that a company can follow so people can work together and be clear about what they are trying to accomplish.*

Have the vendors identified a vision for their company? Has that vision been communicated throughout their organization? Do they market their products and services in adherence with that vision? Look to create a partnership with vendors that have identified a vision that is consistent with your organization. Vendors will identify a viewpoint about where technology is going, how markets are evolving, how companies' needs and interests are changing, and they will then build their business strategy for software development and service delivery around those objectives.

Strategy for Unique Value
A software company can outperform competitors only if it can establish a market difference it can sustain. In marketing terms this can be defined as an organization's Unique Selling Proposition (USP). A USP is a distinct set of appealing concepts and ideas that sets an organization apart from others. In your review of the software vendors, identify what is unique, what is distinct, what they promise, and what value, benefit, or service they offer that provides you with justifiable and rational reasons to buy.

Ultimately, all differences between software vendors in function or price derive from the many activities required to design, develop, sell, train, implement, and maintain their software. Strategic positioning means performing activities that are different than the competitors or performing similar activities differently, to deliver a unique mix of values.

Top Management Team
A team is a group of people with complementary skills who are committed to a common purpose, set of goals, and a work ethic for which they hold themselves mutually accountable. This mutual accountability is important as it sets the tone for financial responsibility, which has been absent in some organizations in recent years. Great management magnifies the social core of human nature and brings individual talents to fruition. It creates value, and combines these activities with the passion to generate the greatest possible advantages for every player, not just the top executives.

The top management teams of software companies that we admire most are not involved in perpetual corporate reorganizations that harm the employees and disrupt the momentum of the activities of the company. Instead, they are involved in creating excitement about the possibilities their companies hold for their employees and customers alike. They empower their employees and create a passion for the vision of their organization.

What is the company vision of the software vendors?

Is that vision consistent with the business objectives for your software selection project?

What makes each of the software vendors being considered a unique value to your organization?

Which of the unique values is the most important or most consistent to the goals of your organization?

What is the organizational structure of the vendors you are evaluating?

How does top management of the prospective vendors create value and excitement for their customers?

Employee Hiring and Retention

There are times when there has been a massive shortage of technically skilled employees in the marketplace. This is often the case in a booming economy. At other times, there is an overabundance of technically skilled employees. This is often the case in a recessionary or wait and see economy. In either situation, finding, training, motivating, and retaining productive employees is a major challenge for any vendor.

Facing a change in sales representatives, customer service personnel, implementation consultants, or other key team members, part way through any project, can disrupt a successful selection and implementation project. The vendor's goal should be to attract and retain quality staffing at all levels or the organization. The employees should understand exactly what they need to do to help create value for the vendor, are highly motivated, can see the results of their actions, have a sense of ownership, enjoy what they are doing, and intend to stay committed to the software company for the foreseeable future.

Company History

Many software vendors have a rich history and a good story to tell. Find out how the company was started. Who were the founders, what were their backgrounds and why did they start the company? The genealogy of a company and its founders can provide fascinating clues as to the company's strengths and weaknesses. It is exciting to see new companies starting out in the software marketplace. However, most organizations prefer to stay with vendors that have established themselves as leaders in the industry.

Corporate Culture and Character

Sometimes too much emphasis is placed on the functionality and the technology of a software company and not enough on its culture or character. The best vendors have an abundance of character. Their corporate culture and values are an inspiration to their employees as well as their customers. The best vendors work for the benefit of the customer and follow ethically sound business practices. The following core values represent the foundation of corporate cultures we admire in any organization.

- *Trust* involves dependability. The vendor is working towards gaining the trust of their current and prospective customers.
- *Respect* sees the value in all people: employees, customers, suppliers, partners. Honor and consideration is granted to everyone.

- *Faith* means they believe each is interested in the other's welfare and neither would act without first considering the impact of their actions on the other.
- *Integrity* in business is accepting full responsibility, acting ethically, communicating clearly and openly, keeping promises, avoiding hidden agendas, and leading your organization with honor.

These characteristics create a reservoir of goodwill that can help preserve the partnership you will be creating wit the software vendor. Identify the core values of the software vendors to help determine if they are a good match for your organization.

Learning Environment

Learning is at the heart of a company's ability to adapt to today's rapidly changing environment. It is the key to being able to identify opportunities others might not see, and to exploit those opportunities rapidly and fully in a positive manner. The top vendors will have processes in place to foster learning within their company and to link people's jobs to creating value. And, since experiential knowledge is retained personally and cannot be captured in a database, the vendor needs to foster the personal interactions required to mine implicit experiential knowledge. This should be accomplished with teamwork and informal networks in which people eagerly share knowledge; and not be dictated by rules and procedures. The desired result of learning is that every time the software vendor does something again, it will be done better than the last time.

Financial Stability

Financial stability affects a company's ability to deliver new products in a timely fashion. There are several vendors stalled on their software development and have not yet released versions of the software with all the functionality required on the most recent technologies. Some vendors are developing their applications towards Microsoft® .NET, Object Oriented, and Business Integration. Vendors should be in a financial position to continue to develop their applications to support the future requirements for functionality and technologies from its customers.

Some specific items to review in your evaluation of the financial stability of the software vendors include the following:

- Consecutive years of profitable operating results.
- Positive cash flow.
- Increasing license sales.
- Debt/equity ratio of less than 35%.
- Gross margins at 30% plus.
- Stable credit history.
- Long-term value to shareholders.

Review the financial history of the vendor and research unusual fluctuations. Competitors in the software industry often take advantage of each other's ups and downs, but they are easily blown out of proportion in relation to the current issues. If you ask a reputable vendor about a negative financial event, they will typically disclose what caused it and summarize the plans for resolution of the issue. Often times the instability is caused by a one-time event which will probably not happen again in the near future.

Merger and Acquisition Strategy

A frequent news item in the technology marketplace recently is the announcement of software vendor mergers and acquisitions. Almost as frequent is the distressing news that the merger or acquisition did not live up to the promotion of its benefits to users and shareholders. There are no guarantees that a merger or acquisition will not impact the vendor you are considering at some time. You should research the merger and acquisition activity of the vendor. What has happened in the past and what is under consideration for the future? Based on this information you can incorporate into your vendor contracts safeguards and remedies to address the situation if it occurs.

External Environment
In today's economy, software companies need to be well positioned to support the pressures of their external environment. Besides the normal competitive issues there are new ones heating up all of the time. Some examples of current external issues include the following:

- *Global regulatory issues.* Privacy issues may impact sales and marketing practices.
- *Unstable technical economy.* Technical stocks can be vulnerable.
- *The Sarbanes-Oxley Act.* The Act defines accountability standards for auditors, company management, and board of

directors. It was triggered by the recent financial events in a few key organizations, which have led to company unstability.

Summary
Companies use their distinctive assets—their culture, management, and knowledge—to allow them to produce outstanding products and services. Your goal is to find an organization that has a reputation of maintaining these attributes. Use the following criteria to evaluate, compare, and contrast the software vendors under consideration:

- A compelling vision and direction.
- A strategy for uniqueness.
- A top management team that creates value and empowers the organization.
- A successful employee hiring and retention strategy.
- A rich company history and a story to tell.
- An honorable corporate culture and character; one that is morally sound.
- An environment where learning is encouraged.
- Financial stability.
- A sound strategy towards mergers and acquisitions.
- Awareness of how the external environment impacts the organization.

what to learn from
sales and marketing

Much of your initial interaction with a vendor comes from the sales and marketing divisions. Their objective is to provide you with information about their company and the products and services they offer. This chapter provides an overview of the information that should be gathered from the sales and marketing divisions of the software vendors and review how to utilize that information in your software evaluation.

Company Literature

The initial marketing materials you receive from your prospective vendors will be literature about the company and the products and services they offer. This company literature can play an important role in helping you decide which software products to investigate in more detail. However, keep in mind that the literature should only be the starting point for your evaluation of the vendor and the products offered. The following list reviews some of the types of literature you will receive in your initial interaction with the vendors:

- Pamphlets that (beyond the glossy overview) present a high level review of the features and functionality of the software.
- Pamphlets that provide an overview about the vendor as a company.
- White papers that review the technical merits and strategic direction of the software.
- Financial summaries that present the financial conditions and stability of the vendor.
- Press releases with relevant and valuable information regarding significant events.
- Case studies that demonstrate how other organizations utilize the applications.

- Demo CDs that allow you to explore the look and feel of the software.
- Independent studies and reviews that identify where technology analysts believe the vendor fits into the overall market.

Company and product literature can typically also be found on a software vendor's Web site. The Web sites generally contain the most current literature and information, as it is relatively easier to maintain and publish than printed materials.

Target Customer Size

Vendors typically define the size of their target customer in terms of annual revenue. The target will be identified as a range and can be quite broad (e.g. $5 million to $1 billion). The subset to the target range is a range that identifies the size of most of their users. The vendors can also identify their target sweet spot. This is a smaller revenue range that depicts the relative size of the majority of their users. The chart on the following page graphically displays the concept of target revenue ranges for software applications. Review with the vendor where your organization fits into their target size range.

Based on the information gathered from the vendor about their target market, you can determine how your organization compares to the vendor's current customer base. It is preferable that your organization should fit within the target range and preferably within the identified sweet spot. This comparison will help you determine if the software is too big, too small, or just the right size for your organization.

Does the sales literature clearly communicate the products and services offered by the vendors?

Do the vendors' Web sites provide additional details and more current information relevant to your evaluation?
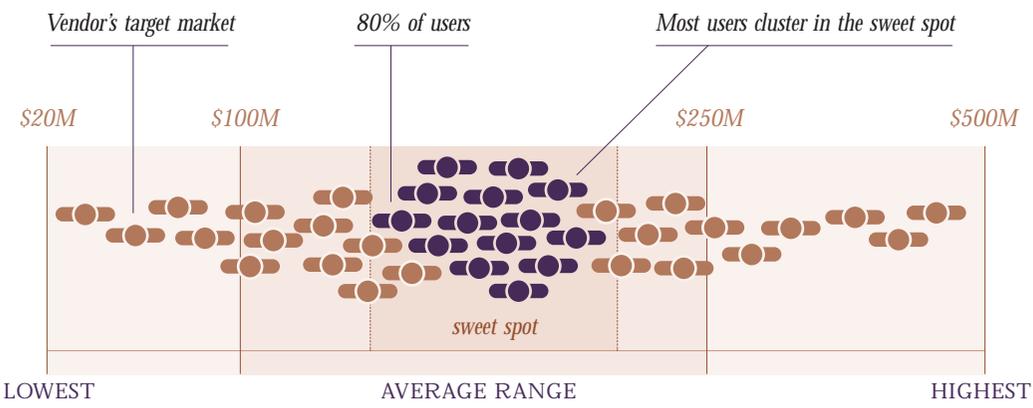
What is the vendor's target user range in terms of revenue?

What is the vendor's sweet spot?

How do the target ranges compare to the size of your organization?

Will you be a big fish in a small sea, or a small fish in a big sea?

Vendor's target market **80% of users** *Most users cluster in the sweet spot*

$20M $100M $250M $500M

sweet spot

LOWEST AVERAGE RANGE HIGHEST

Figure 1
*Software Vendor
Target Size*

*What are the target
vertical industries for the
software vendors you are
considering?*

Target Industry Focus

Since even the largest software vendors cannot adequately fund all market initiatives, software companies must limit their focus to a specific industry or group of specific industries. A single application cannot provide the functionality required by every organization. Trade-offs are essential to a good software vendor strategy. They create the need for choice and purposefully limit what a company offers. Most software vendors target their applications to three or four very specific vertical industries and can serve them all very well. The vendors may also expand their marketing efforts to a few additional industries when and where it makes the most sense based on the technology and functionality of the software.

If your industry is one of the targets for the vendor you are evaluating, you may have found the right software application. If your industry is not a target, you may find there are other compelling reasons (e.g. functionality, technology, cost) to continue your evaluation of that vendor's software. Industry target can be a useful differentiator in your software evaluation. It provides you the opportunity to compare and contrast vendors under evaluation and determine how effectively they

can support your industry. A software vendor may not need to be firmly established in your vertical industry, but they should have identified it as one of their primary targets or be able to provide referencable users in the industry that have successfully implemented the application.

Value Added Resellers

Some software vendors utilize the assistance of Value Added Resellers (VAR) to support their sales process. VARs typically resell software to companies with annual revenues of $20 million to $500 million. They sell the applications to the end users and add value by also supplying services for installation, integration, implementation, support and training. As part of your selection project, you need to determine if you will be required to work with a VAR and then review which VAR is the best fit for your organization. The software vendor can assist you with the VAR evaluation.

There are smaller VARs that have only one or two employees and there are others that are significantly larger. Larger VARs that have staff dedicated to sales, implementation, customization, training and support are necessary for installations with organizations that have more complex business and technology requirements. As you evaluate the VAR recommended to your organization consider the makeup of the staffing of the organization. The organizational structure of the VAR will vary based on size but will typically include the following departments:

- *Executive Officers* set the direction and focus for the company.
- *Sales and Marketing* supports the presales effort and makes the resources of the company available to you to answer and propose solutions to your questions.
- *Consulting Services* provide installation and implementation services. Some implementations may require a single individual while others require a team of individuals, depending on the complexity.
- *Programming Staff* to support the interface, integration, and data conversion requirements of your implementation. When a VAR has this expertise on staff it is a good indication that they are significantly invested in the software and may be a major distributor for the vendor.
- *Training and Support* offers the services required to train and provide support to your implementation as well as future utilization of the software.
- *Administration* supports the contracting, accounting, and other administrative functions necessary for efficient company operations.

*What percent of current
installs are within each
target industry?*

*Does the software provide
the industry-specific
functionality required by your
organization?*

The best software vendors set high standards for VARs, hold them accountable, and only refer those that are a fit for your organization. Typically the vendors offer a certification program to ensure the quality of their VARs. To achieve the certification, the VARs are required to participate in training on the applications and pay a fee. We find it extremely valuable when the software vendors offer a multi-level certification process and also limit the number of VARs in a geographic area, thus controlling to some degree the confusion that otherwise exists among VARs competing in a specific area.

Software vendors should be willing to provide detailed information about their VARs and work with your organization to determine the best match for your implementation and support requirements. The following list summarizes some additional information to gather from the vendor and use in your evaluation project.

- *Track record* with the software vendor. How may years, how many installs, number of current users supported, products supported, certifications and partnerships.
- *Individual's competencies*: the breadth of skills and experience they have.
- *Geographic area* supported and number of installs in that territory.
- *Target industries*. Number of industries supported; number of installs in each industry; strategy to keep current with industry requirements.

Conclusion
The sales and marketing departments can provide your organization with valuable information to assist you with your software selection project. From a sales and marketing perspective you want to be:

- Within the vendor's target market for company size.
- Within the vendor's target market for industries.
- Provided with appropriate literature and Web sites.
- Referred to the best business partner (vendor's sales staff or reputable VAR) that is a good match for your organization.

Investment in R&D is crucial to the long-term viability of any software application.

understanding the software development cycle

The purpose of this chapter is to help you understand the development life cycle of software. Most all software vendors follow a process to develop their applications and then maintain them over time. The following list identifies some of the steps vendors may follow as part of their software development process.

- *Concept Generation and Prioritization.* The process of identifying conceptually the enhancements that will be built into the software. Each concept is ranked to indicate the order in which they will be incorporated into the software and released to the end users.
- *Feature Planning.* The process of identifying the specific feature enhancements that will be made to the software, how the modification will be developed, and when the enhancement will be made available to users (e.g. in a major release or as a patch to the application).
- *Programming.* The generation of program code for the desired modifications and feature enhancements.
- *Internal Testing.* Sometimes referred to as Internal Alpha Test. The use and testing of the software that occurs at the test laboratories of the vendor. Where necessary the application is then modified to repair any identified problems.
- *Early Release and Beta Testing.* After the internal alpha test, a beta version is released to select users that are willing to receive, test, and install the software while still in a test mode. The vendor monitors the beta sites to determine if there are required modifications or additional enhancements required prior to the general release of the software.
- *General Release.* A new release or version of the software that is generally available to all users. These product versions contain significant feature enhancements and are available about once per year. The releases may come on a CD or be accessible through the vendor's Web site. Each general release will require installation and may require end user training or modifications to internal business processes.

- *Patches and Fixes.* An intermittent patch or fix to the software that generally corrects a single or small group of bugs. Patches can be released several times per year. Some patches may be critical to the operability of the software while others are minor and users can opt not to install them. Typically users can download patches from the vendor's Web site and cause minimal interruption to the daily use of the application.
- *Optimized for Multiple Platforms.* The applications are optimized to run on additional platforms depending on current market demand.
- *Product Enhancements or Updates.* A group of patches or fixes that do not usually require your data to be reloaded. They are typically numbered with a decimal. For example release 7, update .3 would be identified as version 7.3.

The remainder of this chapter will expand on topics that support each phase of the development cycle of software. Review each topic and use the questions presented after each topic to assist you with the evaluation of the vendors in your software selection project.

What are the vendor's internal methodology for product development?

Research and Development
Publicly audited companies are likely to follow Generally Accepted Accounting Principles, which require them to disclose and expense the cost for research and development (R&D) of their software before technological feasibility is determined. Due to this regulation, annual reports will provide you with data about how much a software company is spending on the development of their applications. Review the vendor's financial reports and determine if they are investing adequate resources on the R&D effort for software development. (Note: Privately held companies may have fewer guidelines and be less willing to disclose this information.) Investment in R&D is crucial to the

long-term viability of any software application. The average investment in R&D for software vendors can range from 10% to 30% of total revenues.

Look for a vendor that is actively investing in R&D to enhance their software. The software industry is extremely competitive and changes rapidly. Create a partnership with a vendor that understands the importance of maintaining their competitive edge by keeping the software current with functionality critical to the success of their users. Software can quickly become obsolete if not modified on a continuous basis. You want to be sure the investment you make in your software today will be well positioned to respond to the requirements of your organization in the future.

Customer Feedback

Customer feedback should be used to support the efforts of the R&D department of the software vendor. The vendors should define a methodology to solicit feedback from the users regarding enhancements to the features and functionality of the software. By listening to the users and translating their needs into product enhancements, vendors will be able to offer more complete solutions that allow them to retain current users and also increase their customer base.

Review with the vendor how they obtain feedback about the software as well as how customer issues are resolved. Some examples of the process of obtaining user feedback can come from annual user conferences or reseller conferences, help desk support staff, or lost sales opportunities.

Platforms

Software vendors develop their applications for specific platforms (operating systems and databases). Review with the vendors what platforms are currently supported and if they have a strategic plan to optimize the software for other platforms as well. The sales literature from the vendors will sometimes identify the platforms supported. The literature may present the information in a way that suggests that all platforms are supported equally. Review with the vendor what percent of users are on each platform identified. Most vendors have a platform of preference and you will generally find 50-80% or more of the users are on those platforms.

Hardware Infrastructure

Some software vendors establish and maintain relationships with leading hardware vendors to perform hardware sizing for their products. They go so far as to set up benchmarking to help users better scope and manage the infrastructure to run their products. Infrastructure involves: sizing, tuning, security, backup, storage, patches, upgrades to desktops, operating systems and databases and disaster recovery.

Product Line

Many of the software vendors have a unified product line that allows you to implement initially at a lower level and scale up to a higher level application in the future. In essence, you will have a migration path your company can follow as you grow and your requirements change. This migration may require moving to a different application. If product migration is an important evaluation criteria for your organization, review with the vendors the procedure to make the change. Look for a simple migration path that does not require a significant investment in time and dollars. When evaluating the family of software applications available from a software vendor consider the following characteristics:

- Clear vision about the product offerings and how they should be matched to end user organizations.
- The right amount of functionality to meet the requirements of your organization; not too simple but not too complex.
- Cross platform technology with appropriate database support.
- Automatic conversion routines to move data from one application to another.
- Components available for customization and integration.
- Breadth and depth of functionality for your industry.

Global Enterprise Focus

With eBusiness allowing even small companies to make global sales there should be a global enterprise focus by your software vendor. The primary software vendor should have a solution that will support all of your requirements, from global headquarters to national headquarters, divisions, departments and branches. This means the systems to choose from cannot be too complex for locations that cannot support a high-end application, nor can the application be too simple and not supply the detailed functionality required by more complex locations or the global headquarters offices.

The software should also be able to support divisions of your organization which may fall in a variety of industries and require very specific vertical solutions. The application should support operations at a departmental level, which may differ from the financial requirements of the corporate offices. Buying

software from one vendor can simplify communications and support, and can reduce the problems inherent with transferring data and integrating non-compatible products.

Functional Expansion
No single vendor is able to execute functional expansion in all of the markets it targets without some degree of compromise. Instead, they consolidate the number of markets served and turn to third-party software vendors to complete the functional footprints of their applications. Partnering with other software vendors, rather than developing the applications internally, is sometimes preferred because it allows the vendor to deliver a suite of products that have been developed by the industry experts. The software companies may partner with just one company in a niche area. Their objective may be to access the best technology wherever it resides, inside or outside the company, and apply it quickly, cutting costs and reducing time to market. Software vendors create relationships and partnerships with third party vendors so their customers can obtain most of their software needs from a single vendor.

A recent trend among software companies trying to expand the functionality and module offering of their product suite is moving into an acquisition mode. Vendors acquire the third party vendors, which allows them to offer a complete suite to the customers. Keep in mind that once the acquisition is complete there is a significant amount of integration work required to integrate the solutions. Review with the vendors the degree of integration that has been achieved between various pieces of software at the time of your contemplated purchase.

Version Releases
Progressive vendors do not rest on their laurels from the last version or release, but constantly improve. They realize that no advantage or success can be viewed as permanent. The winners are those who always keep moving, plan ahead, and continuously upgrade their software applications to the current demands of their users.

The preferred frequency for new releases seems to be about every 18 months. Vendors should take steps to regulate the pace of new releases to a manageable time frame. If there is an endless stream of patches, updates, or service packs, beta versions and full general versions, the sheer volume can be overwhelming to the IT department as well as the end users.

The most helpful upgrade policies would be to have vendors save changes for major product revisions, not release a constant stream of updates and let you skip certain releases rather than upgrade each time in a serial fashion. They should also enable you as the user to avoid releases which mandate increased machine size, database tuning, normalization or testing, with no increase in functionality or user count, unless there are significant benefits to your organization.

Upgrades can require a significant investment in time and dollars to install and configure. They can take months to complete and are sometimes considered mini-implementation projects and require consulting assistance to complete.

The three things vendors must manage as they consider new releases are Product Scope, Time to Market, and Code Quality. In a technical session or headquarters visit ask the vendors about product testing. Being a large vendor does not necessarily equate to following a sound testing methodology. This is a critical area and contributes to the overall quality control of the product. Advanced testing is required with today's complex products and requires a dedicated staff.

Some vendors utilize the assistance of a third-party software-testing lab. This can incorporate both testing and a bug tracking system using their own database or third party software. The responsible software vendors should have assignments and accountability for bug fixes, along with ongoing testing.

Version Maturity
As you evaluate software, be sure the product is mature enough to support your requirements with minimal problems. The product should ideally have been generally available for at least three months. This means VARs and consultants have experience with implementations of the version and other customers have used the software for a period of time to identify bugs or issues that may impact your organization. It allows time for the vendor to have rectified the bugs with patch updates. It is usually advantageous to let other companies test the software and get it ready for your organization to use relatively error free.

Summary
The first obligation a software vendor has to its customers is to produce a quality solution that is stable. Without stability, a customer cannot effectively utilize the software as a tool to accomplish their purposes. Choosing a product based solely on the presented bells and whistles, which has poor product quality,

should be avoided at all costs. The stability of a product can be evaluated through user reference checks. Talk to current users and review the stability of the current version of the software as well as their recent experiences with other product updates. You will be on the right track when your due diligence findings indicate you are planning to select and implement a stable product that meets the following characteristics:

- The vendor has completed a significant research and development effort.
- The product is on a product line, platform, hardware, and infrastructure that can scale with your needs.
- The software vendor and its partners can provide functionality that meets your requirements.
- Major releases and upgrades are released at a manageable pace and have been thoroughly tested.

Your primary software vendor should offer the correct footprint of functionality for your software selection project.

chapter four

defining the
general requirements

Introduction

The purpose of this is chapter is to assist you with determining what basic product modules or suites of software are required by your organization. This is called the functional footprint. In addition it will help identify the specific functionality required within each suite of modules. The layout of this chapter differs from the other chapters in that it contains an organizing chart, lists, and one central question (rather than several questions throughout). It is meant to be used as a circle-your-needs workbook as you review the functionality available from the different software applications under consideration.

Correct Footprint

Your primary software vendor should offer the correct footprint of functionality for your software selection project. The following chart (Exhibit A) identifies the 12 basic product groups available in the software industry. Use the chart to help identify what product suites and individual modules are required for your organization. The functional footprint chart shows modular groups but does not include the detailed functionality within each of the product groups. To truly understand which product groups you need you may need, to review the detailed functionality offered by each of the modules. Each of the twelve product groupings are reviewed in the remainder of this chapter.

The central question to ask about all 12 of these software suites is—what modules and major functions are required by your organization?

1 FINANCIAL ACCOUNTING.

There are typically six modules included in the financial accounting group or suite. Listed below are the six modules and some of the specific functionality available within each of them.

- *Accounts Payable*: Vendor Master Information, Electronic Invoicing and Payments, Manual Checks, 1099 Tracking and Reporting, Multi-Level Tax Options, Debit Memos, Vendor Statistics, One-Time Vendors, Automatic Distribution.

- *Accounts Receivable*: Customer Master Information, Invoicing, Accounts Receivable Aging, Cash Forecasting, Cash Receipts, Cash Applications, Customer Statements, Sales Commissions, Sales Tax Tracking and Reporting, Electronic Invoicing.
- *Budget*: Top-Down and Bottom-Up Budgeting, Budget vs. Actual Reporting, Collection and Preparation Tools, Capital Expense Budgets, Rolling Budgets, What-If Scenarios, Consolidations, Automatic Data Mapping.
- *Cash Management*: Monitor Cash Position, Cash Flow Projections, Bank Reconciliation, Multi-Bank Management, Multi-Currency.
- *General Ledger*: Chart of Accounts Structure, Accounting Periods, Allocations, Journal Entries, Consolidations, Non-Financial Items, Sub-Ledger Reconciliation, Automatic Inter-Company Balancing, Financial Statements.

The modules identified above represent the more common pure financial modules that are required by most any organization. Additional modules such as Purchase Order, Fixed Assets, Inventory and Order Entry can be added to the Financial Suite and are offered by a single vendor if they have not already been implemented or if they are not purchased as part of one of the other suites.

2 HUMAN RESOURCES AND PAYROLL

Listed below are the functional areas that currently make up the Human Resource and Payroll grouping of modules.

- *Benefits Administration*: Open Enrollment, Plan Details and Eligibility, Benefit Letters, Medical and Child Care, Union Contract Administration.

1. Financial Accounting
- Accounts Payable
- Accounts Receivable
- Budgeting
- Cash Management
- General Ledger

2. Human Resources and Payroll
- Human Resources
- Payroll
- Self-Service

3. Project Accounting
- Project Accounting
- Time & Expense Management
- Some Project Management

4. Manufacturing
- Advance Planning & Scheduling
- Bill of Materials
- Capacity Requirements
- Engineering Change Management
- Inventory Management
- Manufacturing Execution Systems
- Order Processing
- Production Scheduling
- Sales Configuration
- Sales Forecasting

5. Distribution
- Inventory Management
- Picking & Packing
- Purchase Order Management
- Sales Order Management
- Shipping & Logistics

6. Warehouse Management
- Auto Data Capture
- Bin Management
- Cycle Counting
- Inventory Classification
- Pick & Put Away
- RF Devices
- Replenishment
- Zone Ranking

7. Supply Chain Management
- Sourcing
- Manufacturing
- Distribution
- Collaboration

8. Customer Relationship Management
- Campaign Management
- Customer Optimization
- Customer Service Management
- Document Management
- Field Service Automation
- Marketing Automation
- Partner Relationships
- RMA Authorization
- Sales Force Management
- Special Events Management
- Support & Help Desk
- Telemarketing Management
- Warranty Administration

9. Financial Analysis and Reporting
- HTML
- ODBC
- Office XP
- PDF
- XBRL

10. Portals
- External Application Access
- Internal Application Access
- Report Publication
- Role-Based Rules
- Workflow Management

11. eBusiness
- Selling
- Purchasing
- Business

12. Miscellaneous Software
- CAD, CMMS
- DRM, EBPP
- EDI/XML
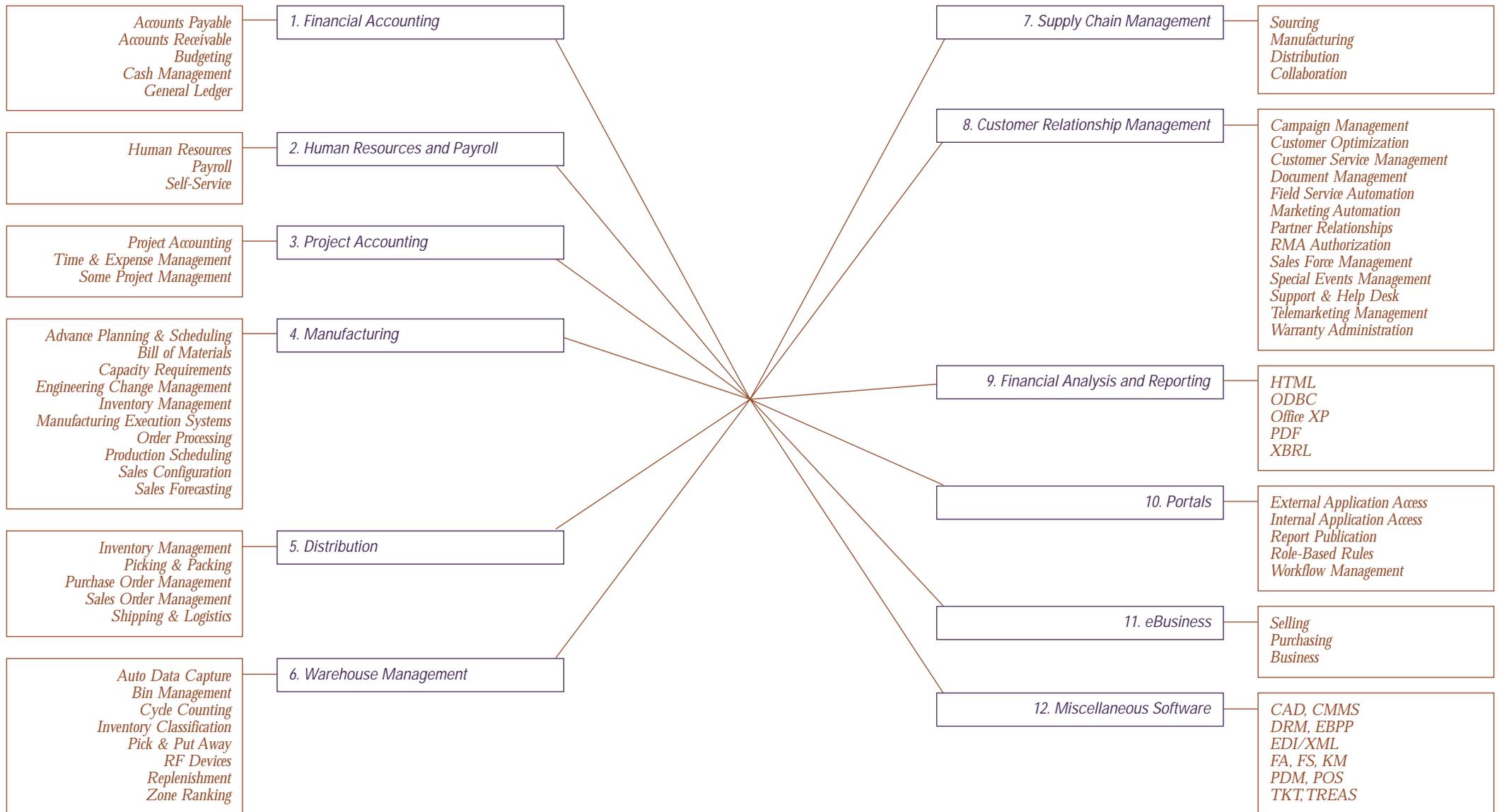- FA, FS, KM
- PDM, POS
- TKT, TREAS

Figure 2
Functional Footprint

- *Employee Tracking*: Hiring, Attendance, Training Administration, FMLA, Workers Comp Claims, Injuries, Vacations, Holidays, etc.
- *Hiring*: Interview Forms, Acknowledgement, Invitation to Interview, Offer Letters.
- *Organization*: Position Management, Departments, Succession, Companies.
- *Recruiting*: Scanned Resumes, Applicant Tracking, Job Matches.
- *Salary and Promotion*: Disciplinary Actions, Salary History, Personnel Reviews.
- *Talent Search*: Licenses, Skills, Tests, Prior Jobs, Awards, Education.
- *Training*: Classes, Requirements, Enrollment, History.
- *Payroll Processing*: Rates, Hours, Periods, Calculations, Earnings, Deductions, Taxes, Year-to-Date Summaries.
- *Payroll Taxes*: Federal, State, County, and City tax reporting related to payroll.
- *Self-Service—Employee*: Personal Data, Direct Deposits, Pay Data, Benefits, Claim Forms, Handbooks, Vacation and Leave Queries and Requests.
- *Self-Service—Manager*: Hiring, Salary Changes, Time and Hours, Terminations, Reports.

The component parts listed above are the primary subject areas within Human Resources and Payroll applications. However, keep in mind that each vendor may classify the functionality differently and group them into a sub-set of modules. Your objective is to identify the required functionality and then review with the vendors what modules from their product group will be required for your implementation.

The burden of employment regulations is constantly changing. Employers are faced with federal as well as local laws and regulations that dictate much of the functionality required in these areas. To recruit, hire, track, discipline, and terminate employees is a major function in any type of organization.

3 PROJECT ACCOUNTING
In some organizations the required functionality for Project Accounting can be supported by a Job Costing module that is integrated with many of the other financial and payroll modules. Lately, as we have moved towards a service based economy, there has been an increased demand for more complex project accounting functionality. This has forced job costing to evolve into a vertical niche suite of modules called Profession Service Automation (PSA). There are also more sophisticated module suites called Enterprise Project Management (EPM). Standard Project Accounting includes the following components and functionality:

- *Project Accounting*: Project Budgeting, Work Breakdown Structure (WBS), Phases, Activities, Tasks, Mark Ups, Multi-Tiered Rates, Multiple Allocations, Flexible Billings, Revenue Recognition, What-If Scenarios, Change Orders, Overhead, Sub-Contractor Management, Employee Utilization and Realization, Project Profit & Loss Reports, Drawings, and Reporting.
- *Time and Expense*: Time Cards, Travel and Expense, Workflow, Commitments, Labor Costing and Classifications, Certified Reports.

This area can become even more complex when Project Management is added into the solution. Project Management differs from Project Accounting or Project Costing and is geared to support the operational management of a project, not directly accounting for dollars. It involves the use of timelines, task lists, and Gantt charts.

4 MANUFACTURING
During the last 25 years the software applications to support the manufacturing industry has evolved from MRP I, to MRP II, to ERP, to ERM and beyond. (Note: The acronyms mentioned stand for: Materials Resource Planning, Enterprise Resource Planning, Enterprise Resource Management). The amount of manufacturing sophistication that has been developed in software to support this industry is astounding.

Manufacturing software can be categorized by the type of process and manufacturing strategies utilized by the organization. Review with the vendors how the applications support each of the processes and strategies employed by your organization. The following chart identifies the manufacturing processes as well as the manufacturing strategies:

Manufacturing Processes	Manufacturing Strategies
Batch	*Assemble-To-Order*
Process	*Make-To-Stock*
Discrete	*Make-To-Order*
Repetitive	*Build-To-Order*

The following list reviews the primary grouping of manufacturing modules with an explanation of some of the related functionality that is included in each of the modules:

- *Advanced Planning Scheduling*: Detailed Scheduling, Bottlenecks, Preliminary and Secondary Scheduling, What-If Scenarios, Back-to-Back, Best Fit, Next Best.
- *Bill of Materials*: Exploded Parts, Dependent Demand, Master Bill of Materials, Customized Products, Consumption Formulas, Waste, Co-Products, Serial Numbers, Bar Codes.
- *Capacity Requirements Planning*: Finite Capacity Planning, Infinite Capacity Planning, Rough Capacity Planning.
- *Engineering Change Management*: Pending Changes, Released Changes, Document Management.
- *Inventory*: Seasonal Stock, Automatic Safety Stock, Warehouse Transfer, Multiple Locations, Consignment, Outsourced Production.
- *Manufacturing Execution Systems (MES)* – Also called Shop Floor Control. Supports the registration of tasks, materials, and time used on the shop floor so you can see who is doing what, when, and how. Also includes routing management, piecework, bundled jobs, lots, teams, yields, and non-productive time.
- *Order Processing*: Vendor Calendars, Lowest Price, Shortest Lead Times, Group Orders, Planned Orders, Blanket Orders, Trade Agreements, Intercompany Orders.
- *Production Scheduling*: Available Capacity, Demand, Current Orders, Production Orders, Static/Dynamic Plans, Net Change, Work-In-Progress, Detail Production Scheduling, Back Flushing, Standard Costs, Historical Costs, Inventory Controller.
- *Sales Configuration*: Item Configuration, Make-to-Order, Pricing, Costing.
- *Sales Forecasting*: Quotes, Dates of Delivery, Production and Planned Orders, Sales Order Explosions.

Software vendors name their manufacturing modules differently. As you evaluate software look for the specific functionality offered within each of the modules and determine if the product includes the detailed requirements for your organization.

5 DISTRIBUTION

Distribution is one of the least understood areas of software functionality in the selection process. Companies tend to understand that manufacturing software differs according to process and strategy. Yet in distribution, people often do not

distinguish the various types of distribution activities or models. They lump distribution into one category. This can create oversights in the evaluation and selection of distribution software.

The following chart describes some of the unique characteristics of industries that may be evaluating distribution software:

Industry	Unique Characteristics
Agriculture	*Grower accounting, field rotation, harvest yields, production dates, and shipping logistics.*
Food Service	*Connected closely with multiple price brackets, such as percentage markup, dollar markup, fixed dollar pricing, ad pricing, negotiated prices, and marketing pricing.*
Apparel	*Product design, landed cost, related accessories, style, size, and color combinations, import and export regulations, consignment.*
Mail Order and Catalogs	*Efficient picking, shipping and delivery, primarily via small package carriers. Picking by order, tote, or wave picking, and pick interleaving.*
Pharmaceuticals	*Genealogy and part and product traceability, serial and lot tracking requirements.*

Most distribution systems assume you are a wholesale distributor of durable consumer packaged goods, and require functionality to support warehouse management, bin tracking, bar codes, kitting, etc. In some cases you may only marginally need these types of features, depending on your distribution model.

Blocks of Functionality
There are five primary blocks of distribution functionality. Each are listed below and include a description of some of the specific functionality included in each grouping:

- *Inventory Management*: Inventory Attributes, Commodity Codes, Forecasting, Deployment Planning, Replenishment Planning, Reservations, Lead Times, Time-Phased Demand, Real-Time Inventory, Minimum Order Quantities.
- *Picking and Packing*: Order Allocations, Pick Tickets, Pick-by-Order, Pick-by-Tote, Wave Picking, Pick

Interleaving, Picking Optimization, Bins Management, Location Tracking, Bar Codes.

- *Purchase Order Management*: Requisitions, Purchase Order Creation and Management, Bid and Quote Management, Sourcing, Vendor Analysis, Rebates, Contract Management, Vendor Returns, Freight Call Tags, Warranty Claims.
- *Sales Order Management*: Order Entry, Sales Analysis, Price Management, Available-to-Promise, Available-to-Deliver, Returns, Substitutions, Up Selling, Add-on Selling, Configuration, Contract Sales, Credit Management, Bid and Quote Management, Warranties, Service Management, Catalog Management, Parametric Search Engines.
- *Shipping and Logistics*: Shipment Management, Routing and Scheduling, Kitting, Service Work Order Management, In-Bound Shipment Visibility, Cross-Docking, Inventory in Transit, Value-Added Service Processing, Outbound Shipment Visibility, Partial Delivery, Freight Damage Recovery.

Another factor to consider is your distribution model. A traditional model would involve Buy-Hold-Sell, whereas an Internet model might require Sell-Source-Ship. Therefore, when you are selecting software, you need to focus on distribution software aimed at solving your particular type of distribution activities and model.

6 WAREHOUSE MANAGEMENT

Warehouse management will be reviewed briefly as its various components are often included as part of a manufacturing, distribution, or supply chain suite of modules. The following list defines the primary type of functionality to look for in this grouping:

- Automatic Data Capture
- Bin Management
- Cycle Counting
- Inventory Classification
- Pick and Put Away
- Radio Frequency (RF) Devices
- Replenishment Strategies
- Zone Ranking

Some Supply Chain Management suites add the following modules to the suite if they are not available to you in other product groups: Bill of Materials, Invoicing, and Landed Cost.

7 SUPPLY CHAIN MANAGEMENT

Supply Chain Management (SCM) is a hot topic in the software application market. This suite of applications brings your organization, your suppliers, and your customers together in a collaborative environment. It includes the management of all aspects of the supply chain process between the time you source a product to the time you deliver a product to your customers. Supply chain activities can be categorized into three major areas:

- *Sourcing* – The acquisition of materials and supplies.
- *Manufacturing* – The actual manufacturing or assembling of the product.
- *Distributing* – The efficient distribution of the products to the customer.

Bringing companies together to share information and to shorten the time it takes to move products through the entire process from recognizing demand to delivering to meet that demand, will enable organizations to have on hand the required merchandise and in turn be able to better serve their customers. The primary objectives behind the theory of SCM is to increase customer loyalty through better responsiveness, rapidly pursue new market opportunities and improve your profitability through efficient collaboration with your business partners.

In your evaluation of SCM functionality offered by the software vendors, determine if they are able to deliver a completely integrated solution to support the process if third party applications are required to augment their core suite of modules. Over the long run, the goal of this new technology will result in better collaboration of information between your organization, suppliers, and customers.

8 CUSTOMER RELATIONSHIP MANAGEMENT

There has been a tremendous amount of hype over the past few years regarding Customer Relationship Management (CRM). The CRM market grew very rapidly as vendors developed functionality to improve the efficiency and effectiveness of a company's sales, marketing and customer service departments. Technology analysts have been hailing CRM as the next big technological and functional leap for all organizations. Many of the larger companies that implemented CRM software in the past few years claimed to have gained competitive advantages through the use of this technology.

The need for CRM software applications has been driven by the economics of customer loyalty. Prospects and customers

expect a high degree of customer service and follow through. Organizations that are not able to react and respond to these higher expectations may lose prospects to competitors as well as lose the patronage and loyalty of their long-time customers. What had been perceived as exceptional customer service has become only a minimum level of acceptable service.

CRM encompasses a whole range of functionality that enables a company to manage the life cycle of a sale, including prospect, customer, support, supplier, and partner interactions with the company. The CRM vendors typically package their modules into groups or suites that support three primary areas: Sales Automation, Marketing Automation, and Service Management. Each of these groupings is identified below and includes a description of the key modules or functionality available in each group:

A) Sales Automation

- *Contact Management*: Tracks names, addresses, telephone numbers, e-mail, profile information, industry, customer history, notes, and other relevant contact information for a prospect or customer.
- *Lead and Opportunity Management*: Tracks a lead by a variety of criteria. Sales cycle is defined by the organization and includes the full process from initial contact through conversion to a customer. Suite includes workflow functionality to support the automatic notification, triggers, and routings required to complete the process.
- *Customer Account Management*: Starts at point lead and opportunity is converted to a customer. All account history is maintained: contact information, company information, order history, etc. Creates a complete view of all customer-related information.
- *Time Management*: Track hours worked by activity or account and related productivity analysis and reporting.
- *Territory Management*: Territory alignment, results tracking, territory profiles, assignments, scheduling, and results tracking and analysis.
- *Quote, Sales Proposal, and Order Processing*: Creation of a quote with ability to convert it to a sales proposal and/or an order.
- *Competitor Tracking*: Maintain variety of information regarding competitors for historical purposes as well as reporting and analysis.
- *Partner Relationship* Management: Manage channel relationships. Can include lead management, channel marketing support, funds management, pricing, co-marketing, and other collaborative activities.

B) Marketing Automation

- *Campaign Management*: Manage life of marketing campaign including development of campaign, tracking results, and the analysis to evaluate campaign effectiveness.
- *Target Marketing*: Marketing directed to targeted groups most likely to purchase an organization's products and services. Can include e-mail and direct mail campaigns.
- *Telemarketing Management*: Requires integrated hardware and software to support inbound and out-bound calls. Includes auto dialing, call routing and distribution, call list management, customer profile data, call tracking and management, scripting, and automatic voice response.
- *Special Events Management*: Track, analyze and mange special marketing events such as seminars, conferences, and Web events. Functionality to support planning, scheduling, lead generation, attendance monitoring, and results analysis.

C) Service Management

- *Case Management*: Set up a case and manage the issue through resolution.
- *Product Tracking*: Track product or group of products to end customer.
- *Warranty Administration*: Track specific warranties, document imaging, lot and serial number tracking, alerts and triggers when thresholds are researched, renewal, performance tracking, and product issue reporting and analysis.
- *Self-Service*: Web access for service requests that can be supported through a self-service process.
- *Call Center Management*: Support customer service call centers. May include Computer Telephony Integration (CTI) that integrates the CRM system to the telephone system.
- *Field Service*: Scheduled Maintenance Management, Field Service Administration, Field Service Dispatch and Scheduling, Inventory management, and Return Management.

No single vendor provides all of the CRM functionality listed above. The depth and breadth of functionality provided within a specific area will also vary from one vendor to another. The best approach is to identify the functionality required by your organization and then review with the vendors which component parts they offer directly as a suite and on which modules they partner with other vendors to provide a more complete solution. If third party vendors are recommended, determine the extent of the integration included for the entire module suite.

9 FINANCIAL ANALYSIS AND REPORTING

Over the last decade one of the primary reasons organizations have made a change to their business software is due to the inadequacy or lack of reporting and analysis available in their legacy systems. This issue is resonant in small as well as larger organizations.

Regardless of the reporting software available, one of the problems companies face is determining who the reporting software is suitable for. The following chart shows the suitability of reporting software by user type. It has been populated with some specific reporting software applications. Review with the vendors the reporting tools available with their product offerings and determine if they are a match for the users of your organization.

USER TYPE	Standard Query	Standard Reports	FRx	Crystal	BRL	SQL
Casual	●					
Intermediate		●				
Power User				●		
Analyst					●	
Accounting Manager			●			
IT						●

Some of the specific functionality to consider in the area of Reporting includes the following: Multiple Data Sources, User-Defined Function, Logos and Colors, Drill Down-Up-Around, Custom Queries, Reusable Objects, Office XP Smart Tags, Dynamic Web Reports, Multiple Export Formats, PivotTables®, Analytics, OLAP Cubes, Mass Electronic Distribution, and publish in a variety of formats (e.g. HTML, XML, PDF, ODBC, XBRL).

10 PORTALS

A portal integrates internal applications such as e-mail, database access, financial applications, and document management with external applications such as new services, search engines, and customer Web sites. It is a Web-based interface that provides user access to all applications through a single screen. A portal is not just a Web page with links to other sites. Instead, it is a page that presents users with data from structured sources, like an accounting system, and unstructured sources, such as Web pages. It usually includes a search engine and several intelligently categorized and classified listings of thousands of pages.

The reason a portal makes business sense is that it can provide a central access point to improve communication to the employees, suppliers, and customers of an organization. A portal can be a single, easy-to-use entry point for employees, customers, and business partners. They have been proven to be effective in the past few years, although somewhat limited in their capabilities. For a portal to be more valuable they have to do more: be more interactive, more adaptable, and more useful, providing the viewers with more and more tools and information required to do their work. Portals are currently in the third generation of development and some can now provide two-way publishing, collaboration, personalization, and single sign-on.

11 EBUSINESS

Over the years the word "eBusiness" has evolved into many definitions. The following two definitions offer some clarity to the term:

- *eBusiness* is any use of the Internet to exchange business information and conduct transactions in an electronic and paperless format. It can involve design, operations, or knowledge.
- *eCommerce* is a subset of eBusiness. It is the component part that focuses on the selling and purchasing of goods and services electronically.

There have been several waves and phases of eBusiness over the last few years. The phases can be generally defined as follows:

Phase 1: Web Presence. Product information online.
Phase 2: eCommerce. Mostly business-to-consumer buying and selling.
Phase 3: eBusiness. Business-to-business coupling of buyers and sellers.
Phase 4: Collaborative networks.

We are now in Phase 4. This phase involves integration with other enterprises so a customer can obtain what they need electronically through your organization, whether you provide it yourself or link them to a strategic partner who does. This can involve multiple marketplaces using intelligent agents to drive value chains. Some of the specific functionality offered within the eBusiness grouping are defined as follows:

- *Selling*: Online Storefront, Product Catalogs, Customer Order Status, Shipping/Billing Address Updates, Credit Card Authorization, General Pricing Information, Customer-Specific Information and Pricing, Inventory Integration, Sales Tax Collection, Automatic GL Updates, Sales Rep Order Entry Access.
- *Purchasing*: Centralized MRO (Materials, Repairs, & Operations) Spending, Preferred Suppliers, Negotiated Prices, Customized Electronic Catalogs, Inventory Availability, Standard Requisitions, Comparison Shopping, Exception Processing, Parametric Searches, Order Status, Workflow.
- *Business*: Campaigns, User Profiles, History, Product Catalog Data, Multiple Languages and Currencies.

As eBusiness becomes more mainstream than it currently is, you will find that the more specialized eBusiness functionality will become integrated more succinctly with all applications and not be a module or suite of modules by itself.

12 MISCELLANEOUS SOFTWARE
There are many other pieces of software that may be vital to your business, from an accounting or operational point of view. The following list identifies some of those applications in alphabetical order with the related abbreviation used on the module diagram in Exhibit A:

- *CAD*: Computer Aided Design
- *CMMS*: Computerized Maintenance Management Systems
- *DRM*: Digital Rights Management
- *EBPP*: Electronic Billing Presentations and Presentment
- *EDI/XML*: Electronic Document Interchange/eXtensible Markup Language
- *FA*: Fixed Assets
- *FS*: Field Service
- *KM*: Knowledge Management
- *PDM*: Product Data Management
- *POS*: Point-of-Sale
- *TKT*: Ticketing
- *TREAS*: Treasury Management

Vertical Industries
There are specific adaptations of the twelve basic product groups that fit certain vertical industries better than others. This occurs because of the specific and unique functionality required by some industries. The following chart provides examples of some vertical industries and the relative specialized functionality that they may require:

Vertical Industry	Specialized Functionality
Aircraft Maintenance	Genealogy and Traceability of Parts
Automobiles	Engineering Change Notifications
Construction	Job Costing, Project Management
Services and Consulting	Professional Services Automation
Education	Student Admissions and Tracking
Government and Non-Profit	Fund Accounting, Encumbrances, and Grant Management
Health	Patient Records and Insurance Administration
Utilities, Energy	Repetitive Billing and Collection

Conclusion
This chapter has reviewed most of the business software applications that you may require for your organization's selection project. Your goal is to determine which modules or suites are required so that you can review with the vendors what product offerings they have that will match your requirements. This is called the functional footprint. In addition it will help identify the specific functionality required within each suite of modules. It is critical that you identify your functionality footprint at the beginning of the software selection process so you can correctly target the software vendors to investigate.

Question Repeated from the Beginning of the Chapter: The central question to ask about all 12 of these software suites is – what modules and major functions are required by your organization?

the importance of integration

The contribution of integration has been, at times, underestimated, but is critical to the benefit derived from the assortment of software packages that may be required for your organization. Progressive vendors understand that users are looking for integrated applications. They need to do more than expose APIs (which are the internal "hooks" developers use to tie data fields together between different programs). This is too simple and does not consider the complicated "spaghetti" plumbing code that links programs and databases across applications and among enterprises. A strong partnership of vendors will get together to jointly own the integration and commit to standards, so if a problem arises, either vendor can be called and there is no finger pointing. Much time and money needs to be spent by vendors and implementers before integration works seamlessly for you.

Three Basic Approaches to Buying Integrated Software
In developing their software selection strategy, organizations generally choose one of three basic approaches to integrated software:

- *Integrated*: One vendor handles all functionality requirements.
- *Best-of-Breed*: The best software for each suite of modules is selected.
- *Hybrid*: A core backbone system is provided by one vendor. Third-party best-of-breed software is selected for other requirements.

One of the main reasons clients prefer a single vendor solution is the assumption that all of the modules will be completely integrated. Best-of-breed strategists know they will have to integrate, but expect the various software packages to be able to do so without many problems. It is our experience that most companies end up with some type of hybrid approach. Therefore, integration is an issue most organizations will need to consider in their selection and implementation of business software.

Interface vs. Integration
Frequently, what a vendor refers to as being integration is actually an interface. When applications are integrated, they are transacting data from the same logic, procedures and process foundation. With an interface, data is imported and exported, but there are no inter-system transactional capabilities because the systems or components do not operate with the same logic, procedures and processes. When a vendor acquires or licenses third-party functionality and adds it to the suite of components offered with their software, they have written an interface that simply imports or exports data. Programming true integration between applications typically requires a significant investment because it generally requires, to some extent, a re-write of the software to have them to work together.

Seven Levels of Integration
The following summarize the seven levels of integration. Vendors should have a clear integration strategy at each of the following seven levels:

1. Functions are integrated within each module. For example: In the General Ledger module journal entries and allocations are integrated to the chart of account structure.
2. Functions are integrated within each group of modules. For example: The General Ledger is integrated to the Accounts Payable and Accounts Receivable modules to form a united product group called a Financial Suite.
3. Integration is coordinated among module groups. For example: The accounting, manufacturing, customer

What is the strategy toward application integration for your organization?

How does this integration strategy match the vendor's product offerings?

relationship management and human resources product groups are all integrated.

4 Different entities are linked together within the same corporate group, supplier group or customer group. For example: Accounts Payable share common vendors among headquarters and branch or divisional offices.

5 International variances of fiscal, legal, and business practices are on a global basis, not a country-by-country basis. For example: The U.S. books can be consolidated with your subsidiary in Germany and Hong Kong in Deutsch Marks.

6 The software package is integrated with existing legacy systems and other third-party products. For example: The General Ledger ties into a third-party Fixed Asset module.

7 Enterprise-to-enterprise integration for eBusiness, collaboration and other applications. For example: The organization can work in partnership with other unrelated organizations to provide products and services to your customers, such as a car rental and hotel accommodation, to go along with an airline reservation.

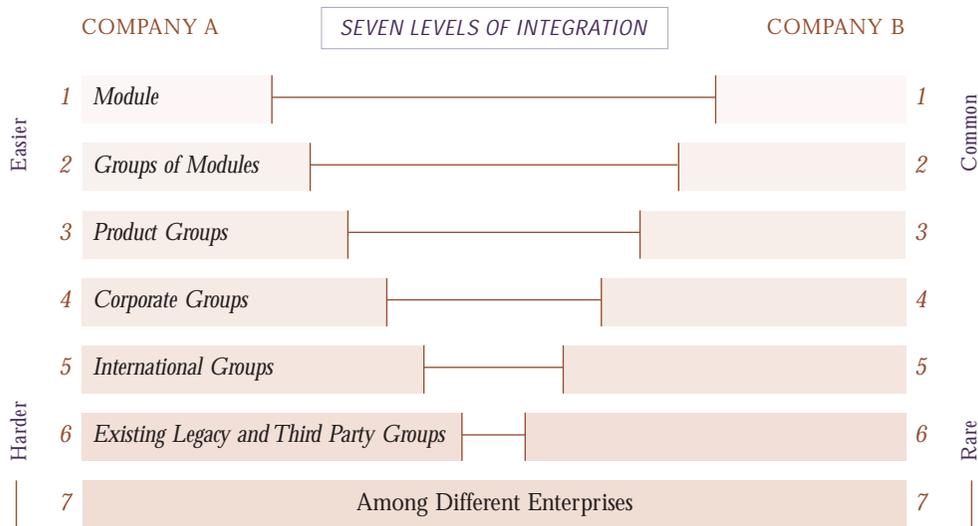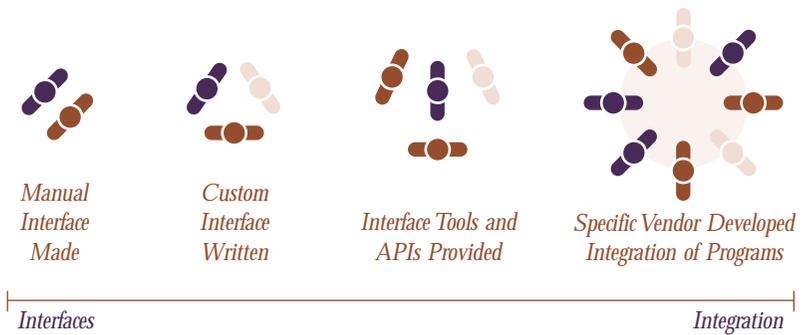## Interface Methods

Getting two software packages to work together can be accomplished four different ways. The following chart demonstrates how interfaces can be accomplished:

| *Manual Interface Made* | *Custom Interface Written* | *Interface Tools and APIs Provided* | *Specific Vendor Developed Integration of Programs* |

Interfaces   *Integration*

AS YOU MOVE UP THIS CONTINUUM YOU GO FROM AN INTERFACE BETWEEN TWO SOFTWARE PROGRAMS TOWARDS INTEGRATION OF THE TWO.

COMPANY A   SEVEN LEVELS OF INTEGRATION   COMPANY B

	Easier		Common	
1	*Module*		1	
2	*Groups of Modules*		2	
3	*Product Groups*		3	
4	*Corporate Groups*		4	
5	*International Groups*		5	
6	*Existing Legacy and Third Party Groups*		6	
7	Among Different Enterprises		7	

Harder   Rare

Figure 3
7 Levels Chart

Figure 4
Integration Continuum

1 *Manual Interface.* Data is gathered manually from one system and entered into another. The software may be a stand-alone solution, or shrink-wrapped package, or office type software (i.e., Microsoft Excel, Lotus Notes, etc.) This is a low-cost option in the short-term. In the long-term it may become more costly to maintain given the labor costs required to complete the transaction and perform reconciliation to ensure the transaction was recorded properly.

2 *Custom Interface Development.* Programmers write the software to connect disparate systems. This is common with organizations that have developed their own systems. It can be costly, as the interface links need to be maintained and updated with software upgrades. This environment is often lacking in good documentation and knowledge transfer.

3 *Interface Tools and APIs.* Development tools and published Application Programming Interfaces (APIs) make it easier for a company to write the integration links. This can still be costly because all of the links must be maintained and modified when new software versions are released or new software is added. In addition, it requires technical staff to develop the integration links.

4 *Vendor Development and Maintenance.* The vendor writes and maintains the integration for the disparate systems. This is often less costly because it is spread over the customer base. However, there are differences between vendors that should be evaluated. These involve how well the vendor develops its interface/integration in terms of the quality of the work, how many interface/integration points are developed for a software package and which specific software packages have interface/integration developed for them so they work together.

What Is XML?
XML stands for Extensible Markup Language. In brief, XML offers a widely adopted standard way of representing text and data in a format that can be processed between disparate applications without much human or machine intelligence. Information formatted in XML can be exchanged across platforms, languages, and applications, and can be used with a wide range of development tools and utilities. XML is as important to data integration as formal HTML (HyperText Markup Language) is to Web presentations on the Internet. XML basically puts tags on data so another system can understand what the data is and how to integrate it. XML does not solve a lot of other integration difficulties, but it does positively identify the data correctly, which is a significant step in the world of integration.

.NET and Integration
Microsoft .NET is a set of Microsoft software technologies for connecting information, people, systems, and devices. It enables a high level of software integration through the use of Web services—small, discrete, building-block applications that connect to each other as well as to other, larger applications over the Internet. Many software vendors are beginning to develop their applications with the .NET technologies. The following summarizes some of the benefits of .NET:

- Simplifies the programmer's job by making software easier and keeps them out of trouble by catching more errors in their programming (C, Visual Studio® .NET).
- Reduces the amount of plumbing necessary to make applications work together (.NET Class Libraries).
- Provides better ways to capture data that you submit with a Web browser (ASP.NET).
- Improves workload divisions and simultaneous tasks among programs and helps exception handling (Visual Basic® .NET).
- Supports multi-platform operating systems working together with meta data, and a common set of data types.

- Moves away from record sets to larger datasets that can be opened and closed automatically (ADO.NET).
- Raises the bar on how a program calls up a function running in an application on another machine anywhere on the Internet (Web services).

Once .NET technology becomes more commonly available, it promises to usher in a new level of application integration that we have not seen bundled together before.

What Can Go Wrong?
The contribution of integration is highly underestimated and sometimes overlooked. Actual integration performance can vary drastically from the expectations built up during software selection discussions and demonstrations. In one example of a troubled integration attempt we observed the following:

- Only two out of the seven levels of integration existed.
- One system tracked data weekly, another monthly.
- One system left out integration with one of the modules in the other suite.
- The combined systems required duplicate data entry; transactions created in one module were not updated in the other.
- No ability to validate data entered into the two systems.
- Invoices had no details attached to them.
- Version release issues: a new version of one vendor's software could not be used because the other vendor had not completed its part of the integration.

Summary
For any new functional modules to tie into your existing systems, there must be sufficient interfaces written and maintained and/or adequate integration points so the combined result operates as one system. Integrations for small, discrete applications can be quite simple, whereas the integration between two strategic applications such as financial management and customer relationship management systems is usually supported at the vendor level. High-stakes integrations such as these can create huge benefits for your organization, or huge headaches. Because of this, you are well advised to pay a great deal of attention to the integration issues when considering combining major application suites into a seamless system.

the contribution of the implementation vendor

For a software package to be useful, it has to be implemented correctly by the right implementation team. This chapter addresses the additional items to consider as part of the evaluation of your implementation vendor.

Installation Vendor
It is not uncommon for companies to confuse implementation with the installation of software. Installation is the relatively short task of physically loading the software, from CDs and/or the Internet onto the desktop or server that will run it. It takes anywhere from a few minutes to a few days in more complex environments, but not weeks, months, or years. It involves figuring out the program directory, company name, registration, passwords, and data storage location, among other tasks.

For the desktop client, mobile laptop, or remote user, installation can be a little more complicated, but again is a relatively short process. On the server side, things can and do go wrong during installation, but they can be fixed relatively easily unless you are experimenting with a database and operating system that is not well supported. For installation you need a technical person well versed in your current computer environment who can either perform the installation themselves or work closely with the vendor or other external consultants.

Do you have access to the right technical staff to support the installation of your new business software?

Implementation Vendor
A critical part of the software selection process is the selection of a vendor to assist your organization with implementation. The entire process begins with the installation of the software but moves you through and beyond the go live date. Organizations frequently overlook the importance of the implementation vendor or make erroneous assumptions about what it takes to complete a successful implementation. The

following lists some of the erroneous assumptions about implementation and why it is critical that you find a vendor to support you with this process:

- The software vendor has the best implementation staff for their software.
- The sales representative knows the best Value Added Reseller (VAR) for your organization.
- The software company always helps you find the best implementation vendor.
- The implementation vendor assigned to your geographic territory is the only choice.
- All vendors follow the same implementation methodology to install and configure the software, provide training and knowledge, and offer on-going support.

What process did you follow to select your implementation vendors?

The main reason the above assumptions are erroneous is they do not weigh the self-interest aspect of the recommendation versus the objective needs of your organization. The consulting service divisions of software companies are increasingly profitable and sometimes provide as much as 50% of a company's revenues. Although these software vendors, consulting divisions, and sales representatives may insist they are independent and objective, they inherently have their own agendas, their own financial objectives, and their own strengths and weaknesses.

Basic Implementation Vendor Criteria
If you were to look at your organization's requirements from an unbiased viewpoint, you would probably agree on a few basic criteria that ideal implementers, either from the software vendor or independent parties, should have. The top 10 criteria might include:

- Product expertise.
- Geographic proximity.
- Industry expertise.
- Responsive behaviors.
- Integration skills.
- Sufficient availability of personnel.
- Good "bedside" consulting manners.
- A training mentality.
- Reasonable hourly rates and expenses.

Other Implementation Vendor Criteria
Your best implementation vendor should also be competent in complementary areas. Since no one is ideal or has equal competency in all areas, focus on the areas of most importance to your organization that would aid your implementation project:

- IT strategy.
- Benchmarking best practices.
- IT architecture and migration planning.
- Business Process Reengineering (BPR).
- Activity based management.
- Custom software development.
- Change management consulting.
- WAN/LAN and other infrastructure issues.
- Internet and eBusiness growth.
- Experience with your legacy systems

Implementation Vendor Team
Your implementation vendor should be able to help you identify the requirements for a complete implementation team. Work with the vendor to determine the make-up of your internal team as well as the team the vendor will provide. A traditional implementation team for an organization usually consists of the following members:

Your Company	*Implementation Vendor*
Project Manager	*Project Manager*
Department Experts	*Functional Experts*
IT Staff	*Technical Staff*
Report Writers	*Report Writers*
Administrative	*Administrative*

Once you have identified the make-up of the project teams, identify the specific individuals to fill each role. You may determine your organization lacks the staffing to fulfill all roles of the project team and may need to backfill internal positions with temporary staff so regular staff can temporarily serve on the implementation team, or hire external consultants to support you with the implementation process.

Implementation Phases
The next step to consider in your evaluation of the implementation vendors is a review of their methodology for implementation. Ask the vendors to provide you with the general implementation methodology used by their company as well as a more specific draft of an implementation plan and timeline for your organization. There are three primary phases to any implementation with many steps for each phase. Use the following implementation plan layout to determine the completeness of the vendor's proposal:

Phase I – Implementation Planning
- Set project time frame.
- Establish vendor and client roles.
- Schedule initial resources.
- Perform gap analysis.
- Establish the accounting policy and philosophy decision making process.
- Identify requirements for process improvements.
- Identify integration requirements.
- Complete a detailed implementation plan.
- Review project management procedures.
- Hold project kickoff meeting.

Phase II – Installation and Implementation
- Document installation alternatives.
- Create installation plan.
- Install software.
- Gather accounting and operational policy materials.
- Train and educate core team.
- Configure tables and parameters.
- Develop system enhancements.
- Write interface and integration programs.
- Perform system testing.
- Develop forms and preprinted stationery.
- Create and assemble reference documentation.
- Train and educate end users.
- Convert existing data.
- Initiate new software operations.

Phase III – Post-Implementation Management
- Make job description changes.
- Create plan for installing patches, updates and upgrades.
- Review implementation for required enhancements or additional implementation phases.
- Make final business benefits assessment.

Accounting Policy and Philosophy
One of the more complex aspects of any software implementation are the number of accounting, operational, and general business process and policy decisions that need to be made, even with a simple entry level software package. This is why we emphasize the need for a step in the implementation-planning phase to review the policies, philosophies, and processes. And, in the actual implementation phase, we recommend that you gather any required documentation you will need to effectively make the changes to those processes or recommend policy changes.

Most companies are prepared for accounting policy decisions, such as which depreciation methods to use for book or tax purposes or the inventory costing methodology to employ. On the other hand, philosophy decisions often catch people off guard. They are not so much at the discretion of the accounting staff as they are a reflection of the organization's vision and priorities. A specific example is in the use of customer dunning letters. The type of questions that will need to be resolved include the following:

- Do you use dunning letters?
- If so, how frequently do you want to send them?
- Based on what amounts?
- What do you want them to increasingly say?
- Who do you automatically want to send them to?

As you can see the stage is being set for a disastrous approach to your most valuable customer with whom the company does a considerable volume of business; an unmerciful letter for a minor infraction that sets off a whole spate of loud menacing phone calls.

Implementation Pointers
A good implementation proposal should describe all deliverables in terms of time, money and quality. Otherwise you may receive the services at the price you wanted, but they may be incomplete or too late to avoid your busy season.

Implementation vendors should strive for effective functionality. This can be defined as the measure of how quickly and effectively an application's functionality can be deployed throughout the company. Numerous functional enhancements add breadth and depth but also create configuration complexity that drives up implementation costs and time frames. To make the functionality more effective, the software vendor may provide automated configuration tools.

You should strive for agile implementation options. This gives you the ability to change the application configuration with little, if any, business disruption. This is important if you are continually improving your processes and want to make changes to your system accordingly. However, you normally do not want to disrupt the business by bringing the system down to make the changes.

The Correct Approach to Rapid Implementation
We believe the correct approach for anyone seeking rapid implementation is to:

Seek to achieve business objectives in the minimum amount of time without incurring undue risk.

This is so important that it is worth breaking down into parts and asking some questions.

1 Seek to achieve business objectives.
- What are your business objectives for implementation?
- Can you identify early wins to secure future information technology initiatives?

2 Minimum amount of time.
- Are you introducing new processes or changes during implementation to the organization?
- Do you want to gain incremental implementation efficiencies at the expense of learning?

3 Without incurring undue risk.
- Will a vanilla implementation disagree with company practices or union contracts?
- Will the software be implemented so rigidly that you cannot grow because small changes have too big of an impact?

In a rapid implementation there are risks. You have to sacrifice something: usually high quality, low costs or user acceptance. SoftResources believes you should seek a balance.

Successful Implementation
An implementation project is not successful when the software is live, it is successful when planned business benefits are realized. An ideal implementation vendor will keep costs manageable while speedily implementing the solutions. The following list identifies metrics you can use to determine if your organization has completed a successful implementation:

- Hard benefits – Do you have lower costs per transaction processed?
- Soft benefits – Do you have better information?
- Cultural vision – How far along are you with your goals?
- Project costs – Are they on target?
- Project deliverables – Are they appropriate and timely?
- Buy in – Do end users use the software to enhance their jobs?

Summary
You should be using objective, unbiased information to select an implementation vendor who will have the attributes necessary to make the software package useful for your organization. The internal and external teams should be carefully chosen to complement each other. A comprehensive implementation plan and time frame should be drawn up that seeks a balance between rapid implementation and the business benefits you want to realize.

When it comes to learning new software, early training and education is vital to the success of the whole effort.

the right level of
training and support

The most important link between your business software and your users is the knowledge and experience they possess regarding how to use the software as a tool to enhance their job. Their level of knowledge and experience will be developed through training and support.

Training—Timing Is Everything
Employees who receive early training perform best. Their success is tied to their self-confidence relating to the new software. The sooner your users receive training and support, when learning the new software, the better. Because learning new software inevitably involves errors and false starts, early use of the software is critical.

For users who receive training too early or too late their ability to understand the implications of the implementation is reduced. The training provides them with the knowledge required to effectively identify the configuration required in implementation to ensure the software will support the entire organization. When it comes to learning new software, early training and education is vital to the success of the whole effort.

Most software companies do not carry training far enough nor adequately convince customers of its importance. Companies tend to budget only 5% of their software costs for training, but should be budgeting 10 - 15% or more. It will be your responsibility to ensure everyone in your organization is trained. You can use consultants to assist you with components of training, but it is most effective when you train your internal staff to retain as much knowledge as possible when the go live date arrives. You can utilize the services of the implementation vendor to conduct all training or follow the "train the trainer" approach where you utilize internal staff to be trained as trainers, and they then conduct the majority of the training to

the rest of the organization. A third alternative is to employ a mixture of both training methodologies. The following is a suggested model for the timing of when each group of employees should be trained:

- *Project Leaders* – before obtaining the new software, train your project leaders on project management and relationship skills. These skills are vital to ensure the project is completed on time and on budget.
- *Core Team* – at the beginning of implementation, train your internal core team on the software so they can make intelligent decisions during implementation.
- *IT Staff* – prior to, during, and after implementation. Expect to provide more training for your IT staff as they must understand the software, as well as how to offer technical support. Often times the IT Staff will participate in some of the training identified for the core team as well as the end users.
- *End-Users and Executives* – near the end of implementation, just before going live, train the end-users and executives. Do not do this too early. There should not be a gap in between training and actual use of the software. Aim for "just-in-time" training.
- *New Employees* – train them soon after the hire date so they can be productive early on with the proper use of the software.
- *All Employees* – remember to retrain on the new functionality that comes out as you put in software upgrades. Continual training is extremely important. Users should receive advanced level training as they become more familiar with the software and are ready to use the more complex features and functionality of the software.

What are the vendor's recommendation for a training plan for you organization?

Support System

One of the first tasks to do after selecting a software package is to get plugged into the support system. Here is a reference sheet to get you started. Create a document similar to this and provide it to your users as a quick reference sheet to determine how to obtain support. Some organizations appoint a single power user (and the software vendors may require this) for each functional area. This is to limit the number of individuals from your organization that have direct access to the support vendor. In many situations questions can be addressed with internal staff.
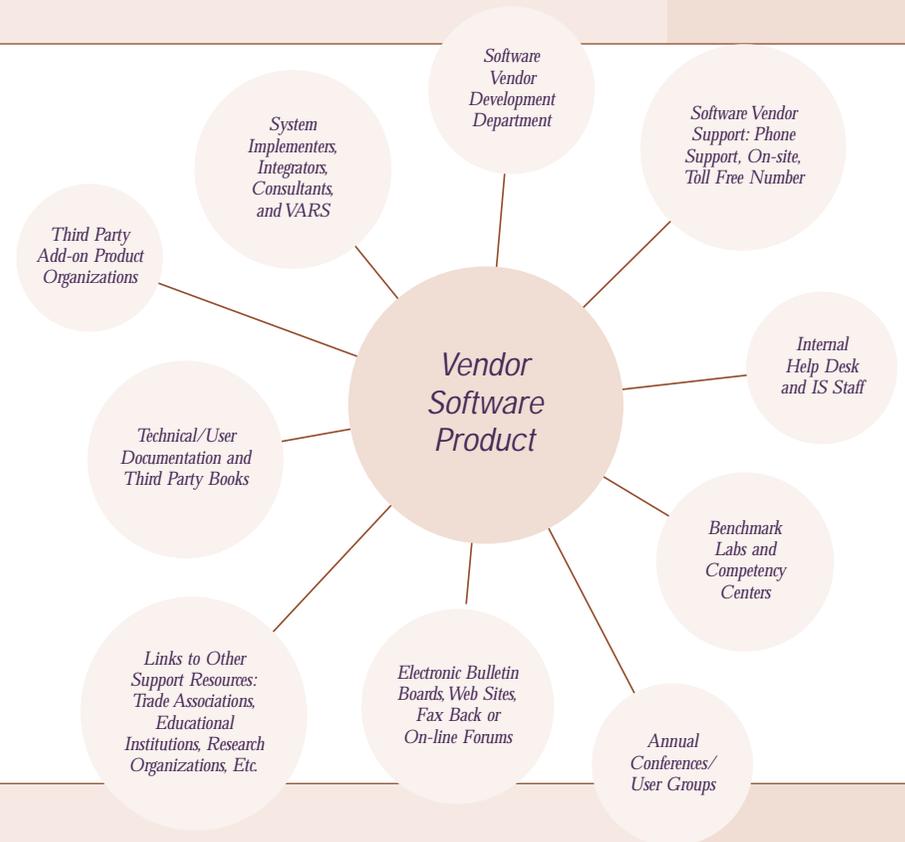
Support System Reference Sheet	
Software vendor name	
Contact and telephone numbers	
Company ID number	
Support plan description	
Authorized company individuals	
Support hours	
Support Web site	
Internal help desk hours and telephone number	
Power Users by functional area	
Software user group Web sites	

Software vendors should provide a training and support system that surrounds your organization. The elements of a support system are described and diagrammed on the next page.

Characteristics of Training and Support

As you review the training and support options offered by your vendors, look for the following types of characteristics to ensure the vendor can support the requirements for your organization.

- An emphasis on educational texts and learning materials to help you effectively use the software as a tool on the job.

Vendor Software Product

- Software Vendor Development Department
- System Implementers, Integrators, Consultants, and VARS
- Third Party Add-on Product Organizations
- Software Vendor Support: Phone Support, On-site, Toll Free Number
- Internal Help Desk and IS Staff
- Technical/User Documentation and Third Party Books
- Benchmark Labs and Competency Centers
- Links to Other Support Resources: Trade Associations, Educational Institutions, Research Organizations, Etc.
- Electronic Bulletin Boards, Web Sites, Fax Back or On-line Forums
- Annual Conferences/ User Groups

Figure 5
Support System Chart

- Hard copy documentation and manuals that are optionally available. Many users still prefer hard copy manuals but may also use on-line tools provided by most all of the vendors.
- Training videos in the proper format (e.g. USA vs. other countries).
- Multiple training options: on-site, train the trainer, at a learning center, with interactive CDs, via a Web site, etc.
- A link to higher educational institutions which enables students (your future job applicants) to gain experience using the software.
- An interest in issuing white papers that educate and help the customer community.
- Intelligent agents built into the software to guide the users and point them in the right direction.
- Flexibility to adapt to specific customer support requirements. (For example, provide remote database administration.)

What type of support system do the vendors offer?

An Attitude of Service

A software vendor might answer all the above questions in an affirmative manner, but not have the right attitude. The following items contribute towards an attitude of service, but do not fully define it. This will be another evaluation criteria for your selection of a vendor:

- Hours and days of phone support that match your business hours.
- Web and e-mail support that is available 24x7 (24 hours each day, 7 days per week).
- Support for the languages required by your organization.
- Technically capable, motivated support representatives.
- Escalation procedures for critical and urgent problems.
- Problem ownership, enabling you to call anyone and get a response.
- Single point of contact. Helpful vendors that do not make you navigate through their company to receive assistance.
- Responsive to your requests for help.

Educational Knowledge Transfer

Education is closely related to training, but is not the same. Training is knowledge about the software. Education is knowledge about how and why to use the software as a tool to get your job done. It involves your company's perspective on the

What is the corporate philosophy of the vendors towards service and support of its existing users?

Have you experienced this philosophy in the attitude of the contacts from the vendors to date?

software and its relationship to your job. When top-notch software and implementation vendors pull out, they should leave your staff with a fair amount of skill from both training and educational knowledge transfer.

Even when working with an ideal vendor, most of these educational items will still be up to you:

- Develop a library of training worksheets and instructions for your end users.
- Teach the business concepts behind the software and how they align with your company's objectives.
- Provide an understanding of how your company processes align with the software's capabilities.
- Provide month-end, quarter-end and year-end task checklists.
- Provide a vision of future additions to your implementation so users can understand where they may need to grow to fill future responsibilities.

Customer Service Software

Many software vendors utilize customer service software to help them deliver support to their users. The following types of functionality are available in customer service support software and can empower the vendors to provide your organization with exceptional customer service and support:

- Record information about an incident.
- Assign the incident to the appropriate person or department for resolution.
- View customer service history and track the status of a problem.
- Access information about problem resolution.
- Automatic incident escalation based on user-defined criteria.
- Monitor service effectiveness through statistics or reports.

What do the vendors do to ensure that knowledge transfer occurred during your implementation?

What system do the vendors have in place to support the customer relationship management of their organization?

Is the level of support offered sufficient for your organization?

Summary

You should fill in the support system reference sheet and educate your staff on how to obtain the support they need to successfully use the system. Your software vendor should have an environment of support that is backed by an attitude of service. You need to make up a training plan as part of implementation and work with your software and/or implementation vendor to help train your users so they get satisfaction and maximum value from the new system.

the value of contract review

You may end up with several contracts as part of your software selection and implementation project. The following list identifies the types of contracts you may receive from vendors:

- *Primary Software Vendor* - Software License and Software Maintenance Agreement (or combined as one document). These contracts may include the cost of software, database, and operating systems required for your implementation.
- *Implementation Vendor* - Services agreement for implementation, training, and data conversion.
- *Application Service Provider (ASP)* – Hosting Services Agreement if you select a third-party vendor to act as a hosting site for your implementation.
- *Third Party Software Vendor* – Software License and Software Maintenance Agreement for ancillary applications purchased to augment the core suite of modules purchased from the primary software vendor.

Your challenge will be to thoroughly review all of the contracts involved. This chapter will provide an overview of the principles behind a successful contract review from a content viewpoint. You should also consider a legal review of the contract utilizing the assistance of an attorney experienced in the review of technology contracts.

What contracts are required for your software purchase and implementation project?

Guiding Principles
There are three specific guiding principles that work best for the contract review and negotiation process. The three major principles to use to guide you through this process are as follows:

- The purchase price should not be the only focus of your review and negotiation process; other factors should be considered.

- The process used for negotiations is critical to the relationships with the vendors. The process defines the tone of the business relationship created as a result of the negotiations.
- The measures of success to contract review and negotiations include Efficiency, Relationship, Interests, and Commitment.

What will be your guiding principles for contract review?

Initial Purchase Price
Price is an elusive thing. There are many areas that can cause total cost to exceed original expectations or budgets. If the vendors feel taken at the beginning of the partnership, they will take advantage over time of any opportunity to rectify the situation. In other words, they will look for areas where they may earn additional revenues for products or services not specifically included in the initial contracts. The following statements define the framework for your negotiation process in relation to price:

- There is more to contract review than negotiating the initial purchase price.
- You should always seek the best price in negotiations; this may not be the lowest price.
- Your measure of success for contract negotiations should be more than total cost.

There is an available sum of money that is allocated to the sales reps or a Value Added Reseller (VAR) by the vendors that can be used to close a contract. This sum of money can be distributed as software discounts, maintenance discounts, payment terms, or in many other ways. If you seek the lowest price in every area, you will exceed the funds available. Although the vendor may agree to it under the pressure of making a sale, they may have second thoughts about the concessions once the ink is dry. You do not want the vendors to feel taken, nor do you want to feel taken. Your goal should be to

buy into or create a long-term relationship with the vendors; not just purchase a commodity where the business relationship ends after that purchase.

Typically the software vendor has a pre-defined pricing structure. This pricing structure defines the list cost of the software and may also dictate how much leeway the vendor has for negotiating your contract. The pricing structure may be further impacted if VAR is involved in the final agreement. The VAR may be bound to a fixed price or they may have the option of negotiating a reduced price or a special deal for a specific customer.

Software pricing is typically very subjective. You will generally have the ability to negotiate something better than list price in your final contracts. This is a good example of why you should consider using an external consultant with the review and negotiation of your contracts. Experienced consultants are typically keenly aware of the current marketplace and understand the type of negotiations that are possible with many of the software vendors or VARs at the present time.

The Contract Review Process
The contract review and negotiation process is a complex yet important part of your selection project because it can add to or detract from the long-term relationship developed with the vendors. The objective here is to negotiate the contracts in such a way as to protect your interests while preserving the relationship with the vendors. Neither side should feel like they have been taken or had to give in to the other side's demands. This can be accomplished using the following steps:

- *Step 1:* Review Initial Proposals. Review the contracts for completeness. Look for modifications, additions, and deletions to contract language. You should be able to find 25-60 items that require modification or clarification. Keep in mind that the contract is probably written to support the seller therefore the terms and conditions are probably not written in your favor.
- *Step 2:* Identify Your Interests. Identify your interests and what you believe are the interests of the vendor. Are they compatible?
- *Step 3:* Options. What are the different options you can create to satisfy both parties' interests? You will be pleased at how much value can be created for both parties with this underlying philosophy.

- *Step 4:* Standards. Find out about the terms and conditions of other technology contracts. What criteria will you use to determine if you received a fair deal?
- *Step 5:* Alternatives. What is the next best alternative for your organization if you cannot reach an agreement with the vendor? What is their best alternative? Identifying the alternatives up front will provide you with more power in your negotiations.
- *Step 6:* Offers. What is the best price and terms you could hope for in an optimal contract? What is the price and terms you would be content to settle with in the contracts? What is the worst price and terms that you would accept from the vendors?
- *Step 7:* Hold Negotiation Meetings. Determine the logistics of the meeting: who will be involved as well as where and when they will be held. Balance assertions for what you want with empathy for what the vendor needs. The negotiation process can add to or detract from the long-term business relationship you are trying to establish.
- *Step 8:* Obtain Approval and Sign Contracts. Obtaining approval may be as simple as a signature from the CEO or as extensive as presenting a complex Return on Investment (ROI) analysis to an Executive Steering Committee or Board of Directors. Consultants can support you with the preparation, attendance, and presentation at any of the meetings required for this process.

Contract Review Pointers – Software License
The primary contract covers the licensing of the software. Keep the following in mind while reviewing and negotiating this contract:

- Licensed Organization. Who is the licensee? The division, the operating entity, related entities, or the holding organization? Typically the software is licensed to the highest organizational unit.
- Modules. Which modules are you purchasing? Are you purchasing all of them now or can some be delayed? Are discounts available if you purchase or commit to purchase now?
- Software Pricing. How is the software priced? Most common pricing schematics are by modules, users, revenues, or some combination of all criteria. Review your pricing options with the vendor.
- Terms of Payment. There are variances in the terms offered by vendors. Most license agreements start with 50% due upon signature of the contract with the balance due upon installation, acceptance or some other identifiable event.

Rarely do you see terms defined as due upon "successful implementation." The following chart presents term options as well as the related probability of what may be available:

Event	Less Favorable	Most Likely	OK	Better	Best
Contract Signing	100%	60%	50%	33%	25%
Shipment or Delivery	–	40%	–	33%	–
Installation	–	–	50%	–	25%
X Days After Shipment	–	–	–	33%	35%
Go Live	–	–	–	–	15%

- Warranties. Most contracts have limited warranties and state the software will perform substantially in accordance with documentation for a period of time. They may also include a statement that there is no "fitness of purpose" guarantee.
- Refunds and Remedies. How will the implementation of the software be documented and monitored? How will issues be resolved? In practicality, few refunds are granted to a user once the software vendor has your money unless an arbitrator or judge rules in your favor.

Contract Review Pointers – Maintenance
This document will identify the maintenance and support coverage and terms. The primary items that should be reviewed in your maintenance agreement include the following:

- *Start Date.* When does maintenance begin and when do you start paying for it? Immediate coverage is important but delaying the cost to the latest possible date will save you money.
- *Payment Terms.* What are the payment terms? Is payment expected at the beginning or end of the defined period?
- *Rate.* The rates vary between 15-30% of the cost of software and are not usually negotiable. You may be able to negotiate the rate at which the costs increase over time.

- *Multiplication Price Used.* What software price is the maintenance rate applied to? The full list price or discounted price?
- *Uninstalled Modules.* Are you required to pay for the maintenance on uninstalled modules? Can you delay the maintenance coverage and payment until the modules are installed?
- *Hours of Support.* What are the hours of support and do they support the operations of your organization? Is beeper service available for coverage outside of normal service hours?
- *Coverage.* What is provided as part of the maintenance plan: product upgrades, version releases, patches, and telephone or on-line support?
- *Escalation.* Are the response times based on the severity of the problem? The following chart provides an example of what can be offered.

Call Rating	Level Definition	Response Time
1	System is completely down.	*Within 2 hours*
2	A business-critical function is down that is necessary to meet a deadline.	*2-4 hours*
3	A business-critical function is down for which a workaround exists.	*24 hours – 2 days*
4	An issue or question that is not scheduled for an immediate fix.	*3 days – 1 week*
5	A known problem or question that is being resolved with a future release.	*Future defined date*

Contract Review Pointers – Implementation and Training
Many implementation service agreements are poorly written and take the approach "you need us, give us a series of blank checks, and sign here." This is not the best type of arrangement given the amount of resources (time and money) your organization will be investing in this project. Consider the following key elements or component parts of a sound implementation agreement:

- *Clear Statement.* One that defines a clear statement of the services to be provided as well as identification of what is not included.

- *Deliverables.* Define the deliverables of the project including the format (written, oral, etc.) and the amount of details to be included.
- *Hours Estimate by Phase.* An estimate of the time required to complete each phase of implementation.
- *Integration, Data Conversion, Testing.* Provision for services to support integration to other applications, the conversion of data from legacy systems, and testing to ensure the implementation has been configured to support the organization.
- *Administration of Open Issues.* A defined process to identify, document and monitor the progress of issues that arise during implementation.
- *Project Control.* How will the project be managed? Include a reporting mechanism to provide updates regarding project status, accomplishments, work planned for future periods, and issues requiring management attention.
- *Professional Standards.* A warranty that ensures services will be performed by competent personnel, suitable for the tasks, in accordance with applicable professional standards.
- *Review of Personnel.* A statement retaining your right to review and approve all personnel assigned to the project.
- *Quality Assurance Process.* A quality review plan. Include who will perform the reviews, at what specific milestones and what will be reviewed.
- *Training and Documentation.* A definition of the training and documentation that will be provided to ensure users are thoroughly trained and prepared to use the system.
- *Travel Time and Costs.* Define the specifics of what is allowed for travel time and trip expenses.
- *Roles and Responsibilities.* Identification of the implementation team provided by the vendor as well as a summary of their roles and responsibilities described in a chart format.
- *Change Control.* A defined process for all requested changes to the scope of the project to ensure the project focus remains as originally identified.
- *Issue Resolution and Escalation.* An issue resolution and escalation process throughout various levels of management that explains what to do when issues arise.
- *Consulting Rates.* A rate chart defining consultant fees by level or role in the project.
- *Payment Terms.* Expected payment terms and available discounts.

Measurement of Success

The following factors provide criteria you can use to measure the success of your contract review and negotiation process:

- *Efficiency.* Did you reach an agreement in a reasonable amount of time or did it drag on forever?
- *Relationship.* Did you deal with people in an open, amicable manner where you balanced assertion between what you wanted with having empathy for their side?
- *Interests.* Are all parties' interests satisfied in a creative manner that allowed an outcome better than a compromise and where no one feels taken?
- *Commitment.* Did you reach an agreement where all parties have received consideration and expect to be able to fulfill the contracts as written?

Summary

We have reviewed a number of the more common business issues that require discussion and resolution during contract review and negotiation. We have not covered the legal issues that may arise. Use the review services of an attorney to ensure the legal side of the document is covered. We usually suggest using a competent software license review firm first, then have your attorney make the final review. Your goal should be to create options and reach agreement where both parties feel understood and neither party feels taken.

These are some of the most important thoughts about how to review your contract and price proposals. The main thing to remember is that a contract is the start of your software implementation project and if any party is dissatisfied with their contract, it will come out during the course of relationship and impair your probability of success.

Conclusion

By reading this guide, you have completed the first step towards selecting software that is right for your organization. Now, armed with the essential fundamentals, take the top three options you are considering for your business software and list them on top of the decision matrix form provided below. Then fill in the table with information about each area until you have enough documented data to provide clarity and to see which application best meets your requirements and expectations. We have provided space for three additional evaluation criteria that may be relevant to your selection project. Once the form is complete you can use it as a discussion document to assist with your final decision making process regarding your business software decision. Best wishes in your software selection project.

		Product A	Product B	Product C
1	Software Vendor			
2	Sales and Marketing			
3	Software Development			
4	Requirements			
5	Integration			
6	Implementation Vendor			
7	Training and Support			
8	Other			
9	Other			
10	Other			

About SoftResources LLC

SoftResources LLC is a consulting firm dedicated to providing unbiased and innovative software selection services to public, private and non-profit organizations throughout the world. Our clients range from small organizations to multinational Fortune 500 companies. What differentiates SoftResources from other consulting firms is that we purposely do not develop, write, sell, or implement software in order to maintain our objectivity and unbiased methodology. This allows us to objectively evaluate software for our clients because we have no vested interest in the final outcome other than to provide a value-added service for our clients.