Spend Management Visibility 101

A Step by Step Guide to Planning your Visibility Program

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Preface

A Note on Terminology

Before you begin reading this guide, note that we use the term "Visibility" instead of the more specific "Spend Visibility" in many instances. We consider "Visibility" as the umbrella term for the following, more specific solutions:

+ Spend Visibility deals with analyzing purchases for the purpose of knowing what is being procured by the enterprise.

+ Process Visibility describes a view into how sourcing and procurement processes are working.

+ Performance Visibility provides a view into the performance of suppliers and buyers.

Generally, Spend Visibility is considered more basic, critical and to provide a stronger ROI. Spend Visibility is generally the best place to start, and, as a consequence, is sometimes confused with all forms of Visibility. This guide is designed to help you plan your Visibility program, whether it involves just Spend Visibility, one of the other forms or a combination.

The final term to define is Spend Management. The various forms of Visibility described briefly above all help to provide the insights necessary to effective management of spend. Complete Spend Management, however, requires more than seeing the issues and opportunities; strategic action and tactical execution are also necessary from Sourcing through Procurement and Invoicing, Contract and Supplier management.

Contacts

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If you would like to discuss how Ariba can help you overcome your Visibility challenges, please contact Ariba at 866-772-7422.

Introduction

Purpose

The purpose of this guide is to help you plan your Visibility program, from rationalizing your need through successfully implementing your chosen solution. For those in the very early stages of a Visibility initiative, the full guide should help you structure your project and provide a checklist for each step or consideration. For those farther along in their efforts, particular sections are intended to help you close any gaps or remaining phases successfully.

How to Use this Document

We recommend this document be used in one of two ways, depending on your situation. If you are:

1. Only beginning to look at Visibility, we suggest that you use this document as a thorough guide. The "Initiative Planning Steps" below can be used to structure your program, or at least to ensure no critical steps are omitted. Each step refers to applicable sections which should be referenced when appropriate.

2. Already in the midst of a Visibility initiative, we suggest that you use this document more as a toolkit, reading those sections pertaining to steps that have not yet been completed or that are of concern to you.

Regardless of where you are, we encourage everyone to review the "Pitfalls" section.

Program Planning Steps

The following are the basic steps critical to any thorough Visibility program. You may choose to add steps or break these down into more detailed steps, but these are a good check to make sure the critical elements are included in your planning.

1. Identify Your Business Needs

2. Determine the Corresponding Visibility Needs

3. Determine the Appropriate Solution Elements

4. Determine the Appropriate Delivery Method

5. Gain Internal Support

6. Evaluate Solutions

7. Select & Implement a Solution

Step 1: Identifying Your Business Needs

There are a myriad of potential business needs addressed at least partially by Visibility. The following table lists many of the most common, some very specific and others fairly broad, and the primary ways that Visibility helps to address each:

Business Need	How Addressed by Visibility
Prioritize Sourcing Events	• Quantifies savings potential • Identifies dependencies (e.g. maverick spending)
Regulatory Compliance	• Accurately shows where funds are going and for what
Government Contract Certification	• Identifies diversity status of suppliers & spend by type of diversity • Identifies geographic location of suppliers • Identifies supplier linkages • Identifies spend with known terrorist organizations
Cost Reduction	• Identifies sources of potential savings • Quantifies savings opportunities • Identifies dependencies (e.g. maverick spending)
Maximize Supplier Negotiation Leverage	• Shows spend by actual supplier across multiple systems and naming conventions • Rolls-up spend by ultimate supplier parents
Improve Supplier Performance	• Shows quantitative & qualitative supplier performance • Identifies supplier rationalization opportunities
Improve Purchasing Productivity	• Tracks procurement process bottlenecks • Tracks employee throughput
Reduce Sourcing Cycle Times	• Tracks sourcing process bottlenecks
Accurately Forecasting Savings	• Quantifies savings opportunities • Identifies source and extent of leakage
Realize Merger Synergy Commitments	• Provides consolidated view of new company spend by supplier & commodity • Identifies opportunities to realize efficiencies of new scale • Provides cleaner data for back-end system consolidations

Since Visibility is critical to virtually all decision-making, the list of potential business needs could continue indefinitely. The above list is only intended to provide examples. The real purpose of this section is to ensure that the correct and

complete business needs are properly used to drive the remainder of your Visibility initiative planning. There are two key factors to consider:

1. **Complete Set of Needs**: Since the Visibility solution is likely to be deployed across the organization, it is critical to ensure that the business needs of all potential users are identified, not just the initiative sponsor. In all likelihood, multiple needs or a much broader need can be addressed by the solution. Taking all needs into account boosts ROI and facilitates added internal support, leading to more successful implementation of the program.

   Example: The Director of Sourcing at Company X has a $100M cost reduction objective for the next year as part of a company-wide cost management initiative. He or she identifies a significant need to prioritize sourcing events and maximize leverage in negotiations. However, the manufacturing business units are having problems with inconsistent supplier performance. If the solution evaluation criteria are determined by the Sourcing Director in isolation, an opportunity to correct the performance issue simultaneously may be lost and the decisions made may create tension between procurement and the business units.

2. **Future Needs**: It is tempting to focus on the need that is highlighted by a current pain or challenge. However, it is critical to look at the long-term or future need that must be addressed. Each level of Visibility provides further information that reveals new needs.

   Example: A global company currently has no central Visibility. The Director of Sourcing is frustrated by his commodity managers' inability to provide accurate reports on spend by supplier or to leverage their full spend in negotiations. Focusing on this need, he comes to the conclusion that he needs a third party to provide supplier-based cleansing (for accurate spend) and parentage (to maximize leverage in negotiations). He structures his evaluation along these lines and selects a supplier information provider to provide these specific services. Once this level of Visibility is obtained, however, he discovers significant savings erosion. Unfortunately, the supplier-based solution does not provide the level of granularity, including item-level categorization, necessary to identify the sources of leakage. A new or additional solution is now needed because of the short-term view of needs used.

Once you have identified the full set of immediate and future business needs driving your interest in Visibility, you should progress to the next step, determining the corresponding Visibility needs.

Step 2: Determining the Corresponding Visibility Needs

Once you have confirmed the business needs that need to be addressed, the next step is to identify the associated Visibility needs. It is important to be as thorough and precise as possible in this step to ensure that you later select complete evaluation criteria. The following table summarizes the different Visibility needs and matches them to some common business needs. As it would be impossible to list every business need requiring Visibility, the table is only intended to serve as a guide. The definitions and examples should help you match your specific needs.

Visibility Need	Definition	Typical Business Needs
Supplier Master Cleansing	Supplier-based data cleansing that provides or enables: • Normalization of supplier names • Spend by supplier • Top level, mediocre commodity classification	• Maximize supplier negotiation leverage • Improve supplier performance
Enriched Supplier Visibility	Supplier-based cleansing plus enrichment of spend data, adding information such as: • Parentage • Standard Industry Codes (SIC) • Financial Information • Credit Ratings • Diversity Status	• Government contract certification • Maximize supplier negotiation leverage • Improve supplier performance
Spend Visibility	Thorough cleansing of spend data, including: • Normalization of supplier names • Precise classification of Spend by any available dimension, including supplier, detailed commodity, geography, etc.	• Prioritize sourcing events • Regulatory compliance • Cost reduction • Maximize supplier negotiation leverage • Accurately forecasting savings • Realize merger synergy commitments
Process Visibility	Reporting on **how** processes are working, this requires sufficient digital control over the process execution (sourcing systems, eProcurement systems, etc. Sourcing Visibility includes: • Cycle time details • Contract expiration tracking • Sourcing event history Procurement Visibility includes: • Order processing times • Buyer work load	• Prioritize sourcing events • Improve purchasing productivity • Reduce sourcing cycle times • Prioritize sourcing events
Performance Visibility	Normally an advanced form attained after Spend Visibility but occasionally separately, it enables tracking of quantitative and qualitative supplier & buyer performance.	• Improve supplier performance • Reduce maverick spending

Step 3:
Determining the Appropriate Solution Elements

Once you have determined your Visibility needs, you can identify the elements required for your solution. Some elements may already exist within your firm while others will need to be obtained from a third party as either a service or software. It may also be possible to outsource virtually the entire process to an outside vendor. Even in this case, it is important to understand the various elements so you can properly evaluate vendor capabilities to address your needs. This section reviews the various elements in a complete Visibility solution and then summarizes the elements required for each type of Visibility need. The goal is to ensure that you do not overlook a critical element and familiarize you with the terminology used within the industry (refer to the Glossary of Terms for a more complete set of definitions).

Complete Solution Architecture
The following diagram shows the typical flow of information within a complete Visibility solution, along with the core elements.
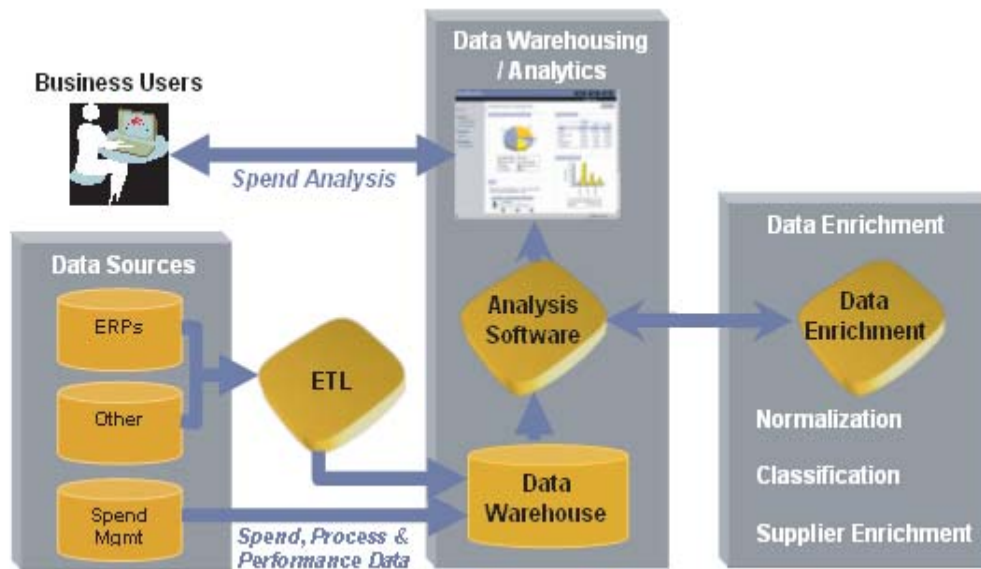
Overview of Core Solution Elements:
Data Sources

These are the original sources of all information that will feed your Visibility solution. Various types of source systems may need to be integrated into your solution. These include:

- ERPs: In most companies, ERP systems (e.g. SAP, Oracle, JD Edwards, etc.) are the primary source of data and are essential for all types of Visibility. Many types of data, in particular Accounts Payable, are captured within ERP systems.

- Spend Management Applications: If implemented in your company, these collect high quality data and usually integrate seamlessly (no ETL software or scripts required) into Visibility solutions. Different types of applications capture different types of information. eProcurement applications capture purchase order and procurement process data, eSourcing applications capture sourcing process data, contract management applications capture contract details, etc. Depending on your Visibility needs, you may need to implement a Spend Management application to capture the level and type of data needed, or manually record and input the data.

- Other: Numerous other data sources may feed your Visibility solution. In principle, any system that captures data relevant to the type of Visibility needed should be integrated. Some common other systems include:
    - Purchasing Cards: Capture detailed purchase information.
    - Supplier Reports: Suppliers often capture exceptional detail on your orders which is not captured in the company's systems (especially if no eProcurement solution is implemented). While this information will only be available from certain approved suppliers, it should be integrated to improve Visibility into those purchases.
    - Travel & Expenses: Often this information is only captured is third party software or services are used.

ETL

ETL, which is the standard abbreviation for Extraction, Transformation & Load software, tools streamline the flow of data from your various data systems, particularly ERP systems, and your data warehouse. As its name implies, ETL tools help automatically extract data from within your systems, transform the format of those data files and then load them into your data warehouse. Such

software often comes with adapters for common ERP systems and may also include mappings to certain data warehouse or analysis formats. Such adapters and mappings help minimize the amount of configuration required to set-up the data transfer process. ETL tools are rarely required, and you may choose to either manually extract data from your source systems or write SQL scripts to do so in an automated fashion. ETL tools are strongly recommended for companies with the following characteristics:

- Desire frequent data extracts (weekly or more frequent) which would make manual efforts impractical.
- Have many source systems which would require significant effort to write custom scripts for.
- Have source systems that do not function well with SQL scripts or require significant effort (e.g. SAP R3).

Data Warehouse

Data warehouses serve as central repositories of large volumes of data. They aggregate data from the various original source systems within a company and feed analytical software. Many data warehouses include analytical capabilities as well, and many analytical solutions include data warehouse capabilities. The primary difference is that each tends to be weaker in its secondary capability. Data warehouses usually provide very generic analytical capabilities and are not especially user friendly, limiting use to IT and other "power" users. They do, however, generally offer larger capacities for aggregation of mass quantities of varied information. Therefore, both elements are often recommended with each element increasing the value of the other.

If a data warehouse already exists, the data aggregation already executed can be leveraged to speed implementation of the Visibility solution. Then the analytical software allows more specific analyses (e.g. labor-based spend analysis) by a broader user base, increasing the value that was being attained from the general reporting capabilities of the data warehouse.

Data Enrichment

Some type of data enrichment is usually required to make original source data meaningful for analysis. This element can be broken down into three sub-elements. These sub-elements are often delivered by the same solution, which is an efficient way to approach the problem of data quality, but this is not always the case. In some instances, only one sub-element may be required. The three sub-elements are:

- Data Normalization: Data from unique source systems, and to a lesser degree within a source system, tends to have inconsistencies

which make it hard to analyze. Examples of such inconsistencies include different spellings / abbreviations of supplier names, different fields, different commodity codes, etc. Normalization of data involves removing these inconsistencies so that data can be more effectively analyzed.

- Data Classification: To conduct effective commodity analysis, spend data must be precisely and accurately classified to a useful taxonomy. Unfortunately, most source systems are unable to capture commodity codes for all, if any, spend. This is particularly a problem for indirect materials and services (non-catalog items being the worst case). Solutions now exist to automatically classify purchases based on the information collected. Using one or more fields of captured data, these solutions assign a commodity code, classifying the item purchased.

- Supplier Enrichment: Often, information that was never available through the transaction is valuable for analysis. The addition of such information, or adding new fields, is called "enrichment." The most common form within Visibility is supplier enrichment. Various types of information may be added. Examples of common enrichment fields includes supplier parent, revenues, credit rating, Standard Industry Code, diversity status, etc.

Analytics (Reporting) Software

Analytics Software allows users to analyze data and generate reports for their specific purpose. Such software ranges from being very generic to very specific. Software designed specifically for Visibility purposes will generally result in far greater value being achieved through your Visibility program. The reasons are that such software:

1. Is designed for use by business users, not IT. As a result, it is generally much more user friendly and is accessible to all users via their web browser. This ensures that the software is actually used.

2. Is spend-focused. Incorporating spend-focused schema and reports makes analysis much faster and easier, plus enables more thorough analysis, particularly of complex commodities (e.g. labor-based).

As mentioned in the Data Warehouse section, Analytical Software often includes data warehouse functionality. Therefore, companies without an existing data warehouse solution can usually meet their Visibility solution needs without implementing a data warehouse. If one is already in place, implementing spend-focused analytical software on top of it can increase the value from the data warehouse investment.

Summary Table

Depending on your Visibility needs, you may require some or all of the solution elements in the above diagram. The following table shows the elements required for each Visibility need:

Visibility Need	Essential Solution Element(s)	"Nice to have" Solution Element(s)
Supplier Master Cleansing	• Data Enrichment ◦ Data Normalization	
Enriched Supplier Visibility	• Data Enrichment ◦ Supplier Enrichment	• ETL Software • Analytics Software

Spend Visibility	• Data Sources
	  ◦ ERPs
	  ◦ All other available
	• Analytics Software
	• Data Enrichment
	  ◦ Data Normalization
	  ◦ Data Classification
	  ◦ Supplier Enrichment
		• ETL Software
		• Data Warehouse (separate)

Process Visibility	• Data Sources
	  ◦ Sourcing &/ or
	  ◦ Procurement Data Systems
	• Analytics Software	

Performance Visibility	• Data Sources ◦ Supplier Performance System • Analytics Software	

Step 4: Determining the Appropriate Solution Delivery Method

The delivery method for your Visibility solution can be as important to success as any other decision but is often downplayed in the decision-making process. Too often, companies first evaluate and select a vendor and then decide how the solution will be delivered during final negotiations. The better approach is to choose the delivery method once the required solution elements have been identified, then structure the delivery options into your evaluation along with other standard criteria. The purpose of this section is to describe the available delivery methods and the factors that need to be considered in determining the most appropriate delivery method for your firm.

Available Delivery Methods

Visibility solution delivery can be broadly classified in one of four categories:

1. **Manual**: Either performed by external consultants or internally, manual solutions are labor-heavy, utilizing generic software such as basic spreadsheet applications to classify and analyze spend.
2. **Managed Service**: Companies effectively outsource the bulk of the effort to a third party. Software is not licensed or installed, with the analytical technology usually provided on-demand and accessed through the web browser on a subscription basis.
3. **Software (or Self Service)**: Companies run their own program with the use of specialized software tools to automate the process, which are licensed and installed behind-the-firewall.
4. **Hybrid**: A combination of two or more of the above. This can involve a simultaneous use of more than one type or a phased approach where the project plan involves a transition from one type to another.

Specific Approach Overviews

The following sections discuss the four general delivery approaches and are designed to help you identify the one that is most appropriate for your firm.

Manual Process

Overview: The bottom line is that manual approaches are generally far inferior to others and should only be considered in special cases. Those cases are:

- Small firms that may lack the spend volume to achieve an adequate ROI given the cost of other solutions

- Lack of internal budget or commitment for a different approach, though this is an internal battle probably worth fighting
- For a single project designed to obtain a snapshot of historic spend and prove the value of investing in a more effective Spend Analysis program, when there is no commitment to Spend Analysis

Unlike the other approaches discussed, it is fair to say that this one is clearly not best-in-class for any firm. Nevertheless, many firms still conduct manual spend analyses on sub-sets of their data. Aberdeen Group estimates that "[o]ver 60% of enterprises use basic spreadsheet applications for managing and analyzing spend.[1]" In the manual approach, firms either use internal staff or external consultants to analyze spend, commonly with Microsoft Excel or similar applications.

Advantages: There are few. The primary one is that cost is generally lower than committing to another approach, though so is the value obtained. Any cost benefit quickly disappears if the process is repeated, however. For small amounts of data, this process may be faster as well, at least initially since no software implementation or configuration is required.

Disadvantages: There are many. Referring back to Diagram A, the manual approach fails to adequately address all issues, most significantly in:

- Making Data Meaningful: Classifications will be inconsistent across data sets and time as different individuals classify subjective or incomplete items differently. Lack of a supplier database will prevent any meaningful enrichment of supplier data.
- Repeating Process: A complete lack of scalability exists with the manual approach. If consultants are used, the firm becomes dependent on repeated engagements that will prove very costly over time and prevent transfer of knowledge to the organization. If done internally, the process takes as long as the first time regardless of the iteration. The effort involved means that it is unlikely that the process will be done on a sufficiently frequent basis.

Managed Service

Overview: This is the approach Ariba has found to be appropriate for most companies. In this approach, the firm effectively outsources the entire Spend Analysis program (minus actual analysis of the enriched data) to a vendor. Ordinarily the firm will provide its data in a pre-agreed format to the vendor at the agreed-upon frequency. The vendor will classify/enrich the data (preferably using automated technology) and provide it for user analysis via a hosted analytical technology. The firm pays a service or subscription fee and neither installs nor owns any software.

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[1] Aberdeen Group, "The Spending Analysis Benchmark Report," Jan. 2003.

Advantages: There are significant advantages to this approach. First, this approach allows customers to focus on their core competencies, conducting analysis to drive strategic actions. Resources do not need to be tied up processing data. Second, TCO may be lower since the vendor is likely to be far more efficient than the firm could hope to be in its operations. Hardware and software costs should be spread across customers and expert data professionals may be based out of low-cost countries. Even with a margin applied to the vendor's costs, the actual cost is likely to be lower than a self service approach. Third, this approach is very likely to yield initial results much faster than the self-service model since no software or hardware needs to be installed and the team processing the data is already expert in that process. This benefit is likely to be larger the more complicated the data is. Based on the motivations behind the project, these can be overwhelming advantages. Choosing a vendor with proven knowledge and best practice processes furthers the extent of these advantages.

Disadvantages: The company is likely to never "own" its data and therefore be less able to proactively identify issues restricting the data's usefulness. Should the company choose to end its relationship with the vendor, the knowledge will have to be bought (if possible) and integrated or be lost. Second, the company must continually pay a subscription fee that will eventually be higher than the maintenance fees in the self-service model. Note that this ignores other, significant TCO elements but should still be noted. Third, since the firm does not own any software in this model, it has the least flexibility to customize it and integrate it with other Spend Management applications. This can place significant limitations on the ability to create custom analysis, particularly around processes and performance. Lastly, some firms may have security issues with transferring data externally, particularly as it may be enriched offshore.

Case Study - Giant Eagle

A great example of a firm for which selecting the managed service approach was key in meeting its Spend Visibility goals.

Company Overview: Giant Eagle, Inc., ranked 28 on Forbes Magazine's largest private corporations list and in 2002 named Progressive Grocer's Retailer of the Year, is one of the nation's largest food retailers and food distributors with more than $5.2 billion in annual sales. Annual indirect spend is in excess of $550M. Founded in 1931, Giant Eagle has grown to be the number one supermarket retailer in the region with 140 corporate and 81 independently owned and operated stores throughout western Pennsylvania, Ohio, West Virginia and Maryland. Its growth had led to increased opportunities to leverage spend hampered only by a lack of a centralized view of that spend. It was impossible to determine what savings were being realized. Growing competition (competition size and price aggressiveness) increased the need to capitalize on opportunities to reduce costs and increase price competitiveness.

Objectives: Giant Eagle identified six primary Spend Management objectives:

1. Achieve and leverage Visibility to indirect spend across the organization
2. Increase identified and realized savings
3. Streamline and standardize Spend Management processes and systems for efficient sourcing and procurement
4. Proactively address Giant Eagle spend culture and organizational acceptance
5. Adopt the Giant Eagle Spend Management program across the organization
6. Increase use of the online sourcing tool across the organization

Approach: Giant Eagle realized that quickly gaining accurate Visibility across their entire indirect spend was essential. The knowledge gained would help drive the planning process and be crucial to achieving buy-in across the organization, particularly at the Business Unit level. Several factors drove its approach selection decision:

- IT personnel were already dedicated to other projects so there was little chance of executing an effective Spend Visibility program on its own in the near term.

- Giant Eagle did not have many standard Spend Management processes or programs in place and was looking for an application that would help standardize procedures and eliminate the current

'customized' processes and reports that each different department was using. Therefore, a flexible approach that allowed excessive customization was a negative in this case.

- The project team needed to devote its time to planning and gaining buy-in with all key stakeholders as Visibility was achieved.

- Giant Eagle was interested in testing any solution and quantifying the actual benefits before committing long-term resources or significant dollars.

Given these unique factors, Giant Eagle decided to take the Managed Service approach, subscribing to the Ariba Spend Visibility Solution. This was the fastest path to gaining Visibility as no software needed to be installed and Ariba's experts were efficient at using their technology and conducting QA quickly and accurately using effective, defined processes. This approach also involved a relatively low initial cost and resource commitment, allowing the best way to test Ariba's ability to deliver on a full scale.

Results: The Spend Visibility program was executed by Ariba (with input and coordination with Giant Eagle's project team) in parallel with internal planning efforts. As soon as spend enrichment was complete, the results were available to Giant Eagle via their web browser in Ariba Analysis, an easy-to-use, spend-focused analytical interface. With initial "power user" training, the core team was able to use the results to drive internal presentations with senior and business unit leadership to gain buy-in for the broader Spend Management initiative. The previous lack of knowledge about their spend became apparent and the new knowledge empowered the project team and generated broad interest in the entire program. Some of the specific problems immediately identified that helped generate interest in the program included:

- Parent-child relationships with suppliers that were not being used to leverage spend in supplier negotiations

- Data discrepancies and data errors in accounting systems, many of which were easily corrected once identified

- Numerous opportunities where different divisions were using the same supplier but paying different prices, easily fixed for immediate savings and ROI

- Several instances of individual departments or divisions buying off contract

- Numerous opportunities for future sourcing projects

A broader training program was all that was needed to roll out the Spend Visibility program to the business units to start identifying savings opportunities. The sourcing pipeline is being developed and any savings will be easily tracked to ensure they are realized (note that this program was rolled-out just prior to this paper being published so sourcing results could not yet be confirmed for publication).

Self Service (with specialized software)

Overview: This is the approach that Ariba has found to be appropriate for the smallest number of firms. The self-service approach is the opposite of the managed service approach, involving the use of licensed, specialized Spend Analysis software to conduct data classification/enrichment and analysis. Ordinarily, the software provider will sell implementation services and training for end users of the analytical and data enrichment software. The provider may hand-hold the users through the first data enrichment process but afterwards several employees, normally from the purchasing and / or IT departments, will run the program.

Advantages: This approach maximizes the amount of information captured within the organization. The firm will really "own" its data and key individuals will most rapidly grow to understand the data issues facing the firm, potentially being able to improve data collection processes going forward. For some firms, the security of not transferring data externally can also be important. The outward cost is also usually limited to maintenance fees after initial licensing and implementations (however significant internal costs must be considered!). Lastly, licensing software allows firms to customize it as needed and to integrate it into other Spend Management applications (e.g. sourcing, contract compliance or eProcurement applications). This enables the firm to most effectively track processes and performance, providing the most extensive analysis.

Disadvantages: The disadvantages mirror the advantages of the managed service approach and must be carefully considered. The greatest disadvantage is that there is a significant, ongoing resource commitment involved with the self-service model, particularly around data enrichment. If leadership is not committed to the Spend Analysis initiative, the project may fail or not even get off the ground, becoming stuck in the implementation phase indefinitely. A poor relationship between Procurement and other critical parties, IT in particular, can prevent timely or complete data processing. Companies must honestly access the willingness of critical players (Procurement team, IT, BU Managers and potentially others) to collaborate on the effort on an ongoing basis. Ariba encourages companies interested in this approach to map out the specific requirements, including their frequency and resources needed, and gain support before selecting this approach. The resource commitment also involves a large,

but often less apparent, Total Cost of Ownership (TCO). The key point is that, while this approach may seem significantly less expensive than a managed service approach over time, there are many costs that must be factored in outside the vendor proposals. See the "Pitfalls" section for details. These may make it the most expensive option in the long run. Lastly, this approach often takes longest to implement and achieve ROI. Software implementation (particularly if deep integration and/or customization is desired) can take months and the company's data team will be learning the new technology and processes from scratch. Companies demanding a quick ROI would do better with a different approach.

Case Study - PPG Industries, Inc. (PPG)

A classic example of a firm for which the self-service approach was optimal. The results PPG achieved, particularly the coverage obtained, are remarkable.

Company Overview: PPG is the world's leading manufacturer of transportation coatings, a global supplier of industrial and packaging coatings, and a leading producer of architectural coatings, primarily in North America. The company also makes sealants, adhesives, metal pretreatment products, flat glass, fabricated glass products, continuous-strand fiber glass products, and industrial and specialty chemicals, including photochromic ophthalmic lenses, optical monomers, silicas and fine chemicals. It operates nearly 120 manufacturing facilities in 23 countries across the globe.

Objectives: With more than $5 billion in indirect spend across more than 15 business units offering products from industrial coatings to insurance, PPG knew it had considerable leverage with suppliers if it could establish a centralized, controlled procurement discipline backed by comprehensive information and analytics. Additional objectives included improved data classification, enhanced spend information available online, supplier rationalization and maverick spend reduction.

Approach: Having internal support and resources, and a good relationship with key stakeholders such as IT, PPG chose the self-service approach. In 2000, PPG made an investment in data warehouse and business analytics software but found that this only addressed part of the problem. Data was consolidated from its five different ERP systems and its purchasing card program but data quality was still poor and the analytical tool was difficult to use and customize, limiting adoption and repeatability. PPG formed cross-functional teams to support the effort, even co-locating IT resources within the purchasing department, and found the collaboration exceptional. In late 2003, PPG licensed Ariba Analysis to provide an easy-to-use and customized, spend-focused analytical tool, and Ariba Data Enrichment (at the time still Softface technology) to address the poor data issue.

Results: By mid 2005, PPG had managed to place over 98 percent of indirect spend under central visibility. Key benefits have included:

- 92% supplier reduction for leveraged categories
- 12% overall cost reduction for leveraged categories
- New level of collaboration throughout the company

Additionally, by controlling its own data, PPG has identified an estimated additional three percent in savings due to bad data captured in ERP and other systems. It is making plans to address this problem and capture those savings. Jim Polak, Director of General Purchasing, recently stated that "data is the fuel for everything we are doing in Spend Management and e-sourcing."

Hybrid Approach

Overview: A hybrid approach can involve the simultaneous use of more than one type of the previous approaches (e.g. data enrichment service and installed analytical technology) or a phased approach where the project plan involves a transition from one type to another over time. As the advantages and disadvantages of using more than one type of approach simultaneously can be inferred from the above sections, we will focus on the phased approach here. The one note we would like to stress concerning the simultaneous approach is that data classification / enrichment is a difficult and resource-intensive process. As a result, Ariba recommends that firms desiring a simultaneous hybrid approach utilize a service for this component of the program while licensing and installing the analytical software. Installing the software allows firms to customize it and maximize the potential types of reporting, particularly by integrating it into other Spend Management applications. The particular phased approach that Ariba has found very beneficial is to begin with a fully managed service delivery, then transition over time to a complete or partial behind-the-firewall software solution, assuming an increasing role in the process. A phased approach to all sources and geographies of spend data is also beneficial.

Advantages: Overall, a phased approach can deliver most of the advantages of both the managed service and self-service approaches, particularly for more complex visibility projects. Specifically, it avoids permanent tradeoffs between speed and coverage/depth of classification. For this reason, Ariba recommends this approach for most customers. By starting with a managed service, the company gains the benefit of speed by preventing software implementations from becoming a ROI bottleneck. The company also has the benefit of the first pass at data enrichment (by far the most complicated and time-consuming) being performed by experts. With the best solutions, the knowledge gained in this initial processing is captured in the software. This means that, once the software is brought behind the firewall and run by internal resources, a far greater percent of items will be confidently classified automatically. Less internal resources are needed upfront, or for less time, than by starting with the self-service model.

Since this approach leads to the self-service model, data security issues are only a concern for a brief period of time and there are no permanent subscription charges. And the company will "own" its data, but with less initial pain. Since software is licensed, full integration and customization will be possible.

Disadvantages: No approach can eliminate all disadvantages, but they are limited here. Those that remain include:

- High TCO: This approach requires both initial service / subscription fees and license / maintenance fees, plus internal resources on an ongoing basis. Depending on the firm, this may be the most expensive option, though the quick ROI and ongoing benefits must be considered.

- Security: Initially, data will need to be sent outside the firewall, though this is temporary.

- Self-service requirements: If both the data enrichment and analysis software is eventually licensed, the resource and collaboration needs of the self-service approach apply. To prevent this, many companies choose to license the analytical tool only; continuing with data enrichment as a managed service.

Case Study - Tyco

A classic example of a firm for which the phased approach has delivered coverage without having to compromise on speed and ROI.

Company Overview: Tyco is a global conglomerate that employs 260,000 people in over 100 countries. It has many independent holding companies with no common IT infrastructure and over 200 sources of data. Total spend, including direct and indirect, is in excess of $18B. There was only a small centralized sourcing effort which, due to a lack of corporate Spend Visibility, was unable to address spend in aggregate and leverage its full size in negotiations.

Objectives: With almost entirely new management looking to transform Tyco from a holding company to an operating company, centralized Spend Management within supply chain became a focus. The first far-reaching, corporate initiative within supply chain was the Tyco Spend Data Warehouse. Tyco's goal is to leverage the company's incredible buying power by coordinating efforts across the business segments to generate significant savings in purchasing. The Tyco Strategic Sourcing initiatives with visibility from the Spend Data Warehouse will enable cost reduction of the materials, goods, and services procured while improving the level of quality.

Approach: Having remarkably complex data issues but desiring maximum coverage, minimum time to results and a behind-the-firewall solution, Tyco opted for a phased approach using the Ariba Visibility solution. The project kicked-off in June 2004 and was broken into three phases:

1. Phase I: Ariba Spend Visibility Managed Services to conduct first pass Spend Visibility service and leverage the Ariba expert systems and labor without waiting for software/hardware installation. The Tyco data sources were broken further into four batches representing different segments of their business. In practice, hard-to-get data sources tended to slip into subsequent batches so that laggards did not jeopardize the speed of delivery.

2. Phase II: Transition of Ariba Analysis to behind-the-firewall, where it could be customized more extensively as desired and integrated with other Spend Management applications. Data enrichment still delivered as a service by Ariba.

3. Phase III: Transition to a full self-service model, bringing Ariba Data Enrichment behind-the-firewall. Prior to this point, all Tyco-specific classification information such as GL & Material codes, direct materials descriptions and any suppliers not originally in the Ariba database will have been incorporated into the technology so Tyco resources need only maintain and build on this rule-set. Tyco will continue to benefit from improvements to Ariba's knowledge base via quarterly merges of all new information added from other customer engagements

Results: By Spring of 2005, Tyco should complete Phases I & II. Results already achieved or expected to be achieved by that time include:

- $24B+ of spend, including direct and indirect, captured for analysis for decision-makers throughout the company. 200 source systems of spend data and 20M+ lines of spend in one spend data warehouse with many different GL coding schemes and/or Material Coding schemes

- $18B+ of that spend classified for granular commodity information and enriched for robust supplier information.

- 300+ users in six major segments of Tyco and 20+ countries exploring their common spend data through an easily accessible web-based Ariba Analysis instance.

- Classification delivered in a Tyco-specific commodity taxonomy tuned by a centralized corporate authority and seen through 20+ standard reports built on Ariba's best practices in Spend Analysis.

- A repeatable methodology for loading new buys on a monthly basis and applying the built rule-set against those buys within days of loading.

Summary of Primary Delivery Approaches

The following table summarizes the key advantages and disadvantages of the primary approaches.

Approach	Advantages	Disadvantages	Company Characteristics appropriate for
Manual	▪ Lower initial cost ▪ Limited budget approvals	▪ Inconsistent classifications ▪ Limited enrichment ▪ Not repeatable ▪ Does not scale	▪ Limited spend ▪ Restricted budget ▪ Short-term outlook
Managed Service	▪ Quick ROI ▪ Minimal internal resource needs ▪ Minimal internal commitment ▪ Best practices imbedded in vendor process	▪ Continual subscription fees ▪ Limited customization ▪ Limited/no integration with other applications ▪ Never "own" data ▪ Data security	▪ Poor IT-Procurement collaboration ▪ Desire to focus on core competency ▪ Want to implement an effective process, not customize to fit existing
Self Service	▪ Maximum insight into own spending ▪ Minimal reliance on third parties ▪ Data security ▪ Maximum ability to customize ▪ Maximal integration with other spend management applications	▪ Slowest approach ▪ Requires significant, up-front organizational commitment ▪ Requires permanently dedicated resources	▪ Close IT-Procurement relationship ▪ Want to "own" data ▪ Want to customize solution to existing processes
Phased Approach	▪ Quick ROI ▪ Eventually "own" data ▪ Eventual maximal integration with other applications ▪ Eventual customization	▪ Requires permanently dedicated resources	▪ Need quick results ▪ Interested in integrating with future applications ▪ Close IT-Procurement relationship ▪ Want to "own" data

Step 5: Gaining Internal Support

The last requirement before evaluating and selecting a solution is gaining internal support, including budget, for your investment. By using the previous sections to identify the full range of needs the solution will address, you should be better prepared to justify the full value to your internal staff. The purpose of this section is to ensure you are aware of the various constituents whose support may be important to success of your project and help you build a business case for your ROI justification.

Constituent Checklist

Everyone who will either use your Visibility solution or support its deployment is a constituent. Maximizing input from as broad a base of constituents as possible will maximize your chance of a successful Visibility program. By including those that will use the solution, you will ensure that maximum value and the greatest ROI is achieved once the solution is deployed. The following table lists the common key constituents:

Constituent	Potential Use of Solution
CPO / Purchasing Leadership	• Aggregate spending analysis • Savings forecasting • Commodity manager performance assessments • Procurement process analysis • Sourcing process analysis
Commodity Managers	• Sourcing pipeline development • Savings forecasting • Commodity spend analysis • Sourcing process tracking • Supplier performance analysis
Business Unit Managers	• Tracking maverick spending • BU spend analysis • P&L planning

By also including those who will be involved in the implementation and ongoing support, you will increase the chances of a smooth and timely implementation. The following table lists these key constituents:

Constituent	Involvement in Implementation
IT Personnel	• Implementing / integrating software (if installing software) • Extracting data (writing scripts, implementing ETL tool, etc.) from existing systems (ERP, pCard, T&E, etc.) • Provision / explanation of proprietary coding systems (general ledger, etc.)
Buyers	• Refinement of classification results
Commodity Managers	• Refinement of classification results • Provision of proprietary coding (material codes) • Validation of supplier analysis • Validation of spend totals
Suppliers	• Providing supplementary data

Building your Internal Business Case

Unlike many other Spend Management initiatives (i.e. Sourcing), the ROI argument on an investment in Visibility can be more difficult to prove as most of the benefit is indirect. Gaining good Visibility into your spend does not automatically provide savings - it enables you to act and realize savings. The logic of meaningful information being necessary to make effective decisions is often not enough to secure the necessary budget. The following two sections are intended to help you build an effective business case to gain internal support.

Sources of Data

One of the challenges of building a business case is the general lack of quality data to prove the value. This is primarily caused by the relative infancy of Visibility within companies. The early pioneers embarked on Spend Visibility initiatives in 2000-2002, but most companies still have not implemented any formal program. And the full value of Visibility is returned over many years (and rarely tracked), unlike Sourcing where the savings are normally calculated as soon as the event is complete as part of the standard process. There are, however, several sources of data that can be leveraged to build your business case.

Analyst Studies: A growing number of industry analysts are tracking Visibility, some of which have already conducted extensive surveys of Visibility results. Those that have published excellent research on quantifiable benefits include:

- Aberdeen Group: The Aberdeen Group has spent over three years examining the spend data management strategies, processes and systems of nearly 200 enterprises and conducting extensive interviews with dozens of leading enterprises. Quantified benefits are extensively detailed in two research papers:
    - The Spending Analysis Benchmark Report, Dissecting a Corporate Epidemic. January 2003.
    - Best Practices in Spending Analysis, Cure for a Corporate Epidemic. September 2004.
- Yankee Group: Through in-depth interviews of 16 leading enterprises, Yankee Group quantified numerous Visibility benefits achieved in their report, "Spend Visibility Drives Sourcing & Procurement Efficiency."

Numerous other Analysts and firms have published reports qualifying the range of benefits from Visibility. See APPENDIX A for a list of documents and summary of content in each.

Visibility Solution Providers: Solution providers are obviously eager to help you build your business case to invest in their solution. Their existing customers can often provide valuable information as to the value obtained. While confidentiality and other reasons often prevent vendors from publishing any aggregated reports on value, case studies of more mature customers should be available from any vendor with a respectable solution. Three Ariba customer case studies are included in Section 5 of this document. Furthermore, reference calls are an excellent source of data on the specific value you are trying to quantify. Finding companies of similar complexity or industry that have proven value will greatly help your internal business case and should be leveraged as much as possible. Lean on solution providers to provide you with access to the type of customer information you require.

Sample ROI Model

Ultimately, it is most likely that your research will need to culminate in a convincing ROI justification for your investment. If you have a company standard, you can simply enter the benefit estimates based on Analyst reports and peer results (applying percentages to your own spend levels), along with the estimated costs. For those companies that do not have a standard ROI model, we have included one used by several Ariba customers to assist you. The model may be requested in a more useful Excel format by contacting Ariba.

The three basic steps involved are:

1. Estimate Project Costs
2. Estimate Project Benefits
3. Calculate ROI

1. Estimate Project Costs

The critical elements to consider are all types of costs and the estimated value of each. This will result in an accurate total cost of ownership (TCO) estimate. To be more precise, you should estimate initial and future year costs, then discount them to the present for your ROI calculations. The following table can be used to record all possible costs in the TCO. Note that not all costs will apply, depending on the type of solution and delivery you choose. The cost cells include notes on calculating the inputs.

Cost Element	Cost ($)	
	Initial Year	Future Years
Software Licenses	Sum of Analytical, Data Enrichment, ETL, etc.	Sum of maintenance fees
Software Implementation	Consultant fees + internal resource time	Usually 0
Software Integration	Consultant fees + internal resource time	Usually 0 unless purchasing elements from different vendors, where integration will be required with upgrades
Software Training	Trainer fees + internal resource time	Future hire or software upgrade training costs
Data Extraction Services	Consultant fees + internal resource time	Consultant fees + internal resource time
Data Enrichment	Vendor service fees plus internal resource time	Vendor service fees plus internal resource time
Additional Hires Needed	Hiring costs + fully loaded cost of new employees needed	Fully loaded cost of new employees needed
TOTAL	Sum of column values	Sum of column values

The following table can then be constructed to calculate the NPV of the project costs. Sample values for a managed service solution have been entered for demonstration purposes. Cost of capital is assumed to be 10% for discounting purposes.

Cost Element	Costs ($K)			
	Yr 1	Yr 2	Yr 3	Yr 4 value of all future costs
Software Licenses	$0	$0	$0	$0
Software Implementation	$0	$0	$0	$0
Software Integration	$0	$0	$0	$0
Software Training	$30	$5	$5	$50 (= 5 / 0.1)
Data Extraction Services	$55	$10	$10	$100 (= 10 / 0.1)
Data Enrichment	$450	$210	$210	$2,100 (= 210 / 0.1)
Additional Hires Needed	$0	$0	$0	$0
TOTAL	$535	$225	$225	$2,250 [=SUM(above)]
Discount Factor	1	1.1	1.1^2	1.1^3
NPV	$535	$205	$186	$1,690 [= SUM/Disc.]

TCO NPV = $2,616,000

2. Estimate Project Benefits

The critical elements to consider are the types of benefits, the amount of spend each will impact and the percent of that spend that will be saved. Remember that many of the benefits are "soft" or not quantifiable. Trying to quantify benefits such as empowerment of procurement within the organization is usually a meaningless exercise and should not be included in the ROI argument, but noted as an important additional benefit. The great value of an effective visibility program will certainly result in a powerful ROI value even without quantifying the "soft" benefits.

The following table summarizes the types of quantifiable benefits and the average savings from each based on Analyst studies. It also shows the overall average percent savings achieved if you prefer to use one value. It should be noted that many companies in these studies were new to Visibility and used inferior solutions to those currently available. Therefore, the values below, while large enough to show a great ROI, are conservative.

Benefit Type	Average Savings on Affected Spend	Percent of Spend Affected
Increased Sourcing Savings	2-12%[2]	10-60%
Improved Contract Compliance	7%[3]	10-40%
Supplier Rationalization & Improved Performance	0.8%[4]	30-60%
Improved Purchasing Efficiency	0.4%[5]	10-90%
Average Total Spending Reduction	**13.7%[6]**	**15-60%**

Note that, to be as accurate as possible, you should select a value in each range based on your assessment of how you stand versus the average company and how much spend procurement controls.

The next step in calculating benefits is to consider the adoption of your program by year and multiply all the values to estimate savings per year. Remember that great data available to everyone has no value unless it is used. The numbers immediately below represent reasonable estimates of adoption rates. Finally, sum the forecasted benefits and discount your annual savings by your cost of capital to determine the net present value of the benefits. The final table below shows an example of this.

	Year 1	Year 2	Years 3+
% of Company Adopting Solution	10%	50%	90%

Company Spend = $1B
Cost of Capital = 10%

Benefit Type	Percent Savings	Affected Spend	Savings ($M)			
			Yr 1	Yr 2	Yr 3	Yr n
Increased Sourcing Savings	8%	30%	$2.4M	$12	$21.6	1B*.08*.3*Adoption
Improved Contract Compliance	7%	25%	$1.75	$8.75	$15.75	1B*.07*.25*Adoption
Supplier Rationalization & Improved Performance	0.8%	45%	$0.36	$1.8	$3.24	1B*.008*.45*Adoption
Improved Purchasing Efficiency	0.4%	60%	$0.24	$1.2	$2.16	1B*.004*.6*Adoption
TOTAL			$4.8	$23.8	$42.8	SUM(above)
Discount Factor			1	1.1	1.1^2	1.1^{n-1}
NPV			$4.3	$19.6	$32.1	SUM/Disc.

Total Benefit NPV = $56.1M (plus year 4+ savings which were not calculated for simplicity)

3. Calculate ROI

The final step is to use the previous calculations to calculate the ROI and any other measures used such as IRR, break even timeframe, etc. The most common measure used, the ROI is simply calculated as:

ROI = (NPV of Total Benefit) / (NPV of Total Cost of Ownership)

In the example above, ROI = ($56.1M) / ($2.6M) = $2157.7%

And remember that the benefit number is artificially small since we did not calculate the perpetual value past year 3 in this example.

Note that, since benefits increase over time but costs decrease, the ROI is greatest in future years and smallest (though still very large).

Even if actual savings fell significantly short, the ROI would be tremendous, a common trait of effective Visibility programs.

Step 6: Evaluating Solutions

Once you have determined your business needs, the associated Visibility needs, the solution elements required for your solution and the appropriate delivery method, you are ready to document your evaluation criteria, for either an RFP or interviews.

In order to ensure that your firm makes an informed vendor selection decision, it is critical to gather a comprehensive list of solution capabilities, focused on the complete set of needs (not just the immediately apparent ones). Many firms will simply consider those capabilities directly tied to their current pain points. Evaluating solutions based on limited criteria may result in the final selection addressing these pain points, but quickly proving itself inadequate to address the next level of obscurity. This next level may simply not be visible yet. Refer to sections 3 & 4 for more information on how to ensure all needs are identified.

Example: Company X's Spend Visibility initiative is being driven by a desire to improve sourcing results, which is currently being hindered by an inability to understand its supplier base. X is unable to accurately identify who it is purchasing from. It is unable to leverage its full spend in negotiations. Focusing on addressing this problem, it focuses its evaluation on a vendor's supplier cleansing & enrichment capabilities, de-emphasizing commodity classification capabilities. The solution selected provides the most cost efficient way to normalize, de-duplicate and enrich supplier information and provides excellent results. Unfortunately, new pains preventing effective sourcing quickly become apparent. Users accessing the excellent supplier information naturally now want to understand exactly what was purchased. Unfortunately, the solution selected is not effective at this next level of Spend Visibility. To address this next level, X must now either replace its solution (costing time and money), or add another niche solution on top of their supplier-focused solution. The overall solution may be less effective or more costly than having selected a complete solution from a single vendor in the first place. Perhaps not, but the point is that having evaluated the full set of relevant capabilities from the onset would have avoided this risk.

Sample RFP

The following sections provide comprehensive sets of questions to fully understand competing solution capabilities in each area. They are organized by solution element so that you may easily see which are relevant to your evaluation needs. These can be used to ensure a thorough RFP or to guide

vendor interviews. Regardless of whether the information is gathered through a formal RFP process or vendor interviews, using an exhaustive set of evaluation criteria is critical to making the most informed decision. Ensure that all applicable sections are included in your evaluation process.

While the following sections are fairly comprehensive, if you have certain, specific needs not fully addressed, be sure to augment the questions listed. Similarly, certain questions (e.g. direct materials classification) in a section may not apply to your situation and should be deleted. Additionally, the questions below do not address generic vendor information (e.g. financials, customer base, etc.) that should be included in any formal evaluation, regardless of the type of solution.

General - Delivery Options

a) Which of the following delivery options are available with your solution:

    i) Managed Service:

    ii) Self-Service (Technology and knowledge installed):

    iii) Other Options (Please describe):

b) Does your solution provide the option to transition from one delivery option to another in the future? If so:

    i) Describe any limitations.

    ii) Is knowledge (e.g. data classification rules, etc.) retained during the transition?

Data Extraction, Transformation & Loading

a) Which of the following types of data extraction solutions do your provide? Please provide details for those provided.

    1) ETL Software:

    2) ETL Services (consultants):

    3) Other:

b) Is the flow of data from your other solutions into the Visibility solution seamless? Describe the integration.

c) What is the underlying database for your data warehouse?

d) What validation is performed on incoming data without use of customized ETL tools?

e) What is the average amount of time necessary from source system IT personnel to facilitate extraction of the relevant data?

Data Enrichment - Service Levels

(Only applicable if service delivery)

a) Service Level Terms (Only apply for service delivery):

    a. What % of spend do you guarantee classified?

    b. What % accuracy is associated with the above term?

    c. Do you guarantee a minimum % of spend classified per source system? If so, what %?

    d. Are errors identified corrected retroactively or only to future data?

    e. Please describe any other service level terms you offer.

b) Briefly describe your data enrichment service process, including all phases.

c) Describe the integration of all elements in your data enrichment service process.

d) Provide a project timeline, indicating all key milestones and dependencies (both external and internal). What risk factors may affect scope?

e) Describe the process for error-correction (e.g. correcting classifications).

Data Enrichment - Data Normalization / Classification

a) Does your solution offer automated data classification?

b) Which of the following types of data does your automated solution consider for classification purposes?

    a. Supplier Information:

    b. Customer-specific codes (i.e. General Ledger, Material Codes, etc.):

    c. Item Descriptions:

    d. Other (Please Specify):

c) If your solution uses multiple types of data in making classifications, are the different types of data used in parallel (all available information considered before providing a final classification) or in series (classifications based on one type of data with other types only considered when no match found)?

d) What commodity taxonomies can your solution map data to? Can custom customer structures be used?

e) How does your solution ensure consistency of classification of similar items across data systems and over time?

f) Can you effectively classify direct materials spend? If so, how?

g) Do you utilize a supplier database for classification purposes? If so:

    1) How many unique suppliers are in it?

    2) What is the geographic distribution of suppliers?

3) Is the database integrated into your product?

4) If a customer's supplier is not in your database, is it researched and added for future classification use?

h) How are item descriptions used in classification?

i) Describe the feedback process for customer-requested changes to classifications.

j) Describe how quality assurance (QA) testing on classifications is conducted with your solution.

Data Enrichment - Supplier Enrichment

a) Does your solution offer supplier enrichment capabilities?

b) How many suppliers do you maintain in your database?

c) What is the geographic distribution of the suppliers in your database?

d) What sources feed your supplier database?

e) Indicate if the following types of enrichment are provided for suppliers

1) Parent / Child relationships:

2) Credit ratings:

3) Diversity status:

    a. Women ownership:

    b. Veteran-owned:

    c. Disabled veterans ownership:

    d. Other minority ownership:

    e. 8A:

    f. SDB:

    g. Hub-zone:

    h. Known terrorist organizations:

4) SIC codes:

5) Revenues:

6) Other types of enrichment (Please list):

Analytics Software - Dashboard

Does your solution offer:

1) A dashboard view? If so, answer remaining questions.

2) Permission-based (based on user ID and access controls) customization of the dashboard to include any relevant components, such as snapshot views of multiple Spend Management applications/modules?

3) "Multi-tab" dashboards to organize information by relevant dashboard (i.e. Procurement dashboard, Sourcing dashboard, AP dashboard, etc.)?

4) Single sign-on to all applications from a dashboard?

5) Summaries of all the user's tasks, action items, and milestones with a personal calendar?

6) Links directly from the dashboard to all relevant Spend Management applications/modules?

7) User-defined, real-time alerts and notifications based on triggers and events within the different Spend Management applications/modules?

8) Portlet views of other applications and systems (through general URL linking)?

Analytics Software - General Analytics

1. What languages is the analytical interface available in? May users specify the language viewed?

2. Do you utilize OLAP reporting, enabling quick drill-down/up and manipulation of data?

3. Describe the key ease-of-use features in your product

4. Describe your graphical capabilities for reports

5. Does your solution support out-of-the box analysis of objects (multiple Spend Management oriented cubes) including POs, requisitions, invoices, contracts, sourcing projects, supplier performance metrics or scorecards, expense reports, cycle time measures, and/or user activity?

6. What formats can you export reports in? (Excel, .pdf, Flat File, Word, etc?)

7. Do you offer Excel integration? If so:

    a. What information is exported?

        1. Pivot tables:

        2. Raw data:

        3. Charts:

        4. Other:

    b. Is data exported in pre-formatted templates?

    c. Is integration bi-directional (can format changes in Excel be saved as templates back in the application)?

    d. Describe any other integration details.

8. Can users join multiple fact tables (e.g. PO and Invoice data) in a single view?

9. Does your solution offer the following functionality?

    a. Pivot table user interface:

    b. 80/20 filters:

    c. Flexible grouping of spend across multiple dimensions (to make it easy for users to locate what they need using rapid response analysis):

    d. Flexible drill-downs, expansion, and navigation:

    e. Simple charting capabilities and a process to create custom analysis with wizards to enable visual presentation of results:

    f. Multi-measure charting for trends, forecasting and performance visibility:

    g. Extensive graphics engine for several chart types including line, pie, or bar charts (for trend type analysis):

    h. Parameter-based reports (to make analysis readily accessible to new and infrequent users):

10. Do you offer the following general types of reports/reporting features?

    a. Trend and forecast analysis:

    b. Variance analysis (delta between any sums):

    c. Line-level reporting:

    d. Alerting: Visual alerting on key metrics and user defined thresholds:

    e. Compound Reports to combine related information from multiple analyses into a single report view:

11. Can users create custom, user-defined fields?

12. Does your solution support 2-way integration to all for spend analysis from within processes (e.g. during requisition approval, contextual linkage to related spend analyses and integration from analysis to transactional details in source systems)?

13. Can your solution support automatic feeds from all spend sources (SAP, data warehouse, etc.?

14. Describe your solutions administrative tools

15. May custom reports be saved with the choice of being either:

    a. Personal (only accessible to user):

    b. Shared (accessible to all users):

16. Does your solution allow user to queue reports and print them at a user-defined time?

17. Does your solution allow user to run large reports in the background while conducting other analysis?

Analytics Software - Spend Analysis, General

1. Does your solution offer out-of-the-box spend analysis reports? If so:

   a. How many?

   b. List the reports along with purpose of each.

2. Is your solution designed specifically for spend analysis or for general reporting purposes?

3. Does your solution have commodity-specific schema & reports (e.g. labor category schema, etc.)? If so:

   a. For which spend categories?

   b. Describe the types of commodity-specific analysis supported.

4. Does your solution allow corrections to spend data enrichment to be submitted via the analytical interface?

5. Does your solution allow the following types of specific spend analyses?

   a. Approved vs. unapproved suppliers:

   b. Unapproved Invoices:

   c. Vendor discounts coming due for payment:

   d. Suppliers per category or item:

   e. Spend by category by business unit with ability to drill down organization (e.g. to department or buyer level):

   f. Supplier parentage / subsidiaries:

   g. Duplicate vendors:

   h. Supplier counts:

   i. Purchase price variance for an item:

      i. Over time

      ii. Across organization

      iii. Across suppliers

      iv. Cost of each type of purchase price variance

6. Detail the following forecasting capabilities:

   1. Forecasted spend and volume based on historical values:

   2. Seamless view of historical and forecasted spend:

   3. The storage of forecasts in a variety of horizons (6 week and 12 month):

   4. The ability to identify forecast exceptions and adjust forecast. Please explain.

7. Do you have the ability to manually allocate historical supplier spend to multiple categories. Please explain.

8. Does your solution offer the ability to create user-defined demand forecasting analyses?

9. Does your solution offer the ability to forecast demand based on prior usage history and trends?

Analytics Software - Spend Analysis, Sourcing Analysis

1. Does your solution enable supplier fragmentation analysis? Is this an out-of-the-box report?

2. Can you analyze supplier risk from an enterprise perspective? If so, please describe.

3. Do you have the ability to identify risk areas in contracts? If so, please describe.

4. Describe how a user selects KPIs.

5. Describe how the KPIs are categorized.

6. Does your solution offer the ability to develop exception reports based on pre-defined KPI thresholds/criteria?

7. Do you have the ability to rank categories to source by:

   a. "contract due dates" and "by spend"

   b. "internal complexity", "new market opportunity", etc.

   c. "last time sourced"

   d. "ranked criteria"

8. Do you have the ability to rank suppliers by category, defined product groups and geographies?

9. Does your Solution interface w/ Price Repository for storing quoted prices?

10. Does your solution offer the ability to enter information and extract reports on:

    a. Actual savings by commodity manager percentage and cost?

    b. Estimated and actual spend and implemented savings by business unit and location?

    c. Traditional volume forecast, actuals & YTD and on unimplemented savings by BU and location?

    d. Planned vs. actual spend, savings and on line bidding volume?

    e. Projects by BU/location (all open projects)

    f. Projects status by commodity manager?

    g. Summary report by BU of plan vs. actual linked to outstanding actions and issues?

Analytics Software - Process Analysis

1. Can you provide task level reporting by hour by resource?

2. Does your solution offer the ability to produce operational reports in real time?

3. Is there reporting for A/P metrics i.e., turn around time, days payables outstanding, days paid late, etc.? Please describe.

4. Can you provide reports to measure procurement effectiveness?

5. Does your system have the ability to connect to completed projects - archive?

6. Does your solution offer the ability to summarize purchase orders by account distribution, delivery date, vendor number, buyer etc.?

Analytics Software - Performance Analysis

1. Can you provide reports to measure procurement effectiveness? Please describe.

2. Describe other scorecards in the system (e.g., buyer scorecards etc.).

3. Describe the degree to which your performance metrics module is customizable.

4. Does your solution support vendor management reports (system captured quality and service level information)?

5. Does your solution export scorecard metrics for consolidation or analysis in other applications?

6. Do you provide both qualitative and quantitative supplier performance analysis? Please describe.

Managed Services - Spend Visibility

1. How much experience does your services organization have delivering a Spend Visibility solution?

    a. Number of clients

    b. Amount of spend enriched in aggregate

    c. Number of Source-systems aggregated

    d. Geographical spread of incoming data

2. What is the nature of your services organization?

    a. Consulting resources on-site at the client

    b. Dedicated project management resources

    c. Shared enrichment experts

    d. Other?

3. How often is data loaded and enriched?

4. Explain the broad process for Spend Visibility, including timeline of activities and persons involved from the client and Ariba teams:

    a. First pass on data

    b. Periodic loading of new data

    c. Periodic deep enrichment of new data

    d. Other defined processes necessary to support Spend Visibility initiatives.

Additional Services - Spend Visibility

1. What is the uptime commitment for any hosted applications?

2. Describe the security profile for data on hosted applications?

3. What is the coverage for product and technical support of users accessing Spend Visibility output?

4. What optional services are offered to Spend Visibility clients?

Step 7: Implementing Your Solution

The effort and tasks involved in any Visibility solution implementation depend mostly on the choice of delivery selected. The two distinct options being software (a.k.a. self-service) and service approaches. All other approaches are some combination of these. While all implementations are unique to some extent and depend greatly on the specific solution selected, we attempt to provide generic advice based on Ariba's extensive experience across the various delivery models. Your selected solution provider will certainly have more detailed project plan information but this section should at least help you understand the key work elements and stakeholders that will be involved and provide some general advice.

Software Implementations

Software implementations can be broken into the following basic phases:

- Pre Kick-Off
- Kick-Off
- Requirements Scoping
- Development / Testing & Installation / Testing
- User Acceptance Testing
- Software Roll-Out

Pre Kick-Off

Before the project kick-off begins there are several preliminary steps that should take place:

- Meet with the project team including a representative from the technical side of the organization and document the hardware requirements for implementation of the applications. Discuss the following topics:
  - Hardware sizing
  - Estimate number of users within the first year and the potential for new users increasing over the next several years
  - Estimate the budget for purchasing the hardware and balance this with the overall requirements of user response. Example, a bare bones hardware solution will run the application, but probably not within the average response time expected.

- Estimate how much hard drive space will be required for:
    + Applications
    + Back-Up (decide how much data the organization wants to back up and maintain)
    + Buffer space for optimizing indexes and general admin database tasks
    + Most applications don't function properly when the hard drive space gets too low, keep this in account when sizing the maximum hard drive space
- How many application environments does the customer want to create? The options are DEV, and TEST, and PROD. However, not all customer implement (3) three environments.
- Are the applications integrated with each other? Is there additional processes or tasks that need to run for the integration that may take up additional space or require specific processing speeds.
- What type of environment does the user need to have?

Kick-Off

Once the hardware requirements are completed and the purchase order is approved, the team can begin to prepare for the kick-off meeting.

The kick-off meeting can include the following topics although this list is not limited to only these topics:

- Introduction to the team members
- Introduction to the project and the goals.
- Usually having the customer champion available for a few words will provide the internal support most team members need at the beginning of a project
- Introduction to the applications that were purchased. Many times the individuals on site to implement these projects are the not individuals that sat through the sales cycle or gave the final approval.
- Walking the team through the implementation plans
- Understanding roles and responsibilities
- Most often the team members have their own daily work loads they will also maintain while on a project. It is good to understand this up front and identify potential risk that may occur on the project down the road.
- Document the holiday schedule and review the project timelines.
- If there are several work streams: i.e. one for each application, then possibly breaking out into various work groups is another suggestion.

Requirements Scoping

After the kick off, the requirements phase of the project is next. The team members work together to understand the following:

- What type of data is to be collected for the application to be implemented?

- Are their any customizations required?

- Are their any application configurations that are required?

- How will the data be pulled from the systems? Will the data need to be formatted into one standard across all the sources before it's loaded into the application?

- What are the reporting requirements for the users? This question is often forgotten. However, understanding how the users will access the data, filter, and sort on the data will provide insight into how the data model will be designed.

- How will the system look when the users log in?

Development / Testing & Installation / Testing

After the requirements phase, the next two phases usually take place at the same time: Development / Testing based on the Requirements and Installation / Testing of the Application Environment.

Often the same resource that can develop the database can also perform the installation of the applications.

Development / Testing - During this stage of the project, the developer typically finalizes the technical requirements, reviews the information with the Core Team, then work remotely. Once the development of the data base is complete (often referred to as the data model), sample customer data will be loaded into the database for further testing.

It is recommended the customer should schedule a conference call once every (2) two weeks during the development stage.

Installation / Testing - Although installation of applications can appear to be fairly simple, there are a few items to sort out before the installation begins.

1. How will the contractor gain access to complete the installation?

Most organizations have elevated their internal security protocols that limited remote access into servers. As a result the contractor will need to be onsite during the entire installation stage.

This often brings up additional issues about the contractor accessing the actual server. In order to install most applications, the contractor requires 'admin' or 'root level' access to the server. Recently, organizations have limitations about contractors having this type of access to any server.

2. How do Organizations get around this?

Some customers will split the installation between internal resources and the contractor. This would require the internal resources to perform the database installation; however, this could lead to inconsistencies between the permission set up in the database compared to the permissions required by the application.

Other customers have worked within the security limitations by requiring an internal resource to shadow the contractor during the installation process.

3. How does this affect the customer?

Risk - the customer will lose a resource during the installation phase

Benefit - the customer will gain tremendous knowledge transfer about the installation of the applications.

4. How does this affect the Contractor?

Risk - the contractor on site will need to be very skilled. This will not be an opportunity for a contractor to 'train' an employee while on the job.

Benefit - the knowledge transfer sessions will occur through out the installation which will reduce the amount of back-end training required.

It will be a common goal to have the completion of the development and the installation of the applications at the same time.

Customer data will be used to test the database within the application in the customer environment to ensure everything is working correctly.

If multiple applications were installed, then additional time should be included to perform any integration installations, setting additional permissions, and testing data as it passes from one application to another.

User Acceptance Testing

Immediately following this stage is U.A.T. or User Acceptance Testing. This is where the customer gathers members from the Core Team and other persons in the organization to be involved in the U.A.T.

1. Who to invite?

- Core Team Members
- Key Stakeholders or those persons that have some connection to the success of this project / application
- Power Users or those persons that will use the application. These users could also be the people that others come to for help before calling the help desk.
- Persons who represent other business units that may be located in other areas of the United States

- If the application is to be rolled out to other business units from outside the country, you may consider including them into one UAT or implementing a phase UAT approach for other countries.

2. What are Test Scripts?

Test scripts can also be called scenarios that help the users during the UAT phase. These scripts can be written so the user doesn't realize what is really being tested.

Example, from the user perspective, the user could be creating a report, however, the scripts could be written in such a manner that the report is really testing various tables in the database (data model), testing the data integrity between multiple tables, and when the report runs, the test will confirm the tables are joined together correctly.

Test scripts are very specific instructions that document each step the user need to take within the application. Often to the level of detail as to which button should be clicked next, the expected results when that button was clicked, etc.

Each step would be numbered an allow space for the user to indicated if each step passed or failed.

3. Do the users of UAT get Training?

Yes, the users receive some training either on the day the pilot phase begins or the day before; however, the training is usually not the full application training and is used to help the user become more familiar with the environment or to obtain certain skills they will need in order to complete the test scripts.

In some situations, section 1 of the test plan could be scripts that help train the users to learn skills that are required in other sections of the test plan.

4. When are the Scripts written?

The best time to begin writing scripts is during the development phase. However, the scripts can be completed until you can test them directly in the customer environment.

Once the scripts are completed a core team member should run through the scripts while taking note of the length of time it too to complete.

5. How long does UAT usually take?

Scripts should be written so they do not take up a lot of time. On average all the scripts should be completed in less than five to six hours.

6. What is the best way to schedule UAT?

Most customers schedule several small UAT sessions that take place in the training room where everyone completes a specific number of scenarios / scripts.

Example Schedule:

Monday Morning - UAT 9 am to 11 am (1/2 of scripts)

Monday Afternoon - Assess results of scripts and make any edits that can completed before the next morning

Tuesday Morning - UAT 9 am to 11 am (1/2 of scripts)

Tuesday Afternoon - Assess results of scripts and make any edits

Wednesday Morning - UAT 9 am - 11 am (Complete any outstanding scripts and revisit scripts based on edits made the developers as a result previous UAT.)

Software Roll-Out

After the User Acceptance Phase and final sign off, the final steps are formal communication to all new users, installation of desktop applications that may be required, completion of users, roles, and permissions, and prepare for the Go Live!

Service Implementations

Service Implementations typically include an initial processing phase followed by refreshes at some pre-defined frequency. While most of the effort is handled by the service provider, customer involvement, particularly during the initial processing phase, is still required for a successful project and should not be underestimated. Note that we assume the service provider is software enabled for automation and to provide access to end users to analyze spend. Pure services such as those provided by many consultancies may differ in effort based on the project definition. Such approaches are also very manual so refreshes do not differ significantly from initial processing.

Initial Processing

The amount of time and resources, both internal and external from the service provider, required for the initial phase are significantly greater than during the refreshes. The availability of resources to support the process is critical to the ongoing success of the project. The Initial Processing phase can typically be broken into the following basic stages:

- Data Acquisition
- Data Classification / Enrichment
- Refinement
- Spend Analysis

Data Acquisition

The initial data acquisition phase can be time intensive, particularly if the customer has many source systems of data. Unless the service provider has

been selected to also conduct extraction of data, the bulk of the effort in this phase lies with the customer. The primary purpose of this phase is to extract source files, transform them as necessary into the service provider's required format and load them into the necessary environment for processing. Preparation of future automation of this process via script writing or ETL configuration takes place simultaneously in most cases. The following table summarizes the specific activities that normally take place involving the customer during this phase, the key stakeholders and estimated time.

Activity	Stakeholder(s)	Effort Required
Training on data schema	IT Data Owners	15 hours per source system
Extraction of data files		
Transformation of data file format into approved format		
Generation of scripts or ETL configuration for process automation		
Provision of internal coding structures (e.g. GL)	Spend Stakeholders	8-16 hours per person
Validation of aggregate data information		

Data Classification / Enrichment

The bulk of the effort involved in this phase lies with the service provider. Minimal, if any, customer effort will be required to answer questions that may arise concerning internal coding systems such as general ledger codes. The end result of this phase is a draft version of classified and enriched spend data, ready for refinement and final QA.

Refinement

Customer effort in this phase is primarily focused on providing input necessary to refine classification rules. Not all service providers will have a refinement phase, but it is encouraged. Normally, customers will be granted access to draft results either in the analytical software or to samples in Excel files. Commodity experts can review and provide feedback for adjustments before final results are made available to all end users. The following table summarizes the specific activities that normally take place involving the customer during this phase, the key stakeholders and estimated time.

Activity	Stakeholder(s)	Effort Required
Review of Preliminary Results	Commodity Experts	24 hours per expert

Spend Analysis

The bulk of effort in this phase transitions back to the customer, first in providing input to specific reports that the service provider should create, and then in actually analyzing the classified & enriched spend data to begin driving savings

to the bottom line. Participation in user training on the analytical software is also essential to drive adoption so the new information is used. The following table summarizes the specific activities that normally take place involving the customer during this phase, the key stakeholders and estimated time.

Activity	Stakeholder(s)	Effort Required
Participate in Training	Spend Stakeholders (Power Users)	8 Hours
	Business Users	2-8 Hours
Conduct Initial Spend Analysis	Spend Stakeholders	20+ hours per person

Refreshes

The amount of time and resources, both internal and external from the service provider, required for refreshes of data are minimal in a service delivery. The refreshes share the same phases as the initial stage, minus refinement. Refinement once in refreshes usually occurs continuously as users review spend during analysis rather than as a separate phase. Therefore, the phases involved in most refreshes include:

- Data Acquisition
- Data Classification / Enrichment
- Spend Analysis

Data Acquisition

During refreshes, data acquisition requires minimal customer effort due to the automation from scripts or ETL that are in place at this point. These scripts must simply be run for data transfer to occur, with ad-hoc maintenance as needed. Files load without error in most cases as validation issues have been worked through during initial loading.

Data Classification / Enrichment

The bulk of the effort involved in this phase continues to lie with the service provider. Minimal, if any, customer effort will be required to answer questions that may arise concerning internal coding systems such as general ledger codes.

Spend Analysis

The bulk of effort in this phase rests with the customer, involving analysis of the classified & enriched spend data to continue driving savings to the bottom line.

Activity	Stakeholder(s)	Effort Required
Refinement feedback	Commodity Experts	2+ hours per expert
Analyze Spend	Spend Stakeholders	4+ hours per person

Summary of Service Requirements

The following table summarizes typical customer requirements by stage and phase of service delivery:

Stakeholder	Phase			
	Data Aggregation	Data Enrichment	Refinement	Spend Analysis
Initial Processing				
Spend Stakeholders	8-16 Hours / Person			20+ Hours / Person
Commodity Experts			24 Hours / Person	
IT Data Owners	15 Hours / System			
Business Users				2-8 Hours / Person
Refreshes				
Spend Stakeholders				4+ Hours / Person
Commodity Experts				2 Hours / Person
IT Data Owners	Ad hoc			

Pitfalls

The previous sections have hopefully provided sufficient insight into planning your Visibility program. No matter what approach is taken, there are a number of realities in Visibility that should be addressed. Behind most of these realities is the point that there is no "silver bullet" with regard to Visibility. While new technologies have greatly enhanced the ability of firms to gain Visibility into their spend, the process still looks for a good amount of domain expertise and local knowledge.

Logical, software-based solutions that are effectively deployed will return tremendous value, but none will deliver 100 percent Visibility or require no effort on your part. The nature of the challenges, with dirty or missing data and maverick spending, prevents firms from achieving perfection under even the best circumstances. There are, however, common pitfalls that can be avoided to maximize the return on your investment no matter the approach you select. The following are those that Ariba has found to be the most common or pose the greatest threat to a firm's success.

Waiting to Improve Data
(the Chicken and the Egg)

Companies interested in Visibility are usually aware of data problems, either concerning data levels of data quality.

By data level, I am referring to limited capture of information.

Example of Poor Data Levels: Company X's systems only capture invoice header information.

Example of Good Data Levels: Company Y's systems captures invoice details, purchase order detail including part #'s and item descriptions, and procurement and sourcing process details.

Data quality refers to the reliability and consistency of data captured, regardless of the level. Good quality data is entered consistently and accurately (usually highly automated) whereas poor quality data has errors, inconsistent spellings and abbreviations and various other issues that make it difficult to analyze.

The pitfall we often see is when companies convince themselves that their data is too poor to gain value from Visibility so they insist on correcting the data problems before implementing a Visibility solution, or using an inexpensive, basic solution "until their data is good enough to benefit from the better solution." The most common example is when a company decides to hold off on a Visibility

solution until after rolling out eProcurement because they do not yet capture Purchase Order details. This approach inevitably leads to a prolonged, painful process and significant loss of savings.

The logic involved is "garbage in, garbage out," which implies that poor data leads to poor Visibility. While this is true of the relationship between data and Visibility, it is just part of the picture. It ignores the reality that the relationship is actually a loop, as illustrated by the below diagram.
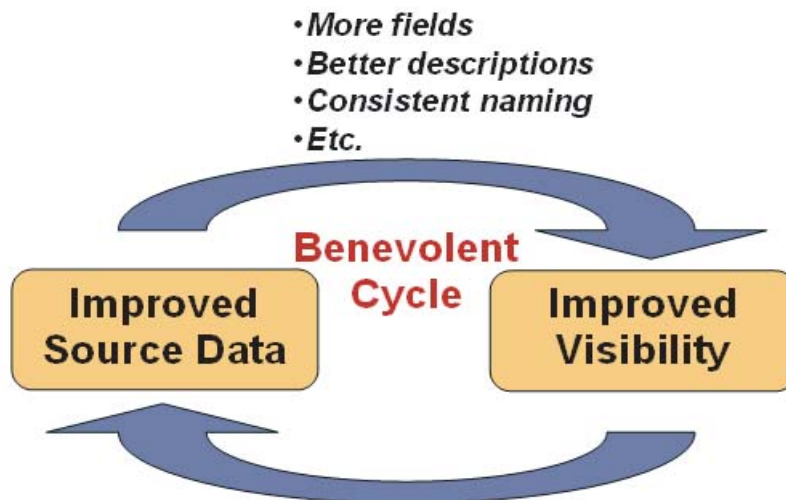
Data problems will not be fully identified and therefore corrected until a Visibility solution is in place. Even with poor data levels and quality, a good Visibility solution will provide a significant ROI, and it helps address the data problems, improving future Visibility. A poor solution will do neither.

Not Properly Defining Service Levels

When a service approach is taken, it is critical that companies discuss and document service levels. Companies should be wary of any vendor that proposes to provide 100 percent Spend Visibility, or even 95 percent if they haven't seen your data. At the same time, clarifying the minimum service levels guaranteed will help set common expectations among all stakeholders. It is very simple for a vendor with no guaranteed service level agreement (SLA) to find some "unexpected" complexity in your data that explains the poor data quality returned or the unexpectedly long project time. Setting a clear definition and minimum service level in the below areas will ensure that the vendor understands the deliverables and overcomes any complexities to meet them. On the flip side, companies should understand that vendors may request significant information prior to proposing a price or project schedule so they can set realistic expectations. If such information is not provided, a vendor cannot be

expected to guarantee a high service level or specific timeline. The following are the critical SLA terms that should be addressed:

- Coverage: Percent of spend classified to the determined accuracy level

- Percent Total Spend: While there is the temptation to ask for 90-plus percent coverage by spend, Ariba has found the optimal starting number to be 80 percent where the cost of enrichment is justified by the value gained. A rule of thumb is that the cost of delivering to 80 percent is doubled to go to 90 percent and quadrupled to go to 95 percent. Doubling the cost only to gain Visibility on 10 percent more of spend makes an ROI justification more difficult.

- Percent by Source System: Only guaranteeing a percentage of total spend will leave certain source systems with low coverage, particularly in firms with large numbers of source systems. Guaranteeing a minimum coverage per source system in addition to a total percent coverage will ensure that no organizational unit finds itself with meaningless spend data. Note that this number will need to be significantly lower than the percentage of total spend. Ariba has found 50 percent to be a realistic and valuable target.

- Accuracy: Ensure an accuracy level is connected to the coverage terms. If only qualitative (e.g. "High" confidence or accuracy), ensure it corresponds to a quantitative value (e.g. 90% accuracy). Keep in mind that measurement of accuracy can be subjective and must be tested using statistical samples.

- Project Duration: Ensure milestones, along with any dependencies, are documented. Extraction of data is a key dependency for the remainder of the project and probably more under your control than your vendor's.

- Reclassifications: Ensure the right to correct data is clearly defined. In particular, rights to retroactive versus future reclassifications should be agreed upon.

- Refresh cycle: Frequency and timing of refreshes should be tuned to the cycle of the company and where it will be used. For feeding the sourcing "pipeline" with savings opportunities, new data isn't needed more often than twice a year, but to measure compliance, a more frequent monthly or quarterly refresh is required to recognize problems quickly.

Even in a self-service (software) approach, companies should consider SLAs. In those cases, the SLAs should cover implementation, training and support.

Ignoring the 80 / 20 Rule

As mentioned in the coverage section of the SLA, the top 80 percent has proven to be the best starting point for Spend Visibility. Many firms want to make the most informed decisions and therefore capture all spend in their analysis. The problem is that this approach forces a significant tradeoff in the speed of implementation (and hence ROI) for marginal incremental value. Therefore, Ariba encourages companies to seriously consider if the extra time and cost involved in starting off with full coverage is worth the incremental value. Be particularly wary of vendors that propose 90-plus percent coverage immediately without considering your firm's goals. Ariba recommends to most customers that they start with approximately 80 percent of spend so that they can start identifying opportunities. With a software approach to processing, 100 percent of the data is processed anyway but only 80 percent is certified as accurate. The other "un-certified" spend will still have some, less-trustworthy results that can be targeted in subsequent mini-projects that should be individually justified.

Underestimating Internal Effort

Companies must be prepared to commit resources to ensure a successful Visibility project, regardless of the approach selected. Even with fully managed services, a company should as a minimum plan on devoting end-user time to attending analytical training, commodity manager time in refining classifications, and IT time writing the necessary, repeatable data queries from each source system. Working with vendors during the evaluation process to fully understand the internal effort that will be required is essential. Doing so will help maintain a collaborative relationship once work begins and will help internal planning and adoption. Again, no solution provides a "silver bullet", so both the internal project team and the vendor team will need to be willing to get their hands dirty while they clean and prepare the data.

Short-Sightedness

Many companies evaluate and select solutions based simply on their immediate needs or pains.

Example: A company with no central Spend Visibility may be driven to find a solution by its inability to identify their suppliers by category or to leverage their full spend by supplier. It designs its evaluation criteria around each solution's ability to classify spend by supplier, therefore selecting an inexpensive information-based solution. Unfortunately, once it achieves this level of Visibility, new needs immediately surface, such as having detailed spend classifications by commodity to monitor compliance and tracking sourcing processes. The company now has to go through the entire process again to select either a niche solution that can be layered on top of its supplier-based one, or a complete

solution to replace the previously selected one. The net effect is an unnecessary, time-consuming process and probable difficulty gaining budgetary approval given the first project's limited value.

Spend Visibility is nearly always approached one step at a time. Not all source systems get into the first phase so they are put in the second. Once all spend is visible, CPOs turn to the processes involved in spending money and want to see reporting on any inefficiencies. Then, they want Visibility into everyone's performance (buyers and suppliers). Next, your company acquires another company and more source systems are added. Finally, new applications for Spend Management come online and need to be reported on.

All of these possibilities should drive your requirements for an Analytical system that is both highly (and easily) configurable and easy to use in the context of Spend Management.

Failing to Accurately Compare Total Cost of Ownership

Without a clear understanding of the different customer requirements for each type of Visibility approach, it is tempting to simply compare prices for acceptable vendor solutions. This can result in drastically underestimating the total cost of ownership (TCO), which should be the key cost factor in your decision-making process. This would also impart error in any ROI calculations. It is most critical when comparing different types of solutions (e.g. installed software versus a managed service, where the managed service pricing is likely to be much higher but minimizes other, internal costs). The following important elements of TCO should be considered:

- Hardware and network requirements for installed software

- Additional software required (database, web-server, ETL)

- Consultant fees
    - Software implementation
    - Integration
    - Data extraction

- Differing personnel time requirements for different solutions
    - Training
    - Data extraction, transformation and loading
    - Any data cleansing and enrichment work done in-house
    - Commodity expert review of data classifications

- Integration costs from multiple vendor solutions
    - Initial integration effort
    - Periodic effort when source systems of portions of the solution itself are upgraded

APPENDIX A: Further Reading

The following table summarizes many existing documents that provide further information on Visibility.

Document	Source	Date	Qualified Benefits	Quantified Benefits	Case Studies	Program Recommendation	Vendor Information
Spend Visibility: A Guide to Effective Program Design	Ariba	Mar '05	X	X	X	X	
Field Tactics in Spending Analysis:	AMR Research	Mar '05	X	X			X
Spending Analysis Is Not Just for Finders, but Keepers, Too	AMR Research	Sep '03				X	
The Spending Analysis Benchmark Report	Aberdeen	Jan '03	X	X	X	X	
Best Practices in Spending Analysis	Aberdeen	Sep '04	X	X	X	X	X
The CPO's Agenda	Aberdeen	Mar '05	X		X	X	
Spend Analysis: Key App, Few Vendors	Forrester	Jul '04	X				X
Spend Visibility Drives Sourcing And Procurement Efficiency	Yankee Group	May '03	X	X		X	X
Super Spend Analysis	Purchasing Magazine	Mar 18, '04			X		
World-Class Procurement	Hackett Group	Jun '05	X				

APPENDIX B: Glossary of Terms

The following is a list of common terminology within the Visibility space. Some of the terms may be used differently by different vendors but we have tried to include the most common definitions.

Accuracy - Percent of processed results that are correctly classified. An essential component of any SLA that should be tied to a level of coverage.

Coverage - Percent of spend processed. Can be defined at an aggregate level or by source system or file. An essential component of any SLA that should be tied to accuracy levels.

Data Cleansing - Fairly generic term that means making data useful for analysis. Most often used to refer to normalization of data (making supplier spellings and commodity fields consistent), but may also include data classification.

Data Classification - Assignment of commodity codes/names to spend data to indicate what was purchased. Common commodity code structures include UNSPSC, eClass and the Ariba Sourcing Taxonomy.

Data Enrichment - Refers to the combination of data classification and supplier enrichment.

Data Normalization - The process of making data field content consistent. Most typical example is applying a common supplier spelling to all different variations in the data (e.g. overriding "I.B.M" and "Int'l Bus. Machines" with "IBM" throughout the data set).

ETL - Software that Extracts data from source systems, Transforms it into a different format and Loads the transformed data file into a different destination.

Performance Visibility - As it pertains to purchasing, the ability to analyze supplier and buyer performance. Supplier performance includes qualitative and quantitative (i.e. delivery times) measures. Buyer performance involves purchasing via authorized systems in accordance with contracts and firm policies.

Process Visibility - As it pertains to purchasing, the ability to analyze sourcing and procurement processes to determine processing times and identify bottlenecks.

Refresh - Subsequent processing of data from same source systems but for a new time period. With automated solutions, involves far less effort than initial processing of data.

Service Level Agreement (SLA) - Agreement between a vendor and customer. Typically defines such components as project timeline and milestones, system uptime as well as level of coverage and accuracy in processed data.

Spend Visibility - The ability to view historic spend across multiple dimensions, including supplier, commodity and geography and with sufficient detail and accuracy to drive effective decision-making

Supplier Enrichment - Adding supplier information (new fields) that did not exist in original data. Common types of enrichment fields include parent company, revenues, SIC codes and credit ratings.

Total Cost of Ownership (TCO) - An effective measure of how much a particular solution or approach will actually cost. Useful for comparing options. Accounts for all cost components, not just license or service fees. For a Spend Visibility project, typically include such elements as hardware costs, training time, and integration costs/effort.

Visibility - Process, Performance & Spend Visibility.