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Outsourcing at Office Supply Inc.

Overview

Jim Anfield, vice president of business development for Technology Infrastructure Solutions (TIS), was waiting in the corporate headquarters lobby of Office Supply Inc. (OSI) for a meeting with Benjamin Wagner, the company's chief financial officer. OSI, a Fortune 300 wholesale office products distribution company, was experiencing its second consecutive year of flat earnings. Its stock price was down 52 percent, and Wagner was looking for ways to significantly reduce costs.

Anfield knew that OSI was a great candidate for outsourcing its infrastructure management. As a ten-year veteran of the information technology (IT) industry, Anfield had helped numerous clients outsource their IT infrastructure to achieve both cost improvements and operational efficiency. He realized that although OSI had made several strategic investments in application software, it had not been spending tactically on IT infrastructure. Most of the company's hardware was procured on an unplanned basis, which had led to disruptions and utilization issues.

After the short wait, Anfield entered Wagner's office with David Harden, OSI's chief information officer. The company had released its second-quarter earnings the day before; margins had declined sharply owing to higher selling, general, and administrative (SGA) costs and the stock was under pressure again. Understandably, Wagner was not in his best mood:

> *We need to control our IT costs. Our current IT spend is about 4 percent of sales and has been steadily increasing over the past year. This increase was easier to justify when our top line was booming at the same rate. But now gross margin is declining because of a lot of competitive pressure, particularly from the local players. Any ideas?*

Seizing the opportunity, Anfield gave a presentation that explained the benefits of infrastructure outsourcing, including some case studies and a preliminary action plan to help control OSI's rising costs. Although Anfield made some persuasive arguments in favor of infrastructure outsourcing, Wagner was unconvinced. He had been reading too many articles about the complexities of outsourcing, and wanted to see hard numbers and a savings potential that would be consistent over the short and long term alike. David Harden was equally skeptical, but his concerns were different; he was apprehensive about the human resource issues that would arise from the outsourcing deal.

Wagner had requested a proposal from Anfield—due in two weeks—with a detailed analysis of the cost savings and benefits of outsourcing OSI's IT infrastructure management over the next five years. Anfield needed his team to put together a proposal that would clearly demonstrate how the TIS solution could help OSI strengthen its bottom line. Although Anfield's initial high-level study of OSI's IT infrastructure had suggested a big win for the company, the results of a detailed analysis could be different. He wondered whether he would be able to demonstrate both short- and long-term benefits for OSI while providing decent profit margins for TIS. He also wondered how best to quell Harden's concerns about organizational change and increased dependence on a third party.

Technology Infrastructure Solutions

Founded in 1994, Denver-based TIS integrated data, services, and technology to create and deliver customer and information management solutions for many of the largest and most respected companies in the world; its clients included bellwethers of the insurance, financial services, and telecom industries. Total revenue from TIS's infrastructure outsourcing business equaled about $2 billion in 2005.

Competing with other IT outsourcing companies and infrastructure management solution providers, TIS offered services for large systems, midrange and client/server platforms, and networks through always-available information-system staffs who worked at a computing and network capacity driven by customer demand. TIS also operated several data centers, managed networks, and hosted Internet e-commerce applications.

Office Supply Inc.

With a total revenue of about $4 billion in 2005, OSI, incorporated in 1949, was a broad-line wholesale distributor of business products and a provider of marketing and logistics services to resellers. Through its various subsidiaries, the company distributed more than 20,000 stock-keeping units (SKUs), classified into four categories: technology products, traditional office materials, office furniture, and janitorial/sanitation supplies.

As one of the nation's leading wholesale distributors of traditional business products, OSI offered approximately 10,000 brand-name and private-label items such as writing instruments, paper products, organizers, calendars, and general office accessories. Business products accounted for roughly 30 percent of the company's 2005 consolidated net sales. In the technology products supply market, OSI offered about 6,000 items, such as printer cartridges, data storage, and digital cameras, to value-added computer resellers, office products dealers, drug stores, and grocery chains. Technology products represented approximately 45 percent of the company's consolidated net sales. OSI's wholesale office furniture category comprised about 12 percent of the company's consolidated net sales. The remaining 12 percent of sales came from OSI's janitorial/sanitation products category, which included more than 2,500 items in primary subcategories such as janitorial and sanitation supplies, food-service disposables, safety and security items, and paper and packaging supplies.

OSI customers were a diverse group that included independent office products dealers and contract stationers, national megadealers, office products superstores, computer products

resellers, office furniture retailers, mass merchandisers, mail-order companies, sanitary supply distributors, drug and grocery store chains, and e-commerce merchants. To fulfill the more than 10,000 different orders each day, OSI had a network of thirty-five business-products regional distribution centers located in twenty-four states.

Information Technology at Office Supply

A substantial percentage of OSI's suppliers and buyers (retailers, business users) used the company's Web site to replenish product inventory and to place new orders. Thus, the Internet site that was supported by the back-end systems (servers, mainframes, and database) played a crucial role in managing partner relationships. (See **Exhibit 1** for a conceptual view of the OSI data center architecture.) The servers housed the custom applications and the databases. In addition to external suppliers and buyers, the front-end Web interface was also used by OSI's internal customer representatives, sales teams, and other support departments to coordinate information flow within the organization. Most of the server maintenance activities at OSI were routine tasks that required periodic monitoring and performance tuning.

Since OSI started using the Web site to manage its business in 1996, revenue had increased significantly. Orders had risen by 400 percent and profits had doubled through this channel. OSI's stock prices had skyrocketed as investors and analysts rewarded its superior operational and financial performance. Because of the growth in the volume of business, the company's reliance on IT also grew. The first few years of this transition from a paper-based company to a technology-based logistics performer went smoothly, with few disruptions and downtimes. As the load on the servers and databases increased, however, OSI began to struggle with ensuring round-the-clock reliability.

Application Software

Most applications at OSI were developed and maintained by a small number of applications-development outsourcing companies. Despite some initial issues in transitioning the business knowledge, OSI had faced few difficulties with the software performance of its applications, which were designed on a robust and scalable e-business platform. OSI's implementation of new software needs in general had been reasonably successful. CIO David Harden had maintained a good balance in managing and dividing the risk among the company's partner vendors, which had ensured a smooth performance of its applications despite a dependency on external vendors.

Hardware/Infrastructure

An organization's IT infrastructure is the foundation on which the firm is built, and a solid infrastructure platform enables innovative new applications and functions. As with all companies, IT infrastructure at OSI enabled all functions of the enterprise: applications, processes, operating models, and the extended enterprise out to suppliers. In order to support the growing need for application speed, data storage space, and bandwidth, OSI had made some new investments in hardware and networks over the years. While the company's IT division continued to rely on its internal staff to set up new data centers, upgrade existing ones, and improve all-around performance, it began having difficulties in optimally delivering secure and uninterrupted access

to its services. Responsiveness started to suffer, and the cost to continually upgrade skill sets of internal IT staff members was very high. Employee morale began to deteriorate, retention of the more talented staff became a challenge, and the department was left with few people who could effectively handle the responsibilities of supporting the IT infrastructure. OSI was now faced with the issue of how to best manage its IT equipment—accessed by thousands of computer users—while focusing on its core business.

CLIENT SERVER

OSI had a proliferation of servers with a variety of operating systems consisting of Solaris and AIX. The environment included more than 700 servers (Sun/IBM/Intel) that were spread out among three different data centers. The servers, configured as Web, application, and database environments, hosted a variety of Web and database applications. The diverse mix of platforms made it difficult to manage the infrastructure to derive optimal results. The sheer number of servers, their complex relationships, and the frequent changes they underwent had made updating and maintaining the configuration management database a Herculean task. In recent years, the infrastructure had evolved in a haphazard, piecemeal fashion—that is, in response to the needs of specific business units rather than as the result of careful execution of a comprehensive infrastructure strategy. The result was a complex and underused infrastructure that was also inflexible, poorly integrated, and very expensive to maintain. The servers were maintained through a series of patches and quick fixes, leading to an unscalable, non-standardized, and sub-optimized configuration whose inflexibility was a hindrance to information sharing.

NETWORK

Spread across six buildings in four cities, all of OSI's servers and its more than 1,500 workstations were connected through a fiber backbone and leased lines. Access to networks was managed using secure, real-time data and voice communications among company sites and through third-party providers, positioning OSI to derive the greatest value from its strategic relationships with suppliers. OSI had to lease these lines from third parties based on flat-fee contracts, but it could not achieve significant volumes in all segments. As a result, the company did not realize economies of scale and paid much more per usage in certain sections of its communication network.

Outsourcing

Outsourcing is defined as the management and/or day-to-day execution of an entire business function, or development effort, by a third-party service provider. There are many forms of outsourcing, ranging from software application development, integration, and deployment, to payroll execution, to package handling. Small businesses hiring a self-employed accountant to handle the corporate tax returns are in essence outsourcing their tax preparation. Large corporations often hire outside firms to manage their customer support so they can focus more attention on their core business functions.

Reasons to Outsource

Successful outsourcing requires the hiring company's management to have a clear set of goals in mind and a realistic sense of the benefits and risks involved. Outsourcing provides the

opportunity for a company to redirect resources from non-core activities to ones more integral to the company's mission by allowing an outside expert to assume responsibility for operational details. In addition, outsourcing providers can bring extensive, often world-class capabilities, including leading-edge technology, to help companies become more productive and more adept at satisfying the needs of their customers. Outsourcing also enables management to turn over to its suppliers certain classes of risks, such as demand variability and capital investments. The outsourcing provider can spread these risks among several clients.

Access to the outside provider's lower cost structure, usually a result of greater economies of scale, is one of the most compelling tactical reasons for outsourcing because it has the potential to significantly reduce costs for the hiring firm.

Types of Outsourcing

APPLICATION DEVELOPMENT OUTSOURCING

Custom solutions and applications enable enterprises to derive competitive advantage, fill gaps in the functionality provided by commercial packaged applications, deal with aspects of the business process that are unique to the company, and address business processes for which no solutions are available in the market.

Outsourcing companies provide the domain expertise to help their clients define the requirements for an appropriate and effective solution. These providers have the required capabilities to define scalable and high-performance architectures, develop the solution, provide program- and project-management experience to oversee the entire process, and deliver on-time, on-budget business solutions.

INFRASTRUCTURE OUTSOURCING

Because infrastructure is crucial for a strong IT function, it is important not only to have the correct infrastructure in place but also to manage the infrastructure well to achieve the best results. The challenge lies in ensuring that the IT infrastructure meets the desired standards for security, reliability, and availability. For effective IT infrastructure management, total cost of ownership (TCO) of systems should be comparable to industry benchmarks, and the IT infrastructure team should have the right blend of skill and expertise to maintain the infrastructure domain.

By consulting with and assisting clients in planning and setting up scalable infrastructure, IT infrastructure management firms are able to optimally deploy their skilled teams to provide expertise managing the complex IT infrastructure of companies. These firms provide services to manage the infrastructure—servers, databases, applications, and networks—and to ensure that the IT environment is available around the clock, supporting both operations and users and auditing infrastructure to ensure high performance and mission-critical security.

BUSINESS PROCESS OUTSOURCING

Business process outsourcing (BPO) refers to the growing trend among companies of relocating entire business functions to third-party service providers, typically in low-cost locations. The outsourcer manages a specific process or function for a client (e.g., finance and

accounting, human resources, or procurement) more efficiently and cost effectively than the client can manage it in-house.

Outsourcing Pricing Models

Outsourcers typically use three types of pricing models: fixed bid, time and material, and cost plus.

FIXED BID

In a fixed bid, the outsourcer charges a fixed fee and fixed time for any given requirement. Fixed-bid contracts are advisable for clearly defined projects that have frozen requirements.

TIME AND MATERIAL (T&M)

When an outsourcer charges for time and materials, it provides a skill/experience/rate matrix, generally with a per-hour rate. T&M is advisable for projects in which scope, functionality, or requirements keep evolving or are likely to change.

COST PLUS

In a cost-plus pricing model, the outsourcer works against a committed budget with full transparency into its actual costs, which are marked up by a predetermined percentage as the outsourcer's profit margin. Cost plus works well for projects in which the requirements are not known in advance.

The Business Case for Outsourcing at Office Supply

TSI's Jim Anfield had to respond to Benjamin Wagner's request for proposal (RFP) with a detailed business case that showed both short- and long-term benefits for OSI. After the meeting with Wagner, Anfield's discovery team of hardware engineers, financial analysts, and sales personnel spent two intense weeks at OSI.

In analyzing OSI's infrastructure and recommending a cost-effective solution for improving it, Anfield adopted a strategic view of OSI's infrastructure. His team had two main aims: to deliver improved IT service, and to drive down the cost of operations, which would help OSI realize immediate cost savings and support its move toward better revenues and profits. IT service levels had to be raised dramatically, while associated operating costs had to be reduced through a program of standardization and consolidation across a range of hardware, database, and communication networks. OSI's spaghetti-like IT infrastructure had to be streamlined, with the goal of producing significant cost savings.

The TSI team began the data collection process with several meetings with key people in OSI's IT department to gather information about the current infrastructure. This information then had to be synthesized into a business proposal for Harden and Wagner that would demonstrate substantial savings for OSI. Anfield also had to attain target profit margins for his company to get approval from TIS management for the deal.

In the first stage of the due diligence process, the team developed the base case after careful exploration of OSI's current spending on IT infrastructure. This stage of the analysis determined current costs incurred on the purchase and maintenance of servers, networks, and other infrastructure-related expenses. The team then further broadened the analysis to include costs TIS would incur to manage a similar infrastructure. Careful consideration was given to other factors, such as a highly trained TIS staff (who could be more efficient than their OSI counterparts), economies of scale (i.e., the same person could work on several projects), and high-performance servers. The due diligence process also involved analyzing the other benefits (in addition to cost savings) that OSI could anticipate as a result of the outsourcing arrangement, such as improved performance, fewer periods of downtime, and an overall increase in customer satisfaction levels.

As a last step, TIS's profit margin was added to the outsourced cost, and then the total outsourcing expenditure was compared to OSI's base case numbers to determine the deal's savings potential.

Base Case

The base case expense data gathered by the TIS team was divided into three categories: salary expense, hardware expense, and others. The salary expense category included salaries, benefits, and overtime. The hardware expense category included both server and storage hardware and hardware maintenance costs. Finally, the others category included software and software maintenance costs, network costs, facility/rental charges, disaster recovery costs, and corporate overhead related to infrastructure maintenance.

The information gathered from the in-depth business discovery was used to develop the base case (see **Exhibit 2** for the summary base case). Certain assumptions about wage growth rates, cost curves, and hardware maintenance costs in the base case were determined by current OSI budgeting and by TIS experience from previous projects. The base case data started five years prior to Year 1 and ended four years in the future. Data from past years was used to estimate costs for the future and to calculate depreciation and book value of hardware for Year 1 and Year 2. Exhibit 2 shows the total expense—about $372 million—OSI would incur over the next five years if it maintained the infrastructure internally. The accompanying Excel exhibit spreadsheet details the base case calculation.

Benefits of the Deal

Exhibit 3 schematically summarizes the benefits and costs of the deal. Specific benefits are as follows:

IMPROVED PERFORMANCE

The reduction—possibly even the elimination—of operational errors and inefficiencies is one of the most important advantages of outsourcing. TIS employed seasoned staffs who adhered to rigorous and well-documented "run book" methodologies. The result was deep experience and consistent discipline that translated directly into improved reliability in system access and repeatability of expected outcomes. TIS's extensive investments in people, technology, and processes enabled a level of service and quality that was virtually unattainable for OSI attempting

to handle its own IT functions. And because of its aggregated buying power, TIS could deliver performance and reliability improvements while reducing costs for customers.

OSI could benefit from a number of changes in data center architecture to achieve industry-standard deployment. In addition to implementing these changes, TIS could provide round-the-clock, real-time centralized monitoring and management of critical servers and network segments. TIS engineers, who were highly trained in providing these services, could do a better job of regularly tuning system performance and supervising usage of CPU, memory, and storage. The company's past experience at automated incident-handling mechanisms, including reconfigurations of firewalls, could help OSI achieve a more secure network. Based on periodic event analysis and recommendation reports from TIS, OSI could restructure its critical services and enhance the overall security and performance of its systems. TIS administrators could also attain greater efficiencies in job scheduling, hardware resource allocation, patch application, and I/O (input/output) operations execution.

COST SAVINGS

By outsourcing its IT operations, OSI could diminish traditional capital investment in infrastructure and technology by diverting these costs to operating expenses. As an additional benefit, OSI could pay for these migrating operating expenses on a per-transaction basis, thus allowing it to vary its expenses with demand, floating directly with the fluctuations in the market. In addition to these advantages, the company could realize annual savings from fewer costs in three primary categories: compensation (salary, benefits, and overtime pay); hardware purchase and maintenance; and other miscellaneous expenses such as software, network, facilities, disaster recovery, and corporate overhead.

Compensation costs at TIS were significantly lower than at OSI for several reasons. The specialized training of TIS engineers made it possible for fewer people to do the same amount of work. In addition, TIS was located in Denver, which meant a lower cost of living and hence, lower salaries than the Chicago-based OSI. Lastly, TIS could assign personnel to a variety of projects, making the best use of their time. This helped save money not only in direct salary expenses but also in related costs such as overtime (6 percent of salary expenses) and overhead (26 percent). OSI currently employed 213 people for activities related to infrastructure maintenance; the same tasks could be accomplished by about 130 people at TIS.[1]

Hardware savings could be realized from several factors. TIS could help reduce the number of OSI servers through the more efficient management of their storage. Also, because of its relationships with suppliers and by negotiating purchases in bulk, TIS could procure servers from the manufacturers at a lower price than OSI could, thus lowering capital expenditure and depreciation. Additionally, it could often eliminate charges incurred by installation services because of its internal capabilities to handle these activities. Servers run by TIS would need to be refreshed only once every four years, compared to those maintained by OSI, which needed refreshing every three years.

TIS also could lower OSI's software costs because of its bulk purchase rates with vendors, as well as lower networking costs by sharing across clients its existing leased lines connecting cities.

[1] The headcount reduction is a complicated process that involves such human resources issues as employee morale, the cost of severance packages, and potential union issues. In this case, morale and union issues are not considered, but severance packages are included in the analysis.

Additionally, it would be less expensive for TIS to maintain facilities because it could more effectively manage floor space, heating and air conditioning, and power consumption, and its facility was located in a less expensive city. Finally, TIS had fewer disaster recovery and corporate overhead costs because it had more efficient management and economies of scale.

Costs of the Deal

Although the outsourcing contract between OSI and TIS involved significant cost savings for OSI, it also contained certain unavoidable additional costs, particularly during Year 1. A new outsourcing deal carried many transaction costs, including those involving organizing tenders, signing contracts, and determining legal matters (e.g., ownership and copyright). The hardware also had to be transported from OSI's Chicago office to TIS's Denver facility, which involved significant freight expenditure. The deal also involved a period of knowledge transfer, during which personnel of both TIS and OSI would be working simultaneously. These up-front costs often caused the cost savings of the deal to be negative during Year 1.

In addition to these up-front costs, the deal also involved costs such as TIS's profit and a marginal increase in risk exposure for OSI, now that a large part of its operations would be controlled by an outside vendor. New outsourcing clients were often uncomfortable in letting go of this control, and Anfield knew he had to address these concerns to build credibility for TIS.

The Proposal

The day before the final proposal was to be presented to Wagner, Anfield looked at his analysis. The comprehensive report on his desk was the result of two weeks of research and interviews conducted by his team to gather information about OSI's current IT infrastructure and costs.

Although the long-term benefits due to performance, security, and higher customer satisfaction levels looked good in theory, they were difficult to quantify and validate in reality. Such qualitative arguments could be used to substantiate the outsourcing advantages, but they could not be used as primary reasons to convince Wagner; he was interested only in hard numbers and was adamant about realizing short-term savings.

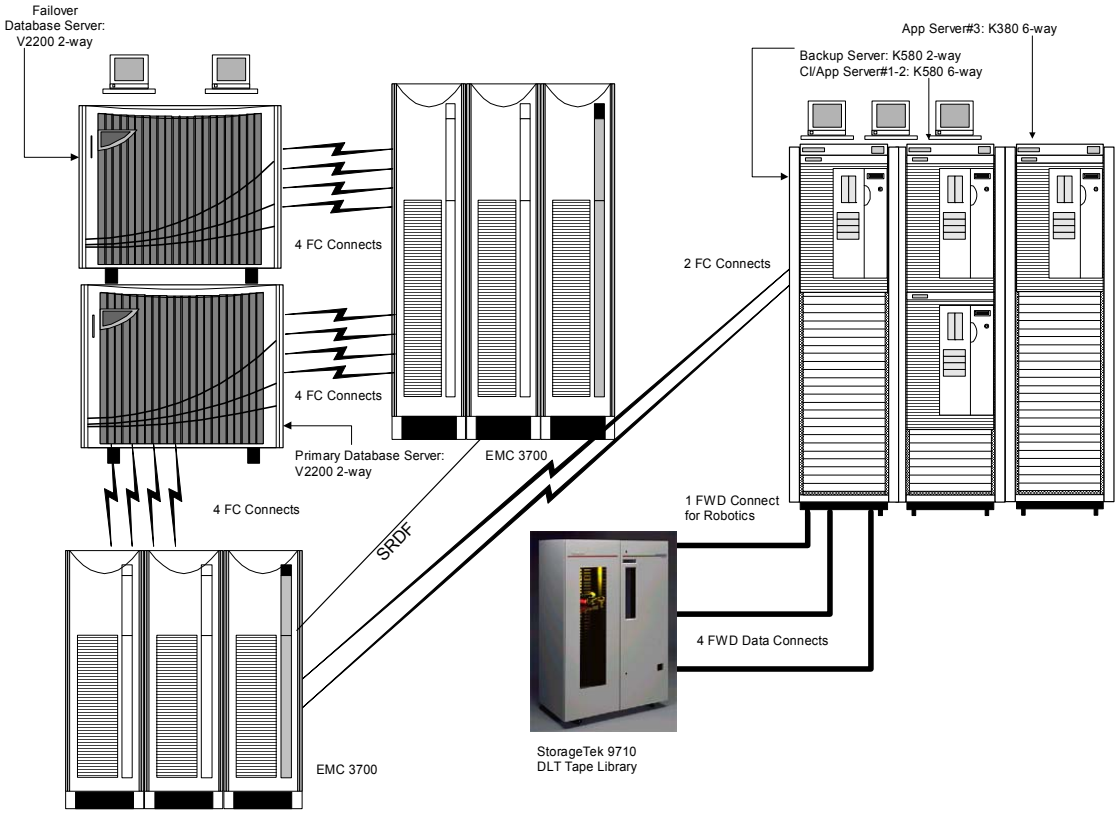
Fortunately, TIS had executed many outsourcing deals and had standardized a business case analysis model for calculating the cost plus for outsourcing. **Exhibit 4** through **Exhibit 11** summarize the findings of TIS's in-depth business discovery, and **Exhibit 12** through **Exhibit 14** show the standard templates and the analysis model it used to calculate the cost savings for OSI and the potential profit for TIS from its outsourcing deals. (See the accompanying Excel exhibit spreadsheet for the detailed templates and the model analysis.)

The assumptions driving the outsourced business case are first entered into the deal assumptions template in Exhibit 12. The details of the outsourcing model business case are then calculated in the deal calculations template in Exhibit 13. Given the input assumptions, Exhibit 14 automatically calculates and summarizes the savings analysis for OSI. **Exhibit 15** then calculates a profit and loss (P&L) statement for TIS for the OSI outsourcing deal.

Anfield knew OSI was looking for a 10 percent total cost savings over the life of the deal, and a significant portion of those savings in the first year. But he also had to factor in the profit margin for TIS. Typically TIS required at least 16 percent contribution margin and 8 percent operating profit over the life of the deal.

It was already 4:00 p.m.; Anfield ordered some pizzas and sent an e-mail to his analysts to convene a meeting starting in thirty minutes. He was not sure if the OSI outsourcing proposal would be profitable for TIS because it was not clear how to structure this deal so that OSI would get a significant cost saving starting in the first year. He was also not sure if he could quell Harden's organizational concerns. He did know one thing: it was going to be a late night crunching the numbers.

Exhibit 1: OSI's Data Center Architecture



Simplified data center architecture consisting of redundant servers, mirrored data storage with failover redundancy, and disaster recovery tape backup. OSI had 656 servers and 102 GB of data storage. Duplicate servers and data storage redundancy were necessary for round-the-clock availability.

Exhibit 2: Summary Base Case ($)

Total IT Infrastructure Expense	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Salaries	16,231,000	17,059,952	17,932,989	18,852,537	19,821,164	89,897,642
Overtime	973,860	1,023,597	1,075,979	1,131,152	1,189,270	5,393,859
Benefits	5,680,850	5,970,983	6,276,546	6,598,388	6,937,407	31,464,175
Overhead expense	4,220,060	4,435,588	4,662,577	4,901,660	5,153,503	23,373,387
Hardware	11,777,931	10,946,949	10,199,729	9,623,588	9,269,186	51,817,382
Hardware maintenance	2,355,586	2,189,390	2,039,946	1,924,718	1,853,837	10,363,476
Software	9,000,000	9,450,000	9,922,500	10,418,625	10,939,556	49,730,681
Software maintenance	1,350,000	1,417,500	1,488,375	1,562,794	1,640,933	7,459,602
Network	3,000,000	3,090,000	3,182,700	3,278,181	3,376,526	15,927,407
Facility expense	12,000,000	12,000,000	12,000,000	12,600,000	12,600,000	61,200,000
Disaster recovery	3,000,000	3,120,000	3,244,800	3,374,592	3,509,576	16,248,968
Corporate overhead allocation	1,623,100	1,705,995	1,793,299	1,885,254	1,982,116	8,989,764
Total	71,212,387	72,409,954	73,819,439	76,151,489	78,273,075	371,866,343
Percent growth		1.7%	1.9%	3.2%	2.8%	

Note: The complete base case with assumptions is in the accompanying Excel exhibit spreadsheet.

Exhibit 3: Benefits and Costs of the Deal

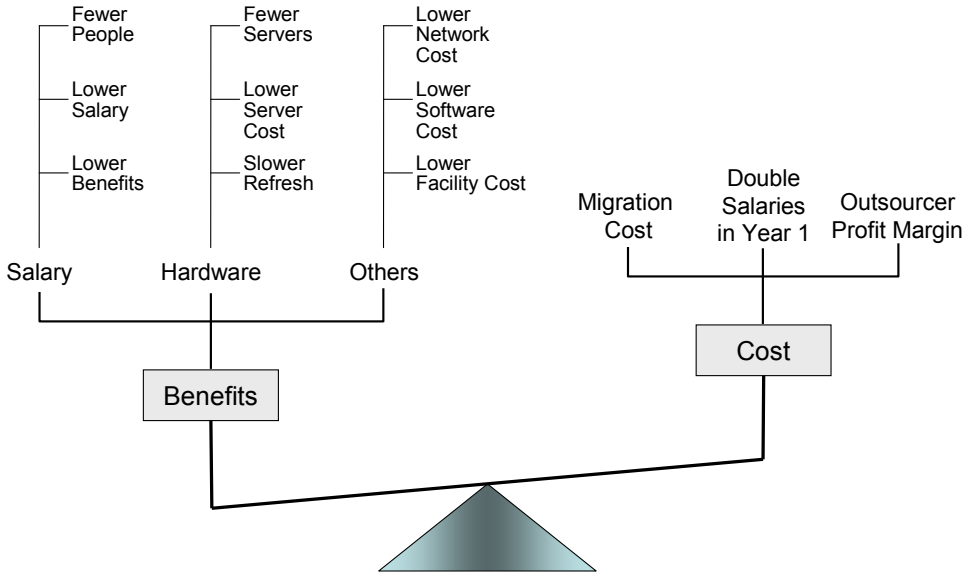


Exhibit 4: General Assumptions

Customer name	OSI IT Outsourcing Deal
Opportunity description	Financial Services
Cost of capital	12.0%
Hardware financing rate	9.0%
Funds cost rate	5.0%
Annual hours per FTE	2,080
Deal length in months	60

Exhibit 5: FTE Assumptions (%)

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Wage growth rate			3	3	3	3
Benefits rate	30	30	30	30	30	30
Employee expenses rate	15	15	15	15	15	15

Exhibit 6: Hardware and Software Assumptions

	Year 1	Year 2	Year 3	Year 4	Year 5
Hardware assumptions					
Server annual refresh rate = 25.0% per year					
Hardware financing term = 36 months					
Server growth	2.0%	–10.0%	2.0%	2.0%	2.0%
Server capital cost curve	–9.8%	–10.0%	–8.0%	–6.0%	–3.0%
Server unit capital cost for Year 1	$38,000				
Storage growth	2.0%	2.0%	2.0%	2.0%	2.0%
Storage capital cost per square foot for Year 1	$7.50				
Hardware maintenance as percentage of hardware depreciation	15.0%	15.0%	15.0%	15.0%	15.0%
Software assumptions					
Software maintenance percentage of software	15.0%	15.0%	15.0%	15.0%	15.0%
Software cost reduction percentage vs. base case	–10.0%	–10.0%	–10.0%	–10.0%	–10.0%

Exhibit 7: Other Assumptions

	Year 1
Floor space assumptions	
Base allocated floor space in square feet (Year 1)	30,000
Floor space monthly unit cost per square foot	$16.00
Annual escalation	3.0%
Other cost assumptions	
Base case disaster recovery contract price	$1,100,000
Disaster recovery cost reduction vs. base case	–5.0%
Network cost reductions vs. base case in each year	–10.0%

Exhibit 8: Annual Salaries of Outsourced Employees in Year 1

Account leader	$130,000
Database administration	$78,000
Help desk staff	$45,000
Network administration	$57,000
Operations support analyst	$45,000
Server administration	$75,000
Storage administration	$75,000
Migration project management	$90,000

Exhibit 9: FTE Headcount

	Year 1[a]
Retained by company	
Management	6.0
Database administration	17.3
Help desk staff	18.8
Network administration	17.3
Operations support analyst	17.3
Server administration	56.3
Storage administration	24.8
Total retained by outsourcer	157.5
Outsourcer	
Account leader	2.0
Database administration	15.0
Help desk staff	16.3
Network administration	15.0
Operations support analyst	15.0
Server administration	48.8
Storage administration	21.5
Total outsourcer	133.3

[a] Three FTEs for management only, each year after Year 1; for Office Supply all other categories become zero after Year 1.

Exhibit 10: Migration Expenses in Year 1

Server moving expense	$1,500,000
Training of new employees	$85,000
Retention bonuses	$250,000
Severance	$500,000
Migration team labor	$521,163
Total	$2,856,163

Note: Year 0 and Year 2 migration expenses are zero.

Exhibit 11: Margin and Deal Assumptions (%)

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Hardware	5	5	5	5	5	5
Hardware maintenance	5	5	5	5	5	5
Software	5	5	5	5	5	5
Software maintenance	5	5	5	5	5	5
FTE resources	20	20	20	20	20	20
Recurring support costs		15	15	15	15	15
Other recurring costs		15	15	15	15	15
Floor space		10	10	10	10	10
Disaster recovery		10	10	10	10	10
Network		10	10	10	10	10
Migration	15	15	15			
Outsourcing overhead allocation	7	7	7	7	7	7
Contingency	5	5	5	5	5	5

Exhibit 12: Deal Assumptions Template

General assumptions

		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Customer name =							
Opportunity description =							
Cost of capital =							
Hardware financing rate =							
Funds cost rate =							
Annual hours per FTE							
Deal length in months =							
Deal months per year			0	0	0	0	0
Remaining months			0	0	0	0	0

FTE assumptions

Wage growth rate						
Benefit expense assumption as a percentage of salary expense						
Employee office expense as a percentage of salary expense						

Hardware assumptions

Server growth						
Server unit capital cost for Year 1						
Storage growth						
Storage capital cost for Year 1 per GB						
Hardware financing term =	months					
Hardware maintenance as percentage of hardware depreciation						
Hardware annual refresh rate =	per year					
Hardware capital cost curve						

Software assumptions

Software maintenance percentage of software						
Software cost reduction percentage vs. base case						

Floor space assumptions

Base allocated floor space						
Forecasted floor space based on server growth		0	0	0	0	0
Floor space monthly unit cost per square foot			$0.00	$0.00	$0.00	$0.00
Escalation						

Other cost assumptions

Base case disaster recovery contract price						
Disaster recovery cost reduction vs. base case						
Network cost reductions vs. base case						

Note: The complete template is in the accompanying Excel exhibit spreadsheet.

Exhibit 13: Outsourcing Deal Calculations Template

Assumptions From Deal Assumptions	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Outsourcing deal assumptions									
Deal months									
Contingency									
Corporate overhead allocation percentage									
Hardware									
Server growth									
Server annual refresh rate									
Server unit capital cost for Year 1									
Storage growth									
Storage capital cost for Year 1 per GB									
Hardware annual refresh rate = 25.0% per year									
Hardware capital cost curve									
Software									
Base case software									
Software cost reduction percentage vs. base case									
Software margin									
Software maintenance percentage of software									
Software maintenance margin									
Base case disaster recovery									
Disaster recovery cost reduction vs. base case									
Disaster recovery margin									
Floor space monthly unit cost per square foot									
Forecasted floor space based on server growth									
Floor space margin									

Note: The complete template is in the accompanying Excel exhibit spreadsheet.

Exhibit 14: Savings Analysis Template

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Savings Analysis						
Base case						
Outsourcing price						
Difference						
Savings percentage						
Savings by Area						
FTE						
Base case expense						
Salary						
Overtime						
Benefits						
Overhead						
Total						
Outsourcing FTE price						
Savings						
Hardware						
Base case						
Hardware						
Hardware maintenance						
Total						
Outsourcing hardware price						
Savings						
Software						
Base case						
Software						
Software maintenance						
Total						
Outsourcing software price						
Savings						
Migration						
Base case						
Outsourcing migration price						
Savings						
Services						
Base case						
Network						
Disaster recovery						
Corporate overhead allocation						
Total						
Outsourcing case						
Disaster recovery						
Network						
Total						
Savings						
Facilities						
Base case						
Facility expense						
Outsourcing						
Floor space						
Savings						
Total						
Base case						
Outsourcing case						
Savings						

Note: The complete template is in the accompanying Excel exhibit spreadsheet.

Exhibit 15: TIS Deal P&L Template

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
Revenue									
Revenue									
Financing revenue									
Total revenue (outsourcing price)									
Direct expense									
Salary									
Benefits									
Employee expenses									
Migration expense									
Hardware depreciation expense									
Hardware financing expense									
Hardware maintenance									
Software expense									
Software maintenance									
Network expense									
Floor space									
Disaster recovery									
Contingency									
Total direct expense									
Contribution margin									
Contribution margin percentage									
Corporate expense									
Corporate overhead allocation									
Financing expense									
Total corporate expense									
Operating profit									
Operating profit %									

Note: The complete template is in the accompanying Excel exhibit spreadsheet.