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Hope Koch
Baylor University

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Pegasus: Lessons from a Business-to-Business Electronic Marketplace's Struggle

Hope Koch
Baylor University
Hope_Koch@baylor.edu

ABSTRACT

This paper reports on a 2.5-year case study of the North American utility industry's effort to create a business-to-business (B2B) electronic marketplace (e-marketplace)-- Pegasus. The utilities formed Pegasus in order to improve utility industry procurement practices by better integrating all aspects of the supply chain. The paper discusses the e-marketplace, evolving strategies, technology and challenges. This discussion offers several lessons to those interested in improving industry procurement practices with a B2B e-marketplace.

Kew Words: e-marketplace, case study, e-business, success

INTRODUCTION

Business-to-business (B2B) electronic marketplaces (e-marketplaces) have been one of the most heralded developments in recent years. These marketplaces bring businesses buying and selling goods and services together into an on-line buying community. They promise to increase the efficiency and effectiveness of procurement activities by replacing traditional manual processes with automated, integrated, electronic procedures and by expanding the number of available trading partners. Despite the technology availability and the high potential benefits, very few e-marketplaces succeed (Bannan, 2001; Meehan, 2002).

The purpose of this paper is to provide insight into Pegasus, a B2B e-marketplace for the North American utility industry. Although Pegasus has faced significant challenges, it has survived. Pegasus' experiences will contribute to knowledge regarding e-marketplace formation, survival and success. This knowledge will offer researchers rich insight into e-marketplaces. To date, most of the e-marketplace research hypothesizes e-marketplace impacts. These insights will help organization overcome e-marketplace implementation challenges and reap the benefits of digital marketplace participation.

This paper is based on a longitudinal case study (Eisenhardt, 1989; Emerson, Fretz and Shaw, 1995) with Pegasus' e-marketplace. The case study began a few months after Pegasus' inception, continued as member's e-marketplace expectations escalated and subsequently declined and endured as the member's anticipated benefits stabilized. The research involved fifteen field visits and two telephone interviews. Field visits spanned between ninety minutes and six hours. Data collection included participant observations, interviews, surveys and internal and external document reviews. Collected information came from the e-marketplace as well as organizations participating in the e-marketplace. This included buyers and sellers with contrasting use levels and a targeted organization that chose not to join Pegasus. We interviewed the person in each organization that knew the most about the e-marketplace. The table below shows the organizations and the titles of the respondents. All organization names are pseudonyms.

The paper is organized as follows. The first section describes Pegasus. The next section explains Pegasus e-business strategy. The paper then discusses Pegasus e-business software solution. The lessons learned section follows. The conclusion assesses the contribution.

MEMBER ORGANIZATION CLASSIFICATION AND TYPE	ORGANIZATION NAME	INTERVIEWEE JOB TITLE
Marketplace	Pegasus	<ul style="list-style-type: none"> • President and Chief Executive Officer • Sales Vice President • Buyer Development Manager
High seller	Office Plus	<ul style="list-style-type: none"> • Vice President Strategic Accounts • Quality Manager • President • Division Customer Service Representative
Low seller	Bearing Point Manufacturing	<ul style="list-style-type: none"> • Account Executive, E-commerce
Low seller	Mining Manufacturing	<ul style="list-style-type: none"> • Manager Capital Projects
High buyer	Synergy	<ul style="list-style-type: none"> • Purchasing Manager
High buyer	Gulf Coast Energy (Regulated)	<ul style="list-style-type: none"> • Corporate Purchasing and E-Procurement Manager
Low buyer	Lone Star Utilities	<ul style="list-style-type: none"> • Procurement Services Manager • Senior Contract Representative
Low buyer	Gulf Coast Energy (Unregulated)	<ul style="list-style-type: none"> • Purchasing Manager
Low buyer	U.S. Electric and Power	<ul style="list-style-type: none"> • Director, Strategic Procurement and Supply Chain
Nonmember	U.S. Electric and Power	<ul style="list-style-type: none"> • Director, Strategic Procurement and Supply Chain

Table 1. B2B E-marketplace Interviews

COMPANY DESCRIPTION

The utility industry consists of utilities and direct good suppliers. Utilities provide electricity. Direct good suppliers supply infrastructure enabling electricity delivery. This includes transformers, poles and wires. Until 1999, North American utilities had never faced competition in electricity delivery. Utilities had always passed increased costs along to consumers with rate increases. In 1999, utility industry deregulation was looming. Utilities knew swift supply chain and purchasing improvements were necessary to survive.

To prepare for deregulation, many utilities engaged supply chain consultants. Six utilities engaged a Houston, Texas-based Pete Marvick consultant. These six utilities supply 60% of North America's energy. The consultant realized the utilities had similar problems and solutions for one could help another. He also realized by working together to integrate supply chain processes, streamline supplier production costs, negotiate pricing and improve purchasing practices, utilities could swiftly reduce operating costs. Utility collaboration required care. The perception of non-compliance with the Robinson-Patman Act concerned many utilities. The Robinson-Patman act prevents organization from engaging in anticompetitive actions like price fixing.

At this same time, corporate America was enamored with integrating the Internet into business practices. Wall Street was considering Internet initiatives in company evaluations and heavily rewarding companies with e-business strategies. Many companies were coming together to do business with the Internet in business-to-business (B2B) electronic marketplaces (e-marketplaces). These dynamics led to twenty-one North American utilities investing a total of \$100 million to form a B2B e-marketplace for the utility industry -- Pegasus. Pegasus became a separate company headed by the consultant that was working with six of the founding utilities. Pegasus drew employees with deep utility industry experience, choosing employees from both the supplier and buyer side.

When the Pegasus idea was formally hatched, the utilities expectation regarding Pegasus' membership benefits quickly escalated. Many utilities planned to use Pegasus for all of their transactions and expected significant business process savings and efficiency. Many utilities also believed that Pegasus would become a publicly traded company and that as stockholders, they would reap large profits from the public offering. When Pegasus opened for business in January 2001 expectations fell quickly. The initial Pegasus' interface was not as efficient as the utilities' existing practices and most of the utilities business partners refused to participate.

Pegasus' design process contributed to the systems' initial problems. Pegasus founders rushed system delivery. Pegasus was formed in June 2000 and the system went live in January 2001. Given this short time period, Pegasus' e-marketplace was based on packaged B2B e-marketplace software. Pegasus did not have time to solicit input from participants in order to develop an e-marketplace that fit with industry practices. Pegasus was trying to be the first utility B2B e-marketplace and believed that their participants had to use the e-marketplace in order to remain competitive. A low buyer on Pegasus' marketplace commented:

At first Pegasus had this attitude of “throwing over the fence” and a desire to be on the leading edge. As such they were coming up with these solutions that the utilities didn't need and just throwing them over the fence.

When the utilities rejected Pegasus' offerings and the business environment stopped rewarding companies for electronic business endeavors, Pegasus quickly reassessed its e-marketplace definition, its added value and its survival. Pegasus modified their design process to solicit utility and supplier input. Pegasus also hired representatives with extensive industry experience to help design the B2B e-marketplace and to work with the utilities and suppliers to identify opportunities where Pegasus use was beneficial. These buyer development managers learned from the utilities conveyed the utilities' needs to the e-marketplace designers.

Unlike many e-marketplaces, Pegasus has survived and is growing. Starting with only 21 utilities as time has progressed, Pegasus has added more utilities and suppliers. Today 30 utilities and 450 suppliers use Pegasus (Pantellos, 2003b). Pegasus has executed over 200,000 transactions (Editorial Staff, 2002). In 2003 over \$1 billion dollars in transaction went through Pegasus compared to \$750 million in 2002 (Pantellos, 2003a). The paragraphs below discuss Pegasus' electronic business (e-business) strategy.

ELECTRONIC BUSINESS STRATEGY

Pegasus' original e-business strategy was to be an open e-marketplace for the entire utility industry. Pegasus envisioned a marketplace with all industry utilities and suppliers. For membership, organization would pay an annual membership fee. Buyers and sellers would pay a \$2 transaction fee for all orders completed Pegasus.

Originally, Pegasus promised more efficient, streamlined, integrated procurement practices. In theory, buyers and sellers in the utility industry could replace their maze of procurement procedures (face-to-face, telephone, fax, order book, electronic data interchange) with one e-marketplace for all transactions. Pegasus promised utilities easy access to many more suppliers, allowing utility buyers to easily compare supplier prices. Pegasus promised suppliers access to many more buyers. These promises were unrealized and this strategy did not work.

When Pegasus opened for business in January 2001, the twenty-one founding utilities planned to execute all of their transactions over Pegasus. This did not happen. In January 2001, Pegasus' marketplace opened with a business-to-consumer interface similar to Amazon.com. There was no integration between the e-marketplace and the participant's back office systems (e.g. inventory, accounts payable). For direct goods, Pegasus was less efficient than the utilities' existing business practices, which consisted of tightly integrated electronic relationships with key suppliers. One utility explained that in setting up utility infrastructure utility engineers draw the needed infrastructure with computer-aided-design tools. These tools automatically place orders for the infrastructure to key suppliers. Pegasus required that the engineers search for each item on the e-marketplace.

At Pegasus' inception hardly any of the industry suppliers joined Pegasus. The suppliers did not like the Pegasus' concept because it allowed easy price comparison. Utility industry suppliers frequently offer different prices to different customers, usually promising each utility that they had the suppliers' “best price.” As such listing supplier pricing on an open marketplace did not fit with industry practice.

Utility buying practice was another challenge to Pegasus' original e-business strategy. Utilities purchase many products and services, utilities have professional procurement shops comprised of professional buyers. Buyers negotiate long-term purchasing agreements with suppliers. Purchasing agreements include price, delivery and quality, but over time also include noncontractible services like in-warehouse stocking and supplier innovation on behalf of the utility. The relationships developed as part of these agreements are long-term. The utilities know and trust their key suppliers and vice versa. The premise of the traditional B2B e-marketplace business model and Pegasus' original strategy is enabling a buyer to compare many suppliers. Utility suppliers did not like this model as it forced them to compete on price alone. They argued that they currently deliver more value to their customers than can be measured with price. Utilities also did not want to jeopardize their supplier relationships and choose the low-cost supplier. Utilities realized the noncontractible services such as trust in their existing supplier relationships were more important than choosing the low-cost supplier.

Given that utility procurement departments preselect suppliers and prenegotiate supplier pricing, the concept of an open B2B e-marketplace where any buyer can purchase from any seller does not work in most situations. This is especially true with direct goods such as utility poles that are customized to each utility's specifications. Utilities want to do business with and maintain their long-term relationships with preselected suppliers. Utilities do not want their buyers shopping suppliers to obtain a “better deal.” Because these industry practices conflict with Pegasus' open e-marketplace concept, Pegasus had difficulty influencing member organizations to extensively use the marketplace and influencing suppliers organization to join the e-marketplace.

To survive, Pegasus devised several other strategies. The strategies recognize that utilities will not shop for the lowest price on a daily basis but utilities do periodically evaluate existing supplier arrangements. The strategies also recognize that utility e-marketplace use will take time. Pegasus' revised strategies include sourcing, auctions, business process services and capital asset services. Pegasus also offers consulting services that help the utilities use the e-marketplace to improve their supply chain. Table 2 shows Pegasus' offerings. The paragraphs below discuss each offering.

SERVICE OFFERING	SOURCING	AUCTIONS	BUSINESS PROCESS SERVICES	CAPITAL ASSET SERVICES
VOLUME	Not available	Moved over \$700 million in transactions	3-10 companies use hourly	5,000 companies use daily
REVENUE SOURCE	Term-based commission	Event-based commission and base rate	Not available	Commissions, transactions and subscriptions

Table 2. Pegasus' Service Offerings: Volume and Revenue Source, Summer 2002

Sourcing

Sourcing refers to purchasing items for utilities and includes private and collaborative purchases. Private sourcing involves purchasing specific items for a specific utility. One example is meters. A utility that needs to purchase meters can engage Pegasus to negotiate the meter contract. This arrangement occurs under the premise that because Pegasus employees have worked for the meter supplier or have experience negotiating with the meter supplier, Pegasus can negotiate better pricing than an individual utility. Collaborative sourcing occurs when Pegasus works with a number of utilities that need the same product or service from the same supplier. Pegasus works with the utilities to streamline their product specifications and works with suppliers to reduce supply chain costs. An example is Pegasus' work with six utilities and a wood pole supplier. All six utilities use wood poles to deliver electricity. Each utility requires slightly different product specifications. For example, some utilities require pointed poles and some want resin-treated poles. Producing this array of specifications increases supplier production costs. Pegasus facilitated the utilities and the supplier coming together to create standardized product specifications for all six utilities, reducing supplier production costs and lowering utility pricing. Once the contract is negotiated the utilities can execute the daily ordering over Pegasus' e-marketplace or use traditional procurement channels.

The utilities reap significant value from Pegasus' indirect goods (e.g., office supplies and cellular phones) sourcing arrangements. For most direct materials utilities have automated procurement practices and close supplier relationships. As such, Pegasus has difficulty negotiating better pricing and setting up more streamlined procurement practices than what the utilities already have. Suppliers do not offer utilities their best pricing for indirect items because the utilities do not routinely purchase large quantities of these items. Because Pegasus represents the purchasing power of the entire utility industry, Pegasus is able to negotiate better pricing for indirect items. In addition, because the utilities do not frequently and repetitively purchase these items, the utilities do not have automated procurement practices. In these cases, the utilities are using the e-marketplace to purchase indirect items. The quotes below illustrate this.

Pegasus has had some success in indirects: cellular phones, wireless service, office supplies. They have found fertile ground in indirects. While we buy a lot of indirects we are not the indirect suppliers' biggest customer so we don't get the best pricing in indirects. Pegasus is able to leverage the buying power of all the utilities to get better pricing on indirects.

---High buyer, Pegasus

Marketplaces offer more value in the procurement of indirects. The need is unexpected. When you buy something you don't buy everyday you need to go through the catalogue, find what you want and hand it over to a buyer. With indirects there are not prenegotiated contracts. Studies have been done that show in indirect procurement a \$17 product can end up costing \$120 to own and use.

---Sales Vice President, Pegasus

For sourcing, Pegasus receives a commission based on the utilities' savings over the contract term. Pegasus' strategy is to use revenue generated from sourcing arrangements to sustain Pegasus until e-marketplace use increases. Pegasus' strategy is

for the utilities to integrate the e-marketplace into their procurement practices for indirects and then as the utilities become more familiar with the e-marketplace they will integrate it into other procurement practices.

Auctions

Pegasus' auctions are electronic bidding implementations of traditional auctions. Pegasus facilitates several auction types, including forward, reverse, single and multivariable. In a typical auction, a utility will notify suppliers that they are evaluating supplier bids on a particular item, such as a dragline. Traditionally, suppliers submitted sealed envelope bids. The utility evaluated the bids and chose a supplier. Using Pegasus' electronic auction, the utility notifies suppliers about the auction. The utility and the suppliers sign on to Pegasus' auction system. Suppliers enter their bids. Suppliers can see their bid and everyone else's bid. However, they do not know who is bidding what amount. Suppliers can lower their bid. After a specified period of time, the auction ends and the utility chooses a supplier to manufacture their product. The electronic auction is often supplemented by the utility visiting each potential supplier. Utilities collect information regarding quality, time frame and capacity. The electronic auction decision is based on price as well as these other criteria. The utility does not have to select the supplier with the lowest price.

As of June 2002, Pegasus had facilitated several hundred auctions, around 30 per month, moving over \$700 million dollars in auction transactions. Pegasus charges for auction facilitation on an event basis, but is moving towards charging a monthly fee for auction capabilities.

Business Process Services

Business process services help utilities solve an array of problems including virtual inventory, request for proposal and workforce management. Virtual inventory gives utilities visibility of available inventory in the industry. This is useful in unforeseen circumstances that require utilities to provide electrical infrastructure quickly. For example, in repairing hurricane damage in Florida, the virtual inventory service allows Florida utilities to see if other utilities have available electrical infrastructure. This is necessary, as suppliers often require extensive lead-time to manufacture some utility infrastructure.

The request for proposal function automates traditional proposal processes by allowing utilities to electronically contact suppliers with business opportunities. Suppliers then enter their proposal online for utility evaluation. Utilities can accept a given supplier's proposal. Utilities can choose to execute the repeated contract via Pegasus' e-marketplace or through traditional procurement channels such as electronic data interchange. Pegasus intends for the request for proposal function to move utilities toward executing contracts via Pegasus' e-marketplace.

Workforce management helps utilities manage temporary workers, including required skills and time worked. Pegasus estimates that between three and ten utilities use business process services hourly.

Capital Asset Services

Capital asset services provide an on-line listing of each utility's capital-intensive asset inventory. On occasion, a utility has an unexpected need for a capital-intensive asset such as a turbine engine. Production of these assets can take years. As such, the utility must contact other utilities to see if they have the asset available in inventory. Pegasus facilitates the search and transaction. Currently 5,000 companies use Pegasus' capital asset services daily. Pegasus revenue from this offering includes commissions, transactions and subscriptions.

E-BUSINESS SOFTWARE SOLUTION

Figure 1 shows Pegasus' marketplace technology. Buyers and suppliers can connect to the Pegasus marketplace using an array of technologies including enterprise resource planning systems, buying and order management applications, paper and the web. In addition, buyers and suppliers do not have to use the same technology. A buyer can use one type of technology and a supplier can use a different type.

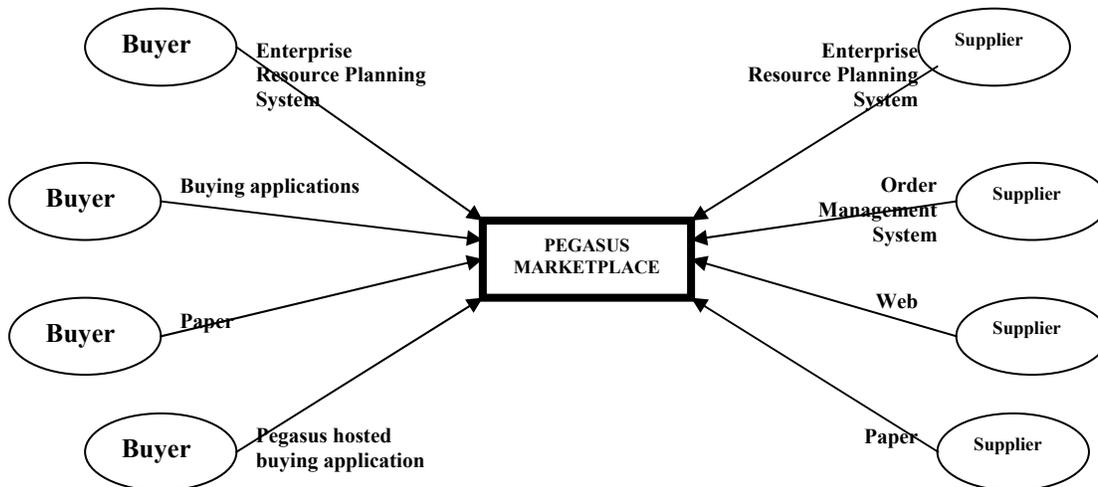


Figure 1. Pegasus' Marketplace Technology

LESSONS LEARNED

Of the 1,734 e-marketplaces that were formed in 2000, analyst predicted that only 407 would remain (Meehan, 2002). Pegasus is one of these. The paragraphs below offer several lessons from Pegasus' e-business endeavor. These insights come from our experience with Pegasus and from comparing and contrasting Pegasus with three other e-marketplaces that we were studying simultaneously.

Industry Nature

Before embarking on an e-marketplace endeavor determine the nature of the industry. The United States utility industry was regulated until recently. United States utilities were accustomed to working together. As a result, most utilities joined Pegasus shortly after its formation. We've conducted case studies of two other e-marketplaces in historically competitive industries. During the height of the dot.com boom industry members were forming industry e-marketplaces, however competitors would not join the same e-marketplace as one another and hence the e-marketplaces were never able to attract a critical mass of members.

Membership Motivation

Pegasus was formed in the height of the dot.com boom. During this time analysts predicted that there were 800 e-marketplaces and that by 2004 there would be 4,200 (Tumolo, 2001). Many organizations joined and formed e-marketplaces because they felt they had to become involved in e-business. In early 2001 when Wall Street stopped rewarding companies for having e-business initiatives many organizations that joined e-marketplaces for these reasons lost interest. Many utilities joined Pegasus partly because they felt they needed an e-business strategy. Pegasus survived because the utilities also joined Pegasus to prepare for deregulation. Pegasus' members still saw Pegasus as a means of dealing with deregulation even when the e-business boom turned to bust.

Limited Offerings

At inception, Pegasus was envisioned as an e-marketplace for all industry procurement. Pegasus had a large number of offerings. The utilities were going to conduct all of their business through Pegasus. When Pegasus went live, the utilities could not conduct any business over the e-marketplace because it was less efficient than their existing practices. In addition, many of the utilities' suppliers were not participating. Those that were participating were not listing their best price on Pegasus. After struggling for nearly a year with this model, Pegasus began facilitating specific buyer-seller arrangements. When Pegasus facilitated arrangements that offered members value the members began using the e-marketplace. Extensive change takes time. Pegasus achieved use when utilities could try specific offerings that add value rather than a number of offerings most of which were not as efficient as existing practices.

Stakeholder Benefit

Utilities formed Pegasus. E-marketplace success requires a critical mass of buyers and suppliers. Industry suppliers resisted joining Pegasus. Pegasus did not have the strong direct good supplier relationships that member utilities had. In addition, industry suppliers saw no benefit to joining Pegasus. The utilities already were their customers. In many cases, these trading partners had worked for years to develop efficient trading relationships. The suppliers did not want to post their "best price" on the e-marketplace. Utility industry pricing varies. Suppliers charge different utilities different prices. Suppliers usually claim that each utility has their best price. If a supplier posted its best price on the e-marketplace, their customers would buy from the e-marketplace as opposed to their existing arrangements.

Suppliers that did not have utility industry relationships saw a benefit to joining Pegasus. Joining Pegasus gave these suppliers access to an industry of customers. These suppliers were primarily suppliers of indirect material, materials that the utilities purchased but did not purchase on a continuous basis. These items include computers, cellular phones and office supplies. Since an individual utility did not represent significant business to these types of suppliers, the utility was not offered the supplier's best price. The utility also did not have automated systems for the products' procurement. With the e-marketplace representing purchasing power for the entire industry, the e-marketplace could negotiate better pricing. In addition, the e-marketplace provided an automated way to purchase these items.

Industry Practice Compatibility

E-marketplaces should understand how business is conducted in the industry and then design the e-marketplace to be compatible with the industry and to relieve industry pain points. Pegasus original idea of an open e-marketplace where buyers could shop all the suppliers for the best price did not fit with utility industry practices. Utilities have worked for years to develop strong supplier relationships. Utilities depend on these supplier relationships especially in unforeseen circumstances such as when inclement weather destroys utility infrastructure. Shopping an open e-marketplace based on price compromises these relationships.

Utilities employ procurement professionals. Procurement shops periodically negotiate supplier contracts based on price, quality and on-time delivery. Once the contract is negotiated, products are repeatedly purchased based on the contract price. Often the utility and the supplier have set up automatic replenishment systems. Pegasus original vision of shopping an on-line e-marketplace is not compatible with these practices. In many cases, the transaction cost of shopping the e-marketplace may be higher than any savings garnered from finding the low-cost producer.

Pegasus modified their e-marketplace to fit industry practices. Pegasus has negotiated with many suppliers of indirect products and has brought these suppliers into the e-marketplace. Because the utilities do not get the best price and do not have automated purchasing systems for these suppliers, using Pegasus adds value.

In addition, Pegasus has created a request for quote function and an auction function. Periodically, utilities evaluate their supplier contracts. These functions allow suppliers to electronically submit bids. In the past this process was a mix of face-to-face and mail submission.

Operational Involvement

The literature repeatedly finds that top management support is necessary for information systems success (Premkumar and Ramamurthy, 1995; Ramamurthy, Premkumar and Crum, 1999; Reich and Benbasat, 1990). In this study, top management made utility e-marketplace membership decisions. However, when the e-marketplace use mandate was passed to the procurement department, they resented it. As one respondent put it, "they would do anything they could to undermine the marketplace because they felt that management joined the e-marketplace because they did not think the procurement professionals were getting the best price from the vendors." In many cases, the procurement professionals would call in competing vendors and explain that their management joined this e-marketplace and they did not want to use it. They would then ask the vendor to beat the e-marketplace's price so they could show top management that they had better pricing than the e-marketplace.

A case study in contrast to Pegasus showed a situation where operational level employees decided to join the e-marketplace because e-marketplace use helped achieve their performance criteria. Given this scenario, operational involvement facilitates e-marketplace use.

Support

E-marketplaces should provide on-site support to help organization determine situation where e-marketplace use offers benefit. When Pegasus opened for business, the e-marketplace had many offerings and the founding utilities were trying to use the e-marketplace. However, after a few attempts where the e-marketplace provided no benefit over existing procedures, utility support waned. The utilities provided Pegasus feedback and Pegasus adjusted their offerings and hired buyer development managers as on-site consultants at each utility. Buyer development managers listened to the utilities,

learned their business practices and worked with Pegasus to develop an e-marketplace that would provide an advantage over existing procedures. The buyer development managers also worked to help each utility determine situations in which e-marketplace use would be fruitful.

Approach

Pegasus main advantage in overcoming these challenges is their e-marketplace approach. Unlike many other B2B e-marketplaces, Pegasus did not focus on the technology. They concentrated on solving supply chain problems and viewed the e-marketplace as the enabler, the transaction layer. Pegasus' staff is primarily composed of utility industry people, not technology people. Pegasus assigns representatives to help each utility use Pegasus to solve their supply chain problems. Once the utility engages Pegasus to help solve supply chain problem, e-marketplace use follows. Change takes time. Often, Pegasus provides the utilities with a supply chain solution, such as streamlining buyer specifications on wood poles and then collects a percentage of the savings on the solution. The idea is that ultimately the utilities will use the marketplace to procure wood poles. But, in the meantime, Pegasus collects a percentage of the savings from the wood pole solution. These types of revenue arrangements have sustained Pegasus as they struggle to achieve extensive e-marketplace use.

CONCLUSION

Based on a 2.5 year case study, this paper provides insights into Pegasus, an e-marketplace intended to improve procurement practices in the utility industry. This paper explains Pegasus' inception, evolving strategies and challenges. Since B2B e-marketplaces offer a number of benefits, yet many fail, Pegasus' experiences offer several lessons to those interested in developing digital solutions to improve industry procurement practices. This paper also provides new, rich insight into the interorganizational information systems literature which predominately consists of electronic data interchange investigations (Koch, 2004). B2B e-marketplaces differ from most of the technologies discussed in existing interorganizational information systems research, as B2B e-marketplaces require a critical mass of participating organizations rather than a point-to-point connection between two organizations. This paper also provides insights for further B2B e-marketplace investigations. The e-marketplace literature is primarily composed of research investigating economic aspects of (Malone, Yates and Benjamin, 1987) electronic markets hypothesis.

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