BUSINESS PROCESS IMPROVEMENT OF CUSTOMER SERVICE FOR AN EBAY JEWELRY COMPANY

Woraphol Aummontha* and Srobol Smutkupt
Assumption University of Thailand

Increasingly buyers shun retail shops in favor of online sellers. The focus firm in this research is a gemstone wholesale company which sells its jewelry on eBay. It had an inefficient operation process that was causing the company's late delivery rate to exceed 4.00%, which was the new standard eBay requirement. The research objective of this project is to identify the root cause of this major problem, find solutions and implement improvement action. The Business Process Improvement model (BPI) was chosen to improve the internal process to align with the dispatch time agreement with eBay. Primary data was collected through interviews of relevant workers and secondary date from the investigation of company documents. Process Mapping, Fishbone Diagram, and Pareto Analysis were used to analyze and improve the process. The research identified two major causes of the late delivery rate, namely poor invoice management and insufficient shipment dates, so that the operation process lead time took over 7 days against the eBay requirement of only 2 days. The research methodology then developed a to-be business process for improving the delivery rate. This led to a significantly reduced rate, which although not achieving the eBay requirement would soon achieve this.

บทคัดย่อ
จุดประสงค์ของงานวิจัยฉบับนี้เพื่อต้องการระบุปัญหาที่แท้จริงและวิธีการแก้ไขปัญหา   เพื่อที่จะเพิ่มประสิทธิภาพของกระบวนการทำงานภายในของบริษัทขายส่งอัญมณีบนตลาดอีเบย์   ที่กำลังประสบปัญหากับการไม่สามารถบรรลุมาตรฐานของการส่งของให้กับลูกค้า โดยอัตราการส่งมอบล่าช้าต้องไม่เกิน 4% ของจำนวนสินค้าทั้งหมด

งานวิจัยนี้ได้นำทฤษฎีการพัฒนาขั้นตอนและกระบวนทางธุรกิจ (Business Process Improvement: BPI) มาใช้ในการแก้ไขปรับปรุงกระบวนการทำงานภายใน   เพื่อที่จะทำให้องค์กรสามารถบรรลุมาตรฐานที่อีเบย์บัญญัติไว้   ข้อมูลปฐมภูมิที่ใช้ในงานวิจัยฉบับนี้มาจากการสัมภาษณ์ผู้ที่มีส่วนเกี่ยวข้องในการทำงานโดยตรง   และข้อมูลทุติยภูมิมาจากข้อมูลต่างๆของงองค์กรในปี พ.ศ. 2558 และ 2559 จากนั้นได้ทำการใช้ทฤษฎีการวาดผังกระบวนการ แผนผังก้างปลา และ ผังพาเรโต ในการวิเคราะห์และปรับปรุงกระบวนการทำงานเดิมให้มีประสิทธิภาพมากยิ่งขึ้น

จากการค้นพบในงานวิจัยฉบับนี้ กระบวนการทำงานเดิมขององค์กรมีระยะเวลาในการดำเนินงานมากถึง 7 วันขึ้นไป ในขณะที่ข้อตกลงที่ผู้ขายให้ไว้กับลูกค้าที่ว่า   จะดำเนินการจัดส่งสินค้าหลังได้รับการชำระค่าสินค้าภายใน 2 วัน ส่งผลให้องค์กรไม่

สามารถบรรลุมาตรฐานที่อีเบย์บัญญัติไว้ จากการพัฒนาแนวทางการเพิ่มประสิทธิภาพการทำงาน ทำให้สามารถลดระยะเวลา
การทำงานเดิมเหลือเพียง 2 วันเท่านั้น หลังจากที่ได้ดำเนินการกระบวนใหม่ทำให้อัตราการส่งมอบล่าช้าลดลงอย่างมีนัยสำคัญ
ถึงแม้ว่าผลลัพธ์ของงานวิจัยฉบับนี้จะยังไม่สามารถบรรลุมาตรฐานของอีเบย์   แต่กระบวนการใหม่นี้จะสามารถทำให้องค์กร
บรรลุอัตราการส่งมอบล่าช้าได้ต่ำกว่า 4% ในอนาคตอันใกล้นี้

INTRODUCTION

Nowadays the e-marketplace is where the origin of products can be presented directly to the customers. Internet can help firms to reduce or eliminate costs, such as fixed costs from opening stores, and warehouse labor costs. Therefore, every year sees increasing numbers of small and medium enterprises (SMEs) as well as big firms which enter the internet market. E-Bay is a highly successful bidding website which people visit for buying-selling products from around the world. Currently, there are over 200 million bidders with buy-sell of more than 40 billion baht annually year.

E-Bay is the world's largest bidding website for people around the world who are buying-selling products. 'Top Rated Seller' (TRS) is the most reliable seller rank for those websites which provide high service levels as an eBay requirement. From time to time, eBay raises its standards for TRS. In this study, the focus company, ABCo is a gemstone wholesaler on eBay. In the first quarter of 2016, ABCo had to respond to a downgrading, from TRS to 'Below Standard Seller', as its current company processes were not aligned with the latest TRS requirements. The late delivery rate to ABCo users was higher than the new standard of 4.00%. As a consequence, ABCo's total sales volume in 2016 decreased significantly compared to the same period in 2015.

The main objective of this research is to improve the customer service process of ABCo by applying the strategy known as Business Process Improvement (BPI). Specifically, the research objectives are:
1.   To study the current customer service process and identify where to improve the process;
2.   To identify the root causes of the key problems and find alternatives to improve the process in order to meet the Top Rate Seller standard requirement for every month and ensure customer retention and loyalty;
3.   To propose a better customer service process and smoother workflow across company functions.

Background of the Research
ABC Company is a small and medium enterprise firm (SME) that creates and enhances jewelry and accessories. It also customizes designs and provides high

quality diamonds and other natural gemstones set into jewelry such as rings, necklaces and pendants. It is also a gemstone wholesaler. Its target markets are mainly in the United States of America.

The key to being successful in selling online is gaining the trust of customers. In order to be a reliable seller on eBay, one must provide the right product quality, right quantity, fast delivery, good packaging and after-sales service. In eBay, there are three levels of status for eBay sellers.

1. **Power Sellers:** These have to maintain certain monthly levels of gross merchandise sales and they must get there by providing excellent customer service.
2. **Top Rated Sellers:** This rank is the most reliable, in which eBay sellers must follow stricter customer service requirements in order to get the Top Rated seal.
3. **Top Rated Seller Plus:** This special option for Top Rated Sellers is where services are provided, such as providing expedited shipping and longer return policy periods.

The easiest way to be a reliable seller is to be upgraded from a common account to be a Top Rated Seller because there are additional benefits when the Top Rated seal is displayed prominently, and there is a 20% discount on final value fees.
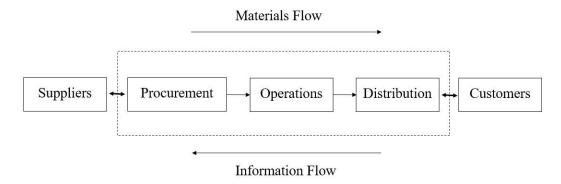
For the standard sellers that would like to upgrade and receive all the benefits mentioned above, they must strictly meet all the requirements, listed in Table 1 below.

Table 1: Top Rate Seller Requirements

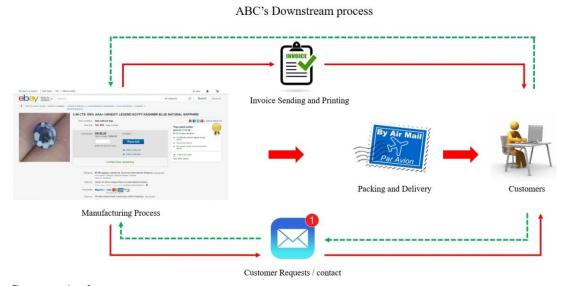| Requirement	Minimum standard for all Seller	eBay Top-rated seller
Defect rate		
Maximum percentage of transactions with defects	2.00%	0.05%
Minimum number of unique buyers affected before seller status is impacted	5	4
Late delivery rate		
Maximum percentage of transactions dispatch late	n/a	4.00%
Closed cases without seller resolution		
Maximum percentage of eBay Money Back Guarantee or Paypal Buyer Protection cases closed by eBay without seller resolution	0.3% or no more than 2	0.3% or no more than 2
Transactions and sales		
Minimum number of sales transactions	n/a	100
Minimum amount of total sales	n/a	$1,000
Other criteria		
Account registered as a business seller	-	Yes
Active eBay member for a minimum 90 days	-	Yes

Source: www.ebay.com *n/a is "Not Available", no minimum requirement.
Figure 1 below illustrates ABCo's total process, involving material and information flows. After procurement and production of the materials, all natural gemstones will be available on the eBay site, ready for customers to see and choose. Figure 1a below is a graphic illustration of the downstream supply process.

Figure 1: ABCo Supply Chain Management Process

Materials Flow

Suppliers ↔ Procurement → Operations → Distribution ↔ Customers

Information Flow

Source: Author

Figure 1a: ABCO's Downstream Supply Process

ABC's Downstream process

Invoice Sending and Printing

Manufacturing Process

Packing and Delivery

Customers

Customer Requests / contact

Source: Author

This study focuses on this downstream phase from Distribution to Customers because ABC has no retail operation to provide a service to customers. The company is only an online shop on the eBay website, and customers are not able

to touch and try the products before making the buying decision. So, building supply reliability and online trust is the key to be successful in the +e-Commerce business.

Production starts the eBay listing by creating pictures of each gemstone in the eBay listing tool, called Inkfrog.com. Firstly, the operation will receive the natural loose gemstones from the production manager. There are five ABCo online shops on eBay; the operation must list 20 SKUs/shops a day. Then at the end of the bidding date, when the operation finishes checking the sold products, the invoices will, be sent immediately to all winning bidders. For unpaid items, the operation will stock them and wait for the completed payment. Those unpaid items can be stocked for three months, after which, those items will be resold. When the orders are completely paid for, the operation will pick the orders and print out the invoices. All invoices are transferred to the production manager for payment approval, after which the packing staff will pack the orders and despatch goods to the customers. Finally, the operation will receive the tracking number and update it on the eBay website.

The current customer service of the ABC Company starts when the payment has been paid correctly and completely. Normally, the payment approval takes at least seven days to check the reliability of customers. After everything is in place, the operation will prepare for the packing stage. The completed payment orders will be packed in fully covered quality envelopes, although some products are packed based on customer requests and delivered via air mail registration to the destination. The shipment schedule of ABCo is twice a month: 16th and 30th of the month. The lead time takes around 25-30 days to the delivery date for USA customers. After the operation receives the tracking number, the information will be record in the system, and status on the eBay website of each of the SKUs will be updated.

Statement of the Problems
The type of eBay seller account is very importwnt for an eBay business. Although the Top Rate Seller rank is not difficult to get, it is really hard to maintain. Currently, ABCo cannot maintain the Top Rated Seller rank for all its five accounts. All accounts used to be in the Top Rate Seller rank which generated more sales, but there were changes in eBay's new requirements in Quarter 1 of 2016. Without studying deeply eBay requirements and still operating in the old way, ABCo had incurred a higher percentage of late deliveries. This downgrading meant that customer trust and retention fell. The following ABCo delivery diagram is sent to customers, as their rating decision criteria.

YOUR DELIVERY IS CONSIDERED ON TIME AS LONG AS IT MEETS AT LEAST 1 OF THESE 3 CRITERIA:

Item tracking status shows as **Accepted** by the carrier within your stated dispatch time.

Item tracking status shows as **Delivered** within the estimated delivery time.

Your **buyer** confirms the item arrived on time.

If none of this information is available, the transaction **won't count** towards your on-time delivery rate.

LITERATURE REVIEW

This chapter presents the review of the literature related to this project. Five relevant topics discussed in this chapter are: (1) customer service; (2) customer retention; (3) Business Process Improvement (BPI); (4) the cause and effect diagram; (5) Pareto analysis.

Customer Service and Retention
Customer retention is the ability of a business to maintain existing customers (Ang & Buttle, 2006). It is both a measure of customer loyalty and the capacity of the business to keep customers satisfied by good service and quality of the product sold (Kotler, 2000). Also, e-Loyalty has its own challenges and strategies (Reichfeld & Schefter, 2000; Zemke & Connellan, 2001). The strength of trust between buyer and seller is very important (Mayer & Davis, 1995). Successful customer retention comes from collaboration between the different function Departments in a firm, and all departments must recognize how important it is to keep existing customers (Pegler, 2004). Indeed customer service consists of activities that increase the customer's ability to realize the full potential value of the products or services before and after the sale has taken place, so that a high level of service leads to satisfaction and repurchase of the products (Timm, 2001). Keeping the existing customer to come back to buy is cheaper than finding new customer (Ausilio and Anton, 2003).

Business Process Improvement (BPI)

BPI is a systematic method for improving the operational, administrative and support processes, using approaches such as fast process benchmarking, process redesign, and process re-engineering (Harrington, Esseling & Nimwegen, 1997). BPI also helps companies to reduce their operational costs and cycle time, enhance customer service, and improve the quality of their products or services. There are many benefits of applying BPI to an organization, such as improving customer satisfaction, achieving customer loyalty, reducing cycle time, cost and error, and increasing profitability (Cook, 1995; Flanigan & Scott, 1995). Johnston (2001) studied four relationship variables: complaints, process, employees, and customers, which affect financial performance. He found that to gain financial benefits, the company should use information from complaints to improve the internal operation process by satisfying and retaining employees because those employees are main drivers in the organization, and quality employees are needed in the operation process. Information from customer complaints should be used reduce the weakness of the operation process (Randall & Kevin, 1989; Terentis et al, 2002).

Within BPI, the following seven generic steps guide the actions and decisions for improving business processes (Adesola & Baines, 2005).

Step 1: Understand business needs; evaluating current practices by gathering the data to identify the current problems (Livingstone, 1992). This step aims to identify the core activities which can have major effects on the company's objectives or customers' needs. The data and information could reveal that some activities might be inefficient, so that relevant processes could be selected.

Step 2: Understand the process; identify the current business process architecture. This step aims to identify the current process flow and find any weak processes. This step provides a clear understanding of the processes from its origin until the end, and knowledge of the position of the selected process.

Step 3: Model and analyze the process; measure the existing process performance so as to find the root cause of the problem by using the root cause analysis tool, such as the ABC triage prioritization, 'Fishbone' Cause and Effect Analysis (Knights, 2001), and Pareto Analysis (Craft & Leake, 2002. This analysis results in identifying all possible causes of the problems which need solving.

Step 4: Redesign the process; validate a new process model which can get rid of the weakness activity in the process. The to-be process mapping will show the upgraded processes and additional issues.

Step 5: Implement the new process; there will be changes in the process, so planning is required to implement these. Meetings involving people from relevant related functions will be conducted to assign responsibilities and expound the benefits of the new process. Training the staff, and roll-out change plans are required.

Step 6: Assess the new process and methodology; evaluate the new process to gauge whether it has achieved the goals, by using an evaluation measurement report, and a customer measurement survey.

Step 7: Review the new process; with relevant staff, review new process targets and performance, and develop a strategic view of the business with a plan to meet the targets.

RESEARCH METHODOLOGY

This section presents the six steps of the BPI model:

(1) Data collection to show all the possible problems in the customer service process;

(2) Mapping an "As-Is Process" to see and understand clearly the overall processes, how each activity works, and where any bottleneck occurs;

(3) Analyzing the "As-Is Process" to identify the root causes of the problems by using the Ishikawa fishbone model and Pareto analysis;

(4) Identify the "To-Be Process" to propose an improved process for solving the problems;

(5) Develop an implementation plan to prepare for the changes in the process and for following the plan to make new process successful;

(6) Assess the new process and methodology to evaluate the results from the new process, and to compare that to the goal that need to be achieved.

The following dash-board Tables contain the monthly performance reports for the ABCo eBay seller, for the delivery performance for the five main USA customers in the previous three and twelve months. A dash-board is very useful for the seller in order to quickly spot where the weakness points are and prepare for better performance for the next evaluation

Table 2: The Seller Dash-Board of ABCo

	Required	USER 1	USER 2	USER 3	USER 4	USER 5
Defect Rate	0.5%	0%	0.03%	0%	0%	0.02%
Late Shipment Rate	4.00%	70.37%	42.62%	84.28%	77.27%	65.67%
Close Case Rate	0.3%	0%	0%	0%	0%	0%

Source: ABC Company Data

This shows the key indicators for the five main USA customers. It reveals that the then current performance of ABCo exceeds the 4% late shipment rate requirement in all ABCo eBay accounts. It was this late shipment rate which caused all ABCo users to downgrade ABCo from the status of Top Rated Seller to that of Standard User. ABCo's sale volume had decreased from July to December 2016 when compared to the same period in 2015, as shown in Table 3.

Table 3: Total Worldwide Sale Volume Comparison: 2015 and 2016

Month/Shipments	In 2015	In 2016
July	378	249
August	482	305
September	686	398
October	1,107	764
November	905	549
December	727	498
Total	4,285 shipments	2,763 shipments

Source : ABC Company

After ABCo's Top Rated seals were removed from its products, its sales volume worldwide in 2016 decreased significantly compared to the same period in 2015 from 4,285 to 2,763 shipments.

Table 4: USA Shipment Performance of Account No. 1

Period	<7days	8-14 days	15-21 days	22-28 days	>29days	Total
No. of Shipments	145	187	76	10	6	424
Percentage	34.20%	44.10%	17.92%	2.36%	1.42%	100%

Table 5: USA Shipment Performance of Account No. 2

Period	<7days	8-14 days	15-21 days	22-28 days	>29days	Total
No. of Shipments	148	301	81	4	1	535
Percentage	27.66%	56.26%	15.14%	0.75%	0.19%	100%

Table 6: USA Shipment Performance of Account No. 3

Period	<7days	8-14 days	15-21 days	22-28 days	>29days	Total
No. of Shipments	82	83	16	0	0	181
Percentage	45.30%	45.86%	8.84%	0%	0%	100%

Table 7: USA Shipment Performance of Account No. 4

Period	<7days	8-14 days	15-21 days	22-28 days	>29days	Total
No. of Shipments	52	99	26	1	1	179
Percentage	29.05%	55.31%	14.53%	0.56%	0.56%	100%

Table 8: USA Shipment Performance of Account No. 5

Period	<7days	8-14 days	15-21 days	22-28 days	>29days	Total
No. of Shipments	36	125	15	0	2	178
Percentage	20.22%	70.22%	8.43%	0%	1.12%	100%

Source : ABC Company

These Tables show the ABCo users operation process performance of shipments to USA customers in 2016 starting from customer payment cleared to the shipment date. Mostly, the average lead time of operation process took from 8 to 14 days.
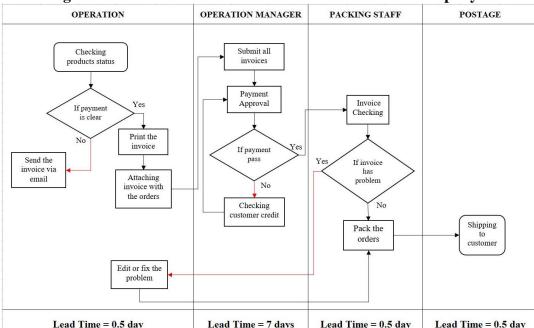
Process Mapping

Figure 2: Current Customer Service Process of ABC Company

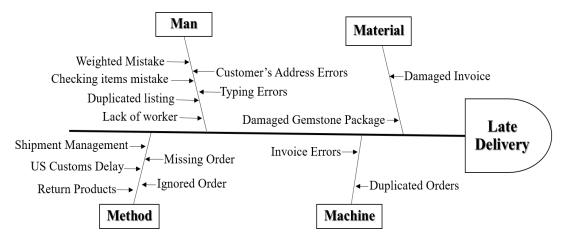| OPERATION	OPERATION MANAGER	PACKING STAFF	POSTAGE
Lead Time = 0.5 day	Lead Time = 7 days	Lead Time = 0.5 day	Lead Time = 0.5 day

Source: Author

This step shows the entire ABCo operation process, starting from the customer payment cleared until the products are shipped to the postage agency. The total lead time of the ABCo process took 8 days. Generally the process took less than 1 day, but there was an inefficient payment approval process. It took 7 days and above until all invoices could be passed to the shipping station. Therefore, some inefficient ABC processes could not meet the 2 days dispatch time agreement as promised by ABCo to its customers.

Analyze the "As-Is Process"

The purpose of this step is to analyze the current process and identify root causes of the problems that impact on late delivery, so that weaknesses in the process can be improved. The Ishikawa fishbone model was chosen in order to elicit the root causes of the problems, and the Pareto analysis was used in classifying the problems.

Figure 3: Fishbone Summary of Possible Causes and Effects of Late Delivery

Source: Gemologist operation team of ABC Company

All causes may impact delivery delay, but actually there were eight sources which caused the longest times of late delivery. From the interviews, the researcher found that there were eight processes that impacted the delays in the delivery process:
  (1) weight mistake;
    (2) duplicated order;
      (3) missing order;
        (4) ignored order;
          (5) shipment management;
            (6) US customs delay;
              (7) damaged gemstone package;
                (8) invoice error.

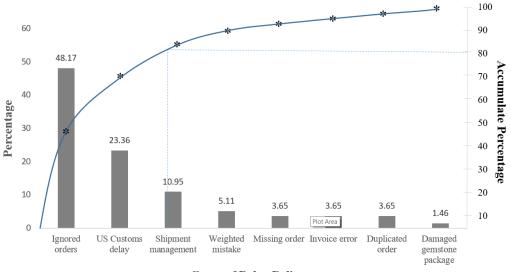These are shown, in descending order of delay-days, in Table 9 below.

Table 9: Causes of Delivery Delay

Description	Duration (days)	Time %	Cum. %
Ignored orders	66	48.17	48.17
USA Customs delay	32	23.36	71.53
Shipment management	15	10.95	82.48
Weight mistake	7	5.11	87.59
Missing order	5	3.65	91.24
Invoice error	5	3.65	94.89
Duplicated order	5	3.65	98.54
Damaged gemstone package	2	1.46	100
	137	100	

Source: ABC Company

After the evaluation, prioritization of causes was made by using the 80/20 Pareto rule to classify the lead time spent to fix the problems in each process. There were three main causes of delayed delivery. Firstly, missing orders that occurred during the approval stage. It took on average 66 days. Secondly, USA customs delay, which took an average delay of 32 days. Thirdly, shipment management, because ABCo shipments are made only twice a month, every 15 days. The other causes took an average of 24 days.
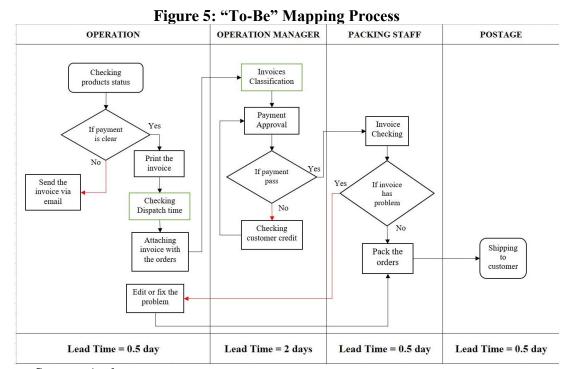
Figure 4: Pareto Chart of Cause of Delivery Delay

Source: Author

The Pareto analysis chart helps to easily classify the causes of delayed delivery. According to its 80/20 rule, the results show that there were three main processes which caused the longest lead time in the delivery process. There were two inefficient internal processes (invoice problems and shipment management), and the USA customs delay was an external factor.

Identify the "To-Be Process"

Figure 5: "To-Be" Mapping Process

Source: Author

The boxes in the "To-Be" mapping process are the improved processes added in the Operation Department. It has to check the dispatch times to match with the orders in the earlier stage. The dispatch schedule serves as the guide or basis for the Department to categorize the invoices by following the shipping date. Then, the Department collates and prioritizes the invoices before sending them to the manager to approve the payment according to the eBay timeline agreement. This process could help the manager to efficiently control the approval payment time and to minimize the situation of losing invoices.

Implementation Results

One of the five users was selected as the pilot user, whose performance was evaluated from 21st April to 20th June 2017. The result from adding two new processes in the operation and payment approval process is more efficiency. The

Operation Department is already aware of the new eBay policy and is well prepared for invoice management and invoice classification.

Table 10: Pilot User Shipment Performance - April to June 2017

Data Collection Period	No. of USA Shipments	No. of on-time Shipments	On-time %	No. of late Shipments	Late %
21st Jan – 20th Feb 17	66	25	38%	41	62%
21st Feb – 20th March 17	76	31	41%	45	59%
21st March – 20th April 17	128	24	19%	104	81%
**21st April – 20th May 17	115	93	81%	22	19%
**21st May – 20th June 17	82	76	93%	6	7%

Source: ABC Company   **Pilot user's performance

Table 10 shows the number of US shipments from January to June 2017. The percentage of on-time shipments after the implementation has increased rapidly. It increased from 19% (21st March – 20th April 2017) to 81% (*21st April – 20th May 2017) and from 81% (*21st April – 20th May 2017) to 93% (21st May – 20th June 2017).

Table 11: Pilot User Performance Comparison - April and June 2017

	April 2017 (Before)	June 2017 (After)
Current seller level	Above standard	Above standard
Late shipment rate	190 of 270	132 of 325
Late shipment rate%	70.37%	40.61%

Source: ABC Company

Table 11 shows the before and after results of implementation. The new results from 21st April to 20th June 2017 period compared to the previous performance from 21st Jan-20th April 2017 period. The total US shipments of before was 270 (66+76 +128; 21st January – 20th April 2017) while the number of late shipments was 190 (41+45+104; 21st January – 20th April 2017). The total US shipment of after was 325 (128+115+82; 21st April – 20th June 2017) while the number of late shipments was 132 (104+22+6; 21st April – 20th June 2017). The results show the progress in the reduction of the late delivery rate. The late delivery rate in June had reduced rapidly from 70.32% to 40.61%.

However, the late delivery rate is still above the eBay requirement of 4.00%. Nevertheless there is a high possibility that the pilot user can achieve the Top Rated Seller rank again in the near future. Table 7 shows the expectation of future results if ABCo is able to fully implement the new working processes without human errors.

Table 12: Expectation of Future Results

	Apr 17	May 17	Jun 17	Jul 17	Aug 17	Sep 17
No. of late shipments	104	22	6	0	0	0
% of late delivery rate of June	40.61%					
% of late delivery rate of July**		8.62%				
% of late delivery rate of August**			1.84%			

Source: Author   **The expected results in the future

The researcher assumes that in the next three months the number of shipments will be constant at 325 shipments, while the number of late shipments will decrease to zero. From the three months of eBay evaluation, the current late delivery rate is 40.61%, but the late delivery rate expects to be 8.62% in July and 1.84% in August. Therefore, the final late delivery rate will below 4.00% in August 2017, and thus the Top Rated Seller position would be regained in September 2017.

CONCLUSION

Reliability is the key to being a successful eBay seller, especially if in the Top Rated Seller position. Thus, eBay tries to maximize the satisfaction of online purchasers by improving the seller service level. The ABC Company must adapt to the change quickly. In this case, ABCo had inefficient processes, which caused the late delivery rate to be higher than the new standard requirement for the Top Rated Seller rank. The researcher recommended two approaches to improve the existing process - by adding more shipment dates and invoice classification to eliminate late shipment factors.

The result from applying these business process improvements shows that the number of late shipments has reduced significantly. However, there were still a few late shipments because of the change in the process. In the first month of implementation, the workers were unaccustomed to the new working process; they needed time to adapt. So, monitoring and control was intensely necessary in the first phase of implementation.

Even though the overview of the total delivery rate is still below the eBay requirement, there is a real opportunity to reach the late delivery rate of 4.00% in the near future. Therefore, the researcher expects the pilot user to record a late delivery rate lower than 4.00% in August 2017. After the pilot user is successful in regaining the Top Rated position in September 2017, ABC Company can apply the new processes to all its other users to generate revenue and retain trust from its customers.

As to limitations of this research, this study has mainly concentrated on the USA shipments; therefore, customers from other countries are not included in this

project. Moreover, there are other factors that affect the late delivery: external factors, e.g. delays from US customs clearance, late delivery from the postage agents. In addition, eBay regulations regularly change the terms and requirements to be more complex. Finally, there are the limitations of time and resources in collecting the new results by using the TO-BE process. The new results have not achieved the target of 4.00% of the eBay requirement because the research only collected data from March to June 2017.

As to recommendations for the future research, ABCo managers and workers should adjust the work process in advance of Thai holidays, because some holidays may be on a shipment date. The products must be shipped a day before. In the case of long holiday like New Year and the spring Songkran Festival, shipments are seriously affected. The details of gaining staff commitment should be researched.

REFERENCES

Adesola, S., & Baines, T. (2005). Developing and Evaluating a Methodology for Business Process Improvement *Business Process Management Journal*. *11*(1), 37 – 46.

Ang, L., & Buttle, F. (2006). Customer Retention Management Processes: a Quantitative Study *European Journal of Marketing*. *40*(2), 83 – 99.

Arshinder, K., Kanda, A., & Deshmukh, S.G. (2007). Supply Chain Coordination Issues: an SAP-LAP Framework *Asia Pacific Journal of Marketing and Logistics*. *19*(3), 240 – 62.

Cook, S. (1995). *Process Improvement: A Handbook for Managers.* Aldershot: Gower Publishing. 1st edition.

Craft, R.C. & Leake, C. (2002). The Pareto Principle in Organizational Decision Making *Management Decision*. *40*(8), 729-733.

Ausilio, R., & Anton, J. (2003). *Customer Service and the Human Experience. We, the People, Make the Difference*. California: The Anton Press. 1st edition.

eBay Top-rated Seller account status. Retrieved February 21, 2016, from ebay website: http://pages.ebay.co.uk/help/sell/top-rated.html.

Flanigan, E.M. & Scott, J. (1995). *Process Improvement: Enhancing Your Organization's Effectiveness.* Mississauga: Crisp Learning. 1st edition

Hansemark, O.C. & Albinsson, M. (2004). Customer Satisfaction and Retention: The Experiences of Individual Employees *Managing Service Quality: An International Journal*. *14*(1), 40 - 57

Harrington, H.J. & Esseling, K.C. & Nimwegen, V. (1997). *Business Process Improvement Workbook: Documentation, Analysis, Design, and Management of Business Process Improvement.* New York: McGraw-Hill. 1st edition

Johnston, R. (2001). Linking Complaint Management to Profit *International Journal of Service Industry Management*. *12*(1), 60-69

King, S.S. & Cushman, D.P. (1997). *Lessons from the Recession: A Management and Communication Perspective.* Albany: State University of New York Press. 1st edition.

Knights, P.F. (2001). Rethinking Pareto Analysis: Maintenance Applications of Logarithmic Scatterplots *Journal of Quality in Maintenance Engineering*. Vol. *7*(4), 252 – 263.

Kotler, P. (2000). *Building Customer Satisfaction, Value, and Retention.* New Jersey: Prentice Hall Inc. 11th edition.

Livingstone, G. (1992). Measuring Customer Service in Distribution. *International Journal of Physical Distribution & Logistics Management*. *22*(6), 4-6.

Mayer, R.C., & Davis J.H. (1995). An Integrative Model of Organizational Trust. *Academy of Management Review*. *20*(1), pp. 709–734.

Pegler, M. (2004). Seven Ways to Hold Fast to Your Customers *Handbook of Business Strategy*. *5*(1), 223 – 226.

Randall, D.B., & Kevin, L.R. (1989). Focusing on Customer Problems to Improve Service Quality *Journal of Services Marketing*. *3*(4), 5-13.

Reichheld, F.F., & Schefter, P. (2000). *E-loyalty: your secret weapon on the Web.* Boston: Harvard Business Review, July-August, 2nd edition.

Terentis, J., Sander, F., Madden, M., Stone, M., & Cox, D. (2002). Customer Service, Complaints Management and Regulatory Compliance *Journal of Financial Regulation and Compliance*. *10*(1), 37 – 54.

Timm, P.R. PH.D. (2001). *Customer Service Career Success through Customer Satisfaction.* New Jersey: Prentice Hall Inc. 2nd edition.

Zemke, R., & Connellan, T. (2001). e-Service: 24 ways to keep your customers – when the competition is just a click away. New York: AMACOM. 1st edition.