

**Case Study: Improving the Order Entry Process at Manufacturer A**

## **Description of the organization and issues**

Manufacturer A, established in 1986, is a medium sized manufacturer of power transformers, DC power supplies, and battery chargers. Historically, Manufacturer A started as a garage shop operation and has now grown to approximately \$3MM in annual sales. Today they have two manufacturing plants. Headquarters is located in one of the plant locations and have centralized office functions.

The increase of electronic commerce has posed new obstacles and opportunities for Manufacturer A. Traditional business systems relied on relationships as an element for success. Now, relationships are developed and maintained on-line. Sales, marketing, purchasing, and several other functions are now dynamically linked to the World Wide Web. If ordinary business systems are going through this incredible change, how can companies keep up; especially, smaller companies that lack technology? How does a company quantify/support the decision to become electronically enabled (e-enabled)?

Web presence has been identified as the initial step to being electronically enabled. What next? Does the company put up a personalized site? Does the company allow for real-time stock checks? Well, the next step is not only to provide content, but also reduce overall time and cost while increasing cash-to-cash cycle times and quality of service.

Specifically, the order entry process will be reviewed in this case study. The B2B electronic commerce process begins when the customer initiates the demand chain. This event creates a progression of events streaming down the enterprise. After analyzing business processes, once a web site is rolled-out, the next vital milestone is achieving transaction based cost reductions, particularly order processing. Order processing is an end-to-end vital link between front and back-end functions. This process is closely linked to financials, customer service, and production. The order entry process is measurable, thus providing clear visibility and opportunities for improvement. The continuous improvement process allows us to examine what other corporations are doing, how they are doing it, and develop a structure to meet and/or exceed best practices. Most of all, it let's us learn from others mistakes.

## **Determine the As Is**

Currently, Manufacturer A utilizes an ERP system manufactured by Computer Associates (named SBT). The purchasing, sales order, bill of materials, general ledger, manufacturing (inventory control and manufacturing), accounts payable, accounts receivable, and payroll are fully integrated within this ERP system. For the last several years, Manufacturer A has had a web presence. They have an on-line catalog for standard products. Custom sheets are available for custom requirements. Links to national distributors and representatives are also included on the web site. Traditionally, marketing has been done by referrals, trade publications, direct mail, and catalogs. Order acceptance has been limited to traditional purchase orders via facsimile. Limited credit cards are accepted and are handled using the assistance of a local distributor.

Order entry has long been a manual end-to-end process. Efficiency in this department has been limited to a high amount of paperwork, error rate, and upper management response time. The customer service team that suffered low efficiencies due to the handling of customer complaints and stock checks performs the order entry function. These reasons were the early warning indicators for Manufacturer A wanting to improve this part of the process.

Manufacturer A used flowcharting and a self-assessment between the two owners of Manufacturer A to help identify key issues in the order entry process.

- ❖ Process Flowchart (**appendix 1**)
- ❖ Self assessment questionnaire (**appendix 2**)

The key activities of the order entry process are summarized below.

1. Order received via email, fax, snail mail, or phone
2. Manual function in completing internal forms attached to customer hard copy
3. New part numbers are referred to engineering to be added into the ERP system (time constraint from engineering)
4. Customer service to attain the lead time from production team for the order (time constraint from production)
5. Sales order filed for management approval (time constraint from upper management)
6. Corrections will be made (if necessary)
7. Sales order entered into ERP system
8. ERP system confirms entry
9. Immediate shipments are verbally communicated to production (possible human error)
10. Blanket orders are scheduled for delivery by ERP system. Production team is responsible for seeing this schedule and planning accordingly.
11. When product is shipped, the shipping list is turned into customer service
12. Upon processing, five forms are generated
  - ❖ Shipping
  - ❖ Invoicing
  - ❖ A/R
  - ❖ Internal sales order copy
  - ❖ Internal master log
13. Upon processing of the shipment, open orders are re-filed for later delivery and closed orders are archived.
14. ERP system tracks payment from date of invoicing (usually net 30 days)

In summary the existing process had inefficiencies as a result of manual functions needed to complete internal forms (shipping, invoicing, accounts receivable, internal sales order copy, internal master log). The manual labor has led to human errors. In addition, there was a bottleneck with upper management because they had to approve sales orders.

### **Determine the Should Be**

Manufacturer A felt they had a good idea of their own process and wanted to look at what others were doing. They went about the task of identifying benchmark partners. Benchmark partners were identified based on:

- ❖ Availability of information
- ❖ Internal contacts
- ❖ Process of order entry (manual and/or automated)

It is important to realize that benchmark partners were selected based on the existence of the order entry process, not the nature of the company's products. The concern is the optimization of a process.

The selected organizations were:

- ❖ Ameritech/SBC
- ❖ Samsung Electronics
- ❖ Inktomi Corporation
- ❖ Harmon Electronics

This decision was driven by access to the organization and their current processes.

A process overview was used to understand the benchmark partners processes. This was done primarily through interviews with key contacts at these organizations along with external research from articles on the companies. Below is a summary of each process overview gathered by Manufacturer A.

#### BENCHMARK PARTNERS PROCESS OVERVIEW (SBC/AMERITECH – manual order entry)

SBC / Ameritech is a leading telecommunications provider in 13 states and has an international presence in this industry. Currently, Ameritech's in-house engineering staff contracts large vendors (ADC, Fujitsu, Tellabs) to perform electronic builds within the central office and the end customer. These electronics facilitate ISP's, WAN/ LAN networks, Inter/Intra state communications and other services.

The digital transport engineer (DTE) is the project manager for any electronic installation within a predefined geographic area. Contracting services is one of the main job descriptions and order entry management (specifically vendor billing) has been chosen as the main focus of this benchmarking study. SBC/Ameritech has a similar ERP system to that of Manufacturer A that combines all functions within service order fulfillment. The current vendor-engineer relationship using fax and snail-mail is still very embedded. The engineering department has been overloaded with a high volume of paperwork that has compounded error rate and vendor billing response time. The engineer performs the order- entry function to a large extent. Additional headcount would create extended learning curves unable to meet current workload. This function (order entry from the engineer) has suffered low volumes, due to the handling of customer complaints, higher than normal demand for installations, and expedited service orders. Furthermore, the engineer has now become the bottleneck in the general ledger process, creating the need for end of quarter budgetary "fire drills". This quarterly process in turn creates limits on the resources available to meet customer due dates and in the end possible loss of revenue.

By studying SBC/Ameritech and incorporating the existing SBC/Ameritech ERP system (JAM) Manufacturer A will look to expand this into instantaneous processing of vendor billing thereby reducing delays in service (lost revenue), improved cycle times from contract to accounts payable (full utilization of capital allocations), and a reduction in rework from an accounting and engineering standpoint. This will allow resources to be reallocated from manual order entry and tracking to meeting customer service requirements.

#### BENCHMARK PARTNERS PROCESS OVERVIEW (SAMSUNG – manual order entry)

1. Samsung's order entry process starts with the customer sending a written purchase order (PO) form to the Samsung Sales representatives.
2. The Sales rep checks the order for accuracy of models and pricing and re-writes the order on a Samsung PO form. Both forms are faxed to the Business Operations Center (BOC) for input into the system.
3. Once an order is received, the BOC specialist reviews both order forms to make sure that everything is filled out accurately, including, ship-to address, terms of payment, model numbers and pricing match.

4. After this initial check, the order is manually entered into the ERP system and assigned a sales order number.
5. After entering the order in the system and having an ERP order number assigned, the BOC specialist checks for pricing errors in the form of discrepancies between the system and the PO forms.
6. If there is an error, the BOC specialist contacts the sales rep and requests that they send in a meet competition form. This meet comp is a legal document filled out by the rep for a specific model and specific prices from Net price down to N/N/N (prices after all discounts are taken including payment terms). Basically, this form states that a competitor has quoted the customer a price on a particular product and the customer wants similar pricing to Samsung's product that competes with that product based on product features.
7. Once the meet comp is sent in, the corresponding Marketing Manager needs to review the meet comp and either agree to the price or reject it. If the meet comp is rejected the Marketing Manager calls the rep to inform them and the customer has the option of rewriting their PO for that model or canceling it from the order.
8. If the Marketing Manager agrees to the price, the price is entered into the system and the BOC specialist re-prices the order to bring up the new price.
9. Next the ship date is reviewed. If the order is set for immediate shipment, the order will appear on the shipping log printed up in the warehouse. The BOC specialist can also contact the warehouse to expedite the process.
10. If the ship date is in the future, the order will appear on the shipping log printed in the warehouse, but will be scheduled for shipment using normal lead times. Once the BOC specialist finishes entering the order, the hard copy is filed.
11. Once items are shipped from the warehouse, the ERP system generates both an invoice to be sent to the customer and a packing slip for each shipment.
12. Once all items have been shipped, the order from a production side is closed out. The accounts predominantly have terms of Net 30 or Net 60, once the customer submits payment to Accounts Receivable (A/R), the amount is credited to the customer's account and once all invoices have been paid for an order, that order is closed out.

#### BENCHMARK PARTNERS PROCESS OVERVIEW (HARMON ELECTRONICS – automated order entry system)

Harman wanted to provide a simplified solution to their order placement process. There were too many imperfect orders, which resulted in customer dissatisfaction. Telephone orders from dealers had to be resolved by order entry personnel and often, it took them two to three days to get an order right. There was also a problem with the lack of in-stock product availability and poor on-time delivery performance. Harman knew they could save time and money and improve dealer satisfaction by automating this process.

Their objective was to permit dealers to view the inventory availability, pricing information and account information that resided on Harman's SAP R/3 system. Another goal was to allow field representatives and dealers the use of the system to enter orders directly to the R/3 system.

Harman chose Proxicom, a web developer, to be the general contractor and do the implementation of the online order entry application. The application communicates with R/3 via integration middleware from Haht Software, which uses SAP's Business Application Programming Interface format.

Harman's own order entry people, or direct/independent sales people, or the dealers themselves can enter orders. This information is then maintained in the SAP system for further integration with the back-end R/S system. Dealers can see the product description, pricing, credit history and order history.

Harman has greatly benefited from their online ordering system. The two major benefits are reduced workload and redeployment. Other benefits include:

- Reducing order entry time from two or three days to approximately five minutes per order.
- 20 independent reps can see order and delivery status on their dealer's sites using Harman's system.
- The new system has the added benefit of providing information to aid in making decisions regarding improvements to the supply chain.

Harman made a conscious design to compile suggestions for enhancements in a list of future upgrades, instead of implementing them as they came in. They also are using a knowledge transfer method by insisting that an Internet team of in-house application developers perform upgrades on an ongoing basis. They were successful in improving dealer satisfaction and now they are able to achieve a faster time-to-market with the use of an external services provider.

#### BENCHMARK PARTNERS PROCESS OVERVIEW (Inktomi -automated order entry)

Inktomi Corporation is the leading provider of software applications that are designed for improving the intelligence and performance of large-scale networks, predominantly the Internet. Network applications fall into Traffic Server network cache platform, content delivery, and traffic server extensions. Portal services include search, shopping and directory services, these applications are offered to Internet portals and web site customers. The company was founded in 1996 and subsequently went public in 1998.

Order entry in the early stages of Inktomi was fragmented with business contracts largely non-standard and drafted on an order-by-order basis. Significant time was spent on small volume contracts and negotiation efforts. Order tracking was done within four separate databases and sixteen spreadsheets resulting in 60% of all orders being delayed. Inktomi had a web based order fulfillment process that attributed to approximately 5% of all orders. This labor-intensive process led to large manual intervention in order to meet specific customer commitment dates. As this companies demand for product increased the end result was a higher error rate, constant rework, lost or late shipments, and manual tracking from contract through invoice.

This corporation was plagued with the fore mentioned companies order entry process problems, in that as the volume of business expanded the profit opportunities were limited by manual order entry. Scalability of a fully automated order entry process was a necessity. The end result was a streamlined process that began with the electronic submission of a deal sheet. From this point the terms are deemed standard or non-standard with only nine process steps from the beginning deal sheet to the final terms. In contrast, previously this flow would have had an average cycle time of 18 days, with a 60% error rate. The cycle time had not been measured at the time of this implementation, but the error rate and tracking process had dropped significantly.

## Analyze the Gap

Manufacturer A intentionally decided to analyze four different companies with different systems against their own current order entry process. Two benchmark partners, Inktomi and Harmon Electronics, have achieved automated order entry systems. The other two organizations, SBC/Ameritech and Samsung, have yet to develop an automated system and currently perform manual operations.

After analyzing the gaps and performance of each system Manufacturer A identified certain gaps that present opportunities for improvement. These points include:

- Redundancy of work
- Accuracy of invoicing
- Accuracy of order entry
- Accuracy of communication between functional departments
- Decreased cycle time of order processing, due to automated system

The above points are a high-level summary of the gap analysis evident between automated and manual organizations in the order entry process.

Inaccuracy in orders are caused by:

- Lack of product availability
- Poor on-time delivery performance
- Inconsistent or incorrect lead/transit times
- Customer deductions from paid invoices

Much of these points can be resolved by more effective internal communication. One great tool that can be used for this is the internal ERP system of Manufacturer A. Manufacturer A should exhaust their ERP system and use it to its full functionality. This will allow Manufacturer A to forecast, communicate, and plan more efficiently. Using the ERP system's full functionality will also reduce the effects of constraints, such as manual functions and waiting time for management. Real-time on-line stock checks can serve an additional benefit by reducing the redundancy of the customer service department. Much of their current time is spent in expediting and stock checks. Another overall effect of using Manufacturer A's existing ERP system and Information Technology would be to reduce processing times of orders. The case study presented by Inktomi and Harmon demonstrate clear results. Please refer to appendix three (3) for this information. Additionally, order entry accuracy will increase.

Competitive advantage for Manufacturer A lies in timesavings and convenience to customers. The use of information technology (IT) to facilitate overall improvement is essential, especially since the internal structure already exists.

The reduction of cycle time is a function of essential and non-essential activities. Manufacturer A's gap analysis identifies a few non-essential activities (i.e. manual redundancy and waiting). These non-essential functions can also be called non-value added activities. The decision is that these non-essential functions can be eliminated by implementing an on-line order entry system that can facilitate internal communication, reduce order entry error, provide on-line stock checks, reduce shipment errors, and increase cash-to-cash cycle times.

Performance measurements should also be part of Manufacturer A's continuous improvement initiatives. Analyzing the benefits of implementing an automated order entry system is clearly visible with organizations that have performance measurements. In this study, they have assigned performance measurements but can only ensure credibility if it is monitored by management.

## **Adapt Best Practices**

After analyzing the order entry process maps for Manufacturer A and then comparing it to Inktomi, Samsung, Harmon Electronics, and Samsung electronics, the critical success factors were:

- High-level executive support: Management buy-in to determine the importance of this project.
- Knowledge transfer from the “as-is” to the “after” stage. This includes training programs for staff and management.
- Streamlined system capitalizing on IT infrastructure.
- Culture supporting the implemented system.
- Selling users on the benefits of the new system. This is a form of “buy-in” but used for customers, representatives, and distributors that are affected with on-line ordering processes.
- Clearly defined functional requirements and rules.

To implement these changes, Manufacturer A first did a readiness survey with existing customers to see how they might respond to major changes in the way their orders are processed. Please refer to appendix four (4) for this information. Manufacturer A then utilized the results of the survey to help better position any changes to its customers.

In addition, Manufacturer A then prepared action plans to help them implement the best practices. These action plans are detailed as an appendix. Please refer to appendix five (5) for this information.

In summary the major action steps were as follows:

- Start Using Performance Measurements
- Adopt Management, User, and Customer Buy-In
- Plan, Organize, and Implement Campaign Campaign for Online Order Entry
- Test the System Before Going Live
- Promote Online Ordering Campaign
- Test Online Ordering Systems with Some Users
- Go Live with Online Ordering
- Promote Additional Online Ordering
- Monitor Performance Measurements
- Monitor User and Customer Feedback to Improve System
- User Performance Metrics to Adopt Future Continuous Improvement Efforts

## **Monitor and Improve**

In addition to creating an action plan to use performance measures to monitor the process, Manufacturer A specified the types of measures that would be helpful to ensuring the changes they make stay on track. These measures include the following:

Ratio of change orders vs total orders  
Time spent communicating with engineering function  
Average time to enter orders per day  
Cost of order per employee  
Percent late shipments due to order entry  
Cycle time from order entry to invoicing

Please refer to appendix six (6) for this information as an action plan.



## **Conclusion**

Manufacturer A feels that by implementing the above action plans and having gone through this continuous improvement process, they will recognize the following benefits:

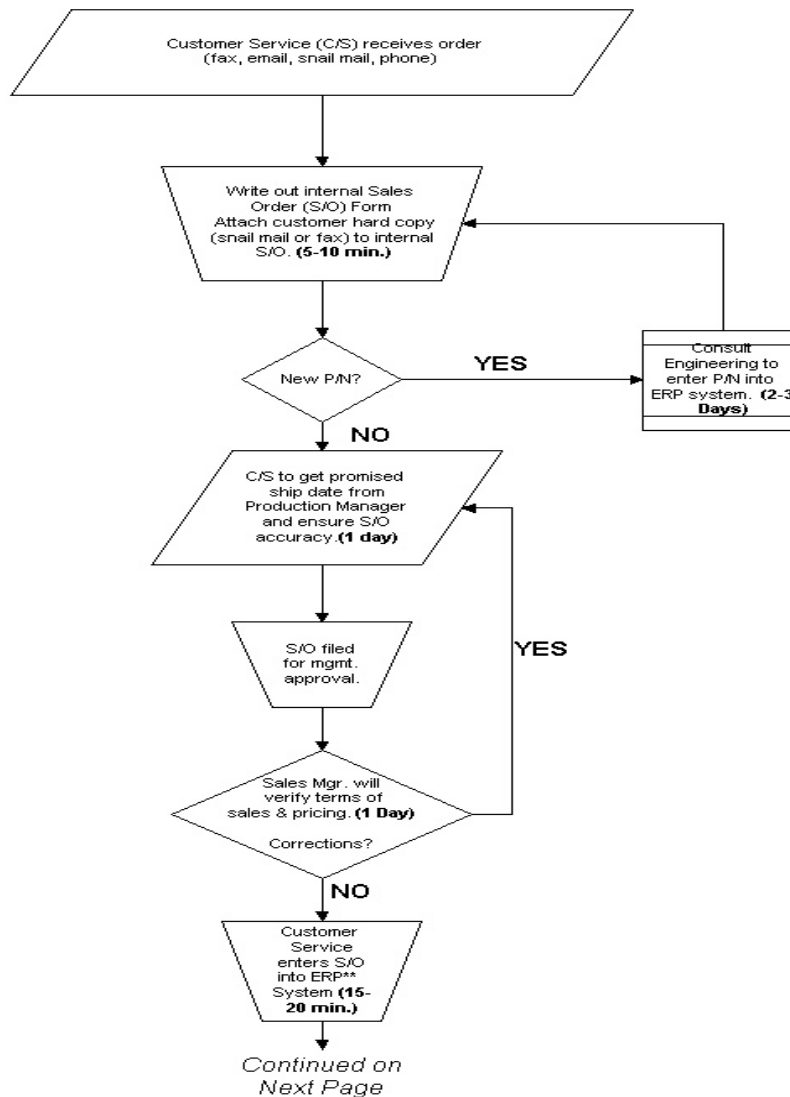
- New partnerships between customers and suppliers
- Increased quality and decreased cost
- Reduction of work-in-process and inventory
- Increased functional integration
- Technology enablement
- Maximize return on cost

### **Case Discussion Questions**

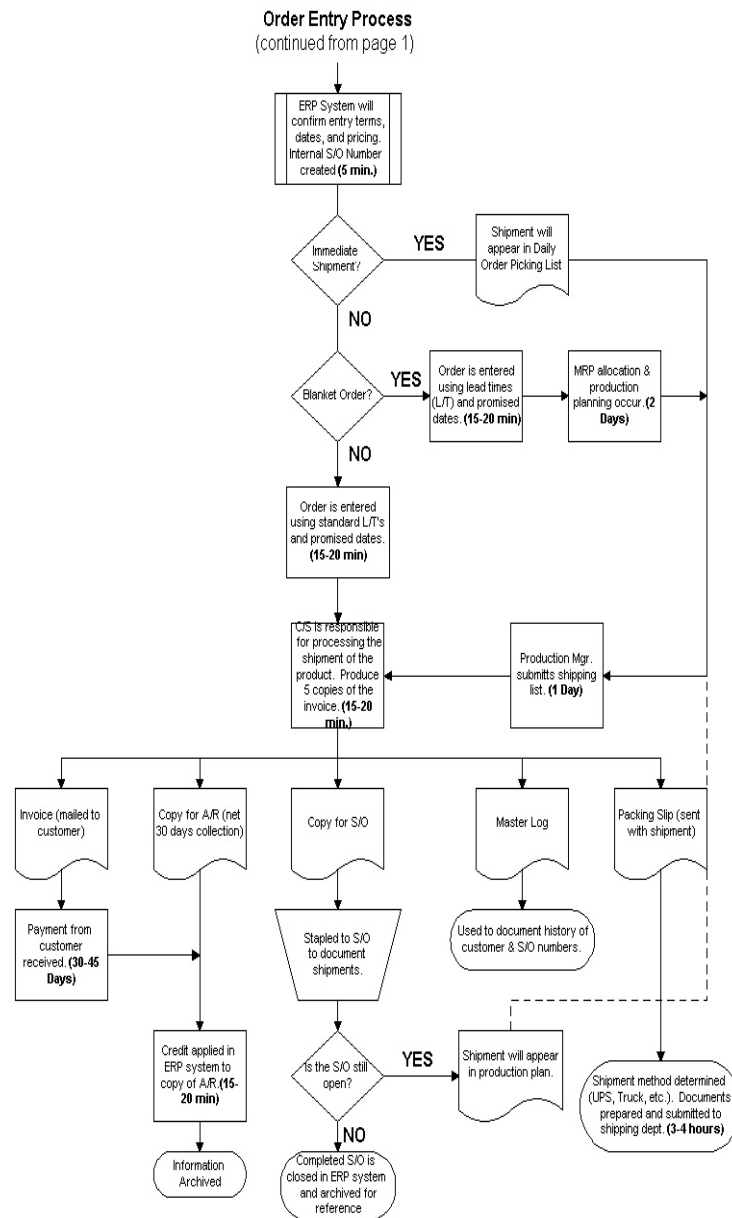
Be prepared to discuss in class

1. Describe how Manufacturer A decided to choose the order entry process. Would you have done anything different?
2. Do you think Manufacturer A did a good job of mapping the process? Describe what they did and what you would have done differently, if anything.
3. What do you think about the approach Manufacturer A took with their benchmark partners to document their entire process? Do you feel this was a worthwhile exercise and why?
4. Do you think Manufacturer A will be successful in implementing their Action Plans? Why

## APPENDIX 1 – MANUFACTURER A ORDER ENTRY



## APPENDIX 1 – MANUFACTURER A ORDER ENTRY (cont'd)



\* Departments involved include Customer Service, Sales, Production, and Engineering.

\*\* ERP system used is called SBT (manufactured by Computer Associates). Plays an important role in verifying entries, stock, pricing, and communication with production.

\*\*\* **Bolded** material indicates time requirements.

## **APPENDIX 2 – MANUFACTURER A SELF-ASSESSMENT FOR ORDER ENTRY PROCESS**

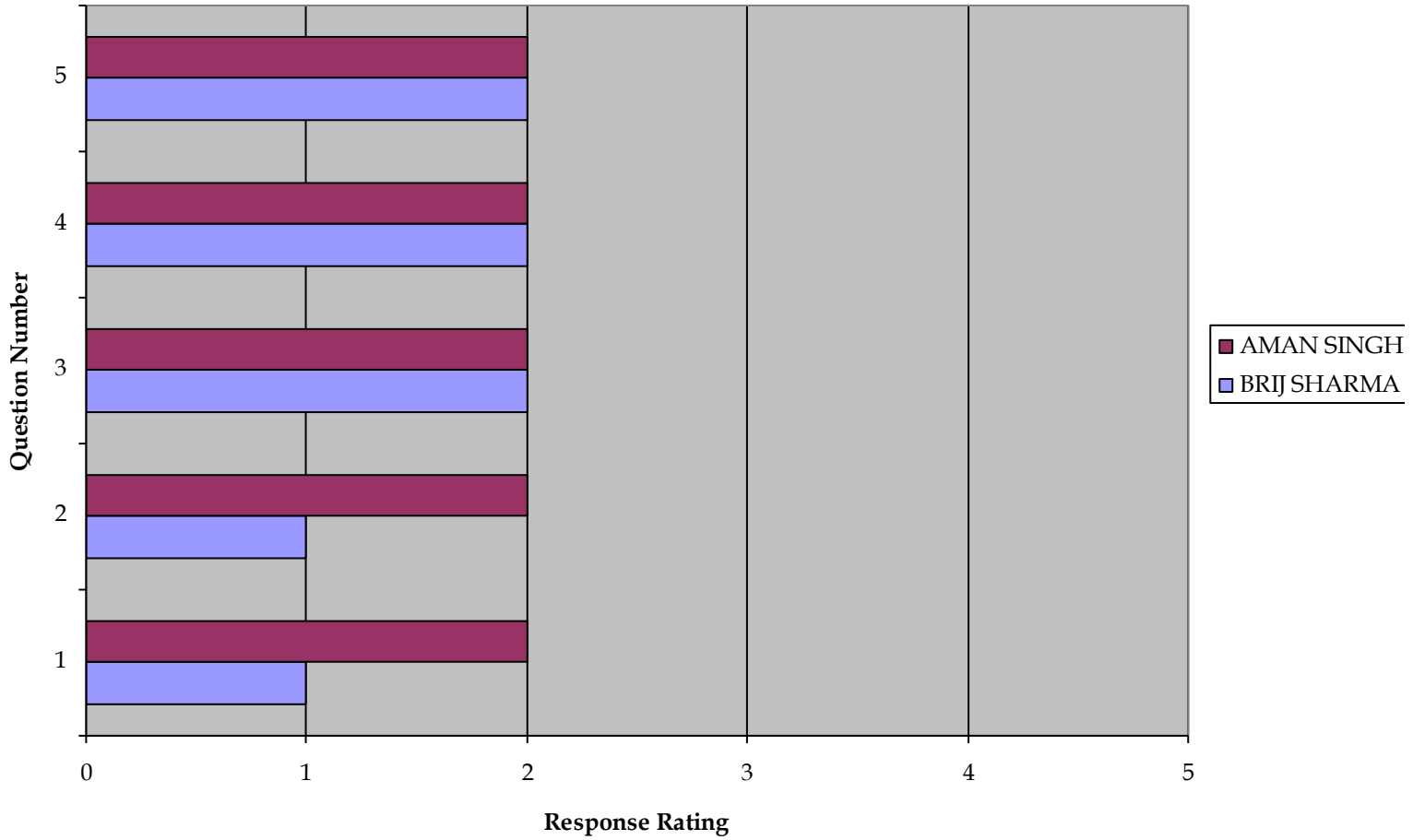
### **BENCHMARKING SELF-ASSESSMENT ASSIGNMENT**

SELF-ASSESSMENT OF ORDER ENTRY PROCESS  
Individuals questioned: Mr. Brij Sharma and Mr. Aman Singh

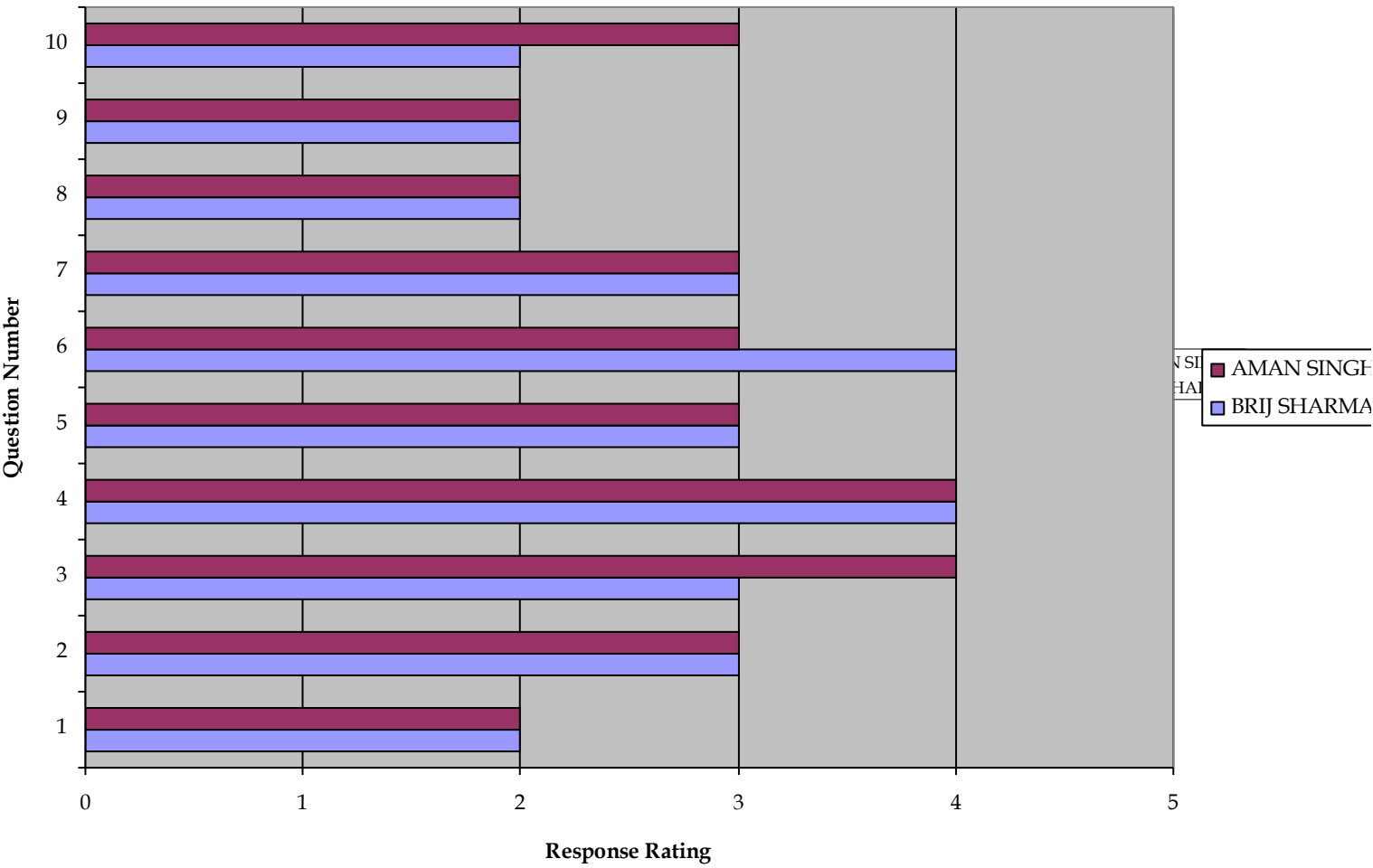
<u>INTERVIEW QUESTIONS</u>	<u>RESPONDENTS</u>	
<u>IMPORTANCE TYPE QUESTIONS (*)</u>	<u>BRIJ SHARMA</u>	<u>AMAN SINGH</u>
1 Order entry affects the companies revenues? (**)	1	2
2 Electronic ordering (e-commerce), on the sell-side, is important?	1	2
3 Paperless environment is important to our business?	2	2
4 Order entry process is an important part of our business?	2	2
5 An optimized order entry process is essential?	2	2
<u>PERFORMANCE TYPE QUESTIONS (***)</u>		
1 Performance of the customer service function due to our order entry process?	2	2
2 How efficient is PowerVolt's order entry process?	3	3
3 The process of closing and order?	3	4
4 Manual processes within the order processing function?	4	4
5 Management assistance in expediting order entry?	3	3
6 Production managers assistance with expediting order entry?	4	3
7 Engineering managers assistance with expediting order entry?	3	3
8 Sales managers assistance with expediting order entry?	2	2
9 Effects of the ERP system on the order processing function?	2	2
10 Rate the present performance of PowerVolt's order processing function?	2	3
<hr/>		
<u>PROBLEM-SOLVING TYPE QUESTIONS</u>		
1 What do you think is the most important component of order entry?	4	3
1) Entering		
2) Organization of paperwork		
3) Ensuring accurate communication		
4) Communicating with the customer		
5) Following up with due dates		
2 What would you like to see happen as the order entry process evolves? (please indicate most impo	1	1
1) Develop more automation		
2) Paperless environment		
3) Over 95% accuracy with order entry		
4) Minimal management involvement		
5) Speedier process		
<hr/>		
<b>Legend</b>		
* The answer choices available were:		
1) Strongly Agree		
2) Somewhat Agree		
3) Don't Know		
4) Somewhat Disagree		
5) Strongly Disagree		
** (This question is intended to link the order processing function to revenues. It helps us filter out people that understand the order processing function.)		
** The answer choices available were:		
1) Excellent Performance		
2) Good performance		
3) Fair Performance		
4) Poor Performance		
5) Terrible Performance		

**APPENDIX 2 – MANUFACTURER A SELF-ASSESSMENT**  
**FOR IMPORTANCE OF ORDER ENTRY PROCESS**

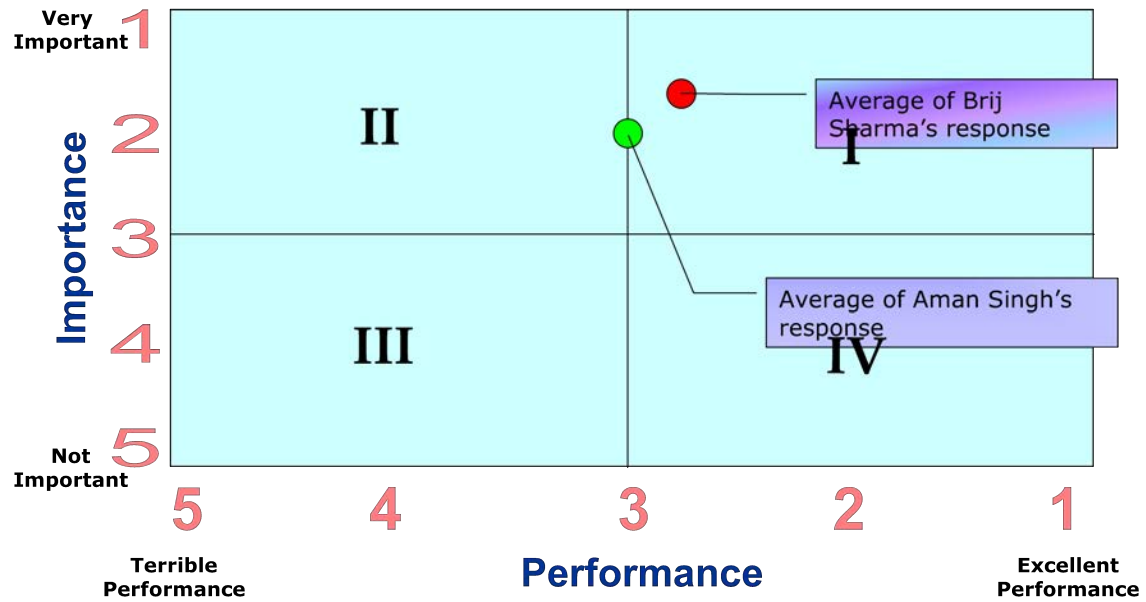
**Response Profile for Order Entry Importance**



**APPENDIX 2 – MANUFACTURER A SELF-ASSESSMENT**  
**FOR PERFORMANCE OF ORDER ENTRY**



**APPENDIX 2 – MANUFACTURER A SELF-ASSESSMENT  
MATRIX FOR THE ORDER ENTRY PROCESS**





### APPENDIX 3 – PERFORMANCE ANALYSIS

In this section the continuous improvement team of Manufacturer A will present some final performance data gathered and analyzed. This information was used for the gap analysis and is useful in determining goals for the order entry process. The table below has some indications of number of handoffs, degree of automation, and steps that require waiting. Furthermore, Manufacturer A then drew some statistical correlation coefficients that helped them determine the correlation between an automated system and cost reductions.

#### ANALYSIS FOR POWERVOLT VS. BENCHMARK PARTNERS

COMPANY NAME	HANDOFFS	STEPS THAT REQUIRE WAITING	DEGREE OF AUTOMATION	INVOICES GENERATED
Manufacturer A	24	5	2	5
SBC/AMERITECH	17	8	2	7
SAMSUNG ELEC	21	7	2	3
HARMON ELEC.	9	1	1	2
INKTOMI CORP.	9	2	1	2

**\* DEGREE OF AUTOMATION**

1 = FULLY AUTOMATED

2 = NON-AUTOMATED

	HANDOFFS	STEPS THAT REQUIRE WAITING	DEGREE OF AUTOMATION*	INVOICES GENERATED
HANDOFFS	1			
STEPS THAT REQUIRE WAITING	0.741380732	1		
DEGREE OF AUTOMATION*	0.932091372	0.927960727	1	
INVOICES GENERATED	0.571901279	0.778962993	0.757936729	1

The above results clearly demonstrate a direct correlation between degree of automation to the steps that require waiting and number of handoffs. These two criteria alone can command great cost reductions in cycle time for the order entry process.

The information provided below is taken from the Inktomi and Harmon Electronics case study, respectively. This information is useful in determining the before and after improvements that are seen after the implementation of an on-line ordering process.

#### Inktomi Corporation

##### Before process improvement

##### **Order error rate**

- The original order management process had 29 steps, 4 tracking systems, 3 invoice systems.
- 60% of all orders were delayed by error.

##### **Orders per FTE**

- Estimated that 1 FTE hours spent on rework and manual processing of orders.
- No other data available.

##### **Cycle time from order entry to invoice**

- Up to several weeks when vital technical data was not included on original order.
- 25% of orders and 49% of revenue occur in the last 2 weeks of quarter.

**Cost measure of order entry per FTE**

- Costs were 57% higher than a competing firm.
- Increased risk and revenue uncertainty – many employees circumventing processes to ensure customer satisfaction. As volumes increase so does an unprofitable error rate.

**After process improvement****Order error rate**

- The newly implemented order management process had at most 9 steps. 100% of all orders tracked from Deal sheet to shipment.
- Renewal rate (customer satisfaction).

**Orders per FTE**

- New data was to be tracked by the following Metrics
  - a. Sales orders vs. invoices per FTE.
- No other data available.

**Cycle time from order entry to invoice**

- Standard contracts were drafted in 3-5 days.
- Cycle times tracked through comparison of:
  - a. Close to create a new sales order.
  - b. Create a sales order to fulfillment.
  - c. Create a sales order to invoicing.

**Cost measure of order entry per FTE**

- FTE vs. total number of orders.
  - 57% cost reduction on order processing from rework and manual order processing.
  - Decreased risk and revenue uncertainty – uniform processes to ensure customer satisfaction. As volumes increase electronic order entry management can be scaled to business volume levels.
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**HARMON ELECTRONICS**

**Quality:** Error rate decreased from 20% to less than 5% with this new system

**Productivity:** Is now between 80%-90% per FTE

**Time:** In the past, it could take 2-3 days (approx 16 hours) to place 1 order  
Now, assuming 5minutes/order, 192 orders can be placed in 16 hours

**Cost:** Assuming \$5 order entry per FTE.  
Previously, it could cost up to \$80 for one entry/FTE!  
Now, it's decreased to approximately \$.50 for one entry/FTE

#### **APPENDIX 4 - SURVEY FOR CUSTOMER READINESS**

The purpose of the survey is to determine readiness and feasibility of enabling electronic commerce functions between Manufacturer A and its customers. This survey includes 28 questions and will take approximately fifteen (30) minutes to complete; if unsure about a question feel free to leave it blank.

This survey is broken down into three sections, current status, enabling e-commerce, and demand planning. Our goal is to reduce processing, inventory, and ordering costs while increasing service levels across the entire supply chain.

##### **Contact Information**

Company \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

Email \_\_\_\_\_

Phone \_\_\_\_\_

Industry (i.e. distributor, OEM) \_\_\_\_\_

Purchasing structure (centralized or decentralized) \_\_\_\_\_

##### **Current Status**

1) Please indicate the total percentage of your time communicating with suppliers: \_\_\_\_\_ %

2) Please break this total time into the method of communication:

Phone \_\_\_\_\_ % Email \_\_\_\_\_ % Other \_\_\_\_\_

Fax \_\_\_\_\_ % On-line/Web \_\_\_\_\_ %

3) Average value of purchase orders issued to Manufacturer A:

\$ \_\_\_\_\_

4) Ratio of change orders (orders modified once purchase order is submitted to vendor) to total orders:

\_\_\_\_\_

5) What is your current cost per purchase order?

\$ \_\_\_\_\_

Please describe your computation and variables involved:

6) What is your current MRP/ERP system?

\_\_\_\_\_

☐ Oracle      ☐ SAP      ☐ PeopleSoft    ☐ i2  
☐ Manugistics      ☐ Other \_\_\_\_\_

7) Do you currently order materials on-line:

☐ Yes      ☐ No      ☐ Don't Know

8) Please indicate the percent of purchase orders processed over the web: \_\_\_\_\_ %

9) Please describe your current method of ordering products on-line (i.e. need based, via fax, ERP system is integrated with EDI):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10) How is data communicated when ordering on-line (check all that apply):

☐ EDI                      ☐ XML   ☐ Other (describe) \_\_\_\_\_

☐ Text Files              ☐ Emails

11) Have you considered partnering with suppliers to improve the efficiency of the supply chain?

☐ Yes                      ☐ No                      ☐ Don't Know

12) Have you considered collaborating forecasting information with suppliers to increase the effectiveness of planning, shortening lead times, and accommodating auto-replenishment?

☐ Yes                      ☐ No                      ☐ Don't Know

### **Enabling E-commerce**

13) What are your expectations of e-commerce (check all that apply)?

- |  |  |
|--|--|
| <input type="checkbox"/> Reduce lead times             | <input type="checkbox"/> Reduce purchasing costs     |
| <input type="checkbox"/> Reduce customer service costs | <input type="checkbox"/> Increase service levels     |
| <input type="checkbox"/> Decrease inventory cost       | <input type="checkbox"/> Better inventory management |

☐ Other (describe)\_\_\_\_\_

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14) How important do you feel e-commerce capability is between you and Manufacturer A (1 - not important, 3 - somewhat important, 5 - very important):

☐ 1                      ☐ 2                      ☐ 3                      ☐ 4                      ☐ 5

15) How important do you feel e-commerce capability is between you and your other suppliers (1 - not important, 3 - somewhat important, 5 - very important):

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

16) Will on-line stock checks reduce your overall cost of purchasing?

☐ Yes

☐ No

☐ Don't Know

17) Will on-line stock checks decrease cost of time required for purchasing?

☐ Yes

☐ No

☐ Don't Know

18) Will on-line stock checks increase the quality of the purchasing function?

☐ Yes

☐ No

☐ Don't Know

19) Will on-line stock checks reduce your overall cost of customer service?

☐ Yes

☐ No

☐ Don't Know

20) What is your overall cost reduction goal (percentage) by using e-commerce: \_\_\_\_\_ %

21) Indicate a supplier that currently meets your e-commerce expectations:

\_\_\_\_\_

\_\_\_\_\_

22) Describe how this supplier meets your expectations: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

23) What would you do differently: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

24) Would you use e-commerce functionality if it existed between you and Manufacturer A?  
☐ Yes      ☐ No      ☐ Indifferent

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**Demand Planning**

25) Are you currently collaborating any forecasting data with suppliers?

☐ Yes      ☐ No      ☐ Don't Know

26) Are you prepared to share forecasting information with Manufacturer A?

☐ Yes      ☐ No      ☐ Don't Know

27) Do you currently have an auto replenishment practice in place?

☐ Yes      ☐ No      ☐ Don't Know

If so, please describe: \_\_\_\_\_

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28) Can you benefit from automatic replenishment with Manufacturer A products?

☐ Yes      ☐ No      ☐ Don't Know

## **APPENDIX 5 - ACTION PLAN**

### **Management, Customer, Distributor, and Representative Buy-in**

**DEPARTMENT NAME:** This step initiates from the top of the hierarchy. After management buy-in the next step would be to utilize the sample survey provided in this report to judge customer, distributor, and representative "readiness".

**RECOMMENDATION:** Weekly meetings stressing the importance of performance measurements. Demonstrate the benefits of such a system. Furthermore, utilize sample survey in this report for customer, distributor, and representative buy-in.

**IDENTIFIED PROBLEMS:** On-line ordering entry is a great system with proven benefits. But are we all ready for it? No market analysis has been done to determine its usefulness in this industry.

**PERSON IN CHARGE:** Brij Sharma and upper management.

**ACTION STEP:** Plan out execution of meetings, motivation tactics, and team that will implement this analysis step.

**TIMING:** This step should parallel the implementation of the performance measurement action plan.

**REWARDS:** This step helps the corporation assess if the idea (on-line ordering) will be used by its customers, distributors, and representatives. If not prepared, this action step will allow the corporation to reassess and plan its implementation plan while waiting for more customer to benefit from on-line ordering.

**PERFORMANCE MEASURES:** Monitoring of proper management and user buy-in will yield a solid result identifying the success of the recommendations.



## **APPENDIX 5 - ACTION PLAN**

### **Plan, Test, and Execute the On-line Ordering System of Choice**

**DEPARTMENT NAME:** Upper management, IT, Sales and Marketing Department

**RECOMMENDATION:** In this phase a platform for electronic commerce should be selected. In addition, a project plan must be laid out that includes project milestones. The structure of on-line ordering and the technology to be used must be outlined. Sales and marketing team will serve as front-end feedback from customers. A testing plan with selected customers should be designed along with a contingency plan. A plan for risk management should also be implemented.

**IDENTIFIED PROBLEMS:** At this time, there is no IT department existent for this. Such an implementation is a full-time responsibility. The lack of a plan will also be addressed in this phase.

**PERSON IN CHARGE:** Management and Brij Sharma

**ACTION STEP:** A dedicated IT professional must be recruited. This professional must be capable of specifying hardware, designing front-end systems, and maintaining the system. Another alternative includes the complete outsourcing of this step.

**TIMING:** Shortly after management and user buy-in this plan should take initiative.

**REWARDS:** This is the first step technical step that will take Manufacturer A to an on-line ordering environment. Additionally, the testing phase will help streamline the process and verify data integrity.

**PERFORMANE MEASURES:** Performance measures for this phase can be tracked by using a project management tool known as the Gantt Chart. Deadlines and milestones serve as motivational tools to ensure the implementation of this phase.

## **APPENDIX 5 - ACTION PLAN**

### **Roll-out of system, Monitoring usage, and Performance Measures**

**DEPARTMENT NAME:** IT, Sales and Marketing, Upper Management

**RECOMMENDATION:** This phase is the actual roll-out of the system. After roll-out there must be a system to monitor usage and success rate of the on-line ordering system. Internal performance measures must be strictly measured to observe improvements and analyze cost/benefits.

**IDENTIFIED PROBLEMS:** In addition to a present day lack of performance measures, Manufacturer A does not have a system of monitoring web usage and traffic. The roll-out plan is a new step that falls within the realm of the non-existent IT department.

**PERSON IN CHARGE:** Upper management, Sales and Marketing, IT department.

**ACTION STEP:** Execute the design of an IT department. Determine the necessity of outsourcing. Implement a Sales/Marketing survey or questionnaire that will be completed by users (also useful for continuous improvement). Develop list of performance metrics to monitor the usage of the on-line ordering system.

**TIMING:** No particular time can be specified at this time. It is a sequential process from the other action steps provided.

**REWARDS:** This step ensures on-line accuracy, data integrity, consumer loyalty, and usage. The continuous monitoring of this system will allow the visualization of performance improvements and cost savings. Additionally, customer satisfaction can be ranked using performance measurements.

**PERFORMANE MEASURES:** Hits per day, cycle time of order entry process, cash-to-cash cycle time, questionnaires and surveys to measure customer satisfaction, order error rate, cost to enter orders, and manual handoffs or steps in the system.

## **APPENDIX 5 - ACTION PLAN**

### **Promotion of New System**

**DEPARTMENT NAME:** Sales and Marketing, IT

**RECOMMENDATION:** Upon the success rollout and monitoring parameters of the system, Manufacturer A should formulate a marketing campaign. As spelled out in the report, the result of this system is increased partnerships and loyalty. This is a great opportunity to boast a competitive advantage over other suppliers. It is also an opportunity to invite new business and ventures.

**IDENTIFIED PROBLEMS:** Manufacturer A manufactures commodity products that clearly do not demonstrate a competitive advantage over competitors. This system can open new doors to their current system.

**PERSON IN CHARGE:** Sales and Marketing, IT department.

**ACTION STEP:** Formulate a Internet marketing campaign using banner ads, emails, auto-replenishment, and boast reduced consumer costs due to on-line ordering and stock checks.

**TIMING:** No particular time can be specified at this time. It is a sequential process from the other action steps provided.

**REWARDS:** This step ensures the promotion of the newly acquired competitive advantage. The ramifications can be seen onto the bottom line and increase in customer base. Customer loyalty is also a success factor in this step.

**PERFORMANE MEASURES:** Hits per day, cycle time of order entry process, cash-to-cash cycle time, questionnaires and surveys to measure customer satisfaction, rate of new customers per day, order error rate, cost to enter orders, and manual handoffs or steps in the system.

## **APPENDIX 6 - ACTION PLAN**

### **Usage of Performance Measurements**

**DEPARTMENT NAME:** Upper Management

**RECOMMENDATION:** The recommendation for this step is the adoption of certain performance measurements that are ideally the only way that a system can be assessed and improved.

**IDENTIFIED PROBLEMS:** Currently there are no performance measurements. It is simply impossible to assess a process without this.

**PERSON IN CHARGE:** Brij Sharma, he is the President which should enforce management buy-in to this process.

**ACTION STEP:** Please refer to the Performance Measurements section to identify several possible measurements that may be implemented by the organization.

**TIMING:** This step should be done immediately upon management buy-in.

**REWARDS:** Visualization of improvements. Internal motivation tool. Inter-plant motivation tool.

**PERFORMANE MEASURES:** The existence of these measurements with on-going monitoring will enhance the culture of continuous improvement.