

REFERENCES

- Chulalongkorn University and the University of Warwick. 1997. Information Systems Strategy.
- Chulalongkorn University and the University of Warwick. 1995. Manufacturing Strategy and Its Implementation.
- Crowe, J. T., Rathi K., and Rolfes D. J. (n.d.) <http://www.prosci.com/rathi.htm>
- Hanan, M., and Karp, P. 1989. Competitive on Value. Amacom.
- Hammer, M., and Champy, J. 1994. Reengineering The Corporation. New York: HarperCollins.
- Harrington, H. J. 1991. Business Process Improvement. New York: McGrawHill.
- Industrial Sales Division. 1999. Grade 99 [Machine readable data file]. Thailand: The case company.
- Information System Center Director. 9 January 1999. Interview.
- Interfacing Technologies Corporation. 1998. FirstSTEP. Canada.
- Kuglin, A. F. 1995. Customer – Centered Supply Chain Management. Amacom.
- MacIntosh, R., and Francis, A. (n.d.). <http://bprc.warwick.ac.uk/glasgow1.html>
- ProSci. 2000. BPR Online Learning Center. <http://www.prosci.com/abc1.htm>
- ProSci. 2000. BPR Online Learning Center. <http://www.prosci.com/intro.htm>
- Sokol, K. P. 1989. EDI The Competitive Edge. New York: McGraw-Hill.
- The Privatization Team. 1999. The case company's Privatization Report. The Public Relation Department of the case company.
- The case company's enterprise report (organization) of customer order process model, 1999

APPENDICES

APPENDIX A
A QUESTIONNAIRE

QUESTIONNAIRE

The Customer Order Process Modeling, and Redesign

- Objectives:**
1. To study the real customers requirement when customer decide to buy petroleum product from the case company and ranked the importance into top five requirements
 2. To compare the performance of the case company in each requirement, with the competitors (Oil and Gas service station do not do this part)
-

1. General Information of Customers

1.1 Company Name _____ 1.2 Type of Business _____

1.3 Capital Registration _____ 1.4 No. of Employees _____

1.5 Address _____

1.6 Petroleum Products ordered 1.6.1 _____ 1.6.2 _____ 1.6.3 _____

1.6.4 _____ 1.6.5 Others _____

1.7 Current way of order

Telephone Contacted Number _____

Facsimile Contacted Number _____

Others _____

1.8 Are you satisfied with the way to order stated in 1.7?

Yes.

No. Because _____

1.9 If you are not satisfied according to 1.7, what way do you want to make an order?

(Please rank according to the first top three of your requirements)

1. _____

Because (reason) _____

2. _____

Because (reason) _____

3. _____

Because (reason) _____

Instruction: (for "when order" "during waiting for the product" and "when receive order")

1. Please review requirements provided in area 1, if they are not covered your requirement, please add your requirement in the 'others'.
2. After finishing reviewing the requirements, please rank your requirement into order of 1-5. (1 means the first of your requirement that you want the most)

3. After ranking, please compare performance of the case company, and its competitors, in each requirement you have ranked according to the instruction no. 2., by write ✓ in the box provided.

2. When You Order

Area 1 (Requirements)	Area 2 (Ranked Requirements)	Area 3				
		Performance in each ranked requirements, compare with the competitors				
		Extremely Good	Very Good	Good	O.K	To be Improved
A. Convenience when you want to order	Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
B. Accuracy of the orders	Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
C. Politeness of order-receive officers	Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
D. Quick response when you order	Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
E. Confirmation of your orders	Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
	Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

Area 1 (Requirements)	Area 2 (Ranked Requirements)	Area 3					
		Performance in each ranked requirements, compare with the competitors					
		Extremely Good	Very Good	Good	O.K	To be Improved	
F. Ability in answering the customer' s question e.g. price		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
G. Others		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
H. Others		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
I. Others		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
J. Others		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CcpetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
K. Others		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

3. During waiting for product

Area 1 (Requirements)	Area 2 (Ranked Requirements)	Area 3					
		Performance in each ranked requirements, compare with the competitors					
		Extremely Good	Very Good	Good	O.K	To be Improved	
A. Degree of responsiveness to change customers' order B. Promptness in informing the customer when orders not complete C. Knowledge of truck Status e.g. where it is now, and when it will arrive. D. Information Support for the next decision of purchase E. Acceptance of responsibility when customer orders not complete		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		

4. When you receive product

Area 1 (Requirements)	Area 2 (Ranked Requirements)	Area 3							
		Performance in each ranked requirements, compare with the competitors							
		Extremely Good	Very Good	Good	O.K	To be Improved			
A. Right type of product delivered		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
		CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
		CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
		CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
		CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
		Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
		B. On time delivery with the right quantity of product.		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
				CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
				CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
				CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
				CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
				Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
				C. Quality of product up to specification		Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3
		CompetitorA	<input type="checkbox"/> 5			<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorB	<input type="checkbox"/> 5			<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorC	<input type="checkbox"/> 5			<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorD	<input type="checkbox"/> 5			<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		Others	<input type="checkbox"/> 5			<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		D. Honesty of delivery man				Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3
				CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
				CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
CompetitorC	<input type="checkbox"/> 5			<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
CompetitorD	<input type="checkbox"/> 5			<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
Others	<input type="checkbox"/> 5			<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
E. Politeness of the delivery man				Case Co.,Ltd.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
		CompetitorA	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
		CompetitorB	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
		CompetitorC	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
		CompetitorD	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		
		Others	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1		

F. Any instructions from delivery man	Case Co.,Ltd. <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 CompetitorA <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 CompetitorB <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 CompetitorC <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 CompetitorD <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 Others <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
G. Environmental concern	Case Co.,Ltd. <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 CompetitorA <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 CompetitorB <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 CompetitorC <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 CompetitorD <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 Others <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
H. Others	Case Co.,Ltd. <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 CompetitorA <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 CompetitorB <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 CompetitorC <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 CompetitorD <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 Others <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

APPENDIX B
AN EXAMPLE OF THE PARETO ANALYSIS
OF
INDUSTRIAL CUSTOMERS

No.	Customer Name	Volume (litres)		
	Industrial Sales Division (Area 1)	Average 9 Months	% of the Total	Cumulative %
1	xxxxx	1,189,301.11	21.75	
2	xxxxx	678,370.04	12.40	34.15
3	xxxxx	633,374.00	11.58	45.73
4	xxxxx	234,777.78	4.29	50.02
5	xxxxx	226,666.67	4.14	54.17
6	xxxxx	188,000.00	3.44	57.61
7	xxxxx	173,222.22	3.17	60.77
8	xxxxx	140,333.33	2.57	63.34
9	xxxxx	133,555.56	2.44	65.78
10	xxxxx	122,666.67	2.24	68.03
11	xxxxx	118,957.79	2.18	70.20
12	xxxxx	118,951.65	2.18	72.38
13	xxxxx	106,333.33	1.94	74.32
14	xxxxx	90,666.67	1.66	75.98
15	xxxxx	84,733.33	1.55	77.53
16	xxxxx	72,000.00	1.32	78.84
17	xxxxx	68,777.78	1.26	80.10
18	xxxxx	66,888.27	1.22	81.32
19	xxxxx	65,388.89	1.20	82.52
20	xxxxx	62,666.67	1.15	83.67
21	xxxxx	56,000.00	1.02	84.69
22	xxxxx	51,666.67	0.94	85.63
23	xxxxx	49,333.33	0.90	86.54
24	xxxxx	48,411.74	0.89	87.42
25	xxxxx	43,964.81	0.80	88.23
26	xxxxx	41,666.67	0.76	88.99
27	xxxxx	38,598.77	0.71	89.69
28	xxxxx	33,333.33	0.61	90.30
29	xxxxx	32,000.00	0.59	90.89
30	xxxxx	26,666.67	0.49	91.38
31	xxxxx	26,333.33	0.48	91.86
32	xxxxx	25,333.33	0.46	92.32
33	xxxxx	25,333.33	0.46	92.78
34	xxxxx	24,719.14	0.45	93.24
35	xxxxx	24,444.44	0.45	93.68
36	xxxxx	24,000.00	0.44	94.12
37	xxxxx	22,222.22	0.41	94.53
38	xxxxx	21,222.22	0.39	94.92
39	xxxxx	21,000.00	0.38	95.30
40	xxxxx	20,888.89	0.38	95.68

No.	Customer Name	Volume (litres)		
		Average 9 Months	% of the Total	Cumulative %
42	xxxxx	17,000.00	0.31	96.33
43	xxxxx	16,000.00	0.29	96.63
44	xxxxx	16,000.00	0.29	96.92
45	xxxxx	16,000.00	0.29	97.21
46	xxxxx	13,333.33	0.24	97.46
47	xxxxx	12,683.95	0.23	97.69
48	xxxxx	12,000.00	0.22	97.91
49	xxxxx	11,899.38	0.22	98.12
50	xxxxx	10,000.00	0.18	98.31
51	xxxxx	9,333.33	0.17	98.48
52	xxxxx	8,724.28	0.16	98.64
53	xxxxx	8,333.33	0.15	98.79
54	xxxxx	8,080.00	0.15	98.94
55	xxxxx	8,000.00	0.15	99.08
56	xxxxx	8,000.00	0.15	99.23
57	xxxxx	6,688.89	0.12	99.35
58	xxxxx	5,333.33	0.10	99.45
59	xxxxx	5,333.33	0.10	99.55
60	xxxxx	3,601.05	0.07	99.61
61	xxxxx	2,844.44	0.05	99.67
62	xxxxx	2,444.44	0.04	99.71
63	xxxxx	1,947.56	0.04	99.75
64	xxxxx	1,807.78	0.03	99.78
65	xxxxx	1,777.78	0.03	99.81
66	xxxxx	1,777.78	0.03	99.84
67	xxxxx	1,767.33	0.03	99.88
68	xxxxx	1,544.44	0.03	99.90
69	xxxxx	1,333.33	0.02	99.93
70	xxxxx	1,333.33	0.02	99.95
71	xxxxx	555.56	0.01	99.96
72	xxxxx	555.56	0.01	99.97
73	xxxxx	511.11	0.01	99.98
74	xxxxx	489.89	0.01	99.99
75	xxxxx	155.56	0.00	99.99
76	xxxxx	155.56	0.00	100.00
77	xxxxx	111.11	0.00	100.00
78	xxxxx	44.44	0.00	100.00
TOTAL		5,468,938.52		

BIOGRAPHY

Weerawanna Chaiyarod was born on March 8, 1972 in Bangkok, Thailand. She got her high school diploma from Benchama Racha Rungsarit school, in Chachoengsao province, Thailand. She obtained her Bachelor's Degree in Biotechnology, Applied Science, from King Mongkut Institute of Technology Ladkrabang in academic year of 1993.

She has worked for the case company since 1993. In 1997, she got a full grant from the case company to continue her study in Engineering Management at the Regional Center for Manufacturing Systems Engineering at Chulalongkorn University. At present, she is working in the industrial sales division of the case company.

