



THE WORLD'S COMPUTING SOLUTION

MARKET PLACE SIMULATION

SUPPLY CHAIN MANAGEMENT

JCT: Task 2

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08/17/13

Target markets and computer design were the most critical decisions Tortuga had to make during the simulation. Not only did each computer need to meet the needs of its target market but that target market needed to have the growth potential and money making revenue necessary to allow Tortuga to expand into additional markets. Tortuga considered three major variables while building the initial computer brands: customer needs and wants (price willing to pay & 12-month potential demand), profit margin (profit = gross income – cost of goods sold) and in what market to focus.

Workhorse and Traveler computers were selected as Tortuga’s target market because the each unit cost less to produce than the Mercedes models thus creating a lower entry cost and less risk. In figure 1 you will see Tortuga’s customer needs and wants, the price they were willing to pay and the potential 12-month demand for each market.



Figure 1: Customer Needs & Wants

Customer needs were selected if they received a rating over 110. Any component that was selected with a rating under 110 was thought to give a competitive edge by adding a “buying appeal” to the product. “Tokyo-Asia” and “NY-North America” were selected as initial markets for Tortuga products due to demand size. You may notice that Workhorse has a smaller 12-month demand potential in “NY-North America” than “Pairs-Europe”. However, Tortuga knew that the profit margin was greater in their Traveler computers than their Workhorse computers. In Figure 2 you will see that it was not only cheaper to produce the initial traveler computer but consumers were also willing to pay substantially more. For example, if Tortuga sold 500 units of each brand, workhorse would make \$84,000 profit after cost and

Cost of Goods					
Brand (units)	100	250	500	1,000	5,000
Workhors (Speedy Trutle)	4,871	3,180	2,332	1,901	1,494
Profit	-1,185,500	-340,000	84,000	299,500	503,000
Traveler (Turtle Pocket)	4,856	3,165	2,316	1,886	1,480
Profit	-165,600	8,750	442,000	1,314,000	8,600,000

Figure 2: Cost of Goods sold vs. Profit Margin

Traveler would make \$442,000. The difference in profit margin between the two brands only widens as the number of units sold increases. Thus, the decision was made to sacrifice 500 Workhorse patrons to gain 1000 Traveler clients. By so doing Tortuga received the continued working capital it required for continual growth and expansion. If Tortuga were able to run the simulation again the same Target markets, Workhorse and Traveler, would be selected. Likewise, Tortuga would also choose the same sales locations because of potential demand and potential profit.

Though, Tortuga would invest in a Mercedes computer model during the 4th quarter if it could keep up with the demand of the other models in the manufacturing plants. Such an action would increase Tortuga's profit margin substantially since the return on a Mercedes brand is much greater than either of the other two.

It is important to note that having enough manufacturing capacity should not be the only variable when deciding to add a Mercedes model to Tortuga's line of computers. Available market demand, market price, cost of production and what consumers are looking for in a Mercedes computer are just some of the components that one must look at when adding a new line of production; not to mention all of the things that the simulation did not account for in international markets like tariffs, social norms, different ethical standards, currency exchange rates, added distribution costs, etc.

The market research that Tortuga received was invaluable and allowed Tortuga to understand its competition better which enabled educated and precise adjustments to be made in, manufacturing, human resources, advertising, pricing, sales channels and brand management. For example, without such market research Tortuga would never have known how consumers compared their products to competitors'. For example, figure 3 below shows how consumers rank Tortuga products to competitor products on a scale of one hundred. A rating would be 70 or more.

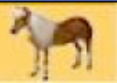


Brand Judgment - World Market				
Company	Brand			
		Workhorse	Mercedes	Traveler
Olympus Computers	Apollo 50	71	8	28
Olympus Computers	Zeus 400	30	87	18
Olympus Computers	Apollo 400	80	45	32
Olympus Computers	Zeus 200	41	70	22
Powerhouse Technologies	Commander T1	33	92	22
Powerhouse Technologies	Stealth	82	35	33
Powerhouse Technologies	Trooper VX	37	70	17
Powerhouse Technologies	Excite V2	75	33	33
Creative Computers, Inc.	Creative Power2	30	87	18
Creative Computers, Inc.	Creative Work2	66	54	34
Creative Computers, Inc.	Creative Worker	75	33	33
Creative Computers, Inc.	Creative Power	37	70	17
Tortuga	Turtle Pocket 2	34	35	95
Tortuga	Speedy Turtle 3	81	51	40

Figure 3: Qtr. 4 Brand Judgment

Anything less than 65 should be considered an ineffective brand and should be discontinued.

Market research like Figure 3 allowed Tortuga to analyze competing brands that had a higher or similar score and integrate features the brands features into the Tortuga models. By staying informed about the computer world market Tortuga was able stay in league and out beat it's competitors and provide a product consumers desired and loved. Tortuga would choose to spend the same amount, \$15,000, on market research if the simulation was run again and the option was given to choose how much to spend on market research.

Though Tortuga kept their product prices verily constant throughout the simulation, market research suggested that if your product received a 100 ranking in price judgment from its consumers it could be an indicator that consumers were willing to pay a higher price for the product. To test the theory, Tortuga raised the price of each computer model by \$100 but continued to offer a rebate of \$100. By still offering the rebate, Tortuga hoped to counter act any ill feelings of a price increase and make it seem as if the price had never changed in the minds of its consumers. Below, in figure 4, are the results after the price increase in quarter 4. You will notice that Tortuga still received a 100 on price judgment for each of its brands.




Price Judgment - World Market				
Company	Brand			
		Workhorse	Mercedes	Traveler
Olympus Computers	Apollo 50	100	100	100
Olympus Computers	Zeus 400	56	89	71
Olympus Computers	Apollo 400	92	100	100
Olympus Computers	Zeus 200	62	100	80
Powerhouse Technologies	Commander T1	62	100	80
Powerhouse Technologies	Stealth	76	100	97
Powerhouse Technologies	Trooper VX	65	100	83
Powerhouse Technologies	Excite V2	93	100	100
Creative Computers, Inc.	Creative Power2	66	100	80
Creative Computers, Inc.	Creative Work2	100	100	100
Creative Computers, Inc.	Creative Worker	100	100	100
Creative Computers, Inc.	Creative Power	68	100	82
Tortuga	Turtle Pocket 2	82	100	100
Tortuga	Speedy Turtle 3	100	100	100

Figure 4: Qtr. 4 Price Judgment

Naming each brand also played a part in brand marketing, judgment, advertising and pricing. Tortuga means turtle in the Spanish language. The idea of having a turtle be the mascot and name of the company held a two fold plan: demonstrating the story of the Tortoise and the hare signifying that with Tortuga products you win the race and indicating the life of an island dream; mysterious, freedom, life and the insatiable feeling of being “cool”. So naturally, Tortuga named each brand to symbolize the company’s name. Tortuga’s workhorse or home computer was the “Speedy Turtle” signifying that the computer was fast and reliable. Tortuga’s travel computer was the “Turtle Pocket” which suggested a dependable companion that was the size of your hand making it the perfect escort during your travels.

Though Tortuga grew rapidly in popularity and demand in its “NY-North America” and “Tokyo-Asia” offices, the need to expand its borders to new international borders was fundamental to continued growth, life and success. Arthur Thomson Jr. in his book, “Crafting and Executing Strategy, The Quest for Competitive Advantage”, gave five reasons that Tortuga used as motives to expand into international markets: “ (1) Gain access to new customers; (2) Achieve lower costs through economies of scale, experience, and increased purchasing power; (3) Further exploit...core competencies; (4) Gain access to resources and capabilities located in foreign markets; (5) Spread...business risk across a wider market base” (Thompson, p. 207).

For example, by gaining access to know customers Tortuga was able to recover investment costs more rapidly than they would have been able to if they stayed only in North America and Asia markets. Likewise, by paying off investments quickly, Tortuga was able to reduce the risk of competitors imitating Tortuga products and consequently reducing potential revenue.

Although expanding into new international markets brings many potential advantages like reduced labor costs, global talent and spreading of business risk. It also brings many challenges and risks: language barriers and different cultural social norms; political instability; currency exchange rates; erratic power grids; inexperienced workers & managers; different labor, quality and safety standard; and local laws and the ability to enforce those laws. Each above concern, though not present in the simulation, are concerns that Tortuga will have to face when expanding into international markets. “For example, in America it is a norm to maintain direct eye contact when talking with others and it is often considered rude if you do not look at the person you are speaking with. In Asia, on the other hand, averting your eyes when conversing with others is a sign of politeness and respect while direct eye contact is considered rude” (Crossman). It is important to note that doing business in other countries can differ greatly from the perceived normal American ways of doing things. Such disparities must be studied and learned if Tortuga is to see success in international markets and continually growth therein.

References

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