

# Styker case essay



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manufacture its own PCBs in its own facility near company headquarters in Kalamazoo, Michigan. Once such a facility was up and running, it might be expanded to supply PCBs to other Stryker businesses as well. Of the three alternatives, Option #3 promised the highest degree of control over quality and delivery. From that perspective, it was most the attractive. But it also required the largest capital outlay and the largest increment to Stryker's headcount and payroll. Whether it offered an adequate return on investment was a question that had to be carefully studied.

If Stryker Instruments wanted to proceed with the investment, it would have to obtain numerous approvals. Stryker Corporation's capital budgeting procedures required specific business and financial analyses of proposed expenditures. The financial analyses included studies of outlays, costs, profitability, risks, and shareholder returns. More specifically, estimates of net present value (NPV), internal rate of return (IRR) and payback period all had to be prepared before a project could receive funding. For the exclusive use of N.

PIRANI This document is authorized for use only by nadeem pirani in Financial Analysis/Fall 2011 taught by David Kuipers from September 2011 to December 2011. 207-121 Stryker Corporation: In-sourcing PCBs 2 Stryker Corporation Stryker Corporation was a leading provider of specialty medical and surgical products with 2002 revenues and operating profits of \$3.0 billion and \$507 million, respectively. The corporation's divisions included Orthopaedic Implants, Medical and Surgical Equipment (MedSurg), Rehabilitative Medical Services, and International Sales.

Summary operating and financial data for Stryker as a whole are presented in Exhibit 1. MedSurg had 2002 sales of \$1.1 billion, an increase of 13% over 2001, which came from three major business units. Stryker Endoscopy produced video-imaging and communications equipment and instruments for arthroscopic and general surgery. Stryker Medical produced hospital beds and other patient-handling equipment along with emergency medical service products. Stryker Instruments produced surgical instruments, operating room equipment and interventional pain control products.

Stryker Instruments operated manufacturing facilities in Michigan, Puerto Rico and Ireland and recorded global revenues of approximately \$430 million in 2002. PCBs were used in virtually all of Instruments' key products and platforms, sometimes in more than one application. They were contained, for example, in instrument consoles, footswitches, handpieces, chargers, docks, and monitors. Stryker had considered in-house manufacturing of PCBs before a proposal had been developed as recently as 2001, but had not been executed. In 2003, as supplier reliability continued to cause concern, the idea was once again receiving serious study.

The Proposal An in-sourcing strategy had been studied in various forms so far and the proposal might change further before implementation. In its current version the proposal called for the construction of a new building with 30,000 square feet of space on eight acres owned by Stryker in Kalamazoo, Michigan. Site preparation, construction and improvements were expected to cost \$3,030,000. This sum did not include architectural and engineering fees of \$278,000. Furnishings and non-manufacturing

equipment would cost \$126, 000. Communication equipment and IT infrastructure would cost an additional \$210, 000.

The building would be ready for manufacturing equipment by April 1, 2004. The proposed facility would manufacture all of the various types of PCBs required by Stryker Instruments and hence require many kinds of manufacturing equipment. Stryker Instruments' managers and engineers were already familiar with the requisite manufacturing processes and had prepared detailed specifications for the needed equipment, including descriptions of equipment, software, and related systems by model and manufacturer; specific configurations and options to be included on the systems; quantities for each type; and installed costs.

The total budget for about 70 separate categories of equipment was \$2, 643, 258. Equipment was to be installed and ready for testing by the end of the second quarter of 2004. Actual production would begin the third quarter of that year. As Stryker Instruments began producing its own PCBs, it would transition out of supplier agreements with third parties. This would happen fairly quickly: production transfers would take place product by product and the transition would be complete by the end of 2005. Accordingly, for part of 2004-05, Stryker would be manufacturing some PCBs while still buying some from outside suppliers.

Beginning in 2006, all PCBs would be produced in-house. Exhibit 2 shows Stryker Instruments' anticipated expenditures on PCBs for the period 2004-2009 under the old sourcing strategy using contract manufacturers, including growth in volume and expected increases in the For the exclusive

use of N. PIRANI This document is authorized for use only by nadeem pirani in Financial Analysis/Fall 2011 taught by David Kuipers from September 2011 to December 2011. Stryker Corporation: In-sourcing PCBs 207-121 3 suppliers? prices. Exhibit 2 also shows the anticipated production schedule for the new facility as currently proposed.

Stryker's manufacturing costs were divided into three main categories: materials, variable costs and fixed costs. Materials costs were estimated by product and based on actual costs reported under existing supplier agreements, adjusted for expected price increases. These are presented in Exhibit 2 for the new facility's anticipated production volume. Fixed costs were estimated by period for more than 30 categories, including wages and salaries, overtime, benefits, training, depreciation, building and equipment maintenance, office supplies, etc.

Certain fixed costs would be incurred beginning in the first quarter of 2004, even before the start of production. A summary of expected fixed costs, including inflation and wage increases, is shown in Exhibit 2. Similarly, estimated variable costs for more than 20 categories including wages, overtime, shipping supplies, scrap, etc., also are summarized in Exhibit 2. Variable costs would begin to be incurred in the third quarter of 2004. Of the combined fixed and variable costs shown in Exhibit 2, roughly half represented employee compensation and benefits; by 2006 the facility was expected to employ 56 people.

The building would be depreciated on a straight-line basis over 30 years. Capital equipment would be depreciated straight-line over seven years. IT

equipment and other furnishings would be depreciated over 3 years. These depreciation charges are included in the fixed costs summarized in Exhibit 2. Also included are expected maintenance expenditures for both the building and equipment, but not additional capital spending. Manufacturing volumes contemplated for 2009 represented 100% of the facility's rated capacity.

Finally, the project would benefit from terms of trade established with suppliers of certain PCB components and materials. About 60% of the materials purchased by Stryker for manufacturing PCBs would qualify for generous payment terms of net 120 days. Even better, the 120 days did not commence until Stryker actually took a given component from its stock. In effect, the supplier owned the component until that point, even though Stryker had physical possession of it. Further, the fact that payment was not due for 120 days meant that Stryker typically would be paid for finished goods by its customers before it was required to pay its materials supplier. Under existing arrangements with contract manufacturers, the contract manufacturer benefited from this arrangement rather than Stryker. Indeed, under the existing policy, Stryker paid its contract manufacturers much more quickly? in 15 to 60 days, depending on the contract, for an average of about 30 days. Exhibit 3 presents a calculation of the anticipated change in accounts payable associated with the new sourcing strategy. In its various financial analyses Stryker would apply a 36% tax rate.

The company generally used a hurdle rate of 15% for net present value calculations (for projects deemed riskier than usual a higher rate would apply). Exhibit 4 presents selected capital market data as of May 2003. 1 Architectural and engineering fees were not depreciated as part of the

building, but rather expensed . For the exclusive use of N. PIRANI This document is authorized for use only by nadeem pirani in Financial Analysis/Fall 2011 taught by David Kuipers from September 2011 to December 2011. 207-121 Stryker Corporation: In-sourcing PCBs 4 Exhibit 1 Stryker Corporation?

Selected Financial and Operating Data for Stryker Corporation (figures in US\$ millions, except employees) 2002 2001 2000 Net sales \$3, 012 \$2, 602 \$2, 289 Gross profit 1, 898 1, 637 1, 473 RD&E expense 144 144 124 SG&A expense 1, 187 1, 000 898 Operating profit 521 454 417 Net interest expense 41 66 98 Net earnings \$329 \$255 \$211 Cash & marketable securities \$38 \$50 \$54 Working capital 444 460 380 Net property, plant & equipment 519 444 378 Capital expenditures 139 162 81 Depreciation & amortization 186 172 169 Total assets 2, 838 2, 439 2, 441 Long-term debt (including current portion) 502 723 1, 013 Stockholders equity 1, 521 1, 072 866 Dividends \$24 \$20 \$16 Number of employees 14, 045 12, 839 12, 084 Source: Stryker Corporation 2006 Annual Report.

Historical figures have been restated to reflect the adoption of SFAS 123R. For the exclusive use of N. PIRANI This document is authorized for use only by nadeem pirani in Financial Analysis/Fall 2011 taught by David Kuipers from September 2011 to December 2011. 207-121 -5- Exhibit 2 Stryker Corporation227Selected Cost Projections under Different Sourcing Policies Quarterly Data: 20042262005 2004 2004 2004 20 04 Total 2005 2005 20 05 2005 Total Q1 Q2 Q3 Q4 2004 Q1 Q2 Q3 Q4 2005 Projected PCB Purchases under current sourcing 2, 559, 479 2, 559, 479 2, 559, 479 2, 559 , 479 10, 237, 918 2, 559, 479 2, 559, 479 2, 5 59, 479 2, 559, 479 10, 237, 918 PCB <https://assignbuster.com/styker-case-essay/>

Purchases assuming transition to in-sourcing 2, 559, 479 2, 559, 479 2, 559, 479 2, 559 , 479 10, 237, 918 2, 559, 479 852, 000 388, 186 - 3, 799, 665  
 Decrease in purchases from contract manufacturers - - - - - 1, 707, 479 2, 171, 293 2, 559, 479 6, 438, 252 Manufacturing costs for Stryker facility  
 Materials - 1, 306, 515 1, 504, 869 1, 504, 869 4, 316, 253 Variable costs - 229, 600 229, 600 45 9, 200 229, 600 392, 701 523, 2 32 523, 232 1, 668, 764 Fixed costs 252, 000 252, 000 374, 444 37 4, 444 1, 252, 888 374, 444 417, 256 53 5, 412 535, 412 1, 862, 524 Total Stryker manufacturing cost 252, 000 252, 000 604, 044 604, 0 44 1, 712, 087 604, 044 2, 116, 473 2, 563, 512 2, 563, 512 7, 847, 541 Annual Data: 20042262009 2004 2005 2006 2007 20 08 2009 Projected PCB Purchases under current sourcing 10, 237, 918 10, 237, 918 11, 773, 605 14, 363, 798 16, 518, 368 20, 152, 409 PCB Purchases assuming transition to in-sourcing 10, 237, 918 3, 799, 665 - - - Decrease in purchases from contract manufacturer s - 6, 438, 252 11, 773, 605 14, 363, 798 16, 518, 368 20, 152, 409 Manufacturing costs for Stryker facility - Materials - 4, 316, 253 5, 745, 591 6, 922, 397 7 , 960, 757 9, 712, 123 Variable costs 459, 200 1, 668, 764 1, 668, 927 1, 336, 1 77 1, 421, 416 1, 525, 709 Fixed costs 1, 252, 888 1, 862, 524 2, 139, 445 2, 239, 93 2 2, 324, 005 2, 412, 930 Total Stryker manufacturing cost 1, 712, 087 7, 847, 541 9, 553, 963 10, 498, 507 11, 706, 178 13, 650, 762 Source: Stryker Corporation documents and Casewriter estimates. For the exclusive use of N. PIRANI This document is authorized for use only by nadeem pirani in Financial Analysis/Fall 2011 taught by David Kuipers from September 2011 to December 2011. 207-121 Stryker Corporation: In-sourcing PCBs 6 Exhibit 3 Stryker Corporation? Effect on Accounts Payable, Out-sourcing vs. In-sourcing of PCBs 2004 2005 2006 2007 2008 2009 Old A/P = 30 days of CM <https://assignbuster.com/styker-case-essay/>



purchases 841, 473 841, 473 967, 694 1, 180, 586 1, 357, 674 1, 656, 362  
 New A/P = 120 days of 60% of Materialsa 841, 473 851, 425 1, 133, 377 1,  
 365, 514 1, 570, 341 1, 915, 816 Change in A/P, new vs. old – 9, 953 165,  
 683 184, 928 212, 667 259, 454 Source: Casewriter estimates. A/P assumed  
 to be the same under both policies during 2004. Exhibit 4 Stryker  
 Corporation? Contemporaneous Interest Rate Data Yield (annual %) on  
 Selected US\$ Bonds at May 31, 2003 U. S. Treasury Bonds 1-year 1. 18% 5-  
 year 2. 52 10-year 3. 57 20-year 4. 52 Corporate Obligations Short-term 90-  
 day commercial paper 1. 19 Long-term Moody? s Aaa 5. 22 Moody? s Baa 6.  
 38 Source: U. S. Federal Reserve. For the exclusive use of N. PIRANI This  
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owns and operates falls under which characteristic Explain why competitive markets normally I...

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INCORPORATION DATE 1/1/2007, ANNUAL Discuss the relationship between the level... Discuss the relationship between the level of GDP and economic well-being. What factors of well-being are missing from the GDP? Is there a point where Do you think these firms would welcome con... Budweiser, Miller and Coors who together produce 80% of all beer consumed in the US, each spend well over \$250 million a year on television advertisin Is doctor's offer considered a counteroffe... O'Mally offers to sell her townhouse to doctor for \$200, 000. Doctor asks her if she would be willing to accept \$175, 000. is doctor's offer considered a . Evaluate Bemis's internal control system...

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