



Question 1

Sally Jones supports the “what-if” output from Geneva’s ABC model, which implies that a long-run-oriented resource-usage perspective be adopted when analyzing the A12 redesign proposal. The resource usage view is predicated on the logic that the A12 product redesign proposal is one in a stream of related proposals that will continue to materialize in the future.

For example, activity #8, “move parts to Assembly,” is expected to have a driver count reduction of 533 moves (per Exhibit 7). Since each of these moves requires a standard time of 25 minutes (per Exhibit 3), the activity reduction will save 222 hours (533 moves at 25 minutes per move). While this results in freed-up material-handling capacity in the short run, it does not generate enough idle capacity by itself to justify reducing employee headcount, since each employee provides a capacity of 1,571 hours (per Exhibit 2). However, Sally Jones is contending that a series of projects implemented over time may provide a substantial release of capacity in activities such as material handling. This cumulative effect would allow the firm to reduce capacity and spending over time. Thus, each proposal by itself has the potential to contribute to cost savings in the long run. In other words, if the cumulative impact of three separate proposals reduced the hours needed to perform activity #8, “move parts to assembly,” by more than 1,571 hours, Geneva could release one of its forklift drivers and eliminate one forklift truck. This decision to reduce capacity would provide savings in terms of wages, benefits, supplies, utilities, and equipment.

Under the resource-usage approach, the contribution of each proposal to cost savings is measured by the reduction in activity frequency multiplied by the applicable activity rate for each affected activity. Granted, during the first several months after activity demands decline, Geneva may realize nothing more than the presence of additional idle time. However, as the benefits of subsequent improvement projects are realized, management will eventually be able to react to the creation of excess time by reducing activity capacity or finding new uses for such freed-up capacity.

Solution Exhibit 1 presents a new bill of activities for the revised version of the A12 junction box. The revised per unit cost is \$82.24. Given the

original cost of the A12 junction box (\$82.72), this represents a per unit savings (net of the material cost increase) of \$0.48. The estimated cost savings shown in Exhibit 7 of \$147,231, less the material cost increase of \$100,000, for a net savings of \$47,231 or \$0.47 per unit.

The capacity-based approach enables the measurement of changes in resource usage because it distinguishes between the cost of used and unused capacity. This approach to accounting for the cost of resources supplied ensures that the cost of resources used in production is not confounded by the cost of unused capacity.

Question 2

Ed Branson supports a resource-spending point of view. The resource-spending model is based on the assumption that management decisions to implement organizational or product changes should be judged as to whether the end results of such decisions improve the “bottom-line” in the short run. This view recognizes that the majority of the costs in ABC cost pools are salaries and wages, equipment and space costs. In the short run, these costs are primarily fixed and represent planned investments in the creation and maintenance of activity capacities.

For example, assume that a material-handling cost pool represents a planned investment in forklift capacity of 2,000 moves. Whether the actual resource usage is 1,700 moves or 1,800 moves during the year, there will be no difference in the wages and equipment costs in the pool—at least in the short run. Changes in the cost pool occur only when management increases or decreases the activity capacity by making changes in future employment levels, or making changes in the amount of investment in equipment and space allotted to the activity. According to the resource-spending model, cost changes occur as a result of specific management decisions to hire or fire employees and to buy or sell assets. Activity reductions within specific departments, if significant, can support staffing change decisions and real cost savings.

The resource-spending viewpoint looks at a single cost-reduction proposal in isolation from other similar proposals reviewed over time. The single proposal must generate enough activity reduction to lead to employee headcount reduction if cost savings are to be attributed to the proposal. Usually, some variable cost savings for items such as supplies and utilities will be realized as a result of activity frequency reductions. However, with respect to short-term

fixed costs such as personnel, activity reductions are often insufficient to create an opportunity to reduce these larger, step-fixed costs.

In summary, the three major differences between the resource-usage and resource-spending points of view are:

(1) resource usage is more long-run oriented and resource spending is more short-run oriented;

(2) resource usage views each decision within the larger context of an ongoing set of business decisions, while resource spending views each decision and its cost savings potential in isolation; and

(3) resource usage relies upon ABC rates to estimate cost savings, while resource spending relies on resource-spending profiles in conjunction with estimates of current idle capacity as the basis for estimating cost savings.

We can focus solely on labor expenses, or can expand the scope to consider all the resource categories included in the ABC model. The discussion below considers all the resource categories in the ABC model. Providing a comprehensive answer to this question requires labeling the four types of resources shown in Exhibit 4 as variable, step-fixed, or committed-fixed. These resources are supplies and utilities, wages and fringes, supervision, and equipment. Each is discussed below.

The “supplies and utilities” are variable resources because they can be supplied as needed. The “wages and fringes” are step-fixed resources that pertain to nonsupervisory labor, such as forklift drivers or assemblers. Assuming that Geneva does not employ temporary workers, their laborers are employed for 40 hours a week and their wages are a fairly stable expense for the company. Only long-term, substantial changes in output or activity driver counts would cause the firm to expand or contract the number of employees hired. Shorter-term fluctuations in output or driver counts are either handled by overtime or represent idle activity capacity. The cost of “supervision” is also a step-fixed resource. This category changes with adjustments in number of shifts and large changes in number of employees. The “equipment” may be a step-fixed cost, when equipment is specific to an employee, such as a forklift truck driven by a specific driver. When releasing a driver, the expectation would be that the firm would sell off the forklift truck driven by that employee. Equipment may also be a committed-fixed cost in cases when: (1) it

represents high investment cost; (2) its deployment is essentially permanent; and (3) it is operated by work crews, compared to individuals. Committed fixed costs do not play a role in quantifying the spending reduction opportunity associated with the A12 redesign.

First, calculate the \$2,529 of cost savings associated with “supplies and utilities” resources as in Solution Exhibit 2. This cost savings is estimated by isolating the “supplies and utilities” portion of each ABC rate and multiplying it by the respective decreases in activity frequency

Second, calculate the \$89,973 of cost savings associated with “wages and fringes” resources. This cost savings is estimated by following a four-step process as shown in Solution Exhibit 4. In the first step, calculate idle capacity existing in each department stated in terms of idle employee hours. The information needed for this calculation is given in Exhibit 2 and in the text of the case. For example, the Purchasing Manager estimated an idle time for the department of 0.75 FTE. Multiplying 0.75 FTE by the average capacity of 1,537 hours provided by each Purchasing employee results in an idle time estimate of 1,153 hours annually. In the second step, estimate the impact of the A12 redesign on idle time. This is added to the pre-existing idle time to provide the projected total idle time available if the proposal is implemented. The detailed calculation of A12’s impact on idle time, on a department-by-department basis, is shown in Solution Exhibit 3. For example, the Purchasing Department would have an estimated savings of 500 hours from the redesign. Since employees perform multiple activities within a department, determining payroll savings from employee reduction must be done at the department level rather than the activity level. In the third step, the total idle capacity in each department is translated into potential full-time equivalent (FTE) reductions. For example, purchasing would have a total idle capacity of 1,653 hours annually if the proposal is implemented. A typical employee in that department adds 1,537 hours of capacity each year. Therefore, reducing the number of employees by one would still leave sufficient capacity to handle the demand for purchasing activities. In the fourth step, translate the reduction in FTEs to dollar savings by multiplying the average annual wages and fringes per employee, as given in Exhibit 2, by the FTE reduction.

The next consideration is the cost of supervisors.

It appears that there is only one supervisor in purchasing, stores, and crane/forklift operations (this observation is based on the supervision dollars shown in [Exhibit 4](#)); therefore, there are no spending reduction opportunities in these departments. [Solution Exhibit 4](#) shows that the Fabrication Department will not be able to reduce nonsupervisory headcount as a result of the A12 redesign; therefore, it is reasonable to assume that no spending reduction opportunity exists with respect to fabrication supervision.

Finally, it appears as though there are approximately seven supervisors in the assembly department. This estimate is calculated by taking \$370,800 of Assembly supervision salary and fringes from [Exhibit 4](#) and dividing it by an approximated average supervisor's salary and benefits of \$50,000 (this approximation is reasonable given the \$52,000 of supervision in Purchasing, \$48,800 in Stores, \$37,938 in Material Handling, and \$56,000 [$\$112,000/2$] average supervision in Fabrication per [Exhibit 4](#)). At seven supervisors, the span of control is about 15 employees, which appears to be consistent with the other departments at Geneva. With a span of control of 15 employees, a headcount reduction of two employees would not provide a spending reduction opportunity in supervision.

Equipment is the final resource cost. Under the resource-spending viewpoint, equipment is generally considered a sunk fixed cost and not subject to cost savings in the short run. In the case of material handling, elimination of a forklift driver would also provide the opportunity to eliminate equipment costs by selling or retiring a forklift truck. Since the A12 redesign did not eliminate a driver, we assume that no equipment savings are available. In the other departments, the equipment is assumed to be common to all employees and therefore a sunk cost.

In summary, the resource-spending-based cost savings associated with the A12 redesign total \$92,515, as shown in [Solution Exhibit 5](#). Of course, in the first year these savings would be reduced by the \$15,000 in severance pay for the three eliminated workers.

Given that the annual savings of \$92,515 is less than the annual \$100,000 increase in direct materials, the resource spending view suggests that the A12 redesign would result in an annual net loss of \$7,485.

Question 3

Usage vs. Spending approach

There are strengths and weaknesses of each approach. The resource-usage-based estimate of long-run cost savings is vague because no specific timetable has been established for realizing the proclaimed savings in step-fixed and committed-fixed resources. In fact, it is possible that these savings may never materialize. Conversely, there is strong appeal among many for the specific and tangible nature of savings under the resource-spending viewpoint.

Two hypothetical cost-reduction proposals.

Each proposal assumes two departments—Purchasing and Material Handling—with one activity in each department and no idle capacity.

[Solution Exhibit 6](#) panel A summarizes the first proposal that was prepared during the month of February and has an implementation cost of \$5,000. The proposal does not produce sufficient capacity reductions in either department to generate any immediate savings under the resource-spending viewpoint. Should you accept or reject the proposal. The majority would undoubtedly reject the proposal since it loses money on its own merits. In other words, the proposal merely creates additional idle capacity while costing the organization \$5,000.

Panel B depicts the second cost-reduction proposal, involving the same two departments, which is assumed to be evaluated two months later. The second proposal has higher costs and again insufficient activity reduction by itself to generate any headcount reduction and cost savings. Again, what would you do—accept or reject? Applying the resource-spending point of view, students may support rejecting the second proposal as well because it does not generate any cost savings on its merits. However, some students will see that we should accept the combined proposals (see [Exhibit TN-4](#), Panel C).

When analyzing the first proposal, the decision maker cannot be assured of when the second proposal will be submitted or how much activity reduction it will generate. The only way to accept the first proposal is to use the resource-usage method, which places a value on the benefits of any activity reduction and idle capacity creation. *The expectation would exist that future proposals would add to idle capacity sufficiently to support eventual activity capacity reduction and true cost savings.*

Solution Exhibit 7 shows the resource-usage analysis for each proposal that includes multiplying the reduction in activity driver counts in the two departments by the appropriate ABC rates. The estimated cost savings for the first proposal would be a net of \$24,500, while the estimated cost savings of the second proposal would be \$25,000. The combined benefits are \$49,500, yet the resource-spending model suggests rejecting the proposals one at a time. Notice, the estimated savings per the resource-usage model of \$49,500 exceed the \$37,000 of savings due to headcount reductions shown in **Exhibit 6**, Panel C. This is caused by the fact that the ABC rate would appropriately include other resources besides labor (e.g., equipment, supplies, etc.).

Question 4

From a resource-usage perspective, the A12 redesign proposal does provide enough savings (\$0.47 per unit) to enable Geneva to respond to its competitor's price reduction of \$0.40 per unit. In terms of advice, Alice should mention the following five issues.

First, she should emphasize that the ability of the ABC system to link engineering design changes to the profitability of a product line provides Geneva with an important competitive advantage. The lessons learned on the A12 product line can be transferred to other product lines. Geneva's management team does not need to merely react to the actions of its competitors, but rather Geneva's engineers could proactively embark upon a continuous process of re-evaluating product designs and proposing changes that would reduce unit costs and increase profit margins.

Second, Alice should emphasize that the resource-usage-based savings are long-run estimates; therefore, the projected savings of \$0.47 per unit will not be realized in next month's income statement. Geneva will need to take actions in the future that either translate the usage-based savings into spending reductions or sales growth.

Third, she should acknowledge that, while resource usage is broadly applicable in decision contexts where it makes sense to distinguish between the costs of used and unused capacity, resource-spending analysis has its practical applications as well. For example, from an operational budgeting perspective, the resource-spending mode of analysis can be used to make informed resource-planning decisions. Also, if management needs highly certain and

targeted cost savings in the short run, the resource-spending-based measures may be more appropriate than the resource-usage measures.

Fourth, Alice should emphasize that both the resource-usage and resource-spending modes of analysis offer higher quality information than the estimates provided by the standard-cost system.

Finally, she should acknowledge that the ABC data being relied upon for the cost-savings estimates is more than one year old. To the extent manufacturing methods have changed or the combination/quantity of resources supplied have changed, the ABC rates may be subject to some amount of error.

Of course, there are numerous other pieces of advice that would benefit Alice in her ultimate goal of making a presentation that fully explains the potential applications of ABC to Geneva's business.

President Simms' response to Alice Johnson's presentation is likely to be positive. Since the ABC system has shown that the design change will save Geneva \$0.47 per unit on a product that is in need of a \$0.40 per unit cost reduction, Simms will likely give his approval to Johnson's request to update the ABC system. However, there is a strong likelihood that the ABC project will not be successful in the long run. The case points out that Geneva's ABC project was spearheaded by Mike Foster. With Foster gone, the project stagnated. The implication is clear that the ABC project did not have strong cross-functional top-management support. Research has shown that ABC implementations driven by the finance function and unsupported by top-level nonaccounting managers are likely to fail. Therefore, it is probable that managers outside the accounting department will never use the ABC system to support decision making in a meaningful and consistent manner.

Geneva Electronics (B)

Part A

The ABC cross model illustrates that, generally speaking, ABC adds values from three perspectives—the cost assignment view, the process view, and the “what-if” cost-modeling view. The conclusions reached in this case may differ, but these three applications of ABC should be apparent to all.

This question provides an overarching framework for organizing their presentation. The term

“product cost-ing” relates to the cost assignment view of the ABC cross model, whereby resource costs are assigned to activities and activity costs are assigned to products. The term “process costing” refers to the process view of the ABC cross model that focuses on costing activities and processes and identifying their root-cause drivers and performance measures. The term “cost modeling,” in this context, refers to the “what-if” analysis perspective of ABC. The cost-modeling perspective inverts the cost assignment view in the sense that it estimates the impact of a change in product mix, product design, or process design on activity demands and resource costs

The (A) version of the case focuses on the “what-if” cost-modeling perspective. The A12 junction box has been redesigned and the task at hand is to estimate the potential cost savings. The resource-usage view uses ABC rates to estimate the long-term impact on resource costs. The resource-spending view uses resource-spending profiles to estimate the short-run impact on resource costs.

Part B

Alice’s concern is that the resource-usage-based savings of \$0.47 per unit is well below the recently announced price reduction of \$2.50 per unit. We should be concerned about this \$2.03 shortfall, However, Geneva’s current view of A12’s product cost and profitability is predicated on its direct labor (DL)-based cost accounting system. There is a product cost distortion inherent in the DL-based system and it may relate the amount of the distortion to the \$2.50 price reduction.

Exhibit 8 provides an estimated income statement for the current version of the A12 junction box using the DL-based standard cost system. The estimated DL charge is a function of the number of labor hours spent on activities #12 and #16 and the average wage rate in the fabrication and assembly departments. Case Exhibit 5 shows the 23,333 DL hours in assembly. The 10,000 DL hours in fabrication is found by dividing the 100,000 units produced by the activity time standard of six minutes per unit. Finally, Exhibit 2 shows the average wage rates per hour for activities 12 and 16.

The overhead charge is estimated by calculating an overhead rate based on DL hours. The overhead rate is computed by taking the \$7,140,000 of overhead from Exhibit 1 and dividing it by the total labor hours allocated to activities #12 and #16 of 135,032 (see Exhibit 3),

thereby yielding an overhead rate per DL hour. Multiplying this rate by the DL hours worked of 33,333 results in estimated overhead assigned to A12.

Exhibit 8b (Panel B) provides an estimated income statement for the current version of A12 using the ABC system. Notice that in the ABC system, DL is lumped in together with the overhead. The ABC charges and other overhead charges come from Exhibit 6. The bottom of the exhibit summarizes the decrease of over \$3.00 in cost of per unit that results from the ABC data.

EXHIBIT 1 Bill of Activities for Redesigned Version of A12 Junction Box

10925

Volume of production				100,000	units	
Activity#	Quantity of Activity Driver	Activity	Activity rate	Total Activity Charge	Activity Charge/unit	Not Value Added
1	300	production batches	\$ 20.71	6,213	\$ 0.060	
2	300	production batches	\$ 19.79	5,937	\$ 0.060	
3	2,400	unique parts/batch	\$ 7.65	18,360	\$ 0.180	
4	2,400	unique parts/batch	\$ 11.69	28,056	\$ 0.280	0.280
5a	1,500	sheet bundles	\$ 7.18	10,770	\$ 0.110	0.110
5b	16,800	part containers	\$ 1.87	31,416	\$ 0.310	0.310
6a	1,500	sheet bundles	\$ 3.25	4,875	\$ 0.050	0.050
6b	16,800	part containers	\$ 0.87	14,616	\$ 0.150	0.150
7	600	crane moves	\$ 39.28	23,568	\$ 0.240	0.240
8	2,800	forklift moves	\$ 10.72	30,016	\$ 0.300	0.300
9	1,500	forklift moves	\$ 21.44	32,160	\$ 0.320	0.320
10	1,500	forklift moves	\$ 15.06	22,590	\$ 0.230	0.230
11	300	setups	\$ 84.83	25,449	\$ 0.250	0.250
12	100,000	housing units	\$ 2.46	246,000	\$ 2.460	
13	3,000	of rework hours	\$ 7.11	21,330	\$ 0.210	0.210
14	100,000	housing units	\$ 0.63	63,000	\$ 0.630	0.630
15	2,100,000	parts used	\$ 0.04	84,000	\$ 0.840	0.840
16	2,100,000	parts used	\$ 0.18	375,258	\$ 3.750	
17	100,000	finished units	\$ 0.89	89,000	\$ 0.890	
18	100,000	finished units	\$ 0.68	68,000	\$ 0.680	
Total activity charges				1,200,614	\$ 12.000	3.920
Overhead from departments not included in ABC study				520,661	\$ 5.210	
Total Overhead				1,721,275	\$ 17.210	
Total Material Costs				6,500,000	\$ 65.000	
Total Product Cost				8,221,275	\$ 82.210	

EXHIBIT 2 Savings associated with "supplies and utilities" resources

10925

	Activity Cost	Activity capacity	Rate	Change in activity use	Saving
Purchasing Department					
3. Issue purchase orders for parts	\$ 8,000 /	22,842 =	\$ 0.35 x	(600) =	\$ (210)
4. Expedite open parts orders	\$ 6,380 /	23,152 =	\$ 0.28 x	(600) =	\$ (165)
Stores					
<i>5. Unload materials and put in stores</i>					
b. Assembly— parts	\$ 6,800 /	123,120 =	\$ 0.06 x	(3,200) =	\$ (177)
<i>6. Process material requisitions</i>					
b. Assembly— parts	\$ 7,000 /	133,560 =	\$ 0.05 x	(3,200) =	\$ (168)
Material Handling					
8. Move parts to Assembly	b \$ 17,200 /	27,886 =	\$ 0.62 x	(533) =	\$ (329)
Fabrication					
13. Rework defective units	\$ 10,000 /	30,774 =	\$ 0.32 x	(1,550) =	\$ (504)
Assembly					
	In thousands				
15. Unload parts and hold	\$ 3,900 /	11,260,800 =	\$ 0.00 x	(500,000) =	\$ (173)
16. Assemble finished products	\$ 18,100 /	11,260,800 =	\$ 0.00 x	(500,000) =	\$ (804)
Total Savings					\$ (2,529)

EXHIBIT 3 The Impact of the A12 Redesign on Idle Time

	Change in activity use	Activity time standards minutes per activity	Change from original Activity time hours
Purchasing Department			
3. Issue purchase orders for parts	(600)	20	(200)
4. Expedite open parts orders	(600)	30	(300)
			(500)
Stores			
5. Unload materials and put in stores			
b. Assembly— parts	(3,200)	5	(267)
6. Process material requisitions			
b. Assembly— parts	(3,200)	2	(107)
			(373)
Material Handling			
8. Move parts to Assembly	(533)	25	(222)
			(222)
Fabrication			
13. Rework defective units	(1,550)	10	(258)
			(258)
Assembly			
15. Unload parts and hold	(500,000)	0	(833)
16. Assemble finished products	Exhibit 5	23,333.33	20,700.00
			(2,633)
			(3,467)

EXHIBIT 4 Resource Spending View of A12 Junction Box Redesign Proposal

	Current Idle Capacity FTE	x	Practical Capacity/FTE = hours	=	Idle Capacity hours	+	Change from original Activity time hours EXHIBIT 3	=	Revised Idle capacity	Potential FTE reduction
Purchasing	0.75	x	1,537	=	1,153	+	500	=	1,653	1
Stores	0.25		1,490		373		373		746	0
Crane Operators	0.25		1,615		404		222		626	0
Forklift Operators	0.50		1,571		786		258		1,044	0
Fabrication	0.50		1,590		795		258		1,053	0
Assembly	0.00		1,526		0		3,467		3,467	2

	Potential FTE reduction	x	Standard Wage + Fringe per employee	=	Savings
Purchasing	1	x	30,373	=	30,373
Stores	0		29,067		0
Crane Operators	0		31,100		0
Forklift Operators	0		29,510		0
Fabrication	0		30,511		0
Assembly	2		29,800		59,600
Saving					89,973

EXHIBIT 5 Total Spending Reduction Opportunity

Supplies and Utilities	(2,529)
Wages and Fringes	(89,973)
Supervision	0
Equipment	0
Total Spending Reduction Opportunity	(92,502)

EXHIBIT 8 Comparative Income Statements for the Current Version of the A12 Junction Box

For activity 16 hourly rate = $2,012,240 / 94,264 = \$ 21.35$

Assembly time charges		Activity per unit	Activity cost rate	=	\$			
By parts processed	26 x	\$ 0.18	=	\$	4.65	This is the way is is done in ABC	EXHIBIT 6	
By labor hours	0.233 x	\$ 21.35	=	\$	4.98	Direct + fringe labor cost	EXHIBIT 2	107.21%
	0.233 x	\$ 12.42	=	\$	2.90	Direct labor cost only	EXHIBIT 2	
A12 share of parts	2,600,000 /	11,260,800 =		23.09% x	2,012,240 =	464,605	ABC	
A12 share of assembly hours	23,333 /	94,264 =		24.75% x	2,012,240 =	498,093		107.21%

Estimated Income Statement for the Current Version of the A12 Junction Box (Using the Direct-Labor-Based Standard Cost System)						Panel A 1999
Sales	60,000,000	x	18.50%	=	11,100,000	
Direct materials (see Exhibit 5)					6,400,000	
Direct labor	Activity 12	100,000	x	0.10 x \$ 12.71 =	127,100	
	Activity 16	23,333		x \$ 12.42 =	289,800	416,900
Overhead	Exhibit 1 total	/			7,140,000	
	/	Activities #12 & #16 Labor hours (from Exhibit 3)	/		134,992	
		Rate	=	\$ 52.89		
	x	Activities #12 & #16 Labor hours for A12	x	33,333 =	1,763,067	
Gross margin						2,520,033
S, G & A	19.00%	x	11,100,000			2,109,000
Profit before tax						411,033
Tax expense	40.00%					164,413
Profit after tax						246,620
Profit margin						2.22%

EXHIBIT 8 b Comparative Income Statements for the Current Version of the A12 Junction Box

Estimated Income Statement for the Current Version of the A12 Junction Box (Using the Activity-Based Costing System)				1999	Panel B 1999	
Sales	30,373,000	x	18.50%	=	11,100,000	
Direct materials (see Exhibit 5)					6,400,000	
Conversion costs = All ABC			Exhibit 6		1,871,330	
Gross margin					2,828,670	per unit
S, G & A					2,109,000	
Profit before tax					719,670	
Tax expense		40.00%			287,868	
Profit after tax					431,802	
Profit margin					3.89%	
Increase in gross margin	2,828,670	-	2,520,033	=	308,637	
Decrease in cost					\$ 3.09	

Overhead allocated

Custom Product Line	1,092,000	/	68,500	\$	15.94
A12 Junction Box	1,763,067	/	100,000	\$	17.63

EXHIBIT 8 b Eliminate Non value added activities

Activity	Cost from exhibit 6	Revised Income Statement			
4	\$ 0.35	Conversion costs = All ABC		=	11,100,000
5a	\$ 0.11	Direct materials (see Exhibit 5)			6,400,000
5b	\$ 0.37	Conversion costs = All ABC	1,871,330	- \$ 4.44 x 100,000	1,427,330
6a	\$ 0.05	Gross margin			3,272,670
6b	\$ 0.17	S, G & A			2,109,000
7	\$ 0.24	Profit before tax			1,163,670
8	\$ 0.36	Tax expense	#		465,468
9	\$ 0.32	Profit after tax			698,202
10	\$ 0.23	Profit margin			6.29%
11	\$ 0.25				
13	\$ 0.32				
14	\$ 0.63				
15	\$ 1.04				
	\$ 4.44				

Multiperiod Analysis

	Year 0
Product Engineering	(10,000)
Process Eng	(9,500)
Severence pay	(15,000)
	(34,500)

Long term ABC Analysis

	Year 1	Year 2	Year 3
Raw materials	(100,000)	(100,000)	(100,000)
Cost savings	147,653	147,653	147,653
Total	47,653	47,653	47,653

Resource spending approach (Exhibit 5)

Raw materials	(100,000)	(100,000)	(100,000)
Cost savings	92,502	92,502	92,502
Total	(7,498)	(7,498)	(7,498)