

**AMERICAN WIDGET COMPANY INC.
ANYTOWN, MICHIGAN**

**DIAGNOSTIC SURVEY AND
ADJUSTMENT PLAN**

Prepared by
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University of Michigan
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AMERICAN WIDGET COMPANY INC.

DIAGNOSTIC SURVEY AND ADJUSTMENT PLAN

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EXECUTIVE SUMMARY

The American Widget Company, Inc. (AWC), located in Anytown, Michigan was certified on April 1, 1997. The cost share agreement was signed on May 1, 1997. Since that time, the company has been actively addressing key issues such as re-assessing its product mix, investigating partnerships with other companies, updating its training and maintenance systems, re-vamping its financial system, hiring a marketing representative, and researching new suppliers.

GLTAAC has identified the following problems: the company is a small one among multi-national competitors who have millions of research funding at their disposal, some of the equipment is redundant, training and maintenance systems are under-developed, the finance department uses a home-grown financial system that needs to be updated for more sophisticated uses, and the company has only one sales representative.

GLTAAC has identified the following strengths: AWC is very quality conscious, there is a strong employer-employee relationship which has translated into a highly dedicated and creative staff, and the company is capable of producing a diverse range of products.

The strategy of the Adjustment Plan is to clearly define the optimal product mix, encourage the company to investigate joint ventures with other small companies, develop internal control systems, and build the sales department.

The future of the company looks very optimistic if the company can take advantage of currently available opportunities. In addition to import competition, there are some major technological changes occurring in the manufacture of widgets which will determine the next generation of widgets. The strategies outlined in the Diagnostic and Adjustment Plan are expected to save 45 jobs and enable the company to expand its reputation to the rest of the country as well as to certain world markets.

I. INFORMATION SUMMARY PAGE

NAME OF FIRM: American Widget Company, Inc.
ADDRESS: 6996 Widget Street
 Anytown, Michigan, 12345
PHONE NUMBER: (123) 456 - 7890
CONTACT: Marvelous Inventions
 President
SIC: 9999 - Widgets
PRINCIPAL PRODUCTS: Steel and plastic widgets for use in medical equipment,
 industrial equipment, cars, and toys

SALES AND EMPLOYMENT COMPARISON

	<u>12/31/97</u>	<u>12/31/96</u>	<u>12/31/95</u>
SALES:	\$3,000,000	\$3,300,000	\$4,000,000
NET PROFIT (LOSS)	\$6,000	\$8,000	\$10,000
EMPLOYMENT:	45	70	90

ASSISTANCE	TOTAL	GOVERNMENT SHARE	CLIENT SHARE
POST CERTIFICATION:	\$10,000	\$7,500 (75%)	\$2,500 (25%)
PROPOSED CONSULTING:			
• Marketing Plan	\$30,000	\$15,000 (50%)	\$15,000 (50%)
• Manufacturing Plan	\$50,000	\$25,000 (50%)	\$25,000 (50%)
• ISO 9001	\$20,000	\$10,000 (50%)	\$10,000 (50%)
• TOTAL CONSULTING	\$100,000	\$50,000 (50%)	\$50,000 (50%)
TOTAL ASSISTANCE:	<u>\$100,000</u>	<u>\$50,000</u>	<u>\$50,000</u>

II. INDUSTRY OVERVIEW

(NOTE: THIS CHAPTER WILL BE SHORTENED IN THE FINAL VERSION)

A. RELEVANT INDUSTRY SECTOR

SIC CODE

The American Widget Company manufactures steel and plastic widgets for use in a variety of industries. Widgets are classified under SIC 9999 Widgets, which are divided into four basic market segments: steel, plastic, ceramic, and composites. Steel and plastic, which are the types that the company produces, usually account for 75% of the SIC code value of shipments and 50% of sales value. Beginning 10 years ago, however, composite widgets have become very popular and may soon comprise 50% of the value of shipments before the end of the 20th century, while sales of steel and plastic widgets are expected to decline by a third at the same time. The value of shipments report shows that manufacturers of widgets have been increasing production at a rate of 2% per year. The widget industry was a \$10 billion business in 1996 in the U.S., which translates to about 300 billion widgets sold.

Table 1. Value of Shipments for SIC 9999: Widgets

Year	Value of Shipments (Smillion)	Cost of Materials as % of Value of Shipments	Total Employment	Production Workers as % of Total Employment
1991	4.765	63%	45,500	78%
1992	4.823	63%	46,000	79%
1993	4.912	67%	47,000	77%
1994	5.325	70%	47,000	75%
1995	5.379	75%	48,100	79%
1996	5.586	70%	47,900	80%
1997 (estimated)	5.776	73%	48,000	80%

Source: Manufacturing USA 1998

SALES COMPETITION

There are about 500 companies in the U.S. and about 600 establishments. The top 20 companies, including the Supreme Widgets Corporation, Delightful Widgets Company, and The Widget Factory International, account for nearly 50% of annual widget sales and they each gross over \$10 million annually. The largest companies also tend to dominate the cheaper widgets while the smaller companies have concentrated on the more expensive end. The average number of employees per establishment is 100. Most widget factories are located in the Midwest, particularly in Michigan and Ohio, close to the factories of their major customers. The widget industry is divided among a few large multi-national manufacturers who employ thousands of workers, as well as hundreds of small companies with 10 to 30 employees and no international sales division. Domestic lies somewhere in between, at 45 employees. 78% of those employees have historically been production workers, which is about the same ratio as Domestic's full-time workers. The National Widget Foundation estimates that the kind of jobs which will increase by at least 10% in the next five years are the scientists in the R & D labs, production workers who have advanced engineering degrees, as well as sales and marketing jobs. Wages in the widget industry are comparable to the average in all manufacturing industries at about \$12 per hour.

TECHNOLOGICAL TRENDS

Widgets are used in a variety of industrial products, including medical and industrial machinery, automotive parts, and consumer goods such as toys. 80% of the American Widget Company's annual

sales is concentrated in widgets for cars and industrial machines. Toy widgets are a recent fad, and the consumer of widget toys tend to be middle-aged professionals (both men and women) with an annual income of about \$50,000, who collect gadgets of all kinds--however, this fad may soon disappear since the younger generations seems to be more interested in other types of toys. The company has experimented with steel and plastic composites, but has not found much interest among its current customers.

Recently, an interest in new materials such as wadgets and wudgets has grown, because of their durability and ease of malleability for formation into various shapes and sizes, as well as meeting the standards of environmental regulations expected to come into effect in five years. These new materials were developed in research funded by the Widget Research Association. Wadgets have already resulted in cutting down the number of parts in automotive vehicles, and other design changes may also be forthcoming. Wudgets have been useful mostly in medical equipment which make highly sensitive and precise measurements.

MARKET FORECAST

Overall sales are expected to plummet in the near future due to over-capacity and a depressed national economy, according to the Widget Research Association. The U.S. and European markets are very mature, and companies are now investigating new markets in regions such as South America and Eastern Europe where American widgets have a long-standing reputation for quality and versatility of use in various kinds of different machines. Since labor is the main cost of producing any kind of widget, especially the cheaper ones, many domestic companies have moved overseas when their customers have opened new plants in regions of the world to assemble various machines and vehicles. In addition, the kind of cars that use widgets have highly cyclical sales, causing small companies like the American Widget Company, whose main products are concentrated in the automotive sector, to have fluctuating sales performance throughout the year. Some of the smaller widget companies have formed joint ventures and become second-tier suppliers to larger manufacturers. However, a limited segment of widgets, mostly the composite widgets which require high-quality inspections during the first phase of manufacture, are expected to continue being tested and produced in the U.S. Though composite widgets are currently more expensive than conventional steel and plastic widgets, their advantages and increasing popularity are expected to bring prices down eventually.

Widgets are sold through distributor channels, trade shows, and directly to the customer. Email marketing has not been popular so far. The main trade show for widgets is usually held each year in the early spring, but there are also five other major trade shows throughout the year, specializing in various types of widgets. Like most small widget manufacturers, the American Widget Company sells directly to the customer and through trade shows. Most large manufacturers use distributor channels and have glossy brochures and pamphlets for their sales representatives. AWC, however, does not have any formal sales department nor any promotional materials, relying instead on word-of-mouth for its reputation. Although this strategy has worked in the past, customers are now more interested in the cost and have taken quality as a given, making the company vulnerable to cheaper imports.

In the future, in-house capability to conduct widget research is expected to become an even more important factor in determining who can adapt to the very fast pace of change in widget technology. This gives large companies a competitive edge, since they are likely have the most amount of research funding at their disposal. There is a rush to patent any new technologies or manufacturing processes, since there has historically been an advantage to being the first to bring a product to the market. In addition to automation, many widget companies are currently operating on Total Quality Management (TQM) principles, Just-In-Time (JIT) manufacturing processes, and barcoding. An estimated 35% of widget companies in the U.S. have ISO-9000 certification of some kind, according to the Widget Manufacturers Association.

B. LEGAL/TRADE ISSUES

FDA APPROVAL PROCESS

The Food and Drug Administration (FDA) must approve every new widget to be used in medical equipment, and the approval process has become even more stringent after the highly publicized disaster of the solar-powered widgets 15 years ago. Widget companies who are in the medical industry business are anxious to bring new products to market quickly, to gain an initial market edge before generic copies begin to be offered. However, not only does the FDA have to evaluate new widgets more thoroughly, the agency itself has undergone severe budget cuts in the last three years, which has left a skeleton staff at the department to review all the applications, with the result of even longer waiting times. In the short-term, therefore, the legal and bureaucratic ends of the situation are not expected to improve.

ENVIRONMENTAL

The manufacture of widgets will be affected by the amendments to the Clean Air Act as well as the Clean Water Act which specifically require widget producers to reduce the amount of chemicals which are created as a by-product when plastic components are molded and shaped.

Environmental regulations have always been the catalyst for new research in the widget industry, leading to such innovations as the plastic and composite material widgets in the 1960's and 1970's. Since the last decade, new research has led to a more ingenious production process that greatly reduced wastewater, decreased the number of redundant widget parts, as well as making ever smaller widgets which can do the same quality job as the traditional, larger size widgets.

TRADE LAWS

The **Widget Quality Act** (Public Law 345-128) was passed after the American Widget Factory filed a lawsuit to protest the dumping of cheap imports in 1995. The new legislation, which took effect in June 1997, affects 50% of widgets sold in the U.S. All of Domestic's widget products will be subject to the quality and inspection criteria. Fortunately, Domestic already meets those standards so that its daily operation is not expected to undergo any major re-organization of resources.

The recent passage of the **Worldwide Widget Agreement** also affects the American widget industry, since it means that American manufacturers no longer has the quota productions they had relied on for 30 years. This is expected to make worldwide competition even stiffer for widget producers.

Additionally, the cost of **resins** affects prices of widgets. In the past several years, resin prices have fluctuated wildly, following various major worldwide events. Both political turmoil and natural disasters have affected the supply and timely transport of resins, which in turn affects the production of widgets. Industry observers are predicting a more stable resin trade in 1998, believing that the worst was over in 1996 when resin prices were at the highest. Over the years, one major focus of research has been the development of alternative materials and creative composite materials, which has been successful in limited types of widgets. Domestic's widgets are not made of any composite materials, and their R&D department is understaffed, due to a local labor shortage, but like many other small companies, they have begun turning to short-term research partnerships with other related companies in the midwest region.

C. IMPORT EFFECT SUMMARY

Traditional competitors for the widget industry used to be from Western Europe. However, as companies began to move factories to lower-wage countries beginning in 1985 with the passage of the Widget Trade Agreement, competitors are now coming from Latin America and Asian countries such as Hong Kong and China. Steel widgets are the main losers of this competition, being very old technology and fairly easy to manufacture, compared to the more high-tech kind of widgets, making market entry requirements

very affordable for small, unknown companies. Since the return of Hong Kong to Chinese rule in 1997, it is unclear yet how import patterns from these two sources will be affected. Currently, the U.S. has different quota rules for various categories of widgets for China and Hong Kong, which would most likely be modified as import practices become more apparent in the near future.

Table 2. Imports of SIC 9999: Widgets in \$millions

Country	1997	1996	1995
Mexico	601	378	302
Brazil	384	360	354
Hong Kong	352	340	242
China	307	351	238
Chile	292	290	300
Caribbean	280	276	269
TOTAL	2,216	1,995	1,705

Source: National Trade Data Bank Imports

Table 2 illustrates that Mexico is the largest source of imported widgets and that furthermore, their imports have doubled in the last two years. Industry observers believe that much of the increase is due to low-tech widget manufacturers which have moved to Mexico in order to take advantage of the cheap labor. Most imports are of the low-tech, cheaper variety, which has prompted many domestic manufacturers to concentrate more on the high-tech end in order to stay in business.

III. FIRM INFORMATION

A. CURRENT STATUS

1. FIRM PROFILE

PRODUCTS

The American Widget Company was started in 1957 by Original Inventions, the grandfather of the current President, Marvelous Inventions. The company produced widgets for the automotive sector and for industrial machinery at the time. Marvelous Inventions inherited the company in 1979, invested in state-of-the-art equipment, rented three additional buildings, and added new products lines: widgets for the medical equipment industry. The Widget Toys Division was added in 1990, when the fad was beginning to take hold in the market, and is a very minor product line. Currently, the company manufactures steel and plastic widgets which are used in the medical, industrial, automotive and consumer goods (toys).

CURRENT FACILITIES

The company has its base operations, including administrative, engineering design, and sales activities located in a 80,000 square ft. facility in Anytown, Michigan. The major widget products are also manufactured here. There are two other buildings which the company rents, nearby which are all about 20,000 square ft. each and house other widget products. A warehouse was built next to the main building, but is currently not used very much, since the company tends to keep low inventories.

STOCK OWNERSHIP

The ownership of the firm is as follows:

	<u>% ownership</u>
• Michael Jones, President	50%
• Adam Smith	25%
• Jane Smith	20%
• Tom Smith	2%
• John Brown	2%
• Mike Brown	1%

There are no past due federal, state, or local tax issues outstanding. No substantial legal issues exist. The company has never had export sales.

2. CHANGES SINCE CERTIFICATION

There have been no significant changes in the company's operations or management since certification. Other than the hiring of Organized Inventions in April 1996 to fill a position previously held by John Brown (now retired), there have been no significant changes at the company in the past five years.

The automotive widget products, which comprise a major part of the company's annual sales, continue to experience increased import competition and a corresponding decline in sales and employment. The firm has increased the number of sales accounts in order to offset the losses, but the additional sales is very limited and has not been sufficient to stop the steep decline. Efforts to increase the sales accounts of

widgets for industrial machinery and medical equipment have performed a little better, but these products together account for only 40% of the company's sales.

3. MANAGEMENT REVIEW

Key members of management are as follows:

- Michael Jones President/Sales
- John Jones Vice President
- Elizabeth Carpenter Manager of Tooling
- Joe Bell Controller
- Janet Hill Production Manager

See Appendix B for a brief biographical sketch on members of management.

4. FINANCIAL REVIEW

CURRENT FINANCIAL CONDITION (BALANCE SHEET)

Based upon financial statements for the fiscal year ended December 31, 1997, the company is in good financial condition. Key balance sheet data are as follows:

	<u>Median Industry</u> <u>SIC 9999</u>	<u>AWC</u> <u>12/31/97</u>
• Working Capital	NA	\$625,624
• Cash Flow	NA	\$157,245
• Current Ratio	2.1:1	2.5:1
• Accounts Receivable	50 days	44 days collection
• Inventories	10 days	7 days on hand
• Total Liabilities/Net Worth	0.9:1	0.3:1
• Sales/Net Fixed Assets	15.3	12.8

• **Balance sheet comparison:** 1997 vs. 1996:

- Accounts receivables remained about the same (\$15.1K increase) even though sales had decreased 18.2%.
 - Inventories were reduced by \$59.9K (18.3%), resulting in a more favorable working capital position.
 - Net fixed assets decreased by \$79.8K, because the company uses accelerated cost recovery for general accounting, as well as for tax return purposes.
 - Total liabilities, the same as current liabilities, decreased by \$88.8K. The company has historically not had any long-term liabilities or debts.
 - Stockholders' Equity decreased by \$12.3K. Common stock was purchased at a cost of \$50,000.
- The **sales/net fixed assets** is lower than the industry average. Several factors affect this ratio - buildings are rented, rather than owned by the company; accelerated depreciation lowers the asset base more rapidly; major equipment additions in 1995; and sales decrease (18.2%) compared to the previous year.

- The company has a \$500,000 revolving **line of credit** with a local bank, renewable in May, 1998. As of June 31, 1997, and 1996, \$50,000 was secured by inventory and accounts receivable and \$20,000 and \$100,000, respectively, were unsecured. Interest is payable monthly at 8.25% as of June 31, 1997 and 1996.
- Although the company had **operating** losses for the past two years, **net** profits were reported in 1995 and 1996. Other income was generated through royalties and miscellaneous income of \$130,251 in 1995 and 1996. Royalty income from patents was worth \$20,021 in 1995 and \$44,215 in 1996. Miscellaneous income is made up of the sale of equipment in 1996.

INCOME STATEMENT

For fiscal year ended December 31, 1997, the company has an after-tax profit of \$6,000, compared to a net profit of \$8,000 for the prior year. Sales for 1997 were \$3.0 million, compared to \$3.3 million for the prior year. Statistical data, related to the income statement, are as follows:

	<u>Median Industry</u> <u>SIC 9999</u>	<u>AWC</u> <u>1997</u>
• Profit before tax/Sales	4.5%	1.3%
• Profit before tax/Assets	7.7%	3.2%
• Profit before tax/Net Worth	14.6%	7.9%

Sales for the 6 months ended June 31, 1998, are running \$1.7, which is lower than 1996. Management estimates that sales will be \$2.9 million, and pre-tax profit will be \$3,500 for the year. Current customer order backlog is \$5,000 - 2 weeks, which is normally low at this time of the year due to seasonality of product lines.

EXHIBIT A

Exhibit A shows the Balance Sheets and Income Statements for the past 3 years, ended December 31, 1997. In addition, an interim financial statement is attached for the 6 months ended June, 1997. The interim financials do not reflect physical inventory values at the end of the period. Therefore, the interim net income would have to be adjusted to record the true net income. The balance sheet at December 31, 1997, indicates a continuing good financial condition. A limited ratio analysis is shown in Exhibit IV. Industry ratios for SIC 9999, Manufacturers - Widgets, are derived from Robert Morris Associates 1998 Annual Statement Studies.

OTHER PERTINENT FINANCIAL INFORMATION

Earnings have been retained in the business. The company does not make a practice of paying dividends. Capital expenditures are planned, for 1998, at level of \$30,000.

Accounts receivable aged trial balance summary as of December 31, 1997, is as follows:

	<u>Gross Amount</u>	<u>% of Total</u>
Current (under 30 days)	\$102,145	32.6%
31 - 60 days	53,127	17.0
61 - 90 days	59,236	18.8
91-120 days	92,184	29.5
Over 120 days	16,283	5.2
Total	\$312,975	100%

The company's level of accounts payable is about 0.32 times inventories. This level of accounts payable represents an estimated 20 days outstanding. In addition, there is no long-term debt. The company has a line of credit amounting to \$500,000 is available from a local bank.

GROSS MARGINS/SAMPLING OF JOBS

- Since the company does not have a cost accounting system that tracks individual job costs, nor product line costs, a random listing of customer quotations provides some estimated costs.
- Selling, general, and administrative overhead is 14.1%/selling price
- Labor overhead is 112.6%/direct labor

	<u>Sales Price</u>	<u>Cost of Sales (\$)/Gross Margin</u>
• Widget type 1	\$567	\$351/35.6%
• Widget type 4	\$235	197/43.2%
• Widget type 6	\$367	302/26.9%
• Overall	\$398	\$12,351/32.4%

5. MARKETING/SALES REVIEW

PRODUCT LINES

- American Widget Company's product lines are as follows:
 - Widget Type 1 - automotive
 - Widget Type 2 - automotive
 - Widget Type 3 - automotive
 - Widget Type 4 - industrial machinery
 - Widget Type 5 - industrial machinery
 - Widget Type 6 - medical equipment
 - Widget Type 6B - medical equipment
 - Widget Type 6C - medical equipment
 - Widget Type 7 - toys

There are 400 different product listings in the widget product line, and the company should consider re-evaluating some of the product lines in order to improve profits.

The company's primary markets are in the automotive sector, although its core competency is in industrial machinery, due to the fact that the original founder of the company had previously spent 30 years in that industry before forming the American Widget Company. The medical equipment and toy widgets are still small, relatively experimental new divisions.

DISTRIBUTION CHANNELS

- Channels of distribution are as follows:

	<u>Sales Year: 1997</u>	<u>Mix</u>
- Automotive		
Distributor A	\$ 1,291,925	43.1%
Distributor B (OEM)	575,874	19.2
- Industrial Machines		

Distributor E	274,263	9.1
Distributor F	511,603	17.1
- Medical equipment	223,124	7.4
- Toys	<u>123,211</u>	<u>4.1</u>
Total	\$ 3,000,000	100.0%

- Approximately 60% (not only house accounts) of sales are made directly by the company. The President is the only sales representative. Future plans should include the use of full-time sales representatives for each of the main types of widgets.
- The company advertises its products in a variety of trade magazines. Trade shows are also a major source of sales.

GEOGRAPHICAL MARKETS, INCLUDING EXPORTS

- The company's products are sold throughout the entire U.S. market.
- The company does not have a history of exporting.

CUSTOMERS

There are 4,290 accounts. Major customers are as follows:

<u>Customer</u>	<u>Sales-1997</u>	<u>Business Type</u>
Buyer 1	\$892,235	Cars
Buyer 2	\$425,235	Industrial Machines
Buyer 3	<u>\$727,235</u>	Medical Machines
Total - Major Customers	\$2,044,705	
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Total Sales, per financial statement	\$3,000,000	

PRODUCT LINE SALES

Sales by product line for the sales year 1997 are as follows:

<u>Product</u>	<u>Sales-1997</u>	<u>Avg. Unit Sell Price</u>
Widget 1	\$837,587	0.092
Widget 2	579,122	1.574
Widget 3	312,151	2.242
Widget 4	123,123	1.519
Widget 5	126,126	0.214
Widget 6	467,235	0.021
Widget 6B	236,742	2.612
Widget 6C	294,352	1.019
Widget 7	<u>23,562</u>	0.178
Total	\$3,000,000	

- It should be noted that some of the key weaknesses of the marketing activity are: (1) monitoring and tracing current market information and (2) inability to get useful market information.

- Approximately 69% of total sales volume in 1997 was in the form of widgets for industrial machinery and cars, compared to 75% the previous sales year. Widgets for the medical industry have increased slightly since the previous year, from 20% to 23%.

COMPETITORS

The Thomas Register lists 502 companies identified as suppliers of widgets. By cross comparison of the Thomas Register companies with those identified as members of the Widget Manufacturers Association, the following list of competitors, with annual sales volume comparable to that of the American Widget Company, was compiled:

<u>Company</u>	<u>Product Concentration</u>	<u>Competitor Rating by Dun & Bradstreet (A-B-C)</u>
ABC Inc., Somewhere, MI	Widget 5 & 7	A- Industry leader
DEF Corp., Overhere, MI	Widget 2	B
GHI Inc., Outwhere, IN	Widget 1 & 2	B
JKL Corp., Herehere, MI	Widget 4	C - Very competitive
NOP Co., Anywhere, OH	Widget 2 & 4	B
RST Co., Comehere, IL	Widget 6/6B/6C	B
UVW Inc., Gohere, MI	Widget 1/2/3	A - #3 leader
XYZ, Ltd., Elsewhere, OH	Widget 2/3/4/5	A - #2 leader

The Domestic Widget Company lists the following competitive advantages:

- Quality of products
- Cost and value are in line
- Good customer service

Disadvantages include:

- Products have a high labor content which causes non-competitive prices
- Insufficient time devoted to long-term market strategy and planning

PRICING

- The customer quoting function is handled by the pricing department. The President, who also manages all sales activities, determines profit ranges. Selling prices are based upon cost data, and a great deal of weight is given to the competitive situation. Pricing components include material cost, direct labor, labor overhead, selling, general and administration overhead, a predetermined profit level percentage and commission expenses, where applicable. Material usage and labor operations are outlined when quoted. Full absorption of overhead is included in the cost base. Prices are not automatically re-worked on repeat orders. There is no established criteria for regular price increases.
- Selling prices include all direct costs (labor and material), plus an overhead rate of \$20/labor hour. A 25% profit margin is sought for all products.
- List prices are established on an annual basis for all product lines. However, the tooling division prepares individual customer job quotations.
- Management's estimate of its selling prices, as compared to the company's competitors is as follows:
 - Widget 1 - 3: prices above competitors
 - Widget 4 - 5: prices match or are above competitors

Widget 6 series: prices below or match competitors

Widget 7: prices match competitors

PROMOTION/EXPENSE BUDGET

The company's goals for promoting its products are: (1) to retain customers, (2) improve name recognition, (3) to improve sales of products, and (4) drawing new users and participants to AWC's products. The company promotes its products through industrial trade shows. Scheduled trade show participation for 1998 are as follows

<u>Trade Show</u>	<u>Location</u>	<u>Date</u>
IWELL	San Francisco, CA	March 1998
POIDW	Chicago, IL	May 1998
WDIOS	Buffalo, NY	June 1998
WEILS	Orlando, FL	July 1998
EILWS	Atlanta, GA	August 1998
WIN	Boston, MA	September 1998
POSDI	Charlotte, NC	October 1998
WODA	Las Vegas, NV	November 1998
LLEW	Los Angeles, CA	December 1998

MARKETING ORGANIZATION

- The American Widget Company does not have an overall market strategy. The company has a philosophy of capitalizing on opportunities as they arise, since the equipment can easily be programmed to produce new configurations.
- The marketing function is managed by the President, who co-ordinates and directs the functions of sales and marketing including outside sales, customer service and advertising for each division (product line) of the company in order to meet the overall sales goals of the company while maintaining profitability. The Sales Manager performs:
 - (1) sales forecasting and pricing
 - (2) customer service (supervises one to three employees)
 - (3) marketing and advertising
- The customer service function handles all aspects of customer orders, accounts receivable, credit, returns and allowances.

6. MANUFACTURING REVIEW

FACILITIES AND EQUIPMENT

The company operates from 2 facilities:

- 201 Widget Drive, with 12 production employees and 1 manager. The 80,000 square foot facility also contains the administrative offices as well. AWC is the seventh largest employer in the county. the facility is leased from XYZ Ltd., owned 100% by a majority of AWC shareholders. The major facility lease is for a term of seven years and can be renewed. The minimum annual rental for 1997 is \$328,000 - \$4.10/square foot.

- 1342 Widgeter Rd., with 10 production employees and 1 manager. The facility was built in 1991 and has 20,000 square ft. In addition, four storage containers have been added for scrap material, rejected material and raw materials storage.
- At present, all plants are operating at 60-70% capacity. The Widget Drive plant operates on 3 eight hour shifts, and the Widgeter Road plant operates on two shifts. Each plant is currently producing about \$1.2 million in sales per year, and the two plants can probably produce at the \$3.4 million sales level without major capital expenditures. The company's products are very labor intensive; therefore, the labor force would have to be increased substantially to operate at or near full capacity. The company has not formally traced product movement on a plant layout to analyze efficiency of material flow and space utilization.
- Recently, there have been no significant investments in new equipment to improve productivity. In Widget Drive, management states that bottlenecks are caused by (1) production management's lack of training in the operational aspects of throughput, which is currently being addressed, and (2) lack of key machinery at certain times and the lack of automation and speed of equipment as it is currently configured. Automation is currently being addressed. In Widgeter Road, management states that bottlenecks are primarily caused by material shortages.
- Primary equipment and machinery is as follows:
 - Widget Machines
 - Radial Drill
 - Wadget Machines
 - Paint Building
 - Personal Computer Stations with CAD/CAM, printers, monitors, etc.
 - Laptop Computers

There is additional support equipment - fork lifts, office equipment, etc.
- Required equipment improvements are:
 - Closed systems for regrind and mixing
 - Loading on injection molders and extruders
- Preventative maintenance is the responsibility of the Tooling Manager, and a system is currently under development.

WORKFORCE

- Current employment is 45 employees.
- Direct production employees are 20, and indirect employees are 20.
 - Indirect employees include 5 salary personnel (skilled/professional) and 1 hourly employee.
- Direct and indirect employees skill classifications are as follows:

- Skilled (one year or more of training)	20
- Semi-skilled (one month or more of training)	10
- Job-skilled (90% productive in a day or two)	10
- Employees are not unionized.
- Referrals are most helpful in recruiting new employees. Newspaper ads and employment agencies are also used in recruiting.
- Technically skilled workers, such as mold makers, are very scarce in the local area.
- Absenteeism is averaging about 4- 6 days per year. The turnover rate for the company is critical at 20%.

- Employee training is provided by more seasoned employee as coach - on-the job training. Management feels that employees are not adequately trained. Training is not always accurate, nor consistent from one employee to the next. The company is designing and documenting a company wide training program with departmental modules.
- There has been only 3 layoffs in the last 20 years. Employees are recalled based upon the Human Resource Manager and the departmental manager.
- Employee turnover for 1997 was about 20%. Normal turnover is about 2%.
- Average hourly wage is usually about \$12.00/hour, although it has been \$11.00/hour in the last fiscal year (FY1997) because of a significant increase in new employees. Wages range from \$10.00/hour - \$14.00. Fringe benefits include health insurance/major medical PPO, life insurance, short term disability, dental insurance. Fringes amount to \$3.80/hour - 40% of average hourly wage. Fringes include vacations, 401K plan, holidays, social security, workmen's compensation, and unemployment insurance.
- The company's compensation lags the local pay scale. Competitors use mostly temporaries and pay no fringes.
- Both plants have Safety Committees and safety procedures. There are no conflicts with OSHA and MOSHA, and there is a cooperative relationship with both agencies.

OPERATIONS/PRODUCTION

Materials

The company's product line is very diverse, and therefore, requires many different types of raw materials. The single largest raw material consists of steel and plastic. Plastics are purchased in 10,000 pound minimum quantities and include polypropylene. Manufacturing processes include both plastic injection molding machines and extruders. The tool and die product segment utilizes high quality steel.

Once the raw material arrives, it is counted and extensive quality control testing is performed. Work-In-Progress (WIP) inventory is tracked via control logs to chart the progress through the production cycle. Perpetual inventory records are maintained which are periodically verified.

Technology

The company uses typical injection molding equipment and extruders. Recent capital expenditures have been made to upgrade equipment . In addition, computers and software are being added to meet production and customer requirements - CAD/CAM software is used for tool design, etc.

A screen changer is being investigated for Widget 6 series operations. Methods to automatically delegate parts from runners are being investigated for the injection molding machines.

The company keeps up to date on the latest widget technology by attending engineering seminars and trade shows each month. There is currently no department for full-time R&D work.

Manufacturing Process

Since the company manufactures a wide range of widget, the plants have a variety of manufacturing methods: continuous flow, batch flow, job shop for tool and die, etc. The primary manufacturing processes include plastic injection molding and plastic extrusions. Specific steps for injection molding and extrusions (80% of production activity) and assembly are as follows:

- Regrind runners/excess plastic and mix with virgin plastic
- Load hopper
- Separate out parts
- Regrind runners/excess plastic
- Assemble and package, as required

- Ship to customer

The primary bottlenecks in the production process are:

- Inadequate inventories
- Large/small unexpected orders
- Slow pace of packaging and shipping
- Lack of skilled operators which causes waste and poor quality products

Management cites the following causes for inefficiencies in the production process:

- Small orders requiring excessive change-overs (set-up and tear down)
- Failure to question why we let things occur (i.e., no formalized systems)
- Failure to document best methods and enforce their use.

Engineering

- **Man-machine utilization:** Since many of the products are processed through cycle time-controlled automatic operations, where possible, the company can investigate forming manufacturing cells. In such a set up, both the machine and operator's utilization generally gets maximized. A product based machine grouping lends itself to a cell operation better than a process flow that is based on like machines grouped together. A cell can provide greater accountability for an operator to a finished product, and the measurement is easier. Not all operations lend themselves to a cellular operation. This may be investigated.
- **Down-time:** The bulk of the down time arises out of poor fixtures and tools, contributing to poor set-ups. In addition, there could be problems in the set-up techniques. Some of the set-up problems can arise from allowing dimensionally defective parts in the initial stages of processes. Some of the set-up skills are related to the use of computers, and these can be improved by proper training only.
- **Machine Maintenance:** A more detailed preventative maintenance program needs to be developed.
- **Scrap:** The scrap rate is about 25%. Higher scrap rate translates into a lot of wasted effort. A detailed investigation as to what is counted as scrap needs to be done. Some of the production parts are also periodically tested through destructive product tests. Improper gauging and fixturing also contribute to the problem; this is likely to be the main reason for the incidence of scrap. A scrap analysis done for a month of production can give a wealth of details indicating the needs for improvement in many other areas.

Purchasing

- Raw material purchases include: high quality steel and plastic pellets.
- Management feels that raw material inventories cannot be kept at the low levels (just-in-time) because minimum order quantities required by vendors and higher prices charged for small quantities. In order to minimize inventories, the company will purchase plastics through resellers (vendor warehouses) in less than 10,000 pound lots.
- Blanket purchase orders are used with suppliers.
- Multiple bids are sought when parameter, specs allow. Sole sourcing is avoided, and second source prices are obtained 40-50% of the time.

7. SUPPORT SYSTEMS REVIEW

QUALITY

- The company does not have a quality control manual, and employees have not been trained in quality procedures. Production of quality products is negatively affected because the company has not determined what a good "quality standard" is needed for each product.
- Management feels that employees are committed to quality work.
- Statistical process control is not generally used, with the exception of one automotive part. The following quality methods and instruments are used to assure quality:
 - Tracking is conducted for possible defects and problems.
 - Raw material is inspected as it is used.
 - Certificate of Assurance is compiled for all incoming materials.
 - Pre-ship samples of steel are tested.
- Quality checks are conducted for some products, and quality records are maintained.
- Although there is a limited quality system, employees are generally made aware of quality problems through postings on the bulletin boards, company meetings, and through one-on-one review of specific quality problems.
- Quality audits are conducted by some customers.
- Customer returns are about 1%.
- The primary causes of scrap are as follows:
 - Most scrap is generated during the busy time of the year when temporary employees are at a high level.
 - When scrap is identified, the employee is notified of error, and the operator fixes the error when possible.

PLANNING AND SCHEDULING

- AWC deals with 2,000 customers.
- Production scheduling is based on demand priorities.
- Customer orders are prioritized as follows: (1) Programmed orders; (2) back orders; and (3) newly placed orders.
- The average lead time to process a customer's order is 4 days, although the timing varies significantly from month to month. On-time delivery can be a problem but is improving with the new inventory control system. The inventory system is based upon prior sales experience, which is modified to reflect historical demand.
- The mix of direct and indirect labor requirements are planned in order to meet delivery deadlines.
- Although the company has a computerized inventory control system, the production scheduling system is not computerized.
- There are definite seasonal patterns in the company's various market segments.
- Job set-ups are generally performed by the tooling person. Job set-ups are much improved, but further improvement is still sought.

MANAGEMENT INFORMATION SYSTEMS REVIEW

- The company's computer hardware is primarily an IBM AS/400. There are 6 PC computer stations, printers, monitors, etc.
- Software utilized includes: CAD/CAM and a program for accounting applications (general ledger, accounts receivable, accounts payable and perpetual inventory).
- Management control systems are not computer based, and paper systems are limited.

B. ANALYSIS OF STRENGTHS, WEAKNESSES, AND SOLUTIONS

<u>Area of Concern</u>	<u>Strengths</u>	<u>Weakness</u>	<u>Solutions</u>
------------------------	------------------	-----------------	------------------

MANAGEMENT

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> • Management expertise in the manufacture of widgets | <ul style="list-style-type: none"> • Business planning is not formalized. | <ul style="list-style-type: none"> • Implement more formalized business planning system. |
|--|--|---|

FINANCIAL

- | | | |
|---|--|--|
| <ul style="list-style-type: none"> • Company is in good financial condition. Current ratio 2.5:1 | <ul style="list-style-type: none"> • Cost accounting and management controls need improvement • Customer quoting system requires improvement | <ul style="list-style-type: none"> • Upgrading data processing and floor reporting system will improve cost system and provide timely management information • Improvement in cost accounting will provide data for accurate pricing |
|---|--|--|

MARKETING/SALES

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> • Diversified product lines provides full service approach • Overall gross margins are attractive • Provide good customer service and delivery • Knowledgeable President as sales rep. | <ul style="list-style-type: none"> • Variety of product offerings may dilute the company's focus and resources, no market plan • Seasonal nature of automotive business difficult to manage • Quick review of overhead rate (\$25/hr.) indicates that rate is overstated • Market and competitive data is limited • Only one sales rep | <ul style="list-style-type: none"> • Analyze the market/company's goals and define a strategy to achieve goals • Investigate new markets • Pricing techniques should be updated • Company is implementing a system to monitor competitors • Company is considering hiring full-time sales personnel |
|---|---|--|

<u>Area of Concern</u>	<u>Strengths</u>	<u>Weakness</u>	<u>Solutions</u>
------------------------	------------------	-----------------	------------------

MANUFACTURING

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> • Solid reputation as a quality producer of widgets of all kinds. | <ul style="list-style-type: none"> • Quality control system needs updating • Lacks definition of critical measurements for products • Production scheduling and other manufacturing control systems are weak | <ul style="list-style-type: none"> • Implement technical assistance to train employees in QC procedures and team problem solving • Locate resources to define and measure specifications of finished product critical measurements • Network existing systems, phase in MRPII software systems modules that will ultimately interface with all functions in the company |
| <ul style="list-style-type: none"> • Small firm, with lots of good people | <ul style="list-style-type: none"> • Multiple buildings reduce productivity and efficiency • Employee turnover (20%) is too high • Documentation shortfall of processes and set-up causes inefficiencies, quality problems | <ul style="list-style-type: none"> • Review layout to improve output: Process engineering project may lead to improvements in plant • Reviewing incentives • Document processes and set-up. Employee training program for new employees to be implemented |

SUPPORT SYSTEMS

- | | | |
|--|---|--|
| <ul style="list-style-type: none"> • Company is updating its production planning and inventory systems. | <ul style="list-style-type: none"> • Company does not have a quality control manual. • Quality standards have not yet been determined. • System to track customer rejects in not in use. | <ul style="list-style-type: none"> • Develop a QC manual and co-ordinate with employee QC training. (SPC, etc.) • Company plans to establish quality standards, which will interface with wage incentive system. • Install system to track customer rejects and causes for rejects. |
|--|---|--|

C. RECOVERY PLAN

1. STRATEGY

AWC will adopt the following strategy to improve its competitive position:

- (1) Define the future direction for the company's product niche(s).
- (2) Improve quality control systems, through employee training and documentation.
- (3) Improve management controls and planning systems.

During 1997, the American Widget Company experienced a 12% decline in sales; however, profits have improved as a result of good cost control. Although cash flow remains good, reduction in inventory levels can be made. The company has a good reputation in the marketplace. On the other hand, quality systems need to be more formalized. Quality systems improvement would provide a significant edge over competition. Employee turnover of 20% causes inefficiencies and scheduling problems.

Manufacturing

The company's plan for improving productivity will include the following:

- Improve quality systems.
- Implement employee training and problem solving techniques.
- Utilize process improvements as a basis for future plant layout revisions.
- Document processes and set-up procedures.
- Implement employee incentive system changes.

Marketing

The company has some major strengths in the marketplace - a solid reputation, good customer service, and competitive pricing structure. The major areas that need improvement are:

- More formalized marketing plan and strategy system
- Improvement in the pricing system related to cost accounting

Finance/Management

- Implement systematic update of basic cost accounting data
- Adopt more formalized business planning process

Data Processing

- Complete updating of production planning and inventory systems

2. PLAN OF ACTION/MILESTONES

** Indicates technical assistance funding through the GLTAAC program is being sought.

<u>Reference Appendix</u>	<u>AREA OF CONCERN</u> <u>Cost: \$000 Estimate</u>	<u>MILESTONE OR INDICATOR</u>	<u>TIME (MONTHS) AFTER COMPLETION OF PLAN</u>	
			<u>Start</u>	<u>Complete</u>
	<u>MANUFACTURING</u>			
	\$50,000 **	- Obtain technical assistance to train employees in QC procedures and team problem solving	1 month	12 months
	\$20,000**	- Prepare for ISO 9001 certification, including 3rd party assessment- outside technical assistance is recommended for this project	5 months	18 months
	Internal	- Review plant layout to improve output	Initiated	Ongoing
	Internal	- Review incentive systems to increase productivity	Initiated	8 months
	Internal	- Document processes and set-ups for improved employee training	2 months	12 months
	Internal	- Phase in MRPII software module for production scheduling and other manufacturing applications	Initiated	Ongoing
	<u>MARKETING</u>			
	\$30,000 **	- Analyze the market and define a strategy to achieve goals - outside technical assistance is recommended for this project.	2 months	12 months
	Internal	- Pricing techniques should be updated.	Initiated	Ongoing
	<u>FINANCE</u>			
	Internal	- Implement systematic update of basic cost accounting data.	2 months	12 months
	<u>MANAGEMENT</u>			
	Internal	- Build up a sales department	Initiated	12 months
	Internal	- Implement training program for supervisors.	Part of QC employee training, outlined above.	
	\$100,000	TOTAL TECHNICAL ASSISTANCE		

3. USE OF OWN RESOURCES

The single largest investment was made in 1994, when the company replaced a third of the equipment at a cost of \$900,000. In 1995, the company purchased a third injection molder. Capital expenditures were \$50,000 in 1995, \$20,000 in 1996, and \$13,000 in 1997. These expenditures were primarily for machinery and computer equipment. The company does not pay dividends on its capital stock. Forecasted major capital expenditures, subject to feasibility studies are as follows:

<u>Year</u>	<u>Brief Description</u>	<u>\$ Amount</u>
1998	Process equipment and computer hardware	\$36,000
1999	Process equipment and computer hardware	\$42,000

If this Diagnostic and Adjustment Plan is approved, the company will pay 50% of the cost of the proposed implementation assistance, which will amount to \$50,000, to implement the projects outlined in the strategy, plan of action/milestones, and scope of work over a period of 5 years. Using its own resources, the company will incur significant costs to implement projects for: productivity improvement, production scheduling system, cost accounting system, and installation of MRPII modules.

4. INTEREST OF EMPLOYEES

Because of the high employment rate in Michigan, the American Widget Company experienced an employee turnover rate of 20%. The normal turnover rate is 2%. There are 20 direct production workers and 20 indirect employees. The average pay rate is \$9.78/hour. Wages range from \$7.40/hour - 12.59/hour. Fringe benefits include: health insurance/major medical PPO, life insurance, short-term disability, dental insurance, vacations, holidays, 401K Plan, and other governmental required programs such as social security, unemployment insurance, and workmen's compensation.

Management and the workforce have a good working relationship. There has been 3 layoff in the past 20 years. When there is a layoff, employees are recalled based upon the Human Resource Manager's and departmental manager's recommendations.

IV. EXHIBITS

A. SUMMARY OF FINANCIAL STATEMENTS THROUGH DECEMBER 31, 1997, AND RATIO ANALYSIS

1. BALANCE SHEET

	12/31/97	12/31/96	12/31/95	12/31/94
ASSETS:				
Cash	xxxxx	xxxxx	xxxxx	xxxxx
Trade Receivables, less Allowance for Doubtful Accounts	xxxxx	xxxxx	xxxxx	xxxxx
Note Receivable	xxxxx	xxxxx	xxxxx	xxxxx
Inventories	xxxxx	xxxxx	xxxxx	xxxxx
Other Current Assets	xxxxx	xxxxx	xxxxx	xxxxx
Total Current Assets	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>
Plant, Property, and Equipment, Net	xxxxx	xxxxx	xxxxx	xxxxx
Other Assets				
Assets Held for Sale	xxxxx	xxxxx	xxxxx	xxxxx
Loans - Stockholders	xxxxx	xxxxx	xxxxx	xxxxx
Other	xxxxx	xxxxx	xxxxx	xxxxx
Total Other Assets	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>
TOTAL ASSETS	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>
LIABILITIES AND STOCKHOLDER'S INVESTMENT:				
Current Installments of Long-Term Debt	xxxxx	xxxxx	xxxxx	xxxxx
Accounts Payable	xxxxx	xxxxx	xxxxx	xxxxx
Other Current Liabilities	xxxxx	xxxxx	xxxxx	xxxxx
TOTAL CURRENT LIABILITIES	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>
Inter-company Eliminations	xxxxx	xxxxx	xxxxx	xxxxx
Long Term Debt, less Current Installments	xxxxx	xxxxx	xxxxx	xxxxx
Deferred Income Taxes	xxxxx	xxxxx	xxxxx	xxxxx
TOTAL LIABILITIES	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>
STOCKHOLDERS' EQUITY (a)				
Common Stock	xxxxx	xxxxx	xxxxx	xxxxx
Paid -in Surplus	xxxxx	xxxxx	xxxxx	xxxxx
Retained Earnings	xxxxx	xxxxx	xxxxx	xxxxx
Less Cost of Treasury Stock	xxxxx	xxxxx	xxxxx	xxxxx
TOTAL STOCKHOLDERS' EQUITY (a)	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>
TOTAL LIABILITIES AND EQUITY	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>	<u>xxxxx</u>

2. INCOME STATEMENT

	12/31/97	12/31/96	12/31/95	12/31/94
Net Sales	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Cost of Goods Sold	<u>xxxxxx</u>	<u>xxxxxx</u>	<u>xxxxxx</u>	<u>xxxxxx</u>
Gross Profit	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Selling, General and Administrative Costs	<u>xxxxxx</u>	<u>xxxxxx</u>	<u>xxxxxx</u>	<u>xxxxxx</u>
Operating Profit/Loss	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Interest Expense, Net	(xxxxxx)	(xxxxxx)	(xxxxxx)	(xxxxxx)
Taxes (Federal)	(xxxxxx)	(xxxxxx)	(xxxxxx)	(xxxxxx)
Net Earnings (a)	xxxxxx	xxxxxx	xxxxxx	xxxxxx

3. RATIO ANALYSIS

	Current Ratio	Liab/Equity Ratio	Inventory Turnover (days)	% Gross Profit/Sales	% Net Profit Before Tax/ Sales
Industry (b):					
Upper Quartile	2.5	0.6	31	—	—
Median	2.1	0.9	70	36.3	4.3
Company:					
12/31/97	2.3	0.5	62	30.2	2.2
12/31/96	2.1	0.7	70	34.4	0.4
12/31/95	2.0	0.6	45	35.6	1.6

(b) Source: Robert Morris Associates 1998 Annual Statement Studies
SIC 9999 - Manufacturers - Widgets

B. INTERIM FINANCIAL STATEMENTS, 6 MONTHS ENDED JUNE 31, 1998**1. BALANCE SHEET**

	6/31/98
ASSETS:	
Cash	XXXXX
Trade Receivables, less Allowance for Doubtful Accounts	XXXXX
Note Receivable	XXXXX
Inventories	XXXXX
Other Current Assets	XXXXX
Total Current Assets	<u>XXXXX</u>
Plant, Property, and Equipment, Net	XXXXX
Other Assets	
Assets Held for Sale	XXXXX
Loans - Stockholders	XXXXX
Other	XXXXX
Total Other Assets	<u>XXXXX</u>
TOTAL ASSETS	<u>XXXXX</u>
LIABILITIES AND STOCKHOLDER'S INVESTMENT:	
Current Installments of Long-Term Debt	XXXXX
Accounts Payable	XXXXX
Other Current Liabilities	XXXXX
TOTAL CURRENT LIABILITIES	<u>XXXXX</u>
Inter-company Eliminations	XXXXX
Long Term Debt, less Current Installments	XXXXX
Deferred Income Taxes	XXXXX
TOTAL LIABILITIES	<u>XXXXX</u>
STOCKHOLDERS' EQUITY (a)	
Common Stock	XXXXX
Paid-in Surplus	XXXXX
Retained Earnings	XXXXX
Less Cost of Treasury Stock	XXXXX
TOTAL STOCKHOLDERS' EQUITY (a)	<u>XXXXX</u>
TOTAL LIABILITIES AND EQUITY	<u>XXXXX</u>

2. INCOME STATEMENT

	6/31/98
Net Sales	XXXXX
Cost of Goods Sold	<u>XXXXX</u>
Gross Profit	XXXXX
Selling, General and Administrative Costs	<u>XXXXX</u>
Operating Profit/Loss	XXXXX
Interest Expense, Net	(XXXXX)
Taxes (Federal)	<u>(XXXXX)</u>
Net Earnings (a)	<u><u>XXXXX</u></u>

APPENDICES

A. SCOPE OF WORK

MARKETING

The American Widget Company does not have a formalized approach to planning market strategies. In addition, sales activities need to be more organized, with additional full-time sales staff. There is minimum knowledge regarding competition, new markets, etc. To provide a base for growth, the company must understand and plan its marketing direction. The tasks to be completed under this project is as follows:

- (1) Review and gain an understanding of the company's capabilities, current customer base, practices and procedures relative to marketing and sales, market share growth potential and future risks.
- (2) Develop a detailed marketing plan to determine most beneficial niche market and potential new markets (foreign and domestic). Recommend approaches to optimize current market niche.
- (3) Develop promotional materials to aggressively market AWC products.
- (4) Recommend improvements to the customer quoting system and gross margin improvement actions.

Cost estimate: \$30,000

MANUFACTURING

- (1) Conduct a detailed analysis on the feasibility and installation of cellular manufacturing system to create distinct product flow. Conduct a new plant layout study based on product flow.
- (2) Focus on implementation of synchronous manufacturing principles to increase throughput, address the causes underlying downtime, and install a new preventive maintenance program.
- (3) Outside experts are needed for several new product engineering programs, some of which require computer simulation and modeling. Wearability, new materials, strength, and longevity of products in service will be investigated.
- (4) Outside consultants will be required to provide training to all employees on the concepts of Total Quality Management (TQM) and potential for ISO-9001 certification.
- (5) Conduct a productivity improvement study, focusing on reducing the down time (e.g., set up time, assembly operation time) and operator's efficiency in various production processes. Provide training to appropriate employees through attendance in seminars, outside training facilities, or training offered by an outside consultant on the company premises.
- (6) Consultants are needed to conduct a micro-structural material analysis and to recommend alternative material specifications which can reduce cost and improve product life and quality.

Cost estimate: \$50,000

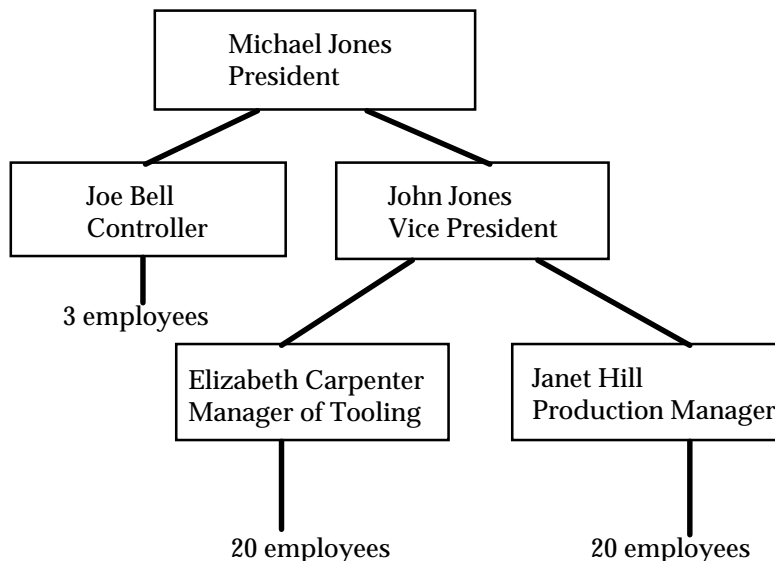
ISO 9001 REGISTRATION/3RD PARTY ASSESSMENT

- (1) Review quality manuals in detail.
- (2) On-site audit to be made of all quality systems outlined in ISO 9001 standard.
- (3) All records submitted for review and assessment performed by 3rd party assessor.

Cost estimate \$20,000

TOTAL CONSULTING COST FOR ALL PROJECTS: \$100,000

B. ORGANIZATION CHART



Michael Jones, President/Sales, has a background in sales and is the main sales representative for the company. Main areas of responsibility include financial planning, long-range planning, and sales. Mike has 20 years experience in the widget industry, including supervisory experience on the shop floor. He has an M.B.A. degree from the University of Widgets and a masters in engineering from Widget Technical Institute.

John Jones, Vice President, runs the day-to-day business of producing the widgets. Overall supervisory responsibilities include plant flow, production machinery improvements, administrative functions, and employee training. He has a degree in widget manufacturing from the State University of Widgets, 1990. Previous experience includes working at Widget Factory International, Supreme Widgets Corporation, and Fancy Widgets.

Joe Bell, Controller, has been employed at the company since 1980. He graduated with high distinction from the University of Controllers in 1975.

Elizabeth Carpenter, Manager of Tooling, is the main technical advisor at the company, graduated AAAS, Electronics Technology, from the College of Widget Inventions and Tools. Previous work experience includes production manager at both the Supreme Widgets Corporation and the American Widget Inventions, Inc. Elizabeth is currently working on a masters degree at the Widget Technical Institute.

Janet Hill, Production Manager, joined the company in 1985, having spent 15 years in the widget industry in various capacities, including production manager, tooling manager, quality manager, maintenance manager, and materials manager. She graduated from the University of New Widgets with an engineering degree.

C. PRODUCT LITERATURE

enclosures