

The Georgia Manufacturers Survey 1996

- Survey questions refer to this facility.
- All individual firm and facility information will be kept confidential.
- We understand you do not always keep exact records of all activities ♦ estimates are fine.
- Please return this survey in the enclosed postage-paid envelope within 10 days to:

Jan Youtie
 Economic Development Institute
 Georgia Institute of Technology
 Atlanta, Georgia 30332-0640
 Tel: 404/894-6111 Fax: 404/894-0069

Please confirm your name and address and make any changes.

THANK YOU FOR YOUR HELP.

1. In which of the following areas does your facility have the most significant problems or needs? (*Check all boxes that apply.*)

- Plant layout, expansion planning
- Manufacturing process, setup, scrap
- Product development/design
- Material failure, wear patterns, and other material-related issues
- Computer applications (e.g., CAD/CAM, computer networks, electronic data interchange)
- Business systems (e.g., for planning, scheduling orders, inventory)
- Quality assurance (e.g., ISO 9000, QS-9000, Malcolm Baldrige)
- Market development, exporting
- Access to financing
- Basic skills (e.g. reading, writing, math, keyboard skills)
- Technical skills (e.g. quality control, preventive maintenance)
- Supervisory skills, management, and team building skills
- Energy costs, conservation
- Environmental, health, and safety compliance
- Other (please describe) _____

Information Technology, Quality, and Production Management

2. For each of the information technology and quality management methods listed below, please indicate the answer that best reflects this facility's use of that method. (Check box.)

Information Technology	Currently Use	Plan to Use	Do Not Plan To Use	Not Applicable
Personal computers or terminals-non-manufacturing				
Data collection devices (e.g., bar code readers)				
Personal computers or terminals on the shop floor				
Local area networks (LAN)				

Software for scheduling, inventory control, or purchasing (e.g., MRP II)				
Internet/World Wide Web/On-line services				
Doing business electronically (e.g., sending or receiving invoices, payments via electronic funds transfer)				
Distance learning (e.g., satellite delivery of training video conferencing)				

Quality Management	Currently Use	Plan to Use	Do Not Plan To Use	Not Applicable
Statistical process or quality control (SPC/SQC)				
ISO 9000, QS-9000 certification				
ISO 14000 environmental management certification				
Employee problem-solving teams				
Just-in-time deliveries to customers				
Preventive/predictive machine maintenance program				

3. For each of the manufacturing production technologies listed below, please indicate the answer that best reflects this plant's use of that technology. (*Check box.*)

Manufacturing Production Technology	Currently Use	Plan to Use	Do Not Plan To Use	Not Applicable
Numerical control/computer numerical control (NC/CNC) machines				
Manufacturing cells				
Computer-aided design (CAD) or computer-aided engineering (CAE) software				
CAD data to generate machine instructions (CAD/CAM)				
Computer-integrated manufacturing (CIM)				
Automated in-process inspection				
Automated material handling systems				
Rapid prototyping				

An important part of the project is to assess key operating characteristics of Georgia manufacturers. Please provide your best estimate if you don't have exact numbers available.

4. Approximately how many keyboards and keypads were used in manufacturing and design (include PCs, terminals, workstations, programmable controllers, and other hand-held data entry devices; do not include equipment used for office or payroll). _____

Approximately what percentage of employees at this location used a computer or programmable machine control on a weekly basis as part of their jobs in 1996? In 1994?	1996 %	1994 %
For a typical order, what was your manufacturing or production lead time the number of calendar days between production start and end in 1996? In 1994?	days	days
What was your scrap (or yield loss) rate in 1996? In 1994? (Please include		

only scrap or yield loss caused by errors; do NOT include design scrap or unavoidable material loss.)	%	%
Approximately what percentage of your products did your customers reject for defects or not-to-spec conditions in 1996? In 1994?	%	%

5. Is this the only facility in the company?

- Yes
- No

6. What percentage of this facility's sales in the past year were from products designed or developed at this location? _____%

What percentage of this facility's sales in the past year came from orders where you were able to charge a price premium over your competitors based on distinctive characteristics of your product(s) or specialized processing capabilities? _____%

An important part of understanding manufacturing practices concerns the relationship between companies and their markets. We would like to ask some questions about these relationships.

7. What percentage of your sales in fiscal year 1996 was shipped to customers:

In Georgia _____%

Elsewhere in the U.S. _____%

Exports outside the U.S. _____%

8. Do you usually subcontract or outsource any part of your manufacturing work? (*Check box.*)

- No
- Yes (IF YES) What percentage of your production, by value, is subcontracted:

In Georgia _____% Elsewhere in the U.S. _____% Outside the U.S. _____%

9. Approximately what percentage of your total annual sales or value of shipments of production was shipped to federal defense agencies, U.S. Department of Energy facilities, prime contractors, or subcontractors? (*Check box.*)

- None
- 1-9%
- 10-49%
- 50% or more

10. Please indicate whether your plant participates with other firms in any of the following cooperative activities. (*Check box.*)

	Currently Participate	Interested in Participating	Not interested in Participating
Identification of shared industry problems and needs			
Cooperative design or new product development			
Cooperative manufacturing with other firms			
Cooperative training with other firms			
Quality assurance/ISO 9000 user groups			
Cooperative marketing, sharing of exhibition space			

Cooperative programs to provide employee benefits such as health care			
Other kinds of cooperative activities (please describe)			

Workforce and Training

11. Now, we would like to ask a few questions about your work force. If you don't know the approximate number for the following work force questions, just give an estimate.

On average, how many employees worked at this location? (Include temporary workers and convert part-time and contract labor to full-time equivalents.)	<u>1996</u> Full-time Equivalent Employees	<u>1994</u> Full-time Equivalent Employees
What was your payroll, excluding owners, at this location in fiscal year 1996? In 1994? (Please include payments to agencies for temporary workers here.)	<u>1996</u> PAYROLL \$	<u>1994</u> PAYROLL \$
Approximately how much was spent on training for all your employees at this location in fiscal year 1996? In 1994?	<u>1996</u> TRAINING \$	<u>1994</u> TRAINING \$

12. Would you be interested in receiving training from Georgia Tech on the following topics? *(Check box.)*

- Lean manufacturing, just-in-time inventory systems
- Internet for manufacturers
- MRP II
- Barcoding
- Electronic data interchange (EDI)
- ISO 9000, QS-9000 quality certification
- ISO 14000 environmental management certification
- Human resources, team building, supervisor development
- Safety & health, ergonomics
- Pollution prevention
- Finance, management
- Marketing, niche marketing, market planning
- International business development
- Product development, rapid prototyping
- Materials joining, plastics/laser welding
- Energy management
- Other topics (please describe) _____

Manufacturing Productivity

13. One important characteristic in assessing any changes in Georgia manufacturers is value-added per employee, which is used as a measure of productivity. It is obtained from sales revenue less the total cost of purchased materials and services. If you don't know the approximate number, just give an estimate. All estimates should be for this facility.

What were your total annual sales or value of shipments or production at this plant in fiscal year 1996? In 1994?	<u>1996</u>	<u>1994</u>
	\$	\$
Approximately how much did you spend at this location on		

purchased materials, parts, and services in fiscal year 1996? In 1994?	\$	\$
On a typical day, how much total inventory did you have on hand at this location in 1996? In 1994?	\$	\$

An important purpose of the study is to learn more about your use of business assistance resources.

14. In the past two years, has your plant received business assistance from:

a. A private-sector business assistance source, such as a private consultant, vendor, customer, industry association, or other private source? *(Check box.)*

Yes

No

Don't know

b. A public or non-profit business assistance source, such as a federal, state or local government program, university, technical institute, utility, technology or training center? *(Check box.)*

Yes

No

Don't know

If you checked YES to Question 14a or 14b, please indicate the types of business assistance received. *(Check all boxes that apply.)* Otherwise, skip to the bottom of the page.

	Assistance by Private Source	Assistance by Public Source
Plant layout, expansion planning		
Manufacturing process, setup, scrap		
Product development/design		
Material failure and other material-related issues		
Computer applications (e.g., CAD/CAM, LAN, EDI)		
Manufacturing automation, robotics, CIM		
Business systems, scheduling orders and inventory		
Quality assurance (ISO 9000, QS 9000)		
Market development, exporting		
Access to financing		
Basic skills (e.g., reading, writing, math, keyboard skills)		
Technical skills (e.g., quality control, preventive maintenance)		
Supervisory skills, teambuilding		
Energy costs, conservation		
Environmental, health, and safety compliance		

If your plant has received business assistance from a public or non-profit source, which of the following organizations provided it? *(Check all boxes that apply.)*

Georgia Tech (main campus in Atlanta)

Georgia Tech Regional Office

Small Business Development Center/Business Outreach Services Center

Technical institute (Georgia Department of Technical and Adult Education, Quick Start)

Georgia Power Company

Federal laboratory, NASA Technology Transfer Center, or other federal technology program

Other (please list) _____

IF YOUR ORGANIZATION RECEIVED ASSISTANCE FROM GEORGIA TECH, PLEASE ANSWER QUESTIONS 15 AND 16 ON THE NEXT PAGE. IF NOT, PLEASE GO TO QUESTION 17 AT THE END OF QUESTIONNAIRE.

FOR COMPANIES RECEIVING ASSISTANCE PROVIDED BY GEORGIA TECH

15. What impacts have resulted, or are expected to result, from the assistance provided by Georgia Tech? (Check box.)

	Resulted (in past 2 years)	Expected (in next 2 years)	Neither
Improved an existing product or service			
Developed a new product or service			
Improved an existing process			
Adopted new technologies			
Improved relationships with existing customers			
Found new customers			
Found new suppliers			
Improved response to market needs and trends			
Increased sales			
Improved profitability			
Established a new company			
Others (please describe)			

What impacts on your employees/managers have resulted, or are expected to result, from the assistance provided by Georgia Tech? (Check box.)

	Resulted (in past 2 years)	Expected (in next 2 years)	Neither
Improved employee skills and know-how			
Improved management/owner skills and know-how			
Increase in employee wages			
Increase in management/owner personal earnings			
Greater flexibility and/or team orientation of employees			
Increased productivity			
Increased attention to quality			
Greater use of computers in the company			
Other impact on staff (please describe)			

As a direct result of the assistance received from Georgia Tech, has there been any impact on the number of people your company employs? Please enter numbers. If no employment effects resulted or are expected, please enter 0.

Full-Time Equivalent Jobs

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	Resulted (in past 2 years)	Expected (in next 2 years)
Number of jobs created		
Number of employees that your company would have been forced to lay off		
Number of jobs eliminated		

16. Considering all the benefits from Georgia Tech assistance you identified in Question 15, but not the costs, what is your estimate of the dollar value, to date, of the following:

Approximate Total Benefits

Increased sales \$ _____

Savings in labor, materials, energy, waste, other cost savings \$ _____

What has been the approximate total costs of your facility's involvement in the project(s)? (Total costs include personnel costs, materials, travel, marketing, equipment, and other project-associated investments.)

Approximate Total Costs

\$ _____

ALL COMPANIES

17. Is there anything else you would like to tell us about problems upgrading manufacturing processes, difficulties using technology, or ways additional technical assistance could help you? If so, please use the space below.

Please check box if you would like to receive information about Georgia Tech's services, seminars, and workshops.

Your assistance is greatly appreciated