The Georgia Manufacturing Survey 2002

Georgia Tech is conducting this survey to help make Georgia’s manufacturers more competitive by improving state business and technology services to industry.

- Survey questions refer to this facility.
- All individual firm and facility information will be kept in a secured, limited access location. Results will only be presented in an aggregated form. Your firm or facility's identity will not be revealed in any publication or presentation of the results of this survey.
- We understand you do not always keep exact records of all activities—estimates are fine.
- In return for completing this survey, we will send a survey summary and customized report with industry comparisons.

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

Any questions about the survey? Tel: 1 (888) 272-2104 · Fax: 404/894-0069 · E-mail: jan.youtie@edi.gatech.edu · www.cherry.gatech.edu/survey

Please confirm your name and address and make any changes.

THANK YOU FOR YOUR HELP.
1. This facility is (Please check one)
   a. A single-establishment enterprise, not affiliated with any other enterprise
   b. An affiliate of a parent group or holding company that comprises two or more establishments
      If YES to b.  
      □ The parent group has fewer than 500 employees in total
      □ The parent group has 500 – 2499 employees
      □ The parent group has 2500 or more employees

2. Is your company’s head office located in Georgia?
   □ Yes
   □ No, head office is located in ____________(US state) or _____________ (country outside of the US)

3. Are most of your customers: (please check one)
   □ Local – within approximately 50 miles of this plant
   □ Regional – within approximately 200 miles of this plant
   □ National
   □ International

4. Your facility’s main product or manufacturing activity is: (Please check one)
   □ Food, beverages, feed
   □ Textiles
   □ Apparel
   □ Lumber and wood, except furniture
   □ Furniture
   □ Paper and paper products
   □ Printing and publishing
   □ Chemicals and allied products
   □ Rubber and plastics
   □ Stone, clay, glass, or concrete
   □ Primary metals
   □ Fabricated metals
   □ Industrial machinery
   □ Electrical or electronic equipment
   □ Transportation equipment
   □ Instruments
   □ Other (please describe)

5. For your plant’s main product(s), how many other rival firms compete with your facility for customer sales?
   □ 0 – 5 competitor firms
   □ 6 – 19 competitor firms
   □ More than 20 competitor firms

6. For the plant’s main product(s), please RANK the order of importance of the following factors according to how your facility competes for customer sales? 1=most important, 6=least important. Please do not give the same ranking to more than one factor.

   ______ Low price
   ______ High quality
   ______ Innovation/new technology
   ______ Quick delivery
   ______ Adapting product to customer needs
   ______ Customer service that adds value to products/processes (i.e., training, consulting)
7. 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 hardware/network systems (e.g., operating systems, LAN, communications, computer networks)
- Computer software/packages for accounting, planning, order entry, scheduling, inventory, etc.
- Quality assurance (e.g., ISO 9000, QS-9000, Malcolm Baldrige)
- Marketing, niche marketing, market planning, exporting
- General business analysis, planning
- Financial planning or assistance with loan applications and fundraising
- Basic skills (e.g., reading, writing, math, keyboard skills)
- Technical skills (e.g., quality control, preventive maintenance)
- Management skills, team-based improvement, problem-solving skills
- Energy costs, conservation
- Waste management
- Environmental, health, and safety compliance
- Other (please describe)_________________________________________________________________________

8. Did your facility undergo major changes in the following areas of business structure and practices during the period 1999-2001? (Please check all that apply)
- Ownership
- Corporate strategies
- Management techniques (e.g. knowledge management)
- Organizational structures
- Marketing concepts or methods
- Internal or external training of your personnel in innovative or new activities (i.e. not routine work)
- Other (please describe)_________________________________________________________________________

**PRODUCT DEVELOPMENT**

9.1 In the past 3 years, what types of improved and new products has the firm developed? Check all that apply.
- None ➔ Go to question 10
- Modifications or extensions to your own existing products or product lines
- Copies of competitors' products
- Products that are new to your industry
  - Yes ➔ What percentage of 2001 sales were from **new-to-the-industry** products? [ ] [ ] [ ] %

9.2 How were these products developed? (Please check one box)
- Mainly by your company
- Mainly by your company in collaboration with customers
- Mainly by your company in cooperation with other companies or organizations
- Mainly by other companies or institutions
9.3 Did your facility apply for any patents during the period 1999-2001?
- No
- Yes ➔ If yes, how many? ___________

9.4 What are your plans to introduce new products or existing products that contain significant technical improvements?
- New products already are being developed
- We plan to begin development within 2 years
- No plans to develop new products

**PROCESS DEVELOPMENT**

10.1 During the last three years, did you introduce any process that was new or significantly improved to your firm?
- No ➔ Go to question 11
- Yes ➔ Was it new to the industry?  Yes □  No □

10.2 How were these processes developed? *(Please check one box)*
- Mainly by your company
- Mainly by your company in cooperation with other companies or organizations
- Mainly by other companies or institutions

10.3 What are your plans to introduce new or significantly improved processes?
- New or improved processes already are being developed
- We plan to start work on new or improved processes within 2 years
- No plans to introduce new or improved processes

**CONSTRAINTS TO PRODUCT OR PROCESS DEVELOPMENT**

11. How much of a deterrent has each of the following factors been in keeping your facility from developing innovative products or processes over the past three years: *(please check one box in each row)*

<table>
<thead>
<tr>
<th>Economic deterrents</th>
<th>Low</th>
<th>Importance</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>New product/process development costs too high</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Lack of available financing</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Cost of financing too high</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Unclear whether benefits exceed the costs</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Lack of long term customer commitments to support development costs</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internal deterrents</th>
<th>Low</th>
<th>Importance</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational rigidities within the company</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Lack of qualified personnel</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Lack of information on technology</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Lack of market information</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Lack of in-house product development systems</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>No capability to sell them</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Product/process development is done by another unit</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other deterrents</th>
<th>Low</th>
<th>Importance</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact of regulations or standards</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Existing customers not interested in new products</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>My company is not interested in new products/ processes</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

Other (please describe)
INFORMATION TECHNOLOGY

12.1 Which of the following types of information are available electronically at your facility?
- Company and product literature
- Accounts receivable/payable
- Bids/quotes
- Customer profile information
- Other financial/accounting data
- Order tracking
- Customer orders
- Inventory of supplies

12.2 Which of the following electronic systems do you use or plan to use at your facility?

<table>
<thead>
<tr>
<th>System</th>
<th>Use</th>
<th>Plan to Use</th>
<th>Do not plan to use</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-mail</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shared databases accessible through the network</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High speed internet connection (e.g. ISDN, cable, DSL, T1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronic data interchange (EDI)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise Resource Planning (ERP) or other software for production planning and control of orders, inventories</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply, electronic purchasing agent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.3 Does your company have a Web site?
- Yes
- No, plan to get a Web site
- No, do not plan to get a Web site

Does your company Web site do any of the following? (check all that apply)
- Provide information about your company
- Provide information about products and/or services
- Allow customers to link electronically with your company
- Allow suppliers to link electronically with your company
- Allow customers to place or request orders online
- Integrate with your back office systems
- Capture customer information
- Provide on-line customer service

What percentage of your FY 2001 sales were placed through your Web site? ________%

12.4. a. Do you require that your customers use electronic transactions?
- Yes
- No

b. Do any of your customers require that your facility use electronic transactions?
- Yes
- No

MANUFACTURING PRODUCTIVITY AND PERFORMANCE

13. For the following questions, use approximate numbers or give an estimate. All estimates should be for this facility.

<table>
<thead>
<tr>
<th>Question</th>
<th>2001</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>What were your total annual sales or gross value of shipments at this plant in fiscal year 2001? In 1999?</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Approximately how much did you spend at this location on purchased materials, parts, and services in fiscal year 2001? In 1999?</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Approximately how much new capital investment was made at this location, including facility, equipment, machinery, and information systems in fiscal year 2001? In 1999?</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

14. What percentage of your sales in fiscal year 2001 was exported to customers outside the U.S ________%
15. What was the approximate average annual return on sales (pre-tax) for this plant over the last three years (Circle the number closest to your facility’s return on sales.)

<table>
<thead>
<tr>
<th>Negative return</th>
<th>Positive return</th>
</tr>
</thead>
<tbody>
<tr>
<td>-25% or more</td>
<td>+25% or more</td>
</tr>
<tr>
<td>-15%</td>
<td>+15%</td>
</tr>
<tr>
<td>-9%</td>
<td>+9%</td>
</tr>
<tr>
<td>-6%</td>
<td>+6%</td>
</tr>
<tr>
<td>-3%</td>
<td>0%</td>
</tr>
<tr>
<td>0%</td>
<td>-3%</td>
</tr>
<tr>
<td>-6%</td>
<td>-9%</td>
</tr>
<tr>
<td>-15%</td>
<td>-25% or more</td>
</tr>
</tbody>
</table>

16. Do you offer support services to your customers such as training, software development, maintenance, arrangement of financing, manufacturing process consulting, or other services that result in added value to your product?

- Yes
- No, plan to offer
- No, do not plan to offer

If yes, Does your facility charge for these value-added services?

- No
- Yes

Approximately what percentage of your annual sales is from value-added services?

______________________%

17. Is your facility certified to any of the following standards?

- ISO 9000 or QS-9000
- ISO 14000 environmental management

Yes | In Process | No
---|---|---

WORKFORCE AND TRAINING

18. Now, we would like to ask a few questions about your work force. If you don't know exact numbers, just give an estimate.

<table>
<thead>
<tr>
<th>2001</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>On average, how many employees worked at this location? (Include temporary workers and convert part-time and contract labor to full-time equivalents.)</td>
<td>Full-Time Equivalent Employees</td>
</tr>
<tr>
<td>What was your total payroll at this location in fiscal year 2001? In 1999? (Please include direct payroll plus indirect fringe benefit payroll expenses. Include payments to agencies for temporary workers.)</td>
<td>Payroll</td>
</tr>
</tbody>
</table>

19. On average in 2001, what percentage of your workers used a computer or programmable machine controller at least once a week as part of their job?

______________%

20. On average in 2001, how many persons at this facility:

- Had a four-year college degree (e.g. B.A., B.S.) or higher graduate degree?

Of these, how many majored in:

- a. Information technology (e.g. computer programming, software development, computer networking)
- b. Science or engineering (excluding information technology)

21. In total, approximately how much did your company spend on training in fiscal year 2001? $

Of this, approximately what percentage was related to new activities and tasks (i.e. not routine training)? %

22. a. What percentage of employees in production work are in teams? (if none, enter zero)

b. Are planning and quality assurance tasks integrated into the employees’ work responsibilities?

- No
- Yes

c. Are all team members qualified for all tasks?

- No
- Yes
An important purpose of the study is to learn more about your use of business assistance resources.

23. In the past two years, has your facility received business assistance from: (Check all that apply.)

- Georgia Tech (main campus or regional office)**
- Other university (not Georgia Tech)
- Technical college (Georgia Department of Technical and Adult Education, Quick Start)
- Small Business Development Centers
- Federal laboratory, NASA, or other federal technology program
- Other public or non-profit business assistant source
- A private-sector business assistance source, such as a private consultant, vendor
- Another manufacturer or customer not included in the above
- Facility has not received outside assistance

24. Would your company be interested in receiving training or technical assistance in any of the following areas? (Check all that apply.)

- Product development, rapid prototyping
- Lean manufacturing, continuous flow manufacturing systems
- Set up reduction, preventive maintenance, total productive maintenance
- Constraint management, theory of constraints techniques
- Supply chain management
- Electronic commerce, Internet applications
- Internet and computer system security
- MRP II, ERP, production scheduling, inventory management, accounting software
- Barcoding
- ISO 9000, QS-9000 quality certification
- ISO 14000 environmental management certification
- Human resources development, management development, team training, change management
- Safety & health, ergonomics
- Pollution prevention
- Energy management
- General business analysis, planning
- Marketing, niche marketing, market planning
- Generating financial information for obtaining working capital or capital for new technology/equipment
- Other topics (please describe)____________________________________________________________________

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

*** IF YOU RECEIVED ASSISTANCE FROM GEORGIA TECH IN THE LAST 2 YEARS, PLEASE COMPLETE BACK PAGE
25. What impacts have resulted, or are expected to result, from the assistance provided by Georgia Tech? (Check box.)

<table>
<thead>
<tr>
<th>Impact</th>
<th>Resulted (in past 2 years)</th>
<th>Expected (in next 2 years)</th>
<th>Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve an existing product or service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve an existing process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adopted new technologies</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Improved relationships with existing customers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved response to market needs and trends</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased sales</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved profitability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved employee skills and know-how</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved management/owner skills and know-how</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in employee wages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater flexibility and/or team orientation of employees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased productivity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased attention to quality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater use of computers in the company</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Other impact (please describe)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

26. Estimate the impact of the assistance you received from Georgia Tech on the following:

<table>
<thead>
<tr>
<th>Approximate Total Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of jobs created</td>
</tr>
<tr>
<td>Number of jobs saved</td>
</tr>
<tr>
<td>Increased sales</td>
</tr>
<tr>
<td>Savings in labor, materials, energy, waste, and other cost savings</td>
</tr>
</tbody>
</table>

27. How much did the Georgia Tech assistance cost your facility? (Include personnel costs, materials, travel, marketing, equipment, and other investments—not just direct fees)

<table>
<thead>
<tr>
<th>Approximate Total Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
</tr>
</tbody>
</table>

YOUR ASSISTANCE IS GREATLY APPRECIATED!