



How advanced manufacturing  
is helping U.S. companies  
compete globally.

*AdvancedManufacturing.org*

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**Transforming the Meaning of American-Made.**

Advanced manufacturing is transforming everything about the way we make things in America. The technological advances that drive manufacturing today are drastically changing the way products are developed, produced, shipped and sold.

**The impact of advanced manufacturing reaches far beyond the shop floor.**

With higher quality products, lower costs and streamlined operations, U.S. manufacturing is more globally competitive than ever before. Innovative technologies have galvanized the resurgence of manufacturing in the U.S. and the reshoring of overseas outsourcing.

**We wanted to learn how companies are using advanced manufacturing to remain competitive.**

In May of 2014, *Manufacturing Engineering* surveyed a cross-section of manufacturing executives, engineers and managers from the SME database (publication readers, trade show attendees, and members). In all, 618 U.S. manufacturers responded to our 20-question survey. On the following pages, you will find highlights of the survey findings.

**Demographics**

Respondents are primarily corporate management (50%) or engineers (27%).

Respondents represent a wide range of company sizes. 51% are small companies (1-49 employees), 31% are medium-size companies, (50-499), and 22% are large manufacturers (500+).

Respondents personally influence the purchase of an average of four (4) Advanced Manufacturing technologies.

Respondents' companies serve an average of three (3) manufacturing segments, led by Fabricated Metal Products (43%), Aerospace & Defense (42%), and Automobile/Truck (35%).

**Methodology**

618 U.S. manufacturers participated in the online survey

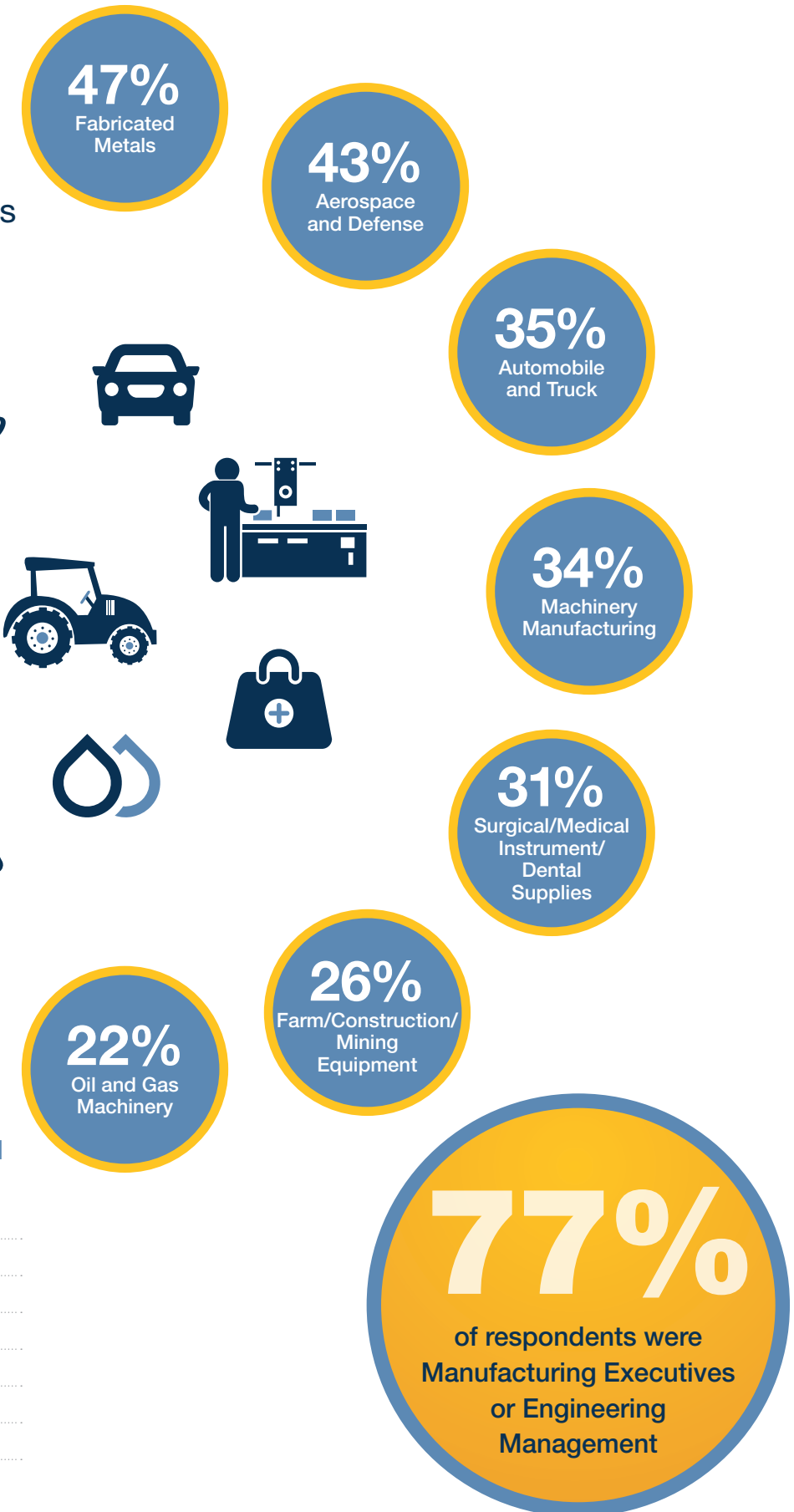
Sample size 37,730

The survey was conducted from April – May 2014

The survey consisted of 20 multiple-choice, rating and differential scale questions. Survey candidates were selected from SME's professional manufacturing database, which included engineers, supervisors and executives. The database is populated primarily with Manufacturing Engineering subscribers, SME event attendees, and patrons of SME professional services.



Which manufacturing industry segments does your company serve?  
*(Multiple responses allowed)*



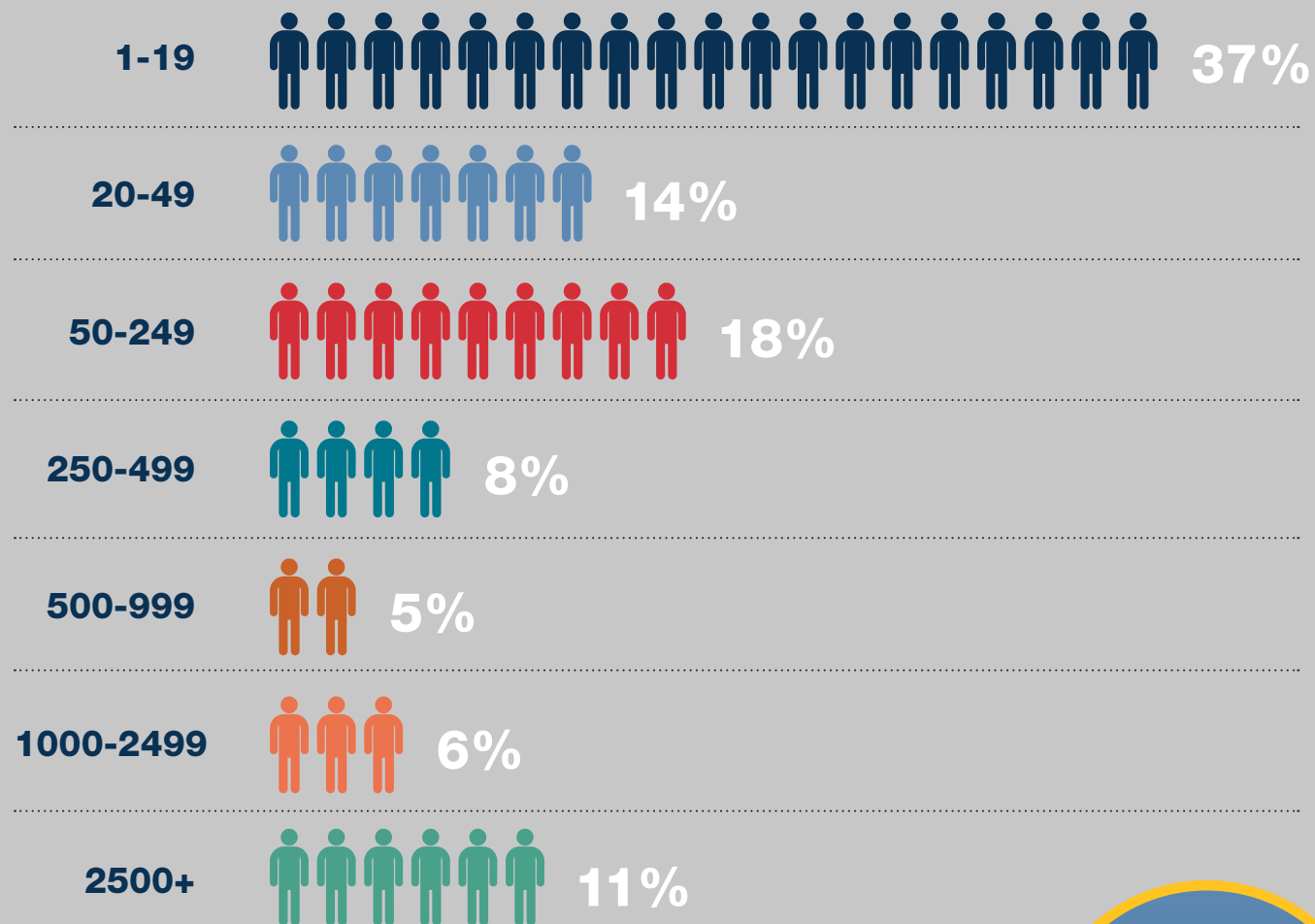
**Respondents also indicated**

- 20% Electrical Equipment/Appliances/Components
- 19% Primary Metal Products
- 19% Transportation Equipment
- 15% Computer and Electronics
- 14% Plastics and Rubber
- 8% Advanced Materials
- 8% Chemical Manufacturing

\* Expenditures toward Advanced Manufacturing capabilities over the next two fiscal years (2014-15)



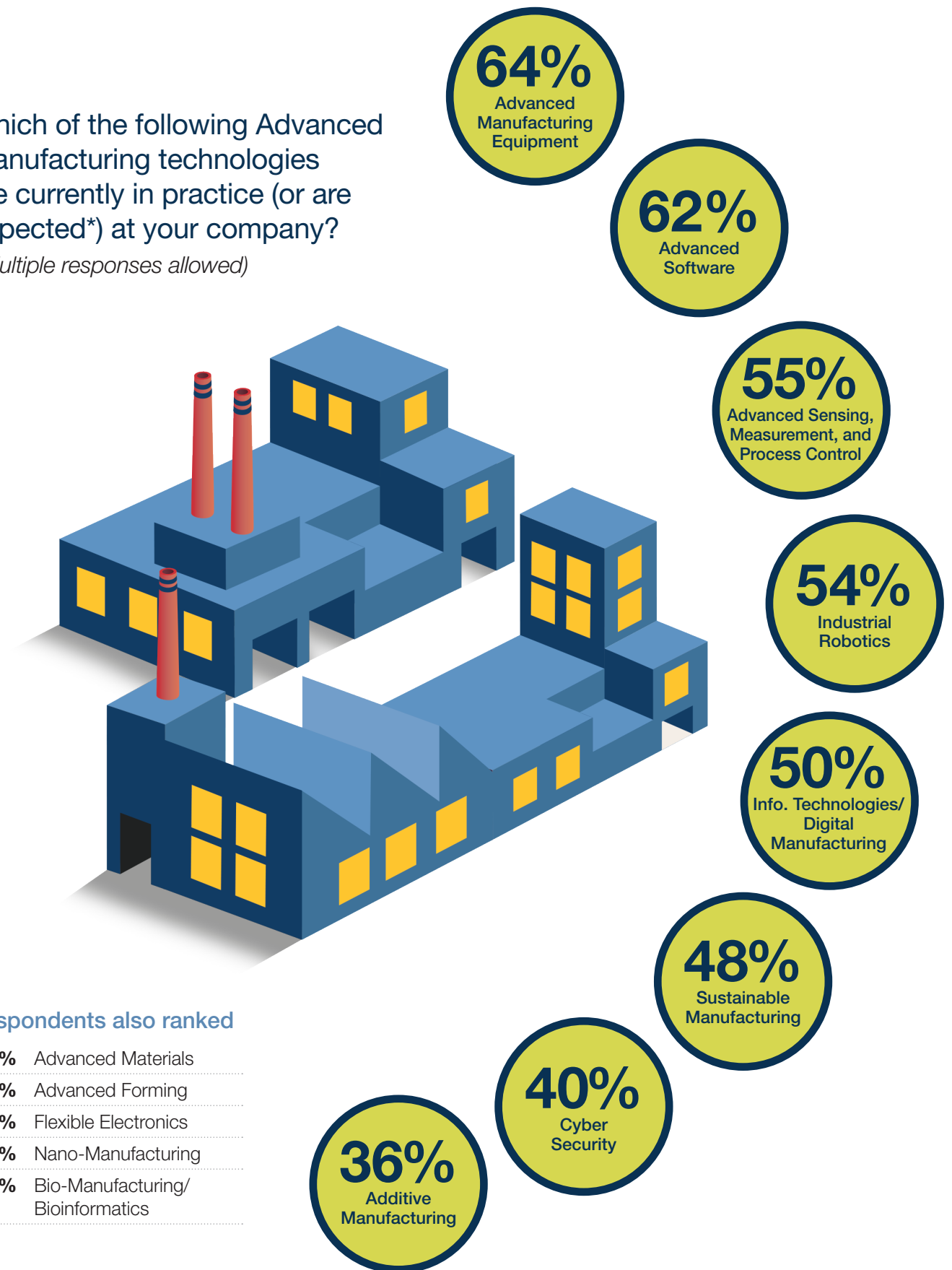
How many people are employed in your company, including all sites, offices, and locations?



Respondents represent small, medium, and large manufacturers



Which of the following Advanced Manufacturing technologies are currently in practice (or are expected\*) at your company?  
*(Multiple responses allowed)*



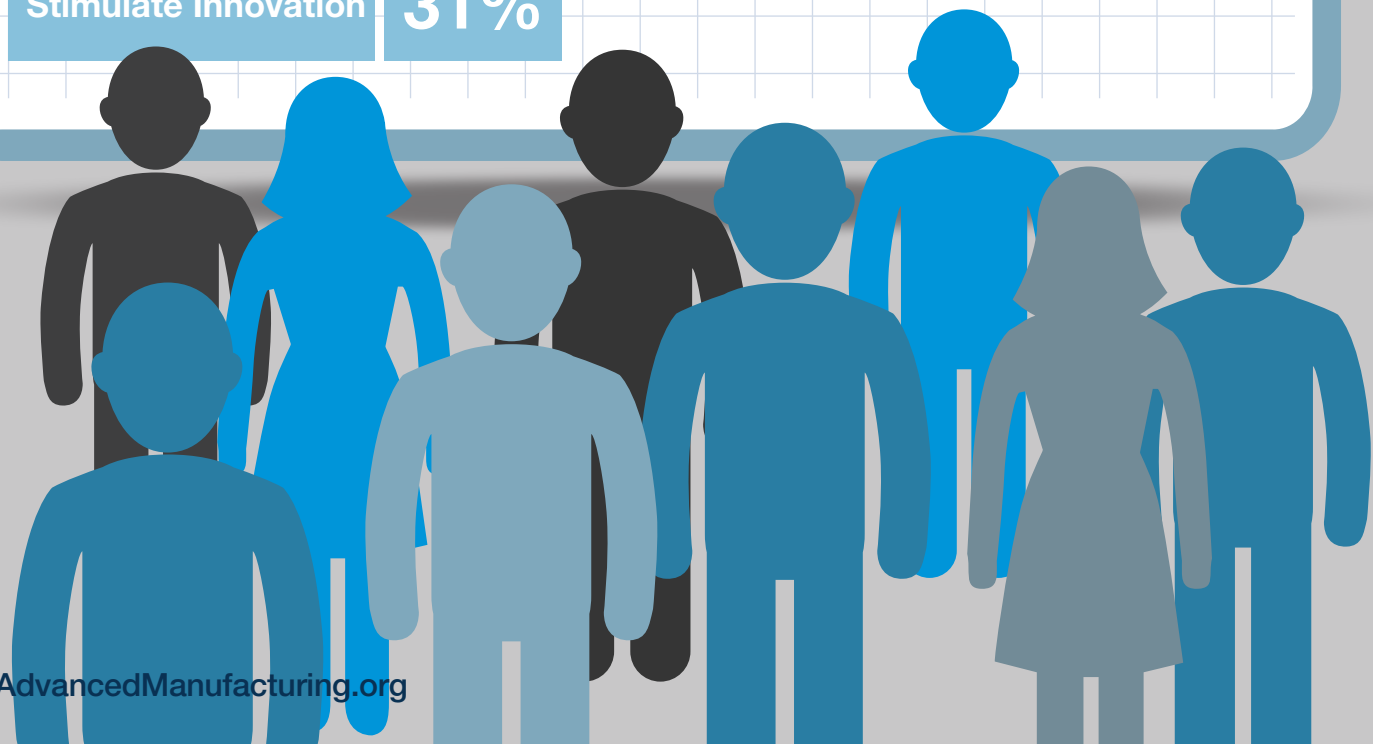
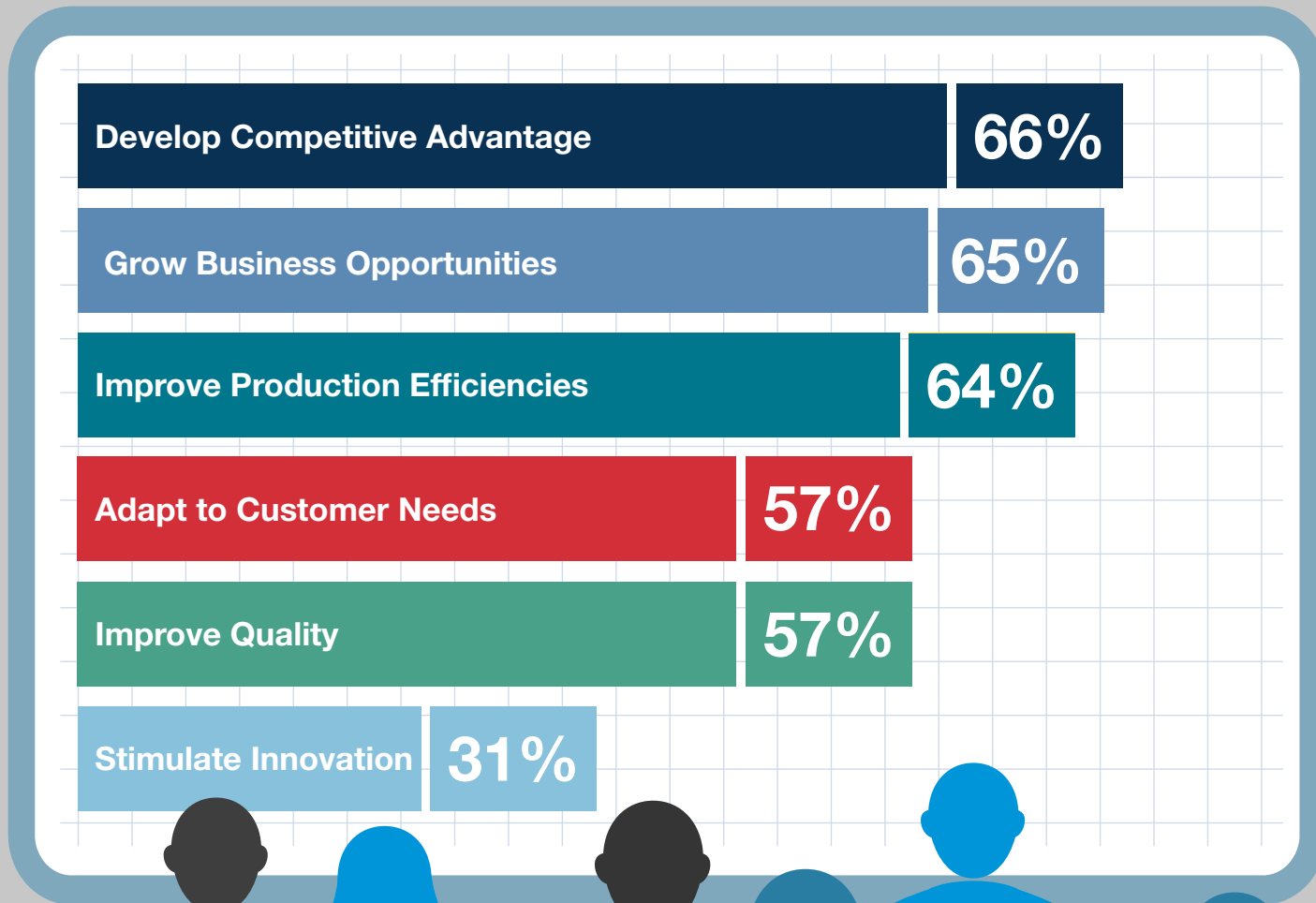
Respondents also ranked

- 33% Advanced Materials
- 33% Advanced Forming
- 20% Flexible Electronics
- 13% Nano-Manufacturing
- 4% Bio-Manufacturing/Bioinformatics

\* Expenditures toward Advanced Manufacturing capabilities over the next two fiscal years (2014-15)



What is driving the need for your company to make Advanced Manufacturing improvements?  
*(Multiple responses allowed)*



Manufacturers who reported that the objectives below were important or very important to their company's strategy during the next five years:  
*(Multiple responses allowed)*

Customer-focused innovation	<b>78%</b>
Process improvement	<b>77%</b>
Workforce development/training	<b>63%</b>
Sustainability	<b>55%</b>
Supply chain management	<b>52%</b>
Global engagement	<b>39%</b>

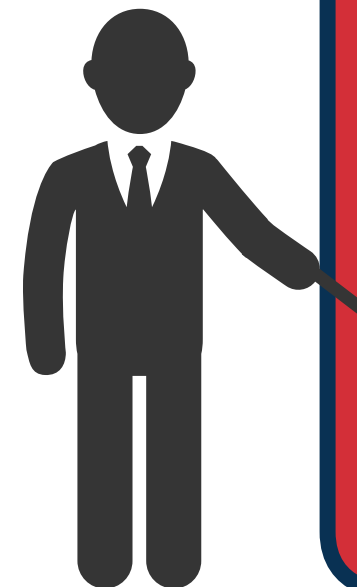


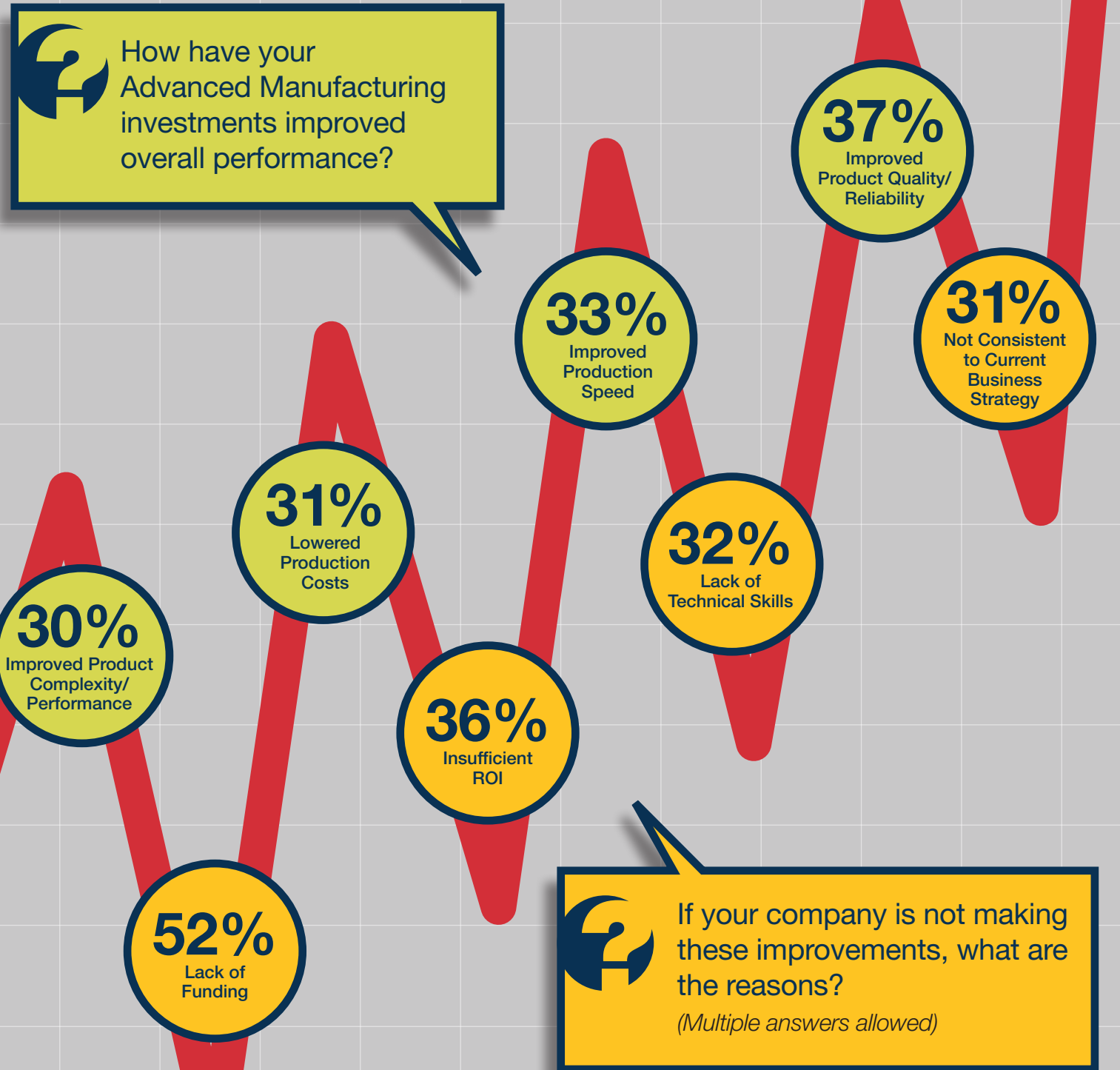
Despite respondents identifying these six strategies as keys to their success, their responses to a follow-up question show a wide gap (23%-51%) in those strategies being implemented "Exemplary" or "Significant Strengths".



Manufacturers who reported that their company was doing a significant or exemplary job implementing those strategies:  
*(Multiple responses allowed)*

Customer-focused innovation	<b>35%</b>
Process improvement	<b>26%</b>
Workforce development/training	<b>17%</b>
Sustainability	<b>16%</b>
Supply chain management	<b>15%</b>
Global engagement	<b>16%</b>





**What are your company's planned expenditures toward Advanced Manufacturing capabilities during the next two years?**

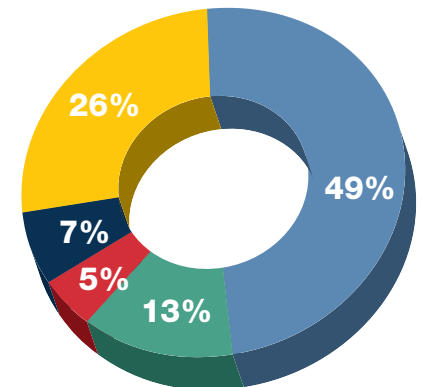


**49%** of small-sized manufacturers surveyed plan to spend \$100-299k toward Advanced Manufacturing.

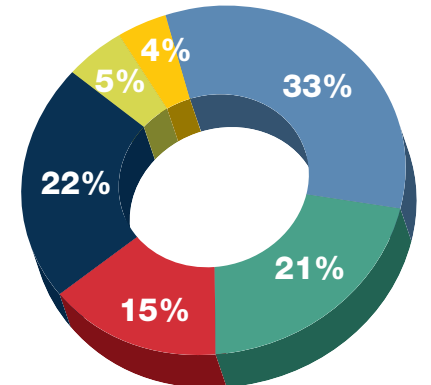
**24%** of large-sized manufacturers surveyed plan to spend \$5 million or more toward Advanced Manufacturing.

**53%** of respondents plan to invest in Advanced Manufacturing technologies in the next two years.

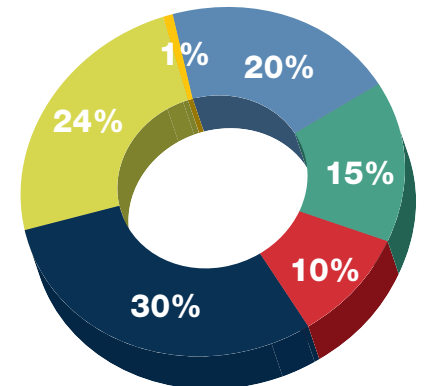
**Small-Sized Manufacturers**  
1-49 employees



**Medium-Sized Manufacturers**  
50-499 employees




**Large-Sized Manufacturers**  
500-2,500+ employees



- \$100,000 to \$299,999
- \$300,000 to \$499,999
- \$500,000 to \$999,999
- \$1 million to \$4.9 million
- \$5 million or more
- None

38% of respondents said they were "not sure" of their companies' planned expenditures for the next two years and were omitted from the results provided on this page.



 Which of the following do you recommend, specify or approve?  
*(Multiple responses allowed)*

Respondents personally influence the purchase of about four Advanced Manufacturing products and services.




**46%**  
Industry Events/  
Trade Shows

**45%**  
Websites

**36%**  
Magazines/  
Trade  
Publications

**35%**  
Conferences

 In developing your company's Advanced Manufacturing expertise, how valuable do you find the following information sources/media content platforms?

**33%**  
Videos



**29%**  
Webinars

**25%**  
White Papers

**25%**  
E-Learning/  
Online  
Training

SME supports the manufacturing industry with networking, training and content.

Respondents also indicated

- 16% E-Books
- 16% Scholarly Journals
- 12% eNewsletters
- 10% Forums/Chat Rooms
- 7% Social Media/Blogs

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