

2020 State of the Gear Industry

Reader Survey Results

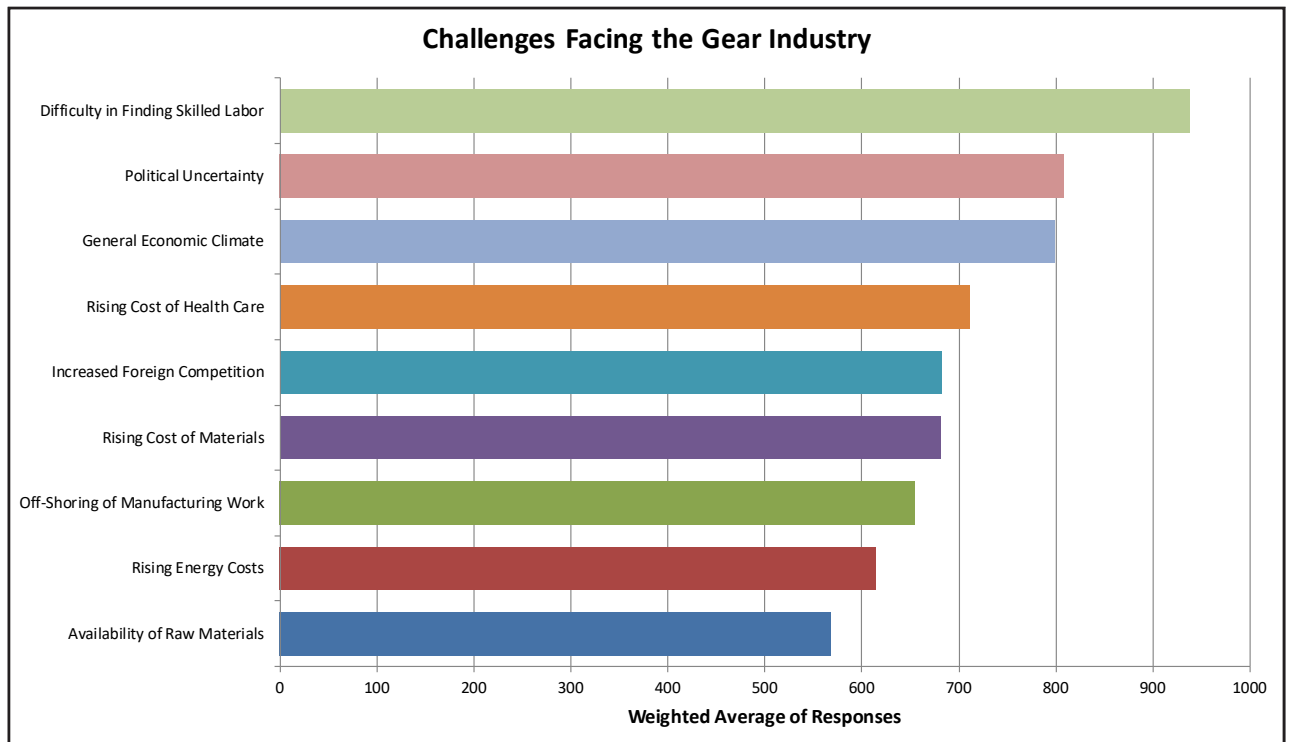
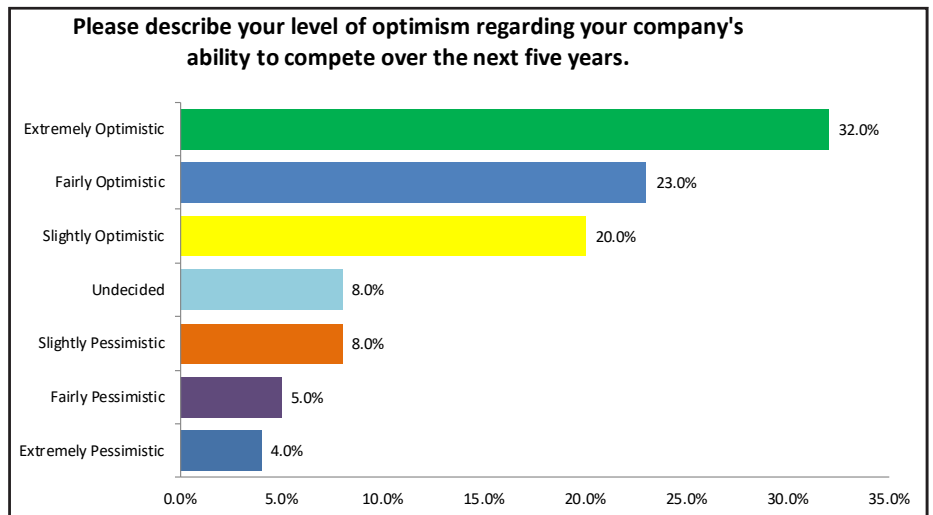
Gear Technology's annual State-of-the-Gear-Industry survey polls gear manufacturers about the latest trends and opinions relating to the overall health of the gear industry. As in years past, the survey was conducted anonymously, with invitations sent by e-mail to gear industry companies – primarily in North America, but also including some respondents from around the world.

All of the responses included in these results come from individuals who work at locations where gears, splines, sprockets, worms and similar components are manufactured. They work at gear manufacturing job shops as well as captive shops at OEMs. A full breakdown of the respondent demographics can be found at the end of this article.

Summary

Compared with previous years, the current level of optimism is low. When asked about their optimism concerning their companies' ability to compete over the next five years, only 75% of gear manufacturing companies indicated some level of optimism (compared with 85.8% last year and 83% in 2018 and 2017). The shift toward uncertainty and pessimism is clear in the results.

In addition, the challenges facing the gear industry seem to have grown in intensity. The difficulty in finding skilled labor is still top of mind with our respondents, and judging by our results, the problem is getting worse, not better. It's worth noting that both political uncertainty and the general economic climate have moved up the list in terms of the gear industry's concerns.



Significant Business Challenges

Here's a sampling of what our respondents had to say about the challenges facing the industry today:

"Economic climate in heavy industry is not great."

"The American government and economy (we are located outside of the USA)."

"Volumes (Low volumes for Truck segment)."

"Finding employees."

"Tariffs."

"Finding skilled labor and new customers."

"Global cooperation over different sites."

"Improve quality and cost reduction."

"Poor economy."

"Tariffs continue to be a challenge because it is difficult to find competitive suppliers for simple, low-complexity gears."

"Improving efficiency."

"Labor shortage."

"Costs and sales."

"Adjusting for lower volume production."

"Adaptation to shifting market demands for gear manufacturing."

"Shortage of skilled labor."

"Fewer engineers and designers know the intricacies of gear teeth and rely on standard tables too much."

"Market predicting / production volume planning."

"Skilled people."

"Getting efficient communication between various departments."

"Sales."

"We're starting new sales program."

"Health care costs & political uncertainty."

"Brexit."

"New projects."

"Entering the EV market."

"Electrification of drive trains."

"Finding machinists to learn the trade."

"Incremental turnover."

"Meeting the bottom line numbers."

"Car industry is going down."

"External Investment."

"Skilled manpower."

"Controlling labor cost increase."

"Increase export business."

"EV."

"Staying in business!"

"Hiring skilled labor."

"Expansion."

"We would be happy if we survive, and improve our efficiency."

"Regulations."

"Retaining operators. Phase out of 2 products. Adding new OEM customers. Rearranging production equipment to make room for new business."

the secret is out

Introduced at the last EMO show in Germany, the new Scudding® machine, the Profilator S-150, is the high-end alternative to broaching machines for gear production.



The gear skiving machine is a vertical configuration, with the patented Scudding® head design and capable of machining 150mm (5.90") diameters both internal and external. Equipped with a Heidenhain encoder/resolver assembly and Siemens top-end CNC, this new machine features opposing workpiece and work tool spindles, A6 and HSK standard. With AC servo motor

drive on both X and Y axes, this sturdy performer offers a small footprint with BIG production capacity, all at a fraction of the price of a conventional broaching machine.

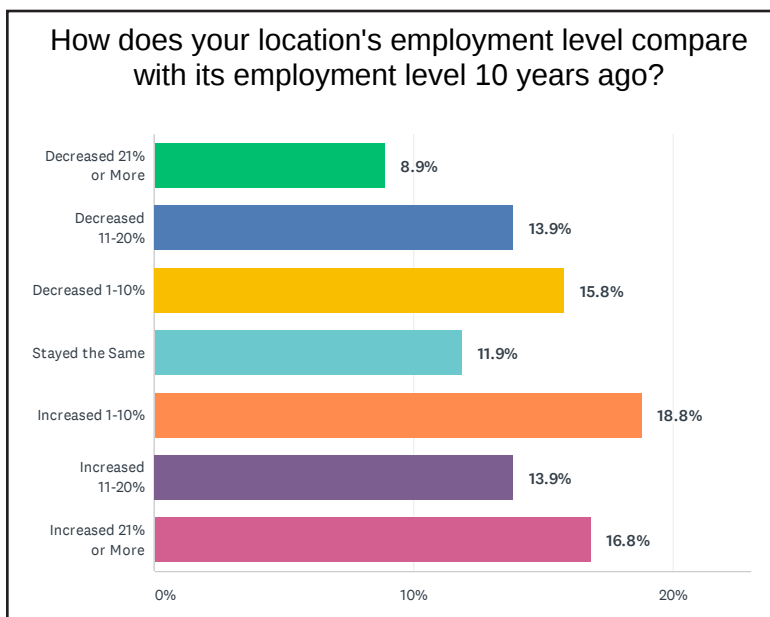
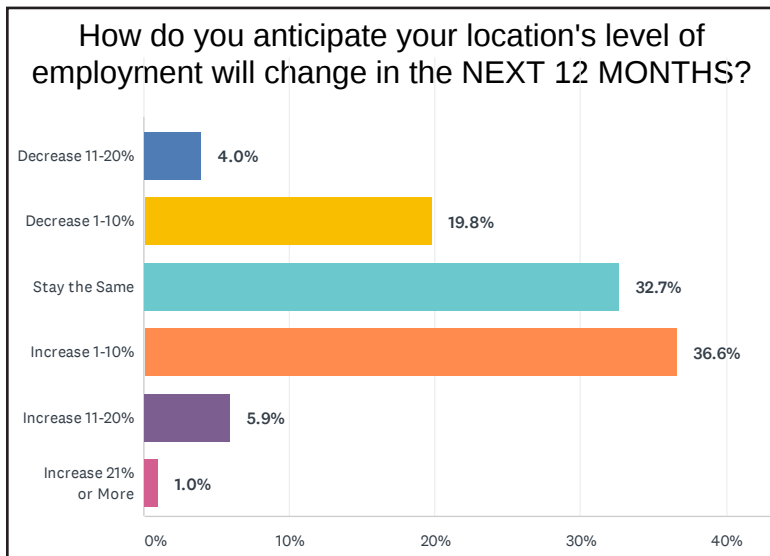
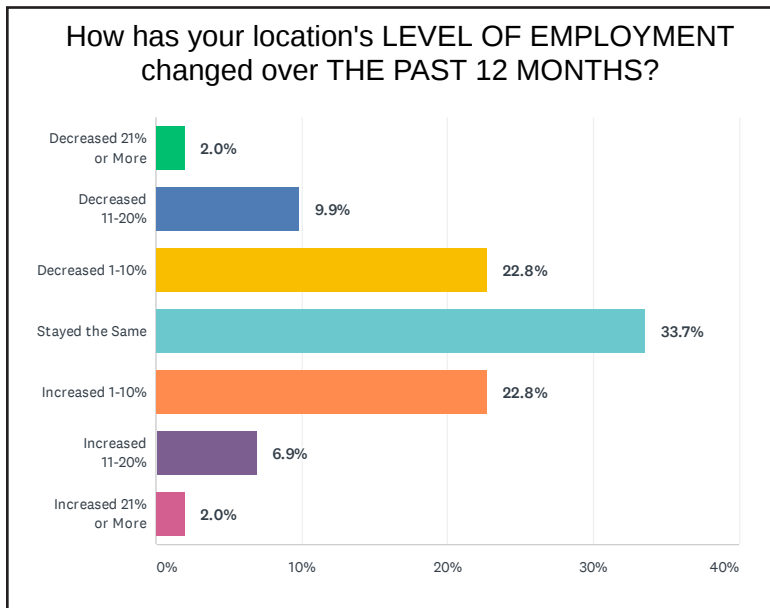
Call Walter (again, if you asked the secret previously) and he'll tell you all about this game-changing machine tool for the North American gear industry.



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Employment



“Find skilled engineers with gear / splined shaft experience.”

“Lack of new projects or capital spending. Government restrictions in new heavy industry projects and environmental legal challenges stopping projects and expansions.”

“Increase sales.”

“Finding good qualified technical people for employment.”

“Adding business.”

“Retaining, finding skilled labor and training new employees.”

“New product introduction.”

“Capacity constraints, Finding skilled labor.”

“Taxes skyrocket with no control under the politician in power.”

“LACK OF SKILLED LABOR.”

“Economic challenges for our customers.”

“Employees.”

“Resolution of trade tariffs.”

“To develop new projects.”

“Booking new business and skilled labor.”

“Hiring qualified workers.”

“Throughput on the shop floor.”

“Ramping up to customer demand.”

“Stay ahead of Chinese products.”

“Controlled growth.”

“New business.”

“SALES.”

“Skilled manpower.”

“Removing wastes in our processes.”

“Finding skilled labor.”

“New premises.”

“Hiring enough skilled people.”

“To replace the retired knowledge is the hardest thing to do!”

“Cash flow, staff.”

“Competing in a world market.”

“Technological competency.”

“Financing new growth.”

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LOOKING FOR AN OUT OF THIS WORLD CAREER?

If you'd like to be part of a world-class gear manufacturing company that values and invests in its people, and you have what it takes to deliver Excellence Without Exception...

Forest City Gear is looking to add team members in:

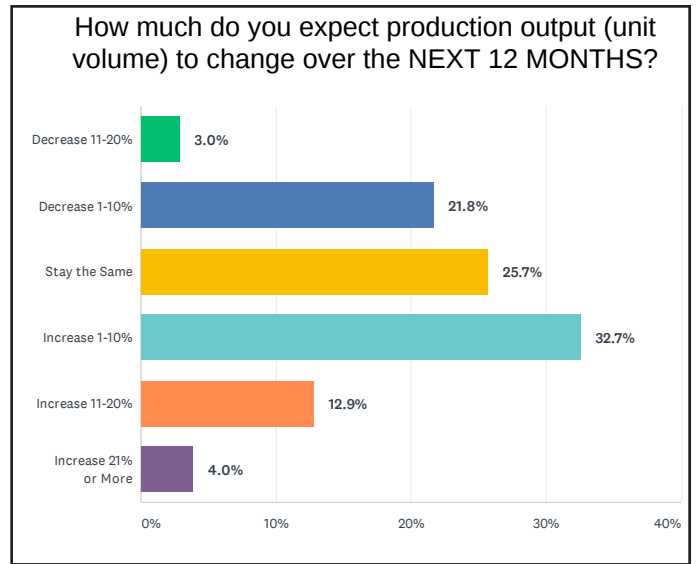
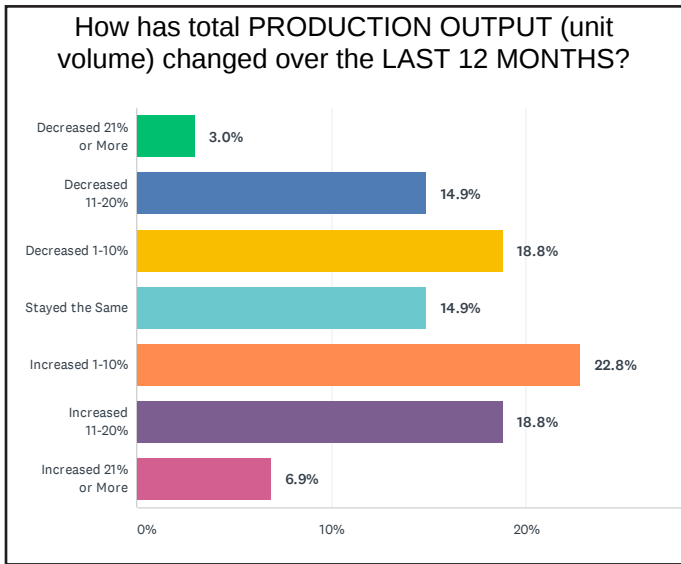
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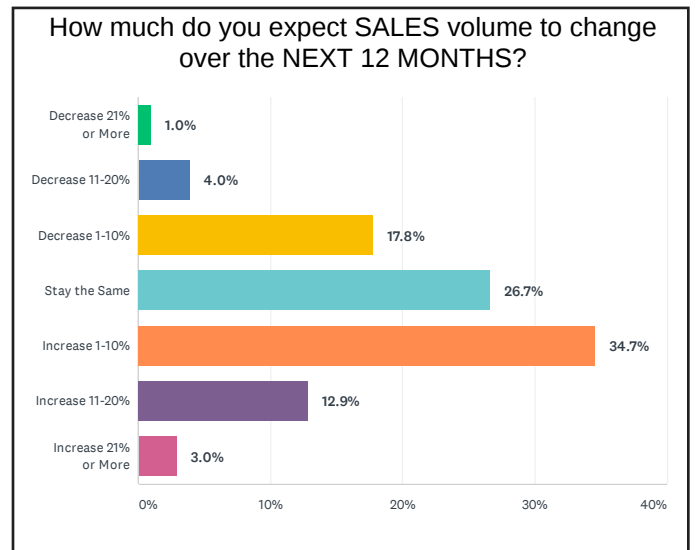
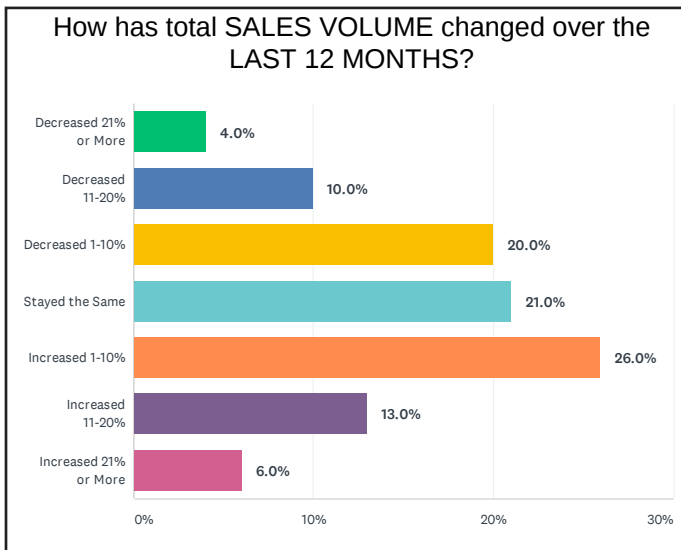


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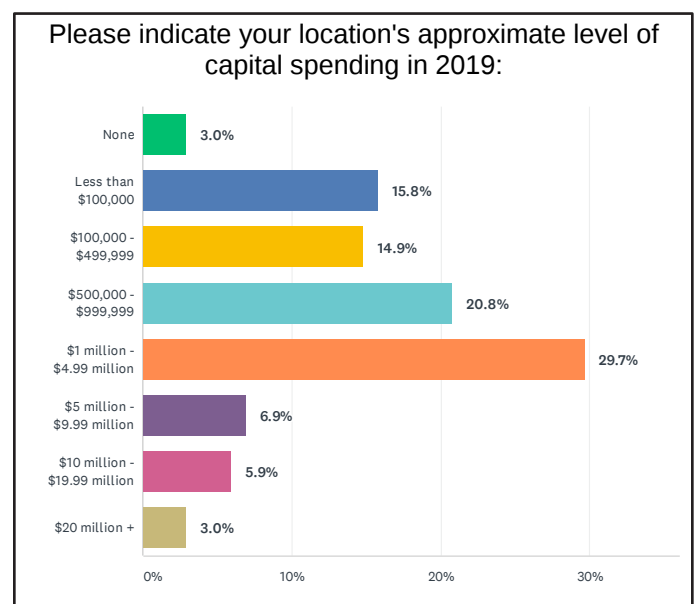
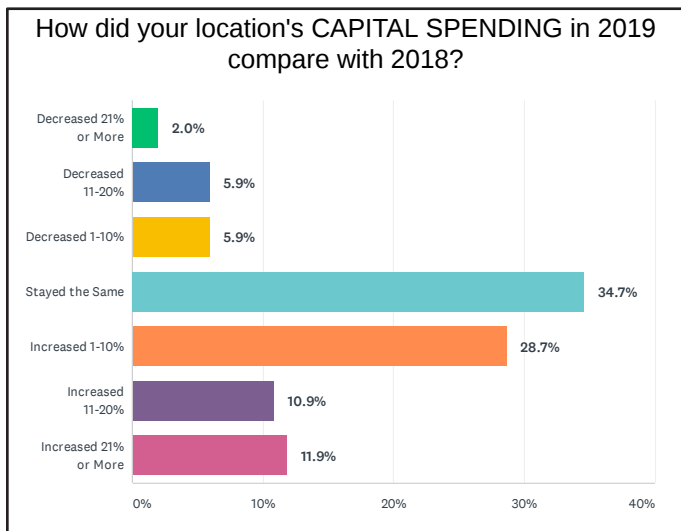
Production



Sales



Capital Spending



Capital Spending

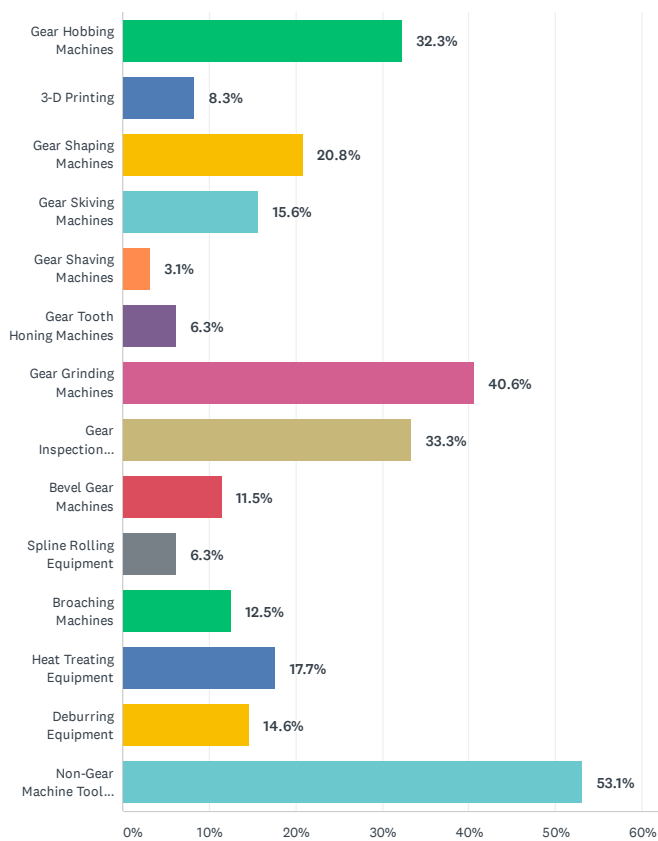
81% of respondents work at locations that spent more than \$100,000 on capital equipment in 2019.

49% work at locations that spent more than \$1,000,000.

14% of respondents' companies spent less than last year.

52% of respondents' companies spent more

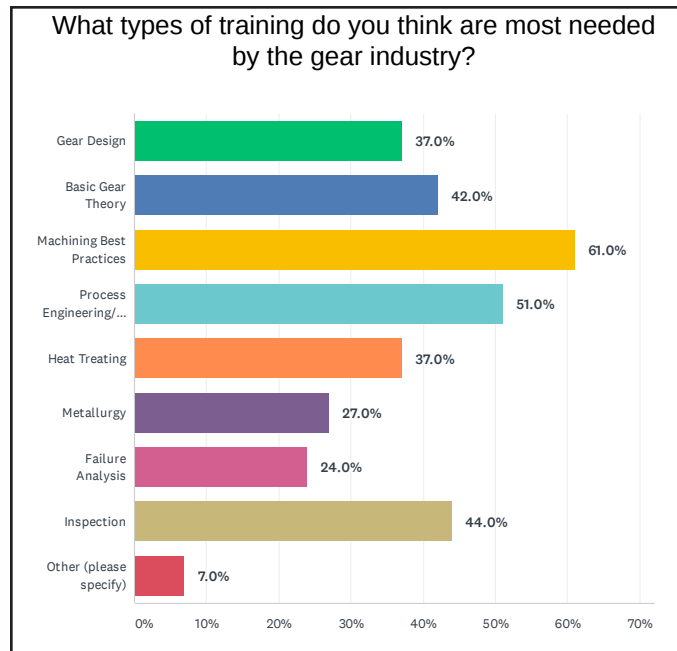
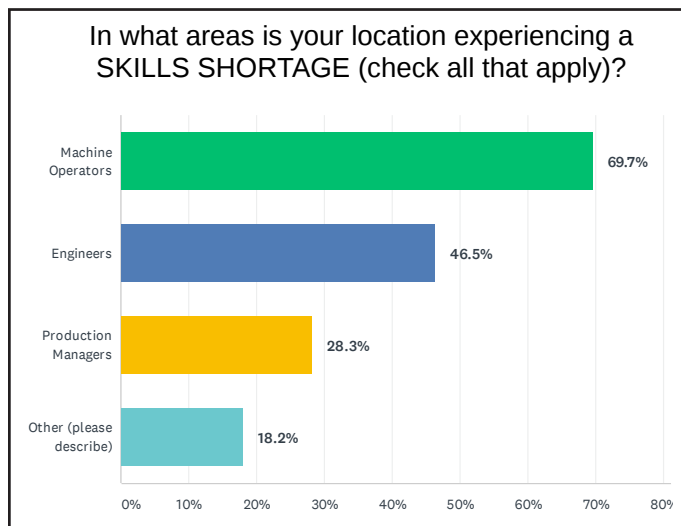
For which production functions do you expect to purchase equipment in 2020?



What is Your Company Doing to Address the SKILLS SHORTAGE?

- "Working with local tech colleges to train and recruit."
- "Internal training / retention plan."
- "Recruitment efforts and training."
- "Working with local community colleges to increase awareness of manufacturing opportunities."
- "Active internal training and selective hiring."
- "The strategy is not clear."
- "Training."
- "Complaining and overloading key employees."
- "Using temps and more classroom training."
- "Reaching out to schools & colleges."
- "Off-shoring to India."
- "Training on the job."
- "Hire and train."
- "Constant in-house training."
- "Networking."
- "Using staffing companies."
- "Nothing."
- "Strengthening cooperation with education entities."
- "LinkedIn sourcing."
- "Internal Training."
- "Teaching employees by ourselves."
- "Internal and external trainings."
- "Training youngsters."
- "Training."
- "Seeking external suppliers and experts."
- "Hiring skilled laborers."
- "Pre-training & re-training."
- "Soft Skill Development."
- "On-the-job training."
- "Training family."
- "Working with local career colleges."
- "Good question! We are looking for young engineers and technicians."
- "On-the-job training."
- "Training. Using local community college. Using our Japanese headquarters to horizontally deploy training. Fundamental gear training (don't assume engineers know anything about gears out of college)."
- "Seeking employees through 3rd parties."
- "Train within."
- "Searching outside of geographical area."
- "Recruit."
- "Attending job fairs; contacting veteran associations; contacting alumni college associations; headhunters."
- "Training in plant and outside training."
- "In-house training."
- "Recruiting overseas, UK and Asia."
- "We host high school and engineering internships."
- "Training. Reaching out to more educational settings."
- "Trying to hire young graduates and train from bottom."
- "Recruiting high school kids into the industry."
- "Job fairs."

Skilled Labor



People, Training, Succession Are Primary Issues Facing Industry AGMA Responds

By Matthew E. Croson, President, American Gear Manufacturers Association

As the *Gear Technology* State-of-the-Gear-Industry survey clearly reports, all aspects of the people puzzle are a primary challenge facing the industry and AGMA members.

AGMA and the AGMA Foundation are responding with programs that directly tackle these issues, including:

1. To secure people, the AGMA Foundation developed the “Get Into Gears” program, providing free of charge, a series of industry marketing pieces designed to attract technicians and engineers into the sector. From posters and brochures, to powerpoints and videos, the materials are downloadable on the AGMA Foundation website at www.agmafoundation.org and promote how great our industry is! The materials are customizable and, to date, more than 160 companies have accessed the materials and are using them at Career Fairs, internally, and at local job fairs.
2. To support education funding, the AGMA Foundation has continued its annual Scholarship Program, where approximately \$50,000 in grant money is provided to engineers and technical students focused on gaining degrees in our space. Over the years, this program has been highly successful in securing workers, with 86% of scholarship recipients ending up working at an AGMA member company.
3. To support OPERATOR training, AGMA has created a National Training Center at Daley College. With grants from the AGMA Foundation, the association has created five new operator fundamentals courses touching on grinding, hobbing, heat treating and other important skills all operators need to have. The 10,000-net-square-foot facility will become the go-to training center for all levels of training, and because it’s centrally located in Chicago, lowers the cost of travel for events.
4. To support ENGINEERING training, AGMA hosts more than 16 classes annually, including five new courses developed over the past four years, with funding from the

AGMA Foundation. From gearbox design to gear failure, and everything in between, AGMA is a significant source of higher learning for engineers who need to gain insight into designing and manufacturing gears.

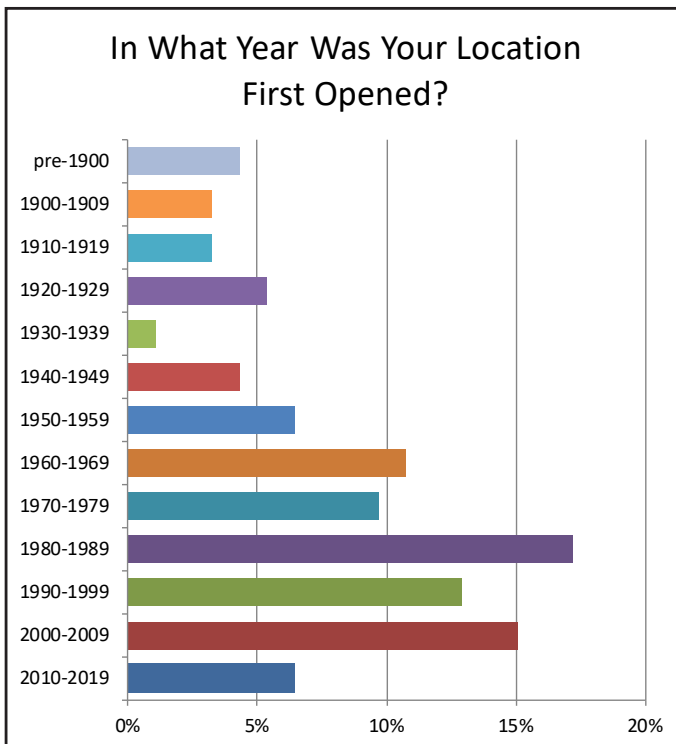
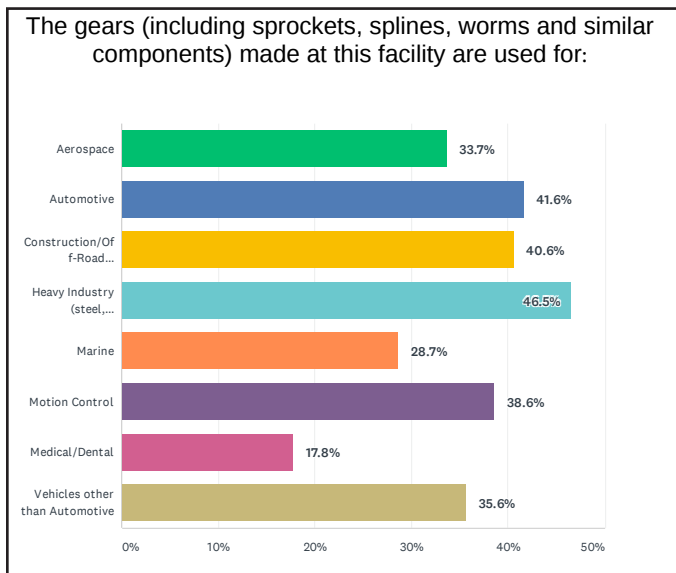
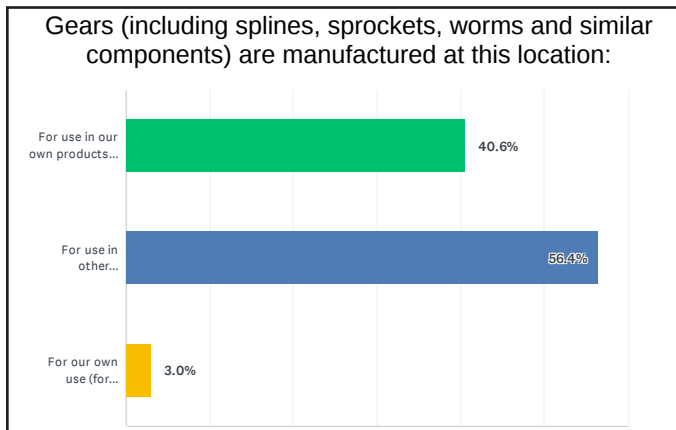
5. Giving Back – In 2018 Linda and Bipin Doshi announced a \$100,000 grant to support a dedicated scholarship program managed by the AGMA Foundation – in 2020, we expect to grant our first scholarship from the funds provided, and it will support an engineer who shows academic excellence as well as passion for gears. We hope more industry leaders, who found success via the industry, will consider similar grants to support the future.
6. Spin it Forward – in March, the AGMA Foundation will announce the “Spin it Forward” program, whereby we are asking the gear community to support the AGMA National Training Center via machinery and materials donations, as well as financial support via contributions. We want the AGMA National Training Center to become a showcase for the power of training, leveraging machinery, materials and information to support the future of the industry.

These are just a small sample of the things the AGMA membership and staff are completing, via a collaborative process including input from the AGMA Foundation’s Trustees, the AGMA Board, the AGMA Education Committee and the leadership at both Daley College and Ranken College. WORKING TOGETHER, we are responding to the primary challenge facing the industry, and would love your support: Join the AGMA, becoming involved on our committees or support the AGMA Foundation.

For more information:

www.agma.org
www.agmafoundation.org

Demographics



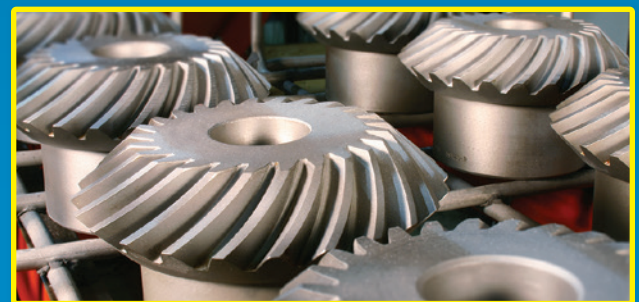
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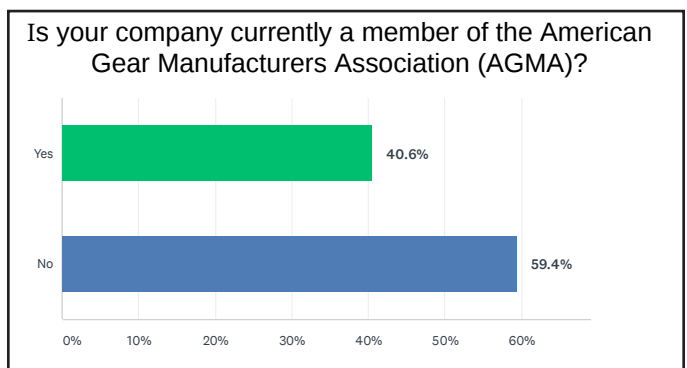
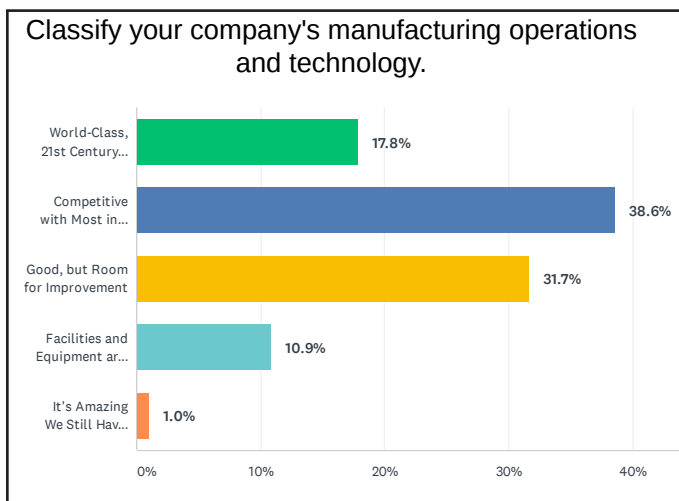
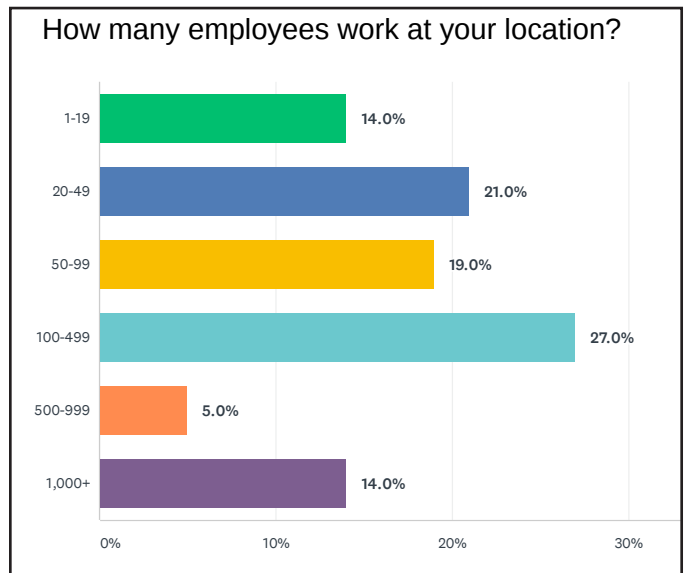
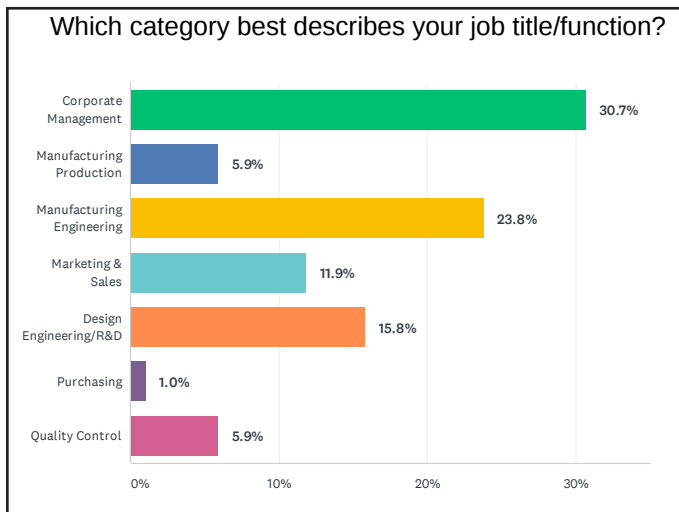
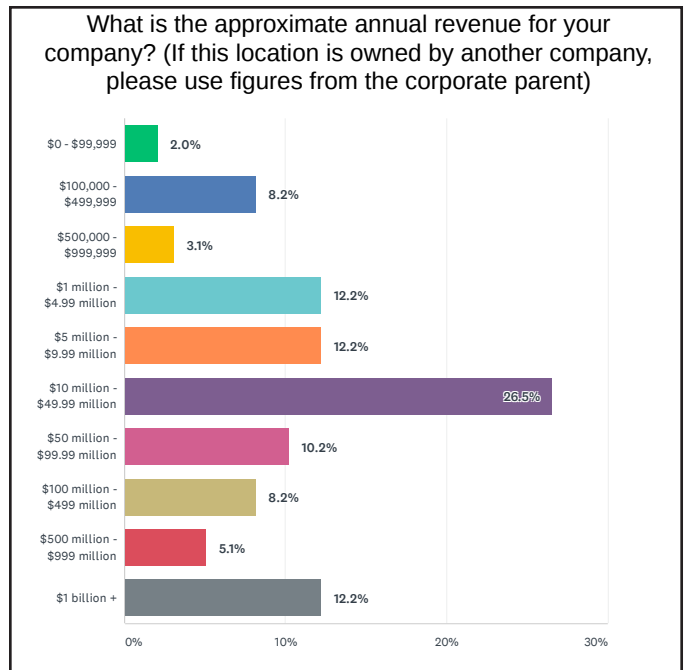
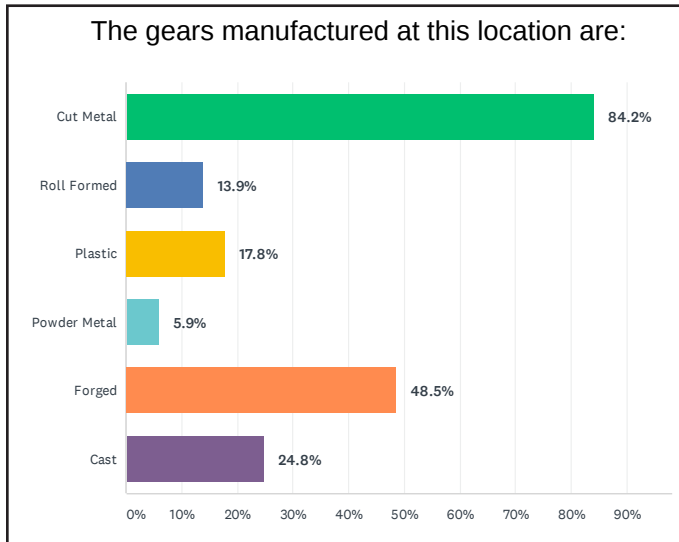
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Demographics



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