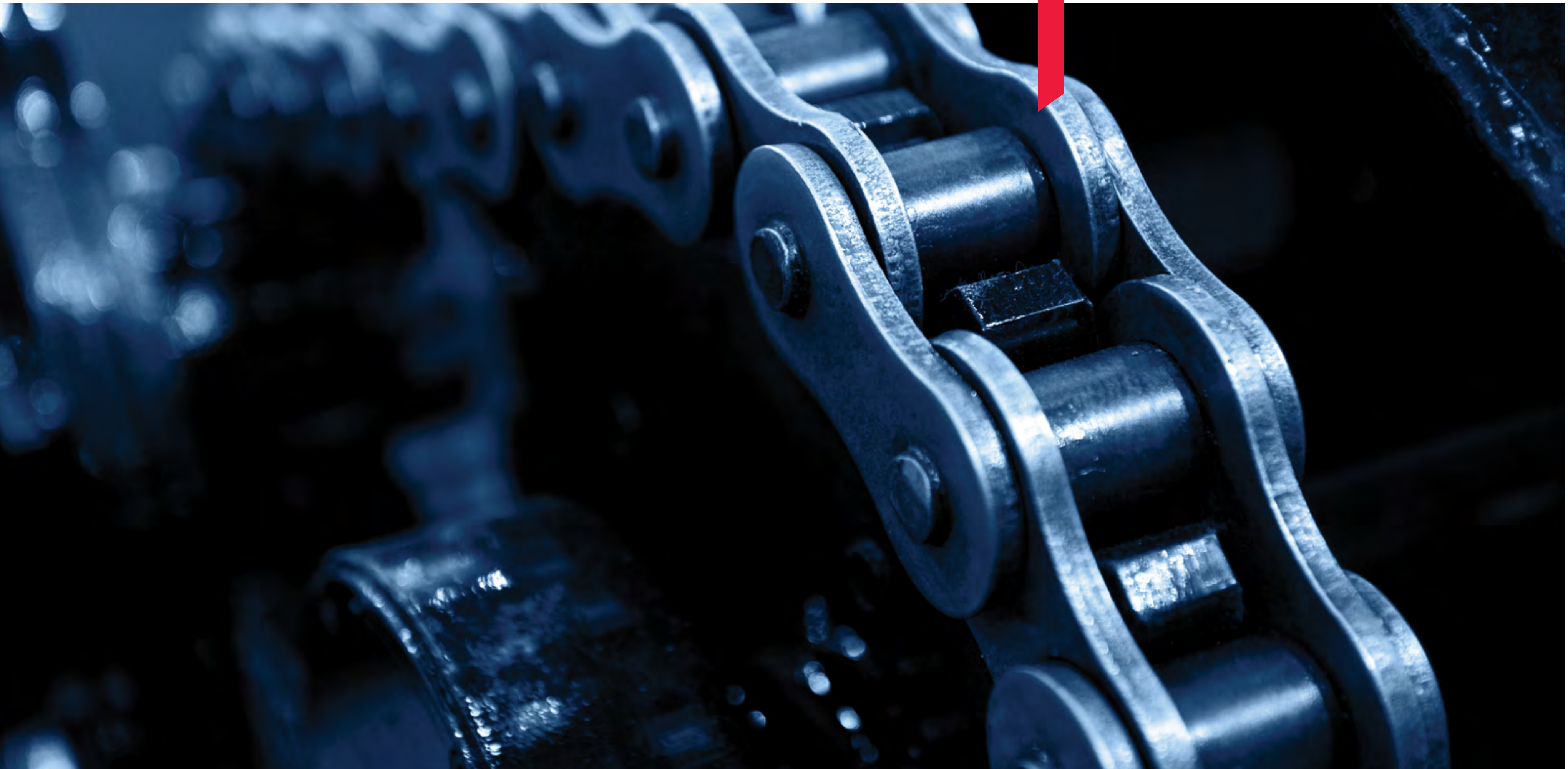

MANUFACTURING THE FUTURE

When stop and start means go

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BDO

MANUFACTURING THE FUTURE

When stop and start means go

After years of economic stagnation followed by numerous false starts, manufacturing executives have grown impatient. Tired of shelving plans and investments until things turn around, more and more manufacturers have come to terms with unfettered prosperity being a thing of the past. To succeed in today's stop-and-start economy companies must be willing to embrace different strategies, perspectives and ways of working, while exploring new markets and redefining how they engage their customer base.

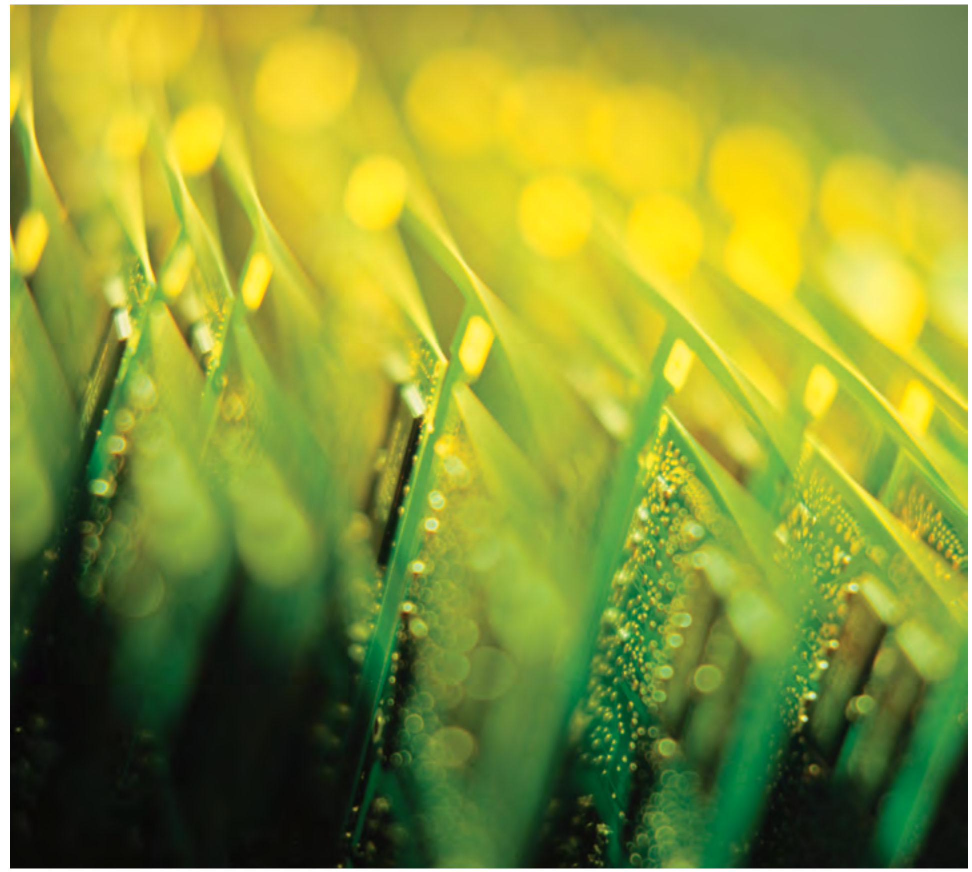
BDO recently began hosting a roundtable series entitled **"Manufacturing Growth amid Uncertainty,"** which brings together manufacturing executives from across the United States to discuss strategies for boosting their organizations' bottom lines in times of prolonged uncertainty. This roundtable series kicked off in late 2012 with vibrant exchanges among manufacturing leaders in Dallas and Detroit (see page 12 for attendees). The wide-ranging conversation touched on innovation, new markets, talent management and improving asset performance. The following highlights provide an overview of the approaches these leaders are using to turn growth into reality.

REVOLUTIONIZING INNOVATION

The pace of change in today's business world is almost breathtaking. Companies must launch products faster, at a lower cost and with more features than ever before – and the result can eat into profits. This trend holds as true for manufacturers that sell to other businesses as it does for those that sell products directly to the end consumer. These companies need to invest in innovation because their customers are innovating; if they don't, then their customers can no longer use what they have to sell. According to one manufacturing CEO, "Our customers reinvent technology every six to 12 months. Typically, we have about 25 percent R&D costs. That's one of the challenges that we face." Innovation has always been a business imperative. But today's leading companies are re-examining the process from the ground up, developing some new rules of the road:

REDEFINE WHAT IT MEANS TO INNOVATE. Innovation is not about products alone. Some companies find overhauling their processes can have just as much impact on the bottom line as rolling out a new product. Other companies innovate around how they interact with and help their customers, adding value in new and different ways. Explains one CFO: "Our customers are not always as familiar with the production process as we are, so we innovate by helping their engineers strip out manufacturing costs."

BROADEN INNOVATION ACTIVITY OUTSIDE THE ORGANIZATION. Some companies, like Apple, hold their innovations close to the vest right up to the point they hit the market. Others – particularly when their supply chain is an interconnected web of customers and suppliers – find that co-creation yields a richer lode of new ideas and, ultimately, better products and services. According to one CFO whose company experienced downsizing of its R&D staff, "We look to our customers and our channels to find new markets – and we have partners who help us innovate." Once the organizational listening posts are attuned to a broader range of signals, partners, suppliers and



"Our customers are not always as familiar with the production process as we are, so we innovate by helping their engineers strip out manufacturing costs."

MANUFACTURING CFO

REVOLUTIONIZING INNOVATION

even customers all become sources of innovation.

REEVALUATE. THEN DO IT AGAIN. There is no shortage of good ideas in most companies. But resource constraints dictate that only a few can make their way to full-fledged products and services. Having a formal process for determining what ideas should move forward ensures both discipline and alignment with customer needs. One manufacturing CFO points to his company's market requirements document as the cornerstone of its innovation process. "We force the new business development and engineering teams to identify the market, the customers, the breakeven point, etc. For each idea we conduct several weeks of intensive market research. If there is a big enough potential market, then we take the idea to the next stage. Having a stage-gate process allows us to kill a project if it doesn't meet the next set of requirements — because the worst thing we can do is take a project all the way through to the end and then find it can't meet revenue targets."

STRENGTHEN AND DEFEND INTELLECTUAL PROPERTY. When companies invest in innovation, creating proprietary products and processes, they want to make sure they reap the benefits of those investments. For this reason, many manufacturers have seen fit to rigorously defend their intellectual property (IP) via legal channels wherever possible – especially if their IP can be protected using patents and trademarks. As one manufacturing CFO notes, "We invest a lot in patents, and we defend our patents very vigorously against our competitors." Nevertheless, in countries with weak IP laws – for example, China – companies need to find more creative ways of protecting their innovations. One approach is to co-innovate with local partners, thus spreading some of the investment risk.

STRIVE FOR A BLUE-SKY PERSPECTIVE. Innovation is like a muscle – if it's not used, it can atrophy. Many organizations take a very narrow view of innovation – they never put the muscle through its paces, or push themselves to imagine what could be. Companies that truly exercise innovation ask such questions as: How else might our products be used? Are there different customers and markets we could potentially capture if we tweaked our product or added new features? What customer needs are we not meeting that we could charge a premium for if we were able to do so?

"We tend to focus on how our technology can be the best in terms of what we do now, as opposed to how it could be used in different ways, in different markets or for different customers," says one executive. He points to a startling example of how a broad innovation perspective can transform even the mundane product his company manufactures. The industry has churned out a relatively unchanged product for years, yet now its customers face a serious challenge: as the value of the material they use has skyrocketed, so has the incidence of theft of their product. Suddenly, helping customers protect themselves from loss is an important way to add value to their company's products. Says the executive, "Coming up with ways to protect our product has become a big issue for us; it requires a whole different process that demands a new way of thinking."

TAKE ADVANTAGE OF INNOVATION SUPPORTS. Staying on top of the myriad government and non-government supports for innovation is a no-brainer according to manufacturing leaders attending the roundtables. Both the federal government and many states offer R&D credits and incentives. Tax benefits, such as accelerated depreciation, can also make investing in R&D worthwhile. Finally, many organizations and associations offer grants for developing or contributing to emerging technologies.

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MANUFACTURING EXECUTIVE

GOING GLOBAL

For industries with maturing domestic markets, leaders have no choice but to scout the globe for new ones, especially in countries with emerging middle classes such as Brazil, Russia, India and China (the so-called BRIC nations). Roundtable participants overwhelmingly pointed to the global marketplace as the future venue for manufacturing. They are all aggressively on the lookout not just for new customers, but for new suppliers, vendors, partners and distribution channels.

GET A 360° VIEW OF THE CUSTOMER. For manufacturers that sell to other businesses – often other manufacturers – understanding customer needs means more than having a conversation with a single buyer, since that individual may not have a full understanding of how new features and services affect his or her company. This is especially important when it comes to global expansion. Says one CFO, "You need to be talking not just to the engineer, but also to the manufacturing guy, the quality guy and the buyer, because each one has a different perspective. It gets back to really understanding the customer. To me that's an easier path for growth. It's the one where you have to step outside your comfort zone and say, 'I think there's a market opportunity here.'"

MOVE FROM PRODUCTS TO CUSTOMER SOLUTIONS. As companies expand further afield internationally, they will face a proliferation of customer needs, some of which they've never before encountered. This is forcing companies to move from a "push" sales model to one that focuses on creating demand for products and services that solve customer problems. The CFO of a company that manufactures commercial and residential

GOING GLOBAL

installation systems explains, "In the past, the way we would sell was 'Here's a list of our products; if you want one, you can go ahead and buy it, and if you don't, sorry.' Now we are saying: 'We're in the energy-saving business and we can help you figure out how to save money.' So we're actually creating demand."

He notes that this paradigm shift is in large part the result of the company's move into global markets where emphasis on energy saving can be significant. Sales reps have had to completely retool how they sell: Where once they sold into distribution, now they have to call on architects, because it's the architects that create the demand for energy-saving installation systems.

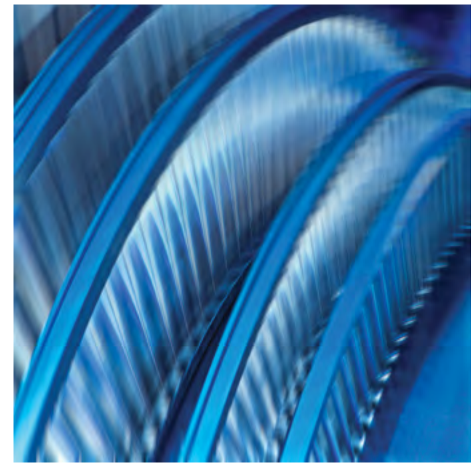
LEVERAGE THE 24-7 ADVANTAGE OF GLOBAL PARTNERSHIPS. As companies expand into global markets, they face a myriad of challenges, one of which is serving customers across all international time zones. While opening facilities in multiple locations is one way to address the issue, many solve this problem by entering into local partnerships in key markets. Having people on the ground across time zones has other advantages as well. For example, the company can pass critical project work from one team to another as one day ends and another begins.

One CFO attributes his company's competitive advantage to its ability to put together rapid quotes using this global handoff approach. "There's a lot involved in coming up with a price quote for one of our products. A lot of our competitors take a week or so to come up with a number. We have actually trained a team at our China facility to assist with quotes. While we're sleeping, they're working. We send them the information they need, and the next day we have the quotes. It's helping us win business."

FIND THE RIGHT JOINT VENTURE PARTNERS. Many manufacturers advocate entering into joint ventures with local companies as a lower-risk way to test the global waters. Local players understand the marketplace, the competitive environment and both the cultural nuances and the regulatory hurdles of doing business in a particular market. Entering into a joint venture can provide a manufacturer with the breathing space it needs to study the market and evaluate the opportunities. Says one CEO: "We look for a lot of manufacturing partnerships, whether it is in supply-chain management or a full outsourcing arrangement. On the distribution side, we seek out partners who can provide a value-added, reseller-marketed channel for us."

THINK TWICE ABOUT BASING OPERATIONS OVERSEAS. The conventional wisdom is that moving manufacturing operations overseas to low-labor countries is the way to cut costs and boost the bottom line. But many companies have been burned by failing to ask the right questions and instead embrace a knee-jerk solution.

There are some obvious costs to basing operations overseas, as well as many hidden ones. It is important to quantify these upfront and assess the impact of working with global suppliers. How much cost will shipping add, especially if there is a spike in oil prices? What will be the effect of such a move on product quality, deliverability and inventory order size? And if most of a company's customers are still domestic, how will overseas production – with the potential for delays due to shipping and clearing customs – affect customer satisfaction? Are there issues with training the workforce or protecting intellectual property? Is there a risk that in



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GOING GLOBAL

making such a move the company might run afoul of the Foreign Corrupt Practices Act?

The CEO of an electronics manufacturer notes, "I would say that 80 to 90 percent of our raw materials come from overseas, while about 80 percent of our customers are domestic. Some people are starting to ask whether there is a way to make our products in the U.S. for the same cost as overseas. I'd say a good 90 percent of the time the answer is yes. You have to get creative, and you need to do it without sacrificing your profitability. It starts with working your supply chain, trying to find better prices and reducing your logistics costs." But perhaps most important of all is to consider how a move overseas might affect those who remain with a U.S.-based operation. Not only can there be a negative impact on morale, but if a domestic staff is responsible for supervising the overseas workforce, it is not always easy sailing. One executive spoke about a company he worked with that had to close its Chinese operations for this very reason. After moving much of its manufacturing to China, the company retained domestic resources to oversee these operations and manage the procurement of goods. But soon cracks began to show in the new arrangement. Supervisory staff felt as if they were on call 24 hours a day, and the company began to experience significant turnover, which placed further stress on those remaining. The cost of training new supervisors compounded the problem until management made the decision to abandon the Chinese venture altogether.

OVERRULE WALL STREET. There are many reasons for a company to expand internationally. But pressure from the investment community should not be one of them. Notes one executive, "In the public company environment, it seems as if Wall Street is driving the entire business process. The analysts are saying 'You need to go to China. Everything's going on in China.' Because analysts tend to ignore the stock if a company isn't doing something to put some sizzle in their business, executives feel pressure to take action. These are block-and-tackle manufacturing companies, and they end up making some serious mistakes because they jump off on tangents and are forced into 'ready, fire, aim.' They start managing their stock price as opposed to managing their business."

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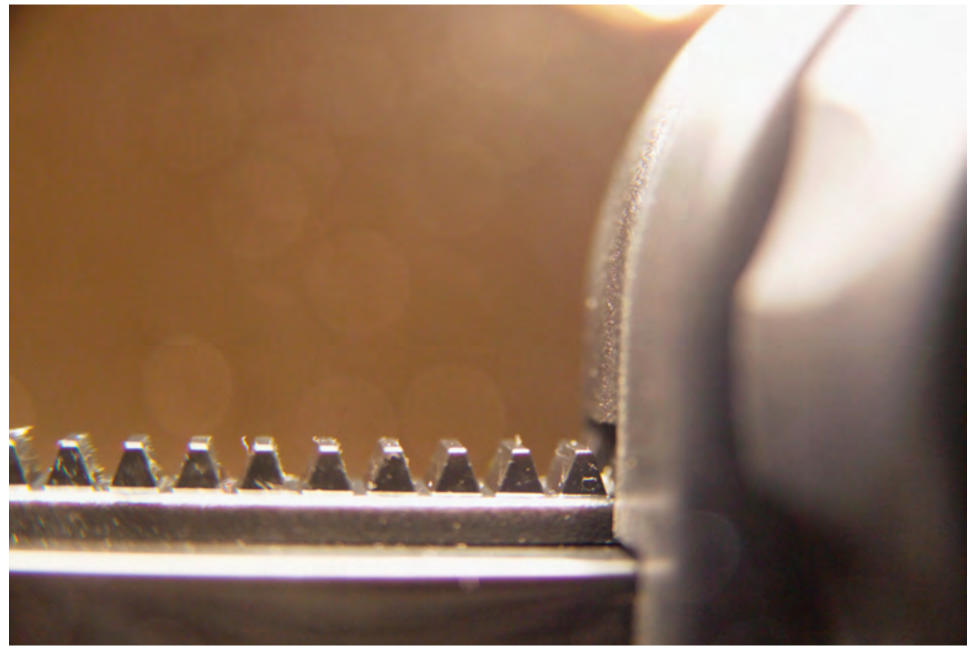
ELECTRONICS MANUFACTURER CEO

HARNESSING TALENT

After continual rounds of downsizing in recent years, manufacturers are running lean. Yet they remain reluctant to begin hiring, despite signs of an economic uptick. While many rely on having employees work overtime, eventually this tactic will erode productivity. Furthermore, the nature of manufacturing has changed, calling for different skill sets than a mere decade ago. Manufacturers say those skills are in short supply, even with so many people seeking employment. Solving the talent management challenge calls for new strategies – from changing manufacturing's public image to involving more employees in decisionmaking.

KNOW WHEN TO ADD BENCH STRENGTH. For manufacturers considering stepping up hiring, timing is everything. Without a solid bench of talent, companies can lose business, but staffing up too early threatens profitability. One CFO professes that finding the right talent prior to starting a new project is one of his company's biggest challenges. "We've stumbled in the past when executing a new launch, and it has cost us. When do you add the bench strength? When do you get people onboard to get these projects going? The question comes down to picking and choosing what work you want to take and determining whether you have the capability to do it." In other words, talent management is just as important to strategic planning as decisions about investing in capital assets or new technologies.

STAGGER RETIREMENTS TO AVOID BRAIN DRAIN. Many manufacturers that were forced to downsize when the economy tanked responded by offering early retirement to some of their older, higher-paid workers. While this seemed a sensible solution, it backfired when used too broadly because an enormous store of valuable knowledge walked out the door with these senior people. Those



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MANUFACTURING CFO

HARNESSING TALENT

companies that took a more thoughtful approach to doling out retirement offers found themselves in a better place: while they may have sacrificed some short-term savings, the benefits of knowledge retention were considerable. According to one CFO, "Having workers retire along with their skill is not necessarily a bad thing; it's just a bad thing if retirements happen all at the same time. The transition needs to be done in an orderly fashion."

MARKET YOURSELF TO THE NEXT GENERATION OF WORKERS. Leading companies understand that talent management is a long-term proposition, so they are looking into the future and considering ways they can appeal to tomorrow's workforce. "Much of the work we do is physically taxing," acknowledges one company CFO. "A lot of people don't want to do that kind of work anymore, so we've had to get creative." One strategy they've hit upon: Sponsoring the Rock and Roll Hall of Fame in Cleveland, Ohio. "We're one of the few companies in the industry to do it," he says. "Why? Because we make heavy metal. And we're marketing ourselves to the next generation as being a cool industry to be in."

Changing the public image of manufacturing is integral to winning the talent wars say these executives. When many people think of manufacturing, they think of gritty, dirty work in an industry that is subject to frequent downsizings and plant closings. The CEO of another manufacturer agrees that the industry has an image problem. So his company has taken a page from the Silicon Valley playbook. "We hire really young, hungry people out of college, and we say, 'Look, we can't pay you a ton, but we can offer you the opportunity to learn as much as you want and to transform this company with your fresh ideas.'

Given that many newly minted graduates are struggling to find work, there is a huge opportunity to woo some of the best and the brightest to consider manufacturing. This is already starting to happen not just at community colleges, but at four-year colleges, as well. Notes another CEO: "If we approach manufacturing with the excitement and energy as people in the IT industry do, then the business will naturally start to evolve. The sooner we can get rid of the stereotype that manufacturing is a dirty, old, boring business, the sooner we'll start to see growth and innovation."

TREAT YOUR EMPLOYEES LIKE ADULTS. The lessons from Silicon Valley go even further. With their youthful CEOs and irreverent cultures, these IT companies are the poster children for empowerment and career opportunity – almost the polar opposite of the traditional manufacturing company. For some manufacturing executives, studying these IT upstarts has prompted them to make some significant cultural adjustments. Says one CEO of the changes at his company: "Suddenly you've got these nice break rooms and people can come to work and it's not just punching a clock and not talking to anybody. It's a more relaxed environment." He also points to a new atmosphere of transparency in which leadership helps people understand the company's production targets and how they translate into individual goals. "Now people take ownership of the fact that they contribute to the overall performance of the business and the company rewards them for that contribution."

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MANUFACTURING CEO

INVESTING IN CAPITAL ASSETS

Manufacturing has always been a capital-intensive business. But the recent credit crunch has meant that many businesses have had to hold off on major purchases. As a result, according to MPI, only 11 percent of U.S.-based manufacturers today have the business systems and equipment they need for long-term support of customer-focused innovation. Now, with money beginning to flow once again, executives need to decide if the time is right to invest. While most agree that some capital allocation is necessary for them to remain competitive, they are wary of overenthusiasm. In a stop-and-start economy, investments need to be both strategic and carefully planned.

TAKE A LONG-RANGE VIEW. Manufacturing technology is constantly changing, which makes it especially difficult for executives to decide when to jump in and finalize a purchase. Will the equipment be obsolete in a few years? Will it be easy to upgrade? Will prices come down if they wait? Choosing investments that are likely to have staying power is key, they say. Explains one CFO, "We've chosen the technology we feel will give us a competitive advantage today, but we also believe it's the one that will continue to drive that advantage in the future."

STAY OUT OF THE CANDY STORE – CALCULATE THE ROI. When it comes to investment in new technology, it is not uncommon for business leaders to get caught up by the "wow factor." Notes one CFO, "It's easy to think, 'Here's all the cool stuff we want to invest in, and we think it's the future.' But then, when you do the math, it's unclear whether it will pay off." Another CFO agrees, explaining how he evaluates new equipment. "Take lasers. We can use them to cut any shape without having to replace tools manually. They used to be very expensive, but now they are becoming cheaper. And they are continually evolving. But you have to ask yourself 'is a laser that's 10 times faster going to make you 10 times more money?' Not really, because you still have to have somebody load the machine." Tempering enthusiasm for the new and shiny with a hardheaded and rigorous ROI analysis will significantly enhance the success rate for capital investments.

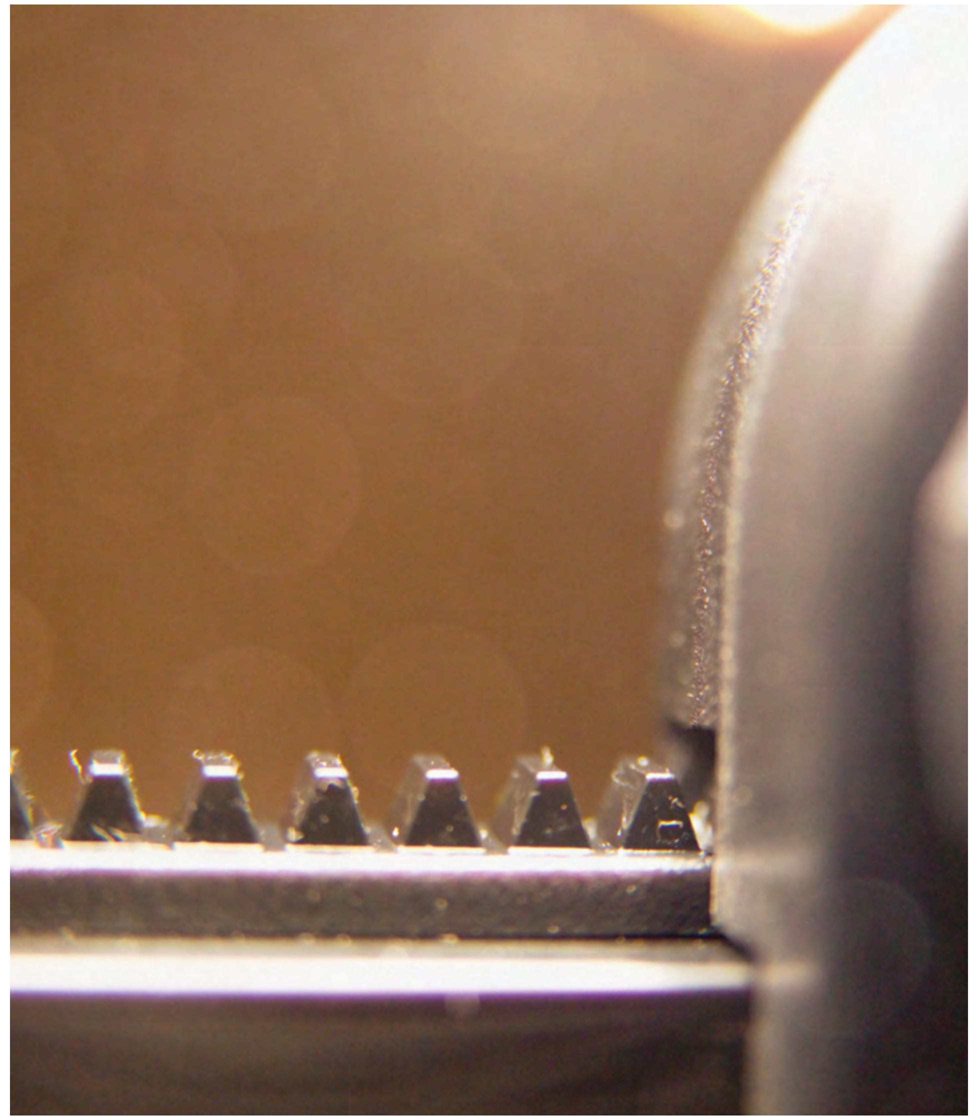
GO FOR LEVERAGE. Occasionally a company will make a significant investment in order to accommodate a large, important customer or to win a new piece of business. But if the investment cannot be leveraged for future opportunities, it may not be worth making. Says one CFO of just such a situation, "About five years ago we had a large contract that doubled our business. There was a lot of associated infrastructure we needed to take on. The challenge, of course, was that it was a one-time program that ended, and we're back where we started in terms of revenue." Prior to saying yes, make a determination as to whether the investment makes sense for multiple business opportunities.

"We've chosen the technology we feel will give us a competitive advantage today, but we also believe it's the one that will continue to drive that advantage in the future."

MANUFACTURING CFO

WHAT'S NEXT FOR MANUFACTURERS IN 2013 AND BEYOND

Manufacturing executives have full agendas these days. Not only must they focus on the day-to-day management of their companies, but they are continually making judgment calls about the future in the face of considerable uncertainty. The executives at the BDO Manufacturing Roundtables talked about what has and hasn't worked as they seek to reinvent their organizations – from their workforces, products and supply chains to their operations, processes and investment strategies. They stressed a collective belief that the next few years will be a defining period for U.S. manufacturers, as cost-effective production begins to return. They are also confident that they can, and will, participate in that resurgence — and that similar opportunities abound for manufacturers throughout the country.



ABOUT BDO'S MANUFACTURING ROUNDTABLES

BDO's Manufacturing Roundtables bring together regional executives for frank and engaging discussions, moderated by John Brandt from The MPI Group, on the issues and challenges involved in leading a manufacturing company today.

To learn more about our Manufacturing & Distribution industry group and how BDO can assist your organization, contact **Howard Sosoff, Manufacturing & Distribution practice leader at 414-287-1115, hsosoff@bdo.com**.

FALL ROUNDTABLE PARTICIPANTS

Jordan Bastable, *CEO, Circuitronics*
Michael Beyer, *CFO, Wolverine Advanced Materials*
Phil Forret, *partner, BDO*
Don Campion, *board member for several Detroit companies*
Layne Campman, *director, BDO*
John Carson, *CFO, Fluid Routing Solutions*
Francesco DiGiannantonio, *CFO, Republic Steel*
Jerry Doubler, *CFO, Burroughs*
Jay Duke, *partner, BDO*
Daniel Goodwin, *CFO, Humanetics*
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