How Industry 4.0 is Changing Manufacturing Recruitment

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Powered by the Internet of Things (IoT), Big Data analysis, Artificial Intelligence (AI) and other computing advances, “Industry 4.0” is rapidly reshaping contemporary manufacturing. The Industry 4.0 revolution not only is disrupting old business models but also is creating exciting, new career pathways for millennial job seekers– and these opportunities couldn’t be coming at a better time. Currently, manufacturing companies are facing a major talent shortfall. Because of this shortfall, Deloitte and the Manufacturing Institute estimate that nearly 2 million jobs will go unfilled over the next decade. Profitability pressures, rapid technology advancements, and generational workforce shifts have changed the rules of the recruitment game. Consequently, many manufacturing companies are struggling to recruit needed talent. Public misunderstanding about manufacturing’s future is compounding these recruitment challenges. At a time when manufacturing has never been more exciting and dynamic, the general public believes the opposite. For example, a frequently cited 2016 Kronos survey found that only 37% of respondents would encourage their children to pursue a career in manufacturing due to a perceived lack of high-pay jobs and advancement opportunities. In reality, the industry is actually gaining higher-paying positions with exciting career trajectories.

While significant research has considered how manufacturing companies can harness the power of digital technologies to transform their processes and business models, less work has focused on how companies can use Industry 4.0 to advance recruitment and retention goals. Drawing on candid conversations with hiring managers, manufacturing executives, and NextGen leaders, this white paper considers how companies can adjust their recruitment strategies to access a previously untapped talent base. Attracting star performers and ambitious, tech-savvy Millennials are essential to bridging the manufacturing industry’s current talent gap– and Industry 4.0 is key to bringing this talent to the table.

What is Industry 4.0?

Industry 4.0 is the fourth major upheaval in modern manufacturing, following the lean revolution in the 1970s, outsourcing in the 1990s, and automation in the 2000s. Deloitte defines Industry 4.0 as the cyber-physical systems,
like IoT, that are reshaping supply chain management, maintenance, production, logistics, and client lifecycle value for manufacturing companies. To understand how Industry 4.0 is transforming manufacturing— and the tremendous talent opportunities this transformation is creating—it’s helpful to start with a closer examination of the major technology disruptors that underpin this trend.

Thanks in part to IoT sensors, we’re witnessing an astonishing rise in data volumes, computational power, and connectivity. By 2020, Gartner predicts 20.4 billion “things” will be connected. The explosion of IoT sensors has led to an exponential explosion of data that most companies struggle to process and analyze. New business-intelligence capabilities are changing this equation, turning this data into actionable insights. For example, AI applications can automate processes, run predictive analytics to better inform decision-making, increase efficiency, and unlock new business value. The result: AI can generate actionable insights manufacturing companies can apply for instant cost-savings and productivity enhancements. At manufacturing companies, AI can automate and prioritize routine decision-making processes. When used with equipment sensors, AI can alert the maintenance team to recalibrate or adjust a machine before it breaks and prioritize repair jobs so that the machine that needs urgent attention gets fixed first.

But Industry 4.0 does more than just use technology to streamline processes—it’s creating new business models, business operations, and revenue streams. This is where things get really interesting for talent recruitment and retention. One of my clients, a coffee roaster, is using IoT-connected sensors to achieve optimal coffee roasting temperatures, disrupting the traditional roasting industry by increasing profitability and productivity. The right technical leadership is essential to navigating this business shift—and that’s where NextGen talent, like tech-savvy Millennials, comes into play.

No matter the industry, Millennials favor positions that offer the potential for rapid growth and skill development. They also seek opportunities for meaningful work that directly impacts a company or field. Manufacturing offers both: the potential to advance quickly and the opportunity to make an immediate, significant impact. The NextGen talent pool is here, but they don’t know enough to be interested—yet. Now, companies need to rethink their recruitment strategies to speak directly to these benefits and get this talent excited about manufacturing’s new direction.

Laying the Groundwork: Identifying Industry 4.0 Talent Needs

Manufacturing companies are increasingly facing an ultimatum: innovate and grow or stay the same and shrink. The trouble is, many companies aren’t sure where to get started. There’s an urgency to do something, but companies aren’t sure what that something is. As a result, companies find themselves stuck at the starting line. Hiring the right talent can help move digitization efforts forward that are essential to gaining a competitive advantage in the age of Industry 4.0. But in an already tight talent market,
it’s critical companies understand their needs before starting the recruitment process.

On average, it takes 94 days to recruit employees in the engineering and research fields and 70 days to recruit skilled production workers for manufacturing positions, representing a major time and resource investment. Failing to clarify needs up front means that your company may invest significant time and resources into recruitment only to have internal obstacles, like a misalignment over technology integration or growth plans, sink these efforts.

The following can help your company understand the best opportunities for digitization and then use these opportunities to refine recruitment objectives:

1. **Identify skills, experience, and leadership gaps.** Consider the skills, experience, and leadership present on your current talent roster. This analysis will help you identify your most urgent needs. For example, do you have a technical expertise gap when it comes to implementing a new solution? Or, do you need a leader with experience helping companies navigate business transitions? Many companies I work with have multiple, complex talent needs. Trying to find a single “perfect” candidate to meet all of these needs is not possible. Consider which skills are essential and prioritize accordingly.

2. **Identify internal barriers to change.** It’s only natural that when a company undergoes a major transition, not everyone will be in agreement about next steps. This is why it is vital that your company leadership has candid, internal conversations and aligns around business direction before starting the recruitment process. For example, if your company is struggling with internal buy-in for technological changes, consider the relationship between lean manufacturing and IoT. As I tell my clients, Six Sigma is all about data, and IoT is all about bringing this data to a single, hand-held device. How can your company be leaner with IoT? How can new hires support these goals?

3. **Identify specific, future goals.** Now, bring it all together: where does your business want to be in one year, two years, or five years? Perhaps the company wants to make a product or business model pivot. While this is the big picture goal, it’s helpful to break this down into smaller milestones. What needs to happen immediately (in the next 6 to 12 months) to reach this goal? As you break down bigger goals into smaller milestones, it will be even more evident which skills and experience gaps your company is facing—helping recruitment priorities fall into place.

**Transforming Talent Recruitment: Attracting Talent Outside the Industry**

Industry 4.0 has the power to help your company save time, save money, and make money— but you can’t achieve these goals without the right talent. To attract NextGen talent from outside the industry, you’ll need to speak directly to their needs and concerns. This starts with selling the opportunity, addressing industry misperceptions, and easing career growth concerns.

1. **Sell opportunity.** The opportunity to be a “first mover” and help a business develop its own applications is a powerful recruitment pitch for NexGen talent. Even if your company is just starting to uncover the power of
AI or IoT, talent will jump at the opportunity to help your business develop its own applications. Being part of the team that builds a new program from the ground up is an exciting opportunity that appeals directly to millennial talent.

*What to do:* Most manufacturing companies are just beginning to scratch the surface for what’s possible with IoT-connected sensors, AI-powered automation, AR/VR applications like digital twinning, and blockchain-powered supply chains. Millennials enjoy taking risks and adopting new ideas—let them know they’ll be empowered to do both at your company. Finally, remind these hires they are not just shaping a business. As “first to market” with new business models and products, they’re charting a new course for an entire industry.

2. **Address industry misperceptions.** The manufacturing industry is struggling with a brand identity problem. While one company can’t fix this problem for an entire industry, it is worth considering how this industry reputation impacts your employer brand reputation.

*What to do:* One way to make your company brand feel “fresh” is through partnership opportunities with major tech companies, such as Amazon, Apple, and Google. Another is by bringing in high-profile hires in the C-suite that will set a new tone for future recruitment. For example, hiring a young, energetic executive from a popular technology company sends a signal that your company is serious about attracting candidates with a similar profile. Finally, if your company has a reputation for being a dinosaur rather than a change incubator, own up to this. Be upfront about these challenges and let prospective hires know what you’re doing to address these concerns and how they’ll be empowered to succeed.

3. **Address career advancement and autonomy concerns.** Top candidates want to work for dynamic companies that are fully invested in Industry 4.0 transformation. This talent doesn’t want to spend their energy battling office politics every day and only seeing small developments or haphazard growth. This is one reason Millennials have earned a reputation as job hoppers: they don’t want to waste time at companies where they can’t make an impact. This is especially true for hires with an IT background. They don’t want to get stuck working on legacy systems as their skills stagnate and their peers jump ahead on new projects.

*What to do:* NextGen talent is more likely to say “yes” to a job offer if they’re confident they’ll have the autonomy to drive real change forward. They’re also more likely to stay put if they have a clear pathway to career advancement that keeps their skills fresh. While part of your initial sales pitch will already have highlighted the opportunity potential at your company, it’s still important to reiterate throughout the process that everyone is fully bought in on the new path forward. Any hints of disagreement or discord among management about the company’s direction will be seen as a red flag.

**Next Steps: Keeping New Hires Excited and Invested**

Recruitment doesn’t end when your new hire signs an offer letter. You’ve made a significant investment in the recruitment process—now it’s time to make a similar investment in the employee onboarding process. Failing to do so represents a huge missed opportunity as a strong onboarding program
correlates with higher employee engagement and retention rates. In fact, research from the Aberdeen Group found that 66% of companies with onboarding programs report a higher rate of successful new hire assimilation into company culture, 62% had higher time-to-productivity ratios, and 54% reported higher employee engagement.

Remember, the employee onboarding process doesn’t end after your new hire’s first day. This is especially true for manufacturing companies bringing on new hires from outside the industry. Your new hire may be comfortable with AI, but less familiar with the ins and outs of an assembly line or last mile delivery. A robust onboarding program will help your new hires get up to speed quickly and hit the ground running. Onboarding is your chance to communicate your company’s values to your new hire, sell your company’s vision for Industry 4.0, and help your new hire feel like an integral part of a transformative team.

Today’s manufacturing companies need leaders who are visionaries, quick learners, and confident decision makers. Industry 4.0 isn’t just about improving a product, but creating entirely new business models. If you want to recruit and retain the NextGen talent critical to driving Industry 4.0 transformation at your company, you need to come out fully committed to this transformation from day one. Prove to your new hires that your company is ready to embrace tech-savvy innovation and this talent will be ready to shepherd your business through a period of dynamic growth.