Media Contacts

Kate Kennedy
Phone: +1.703.535.6260
E-mail: kate.kennedy@shrm.org

Vanessa Gray
Phone: +1.703.535.6072
E-mail: vanessa.gray@shrm.org

USA
SHRM Headquarters
1800 Duke Street
Alexandria, VA 22314
Phone: +1.800.283.7476
E-mail: SHRM@shrm.org

China
Gateway Plaza
Chaoyang District
Beijing, 100027
Phone: +86.10.59231033
E-mail: SHRMChina@shrm.org

India
Gurgaon, Sector 26
Haryana 122002
Phone: +91.12.44200243
E-mail: SHRMIndia@shrm.org

United Arab Emirates
Dubai Knowledge Village
Dubai, UAE
Phone: +971.050.104.6330
E-mail: SHRMMEA@shrm.org

Online
SHRM Online: shrm.org
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SHRM Research on LinkedIn: LinkedIn.com
SHRM Research on SHRM Connect: http://community.shrm.org/home

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About the Preparing for an Aging Workforce Initiative

The Society for Human Resource Management (SHRM) and the SHRM Foundation have launched a national initiative to highlight the opportunities and challenges of an aging workforce and to identify effective practices for recruiting and employing mature workers. This three-year initiative is generously underwritten by a grant from the Alfred P. Sloan Foundation.

About SHRM

The Society for Human Resource Management (SHRM) is the world’s largest HR professional society, representing 285,000 members in more than 165 countries. For nearly seven decades, the Society has been the leading provider of resources serving the needs of HR professionals and advancing the practice of human resource management. SHRM has more than 575 affiliated chapters within the United States and subsidiary offices in China, India and United Arab Emirates. Visit us at shrm.org.

About the SHRM Foundation

The SHRM Foundation is a 501(c)(3) nonprofit affiliate of the Society for Human Resource Management (SHRM). The Foundation is a legally separate organization and is not funded by SHRM membership dues. The SHRM Foundation is governed by a volunteer board of directors from the HR profession, including academics, practitioners and representatives from SHRM.

SHRM Foundation Vision
The SHRM Foundation is the globally recognized catalyst for shaping human resource thought leadership and research.

SHRM Foundation Mission
The SHRM Foundation advances global human capital knowledge and practice by providing thought leadership and educational support, and sponsoring, funding and driving the adoption of cutting-edge, actionable, evidence-based research.
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Introduction

This toolkit aims to provide HR professionals in the manufacturing industry with useful industry-specific information about the impact of an aging workforce as well as links to further sources of information, resources, tools and templates. The toolkit is based on the materials and information presented in the comprehensive SHRM sourcebook, *Preparing for an Aging Workforce: Strategies, Templates and Tools for HR Professionals*. The sourcebook comprises strategies, templates and tools that are based on the expert recommendations outlined in the SHRM Foundation’s Effective Practice Guidelines (EPG) report titled *The Aging Workforce: Leveraging the Talents of Mature Employees*. The EPG outlines effective practices used to recruit, retain and manage the talents, knowledge, skills and experiences of an aging workforce. Throughout this toolkit, readers will be referred to the sourcebook for more in-depth information and additional practical tools and applications built around SHRM Knowledge Center guidelines. Industry-specific findings of SHRM’s Preparing for an Aging Workforce research will also be discussed throughout.
Manufacturing Industry Overview

The U.S. Bureau of Labor Statistics (BLS) classifies the manufacturing sector as part of the goods-producing industries super sector group. The manufacturing sector (referred to in this report as “manufacturing,” or “industry”) employed about 12.3 million workers in the United States as of June 2016. Several subsectors make up the manufacturing industry. The following NAICS code link leads to the BLS information page that gives an overview of employment levels, wages, union representation and other subsector information:

- Manufacturing: NAICS 31-33

BLS data from June 2016 for the manufacturing sector showed that workers in this industry had average hourly earnings of $25.97.\(^1\) Production and nonsupervisory employees earned slightly less, on average.

Table 1 | Earnings Data

<table>
<thead>
<tr>
<th>Industry</th>
<th>Average Hourly Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing, all employees</td>
<td>$25.97</td>
</tr>
<tr>
<td>Manufacturing, production and nonsupervisory employees</td>
<td>$20.43</td>
</tr>
</tbody>
</table>

Source: BLS (June 2016)

Industry and Occupational Outlook

Some of the large occupations in the manufacturing industry include assemblers, inspectors, samplers and machinists, among others, as shown in Figure 1.

In January 2016, wage and salary workers had a median tenure of 4.2 years. Within the private sector, workers in the manufacturing industry had the highest tenure among major industries, at 5.3 years. This reflects the fact that workers in manufacturing tend to be older, on average, than those in other industries. Within the manufacturing sector, several categories of workers had significantly higher tenures compared with the overall median, including petroleum and coal products (6.6 years), transportation equipment (6.1 years) and primary metals and fabricated metal products (6 years).\(^2\)

Looking ahead into the next decade, the manufacturing industry will continue to lose jobs, albeit at a slower pace than the previous decade, according to federal projections. The sector’s job totals will shrink at an annual rate of 0.7% between 2014 and 2024, down from an annual reduction of 1.6% during 2004-2014. This decline is due to a number of factors, including the aging of the manufacturing workforce and associated waves of retirements, as well as increased automation and improved technology that have eliminated the need for certain jobs. The continued shift in the makeup of the U.S. economy—formerly dominated by goods-producing industries, but now with a majority of service-providing industries—has also played a role.
Figure 1 | Large Occupations in Manufacturing

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Team assemblers</td>
<td>850,780</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspectors, testers, sorters, samplers and weighers</td>
<td>329,760</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machinists</td>
<td>328,600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpers (production workers)</td>
<td>258,030</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing agents, except wholesale, retail and farm products</td>
<td>95,660</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: BLS (2015)

Table 2 | BLS Employment Projections for the Manufacturing Industry: 2014-2024

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>14,315.9</td>
<td>12,188.3</td>
<td>11,374.2</td>
<td>-2,127.6</td>
<td>-814.1</td>
<td>-1.6</td>
<td>-0.7</td>
<td></td>
</tr>
</tbody>
</table>

Source: BLS

Helpful Resources for Industry/Sector Information and Forecasting

- Office of Occupational Statistics and Employment Projections
- National Employment Matrix (projected employment estimates by industry and occupation are available)
- National Association of Manufacturers
- Manufacturers Alliance for Productivity and Innovation
- Fabricators & Manufacturers Association, International
- Association of Equipment Manufacturers
Preparing for an Aging Workforce: Manufacturing Industry Toolkit

Preparing for an Aging Workforce: Manufacturing Industry Toolkit

Q&A with Paul Bjacek, Global Chemical-Natural Resources Research Lead, Accenture

by Joseph Coombs

The manufacturing sector is often cited for creating a thriving middle class in the United States. Through the years, the production of automobiles, transportation equipment, electronics, fabricated metal and other items provided millions of jobs and cemented America’s status as an industrial powerhouse.

A confluence of factors in the latter half of the 20th century, including foreign competition and increased automation that eliminated the need for many jobs, contributed to a decline in manufacturing in the United States, but industry is far from dead in America. Manufacturing has bounced back from the recession of 2007-2009, and hiring has picked up. The industry’s biggest challenge at the moment may be attracting the next generation of talent while facing a slew of anticipated retirements among its ranks.

A subset of this sector, chemical manufacturing, is no different than the industry overall. Its workforce is getting more mature, but there is perhaps an even greater urgency among its ranks. Chemical manufacturing exported $184 billion worth of products in 2015, accounting for nearly 14% of all U.S. exports, according to the American Chemistry Council (ACC), a Washington, D.C.-based trade group. Chemical exports are also expected to grow an average of 6% per year through 2021.

Overall, domestic and international chemical industry shipments are forecasted to increase by 31% by 2020, totaling nearly $1 trillion, according to the ACC. All that activity will come with a commensurate demand for labor, and at the moment, many chemical manufacturers are struggling to land younger talent to supplant their payrolls.

Federal data show that the U.S. labor force will grow more slowly in the next decade compared with previous years. This is due, in part, to the economic conditions, but also connected to the increased number of people reaching retirement age and subsequently leaving the labor force. How will this trend affect the chemical manufacturing industry?

Please talk a little bit about the chemical manufacturing industry. What industries does it serve, and what type of demand is on the horizon for jobs in this sector?

Chemicals are unique, in a way, in that they serve all other industries in manufacturing. Most manufactured products have some chemical content, especially plastics. Most of the chemical sales activity is [business-to-business], but there is also some [business-to-consumer], such as household paint.

Chemical manufacturing is done all over the country, but petrochemicals are mostly located along the Gulf Coast, and they’re undergoing huge growth. In the past four or five years, the U.S. has had a large competitive advantage in natural gas. As a result, the chemical industry is making major investments (chemical manufacturing facilities use natural gas to produce ingredients). I know of at least 10 new complexes being built, and the economic impact is in the billions.

But there’s a shortage of construction workers, and there’s a shortage of talent in welding, pipe fitters, electricians and other positions that are needed to build these facilities. They’ll need tens of thousands of construction workers alone in the next three years to build these plants. Once they’re built, several hundred people [will be needed] to operate each of these facilities. You’ll need plant operators, technicians and others, and there aren’t nearly enough of them available right now.

Paul Bjacek is global chemical-natural resources research lead at the Houston division of Accenture, an international consultancy. What follows is a discussion with Bjacek about the chemical manufacturing industry and how it is being affected by the aging of the U.S. workforce.

Federal data show that the U.S. labor force will grow more slowly in the next decade compared with previous years. This is due, in part, to the economic conditions, but also connected to the increased number of people reaching retirement age and subsequently leaving the labor force. How will this trend affect the chemical manufacturing industry?

There are really three main parts of the chemical manufacturing workforce. Based on estimates I’ve made from federal data, it’s about 16% Millennials, 34% Baby Boomers and 50% Generation X.

Why are there so many members of Generation X? These companies did a lot of their hiring in the late 1990s and early 2000s, and that’s the age group that was entering the workforce at that time. Then you have the Baby Boomers, with so many of them ready to retire. But there’s nobody to take over for Generation X. There’s no experienced workers who can move up into their jobs, and we call that the “missing middle.”

We performed a study for the American Chemistry Council and conducted interviews with executives at several of these companies, and they’re struggling to attract Millennials. Now that their hiring rate is increasing once again, it’s really beginning to hurt.
What we also found during our interviews with executives is that there are plenty of workers available, but they aren’t necessarily finding the right workers who fit the culture. This is where soft skills become important, such as the ability to work on a team. You might have a bunch of brilliant engineers, but if they haven’t actually worked with other people, they’re not a good fit.

**What were some of the most interesting findings from the study that Accenture performed for the American Chemistry Council?**

It was released in the spring of 2016, and we did the executive interviews as well as a broader survey of more than 500 employees at chemical manufacturing companies in North America. Among the high-level results, about 40% of respondents said that between 20% and 40% of their workforce is eligible to retire within the next three to five years. Also, 86% of respondents overall said profitability in the chemical industry would be affected if the retirement issue is not addressed in the next three to five years. And nearly half of respondents said that this issue is having an impact on cost control, unplanned operational challenges and efficiency/ performance right now. We talked about this five or six years ago, and many people acknowledged it could be a problem, but that was it. Now it’s happening, and it’s a real issue.

We also asked a question about Millennial workers, and less than 25% of respondents said they retain 90% or more of their Millennials for more than three years. A majority of respondents said 30% to 50% of Millennials leave their jobs within the first three years. There’s a lot of things they’re having issues with. We heard a lot of complaints about “texting across the table” rather than talking with each other during meetings, or how the younger workers aren’t taking a lot of initiative. This is why soft skills are so important.

On the other side, Millennials might not see the chemical industry as glitzy or glamorous as other industries, and they’re going into other careers. It’s funny, because some consultants are saying the chemical companies need to change in order to accommodate Millennials, and the other side says Millennials need to change in order to adjust to the chemical industry. For whatever reason, many of the students enrolled in these fields are not going into the industry. Of the total number of college graduates with degrees related to chemicals, only 30% are working in the actual industry and 70% are going elsewhere.

**What are some of the solutions being explored to fill the industry’s ranks, given the high concentration of mature workers?**

We had some HR experts from Accenture work on this for the report’s summary. One solution is to expand the concept of the workforce, and that means considering people in the gig economy, such as freelancers, to bring them in more. A lot of companies are bringing in retirees more often [to fill the gaps], but they say that with frustration, because they know it’s not a sustainable practice.

There are also plenty of issues with training people behind them and transferring knowledge, and that’s probably not happening enough. A lot of Millennials are also looking at flexibility and work-life balance, so maybe there are ways to change benefits and the definition of the work schedule in order to attract younger workers.

We also suggested that they try to draw more people from other industries, if possible. Oil, gas, utilities, metals, to name a few. Then it’s also a matter of better embracing digital technology, especially for knowledge transfer reasons. By using this, you can save money instead of constantly paying for training. It’s cool, too, because it shows more sophistication in technology as a way to capture knowledge. It might be more appealing to Millennials.

**Rather than focusing on the negative aspects, what value can be placed on having such a high concentration of mature workers in this industry?**

The only complaint we heard [from the study’s respondents] is that there are too few of them (Baby Boomers and Generation X). What they do like about Millennials is their ability to learn digital technology quickly and that they are a very creative generation. These companies should be able to tap into that, as long as they keep them engaged.
Assessing the State of the Aging Workforce

Among the first steps HR professionals in the manufacturing industry can take to prepare for an aging workforce is to assess the current demographics of their workforce and determine how it will evolve over the coming years and decades.

Determining the Impact on Your Organization

The first step in assessing the state of the aging workforce in an organization is to determine what percentage of its workforce is nearing retirement age. According to a SHRM survey of HR professionals at manufacturing companies, more than one out of four (27%) members of their workforce are age 55 or older, on par with the mining, quarrying, and oil and gas extraction sector and comparable to most other industries (see Figure 2).

Less than one out of 10 (8%) HR professionals at manufacturing companies said they were not aware that the proportion of mature workers was increasing (compared with 13% in all other industries), and that mature workers were projected to make up approximately 26% of the labor force by the year 2022, as illustrated in Figure 3. One out of 10 (10%) HR professionals in the manufacturing industry indicated their organizations had implemented specific policies and management practices to address this change, significantly higher than in all other industries (6%).

Figure 2 | Percentage of Older Workers, by Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation and food services, retail trade, wholesale trade, and transportation and warehousing</td>
<td>23%</td>
</tr>
<tr>
<td>Construction, and repair and maintenance</td>
<td>24%</td>
</tr>
<tr>
<td>Educational services</td>
<td>29%</td>
</tr>
<tr>
<td>Finance, insurance and real estate</td>
<td>29%</td>
</tr>
<tr>
<td>Government agencies</td>
<td>30%</td>
</tr>
<tr>
<td>Health care and social assistance</td>
<td>26%</td>
</tr>
<tr>
<td>Information and professional, scientific and technical services</td>
<td>24%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>27%</td>
</tr>
<tr>
<td>Mining, quarrying, and oil and gas extraction</td>
<td>27%</td>
</tr>
<tr>
<td>Religious, grantmaking, civic, professional and similar organizations</td>
<td>30%</td>
</tr>
<tr>
<td>Utilities</td>
<td>29%</td>
</tr>
<tr>
<td>Other</td>
<td>23%</td>
</tr>
</tbody>
</table>

Note: Except for the “Other” group, the accommodation and food services, retail trade, wholesale trade, and transportation and warehousing industry employs significantly fewer older workers than the other industries.

Building a Business Case for Action

Compared with HR professionals in all other industries, fewer HR professionals in the manufacturing industry believed that the potential loss of talent due to retirement of workers was not a problem for their industry in the future (see Figure 4). More than one-third (37%) of industry respondents said the loss of talent due to an aging workforce was not a problem in the next one to two years, significantly lower than 48% in all other industries. One-fourth (25%) said it would not pose a problem in the next three to five years, also significantly lower than respondents in all other industries (33%). Looking further ahead, fewer than one out of five (19%) HR professionals in the manufacturing industry said this demographic trend would not be a problem in the next 11 to 20 years, significantly lower than 27% of respondents in all other industries. These results are not unusual, considering the fact that the manufacturing industry has a higher concentration of mature workers compared with many other industries.

Depending on the organization, different approaches to building a business case may be followed. In some organizations, informal methods are used to make strategic decisions. HR professionals at small organizations, for example, may only need to have an informal conversation with their organizational leadership team or business owner to get the needed buy-in to move forward with a strategy. In larger organizations, a much more formal route may need to be taken.

More than two out of five (45%) HR professionals from manufacturing companies said their organizations were analyzing the impact of workers age 55 and older leaving their organization in the next one to two years, considerably higher than all other industries (32%), as shown in Figure 5. A higher percentage of manufacturing HR professionals also said they were analyzing the impact of mature workers’ departures in the next three to five years (40% vs. 29% in all other industries) and in the next six to 10 years (24% vs. 15%).

More than two-thirds (67%) of HR professionals in the manufacturing industry indicated their organizations were identifying their future workforce needs in the next one to two years, significantly higher than all other industries (56%), as shown in Figure 6. Similarly, a higher percentage of manufacturing HR professionals said their organizations were identifying future workforce needs in the next three to five years (51% compared with 42% in all other industries). Overall, the findings suggest
that many manufacturing companies are cognizant of these demographic changes and are at least taking basic steps to address their workforce needs as a whole.

A better understanding of their industry’s and organization’s demographics will help HR professionals in their efforts to create a business case for preparing for an aging workforce. A business case is a presentation to management that establishes that a specific problem exists and argues that the proposed solution is the best way to solve the problem in terms of time, cost efficiency and probability of success. The form and level of formality of the business case will vary by organization—some are written proposals with supporting financial analyses, whereas others may be slide-supported oral presentations. Whether they are written or oral, business cases generally have the same components, as described below.

- **Statement of need.** This is the condition or change impelling the function’s action.

- **Recommended solution.** The objectives for an ideal solution are defined (the desirable outcomes of such an initiative), and the proposed action is described in sufficient detail to show how it meets these objectives. In some cases, alternatives may be described as well, and the reasons why they are not being recommended may be discussed.

- **Risks and opportunities.** Risks should include outcomes that could decrease the project’s chance for success, outcomes that could present new opportunities that would require action, and the risks of doing nothing at all.

- **Estimated costs and time frame.** The project budget should include all foreseeable elements (labor, equipment, fees, travel and so on), plus a reserve for the unforeseeable expenditures based on the project’s risk. The time frame should keep in mind the project requirements but also the organization’s needs. Longer or more complex projects may be structured in phases, with gates or review milestones at which management can decide whether to proceed.

Creating a solid business case will help HR professionals in manufacturing move forward in a systematic way as they manage the demographic shifts of their workforce and prepare for even greater future changes.
A more in-depth overview of how to build a business case for preparing for an aging workforce is outlined in the free online SHRM sourcebook *Preparing for an Aging Workforce: Strategies, Templates and Tools for HR Professionals*. It includes:

- An overview of how to create a statement of need and the scope of the issues that should be covered in any business case.
- A summary of the main risks and costs of inaction experts have identified in relation to the aging workforce.
- An introduction to the basic steps involved in workforce planning and forecasting.
- Instructions on calculating turnover and projecting future turnover.
- Discussion of how job analysis and skills audits can highlight any potential future skills shortages and gaps.
- Instructions on how to gauge employee satisfaction and engagement and how to use these findings to create strategies for preparing for demographic shifts.
- Samples, forms, templates and tools:
  - Calculating Turnover.
  - Sample Turnover Cost Worksheet.
  - Diversity Survey.

**Figure 5 | Manufacturing Organizations That Have Analyzed the Impact of Workers Age 55 and Older Leaving Their Organization Compared with Other Industries**

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Manufacturing</th>
<th>All other industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 2 years</td>
<td>45%*</td>
<td>32%*</td>
</tr>
<tr>
<td>3 to 5 years</td>
<td>40%*</td>
<td>29%*</td>
</tr>
<tr>
<td>6 to 10 years</td>
<td>24%*</td>
<td>15%*</td>
</tr>
</tbody>
</table>

*The difference between manufacturing and all other industries is statistically significant (p<.05).

Note: Manufacturing n = 221-246; all other industries n = 1,222-1,231.

**Figure 6 | Manufacturing Organizations That Have Identified Future Workforce Needs Compared with Other Industries**

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Manufacturing</th>
<th>All other industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 2 years</td>
<td>67%*</td>
<td>56%*</td>
</tr>
<tr>
<td>3 to 5 years</td>
<td>51%*</td>
<td>42%*</td>
</tr>
<tr>
<td>6 to 10 years</td>
<td>24%*</td>
<td>20%*</td>
</tr>
</tbody>
</table>

Note: Manufacturing n = 226-251; all other industries n = 1,201-1,311.
Legal Issues to Consider

As they prepare for an aging workforce, HR professionals must have a strong understanding of legal issues to avoid discrimination claims. Federal law prohibits employers (and employment agencies and labor unions) from discriminating against applicants and employees who are over the age of 40 on the basis of their age. The Age Discrimination in Employment Act (ADEA) is administered and enforced by the Equal Employment Opportunity Commission (EEOC), which issues regulations and guidance designed to explain and implement the law’s protections. For an in-depth overview of legal issues related to an aging workforce, see SHRM’s sourcebook *Preparing for an Aging Workforce: Strategies, Templates and Tools for HR Professionals*, which covers the following issues:

- An overview of laws prohibiting age discrimination.
- Proving age discrimination.
- The legal aspects of planning for change.
- Legal issues to consider when recruiting.
- How to navigate the legal issues related to physically demanding jobs.

Samples, forms, templates and tools:
- Basic Equal Employment Opportunity Policy.
- Statement of ADA Commitment to Interactive Process and Reasonable Accommodation Policies.
Recruiting and Retaining Mature Workers

Many organizations may not be aware of the number of potential retirements they could soon be facing, hence the percentage of those that are developing strategies to attract and retain mature workers is low. However, HR professionals in the manufacturing industry were significantly more likely than their counterparts in other industries to report that the aging workforce had prompted changes in their recruiting to a great extent (12% compared with 7%) or to some extent (32% compared with 25%). They were also less likely to report that it prompted no changes to their recruiting practices (33% compared with 44%). HR professionals in the manufacturing industry were also more likely to report that the aging workforce had prompted changes to their retention practices to some extent (33% compared with 25%), and less likely to indicate that it prompted no changes to retention practices (36% compared with 43%), as shown in Figure 7.

Steps Organizations Are Taking to Recruit and Retain Mature Workers

Similar to other industries, very few respondents from the manufacturing industry said their organizations had formal strategies for retaining mature workers (4%) and recruiting mature workers (2%), as shown in Figure 8. Employee referrals were the most common method of recruiting mature workers in the manufacturing industry (32%). HR professionals in this industry were more likely than their peers in other industries to use employment agencies (19% compared with 10%) and temporary firms (16% compared with 10%) to recruit mature workers.

Manufacturing HR professionals were significantly less likely to recruit through local senior citizen community groups compared with their peers in other industries (1% compared with 3%). More than half of respondents from manufacturing organizations (58%) said they did not actively recruit mature workers (see Figure 9).

Because there are few examples that HR professionals can refer to for ideas about how to meet the challenge of recruitment and retention as the workforce ages, research on HR staffing practices that help attract mature job seekers and retain those in the mature worker demographic, often well beyond traditional retirement age, can be helpful.

Figure 7 | Extent the Increasing Age of Organization’s Workforce Has Begun to Prompt Changes in . . .

<table>
<thead>
<tr>
<th>Recruiting practices</th>
<th>Manufacturing</th>
<th>All other industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a great extent</td>
<td>12%*</td>
<td>7%</td>
</tr>
<tr>
<td>To some extent</td>
<td>32%*</td>
<td>25%</td>
</tr>
<tr>
<td>To a small extent</td>
<td>24%</td>
<td>24%</td>
</tr>
<tr>
<td>Not at all</td>
<td>33%*</td>
<td>44%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Retention practices</th>
<th>Manufacturing</th>
<th>All other industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a great extent</td>
<td>7%*</td>
<td>6%</td>
</tr>
<tr>
<td>To some extent</td>
<td>33%*</td>
<td>25%</td>
</tr>
<tr>
<td>To a small extent</td>
<td>24%</td>
<td>26%</td>
</tr>
<tr>
<td>Not at all</td>
<td>36%</td>
<td>43%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General management policy/practices</th>
<th>Manufacturing</th>
<th>All other industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a great extent</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>To some extent</td>
<td>26%</td>
<td>23%</td>
</tr>
<tr>
<td>To a small extent</td>
<td>28%</td>
<td>31%</td>
</tr>
<tr>
<td>Not at all</td>
<td>40%</td>
<td>42%</td>
</tr>
</tbody>
</table>

*The difference between manufacturing and all other industries is statistically significant (p<.05).

Note: Manufacturing n = 269-270; all other industries n = 1,431-1,442. Respondents who indicated “Not applicable” were not included in the analysis. Percentages may not total 100% due to rounding.


Figure 8 | Organizations That Have a Formal Strategy for Retaining and Recruiting Older Workers

<table>
<thead>
<tr>
<th>Retain</th>
<th>Manufacturing</th>
<th>All other industries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4%</td>
<td>3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recruit</th>
<th>Manufacturing</th>
<th>All other industries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Note: Manufacturing n = 268-269; all other industries n = 1,438.

Figure 9 | Methods Used by Manufacturing Organizations to Recruit Older Workers

*The difference between manufacturing and all other industries is statistically significant (p<.05).

**Note:** Manufacturing n = 179; all other industries n = 804. Only respondents who indicated that the increasing age of their organizations’ workforce has prompted change in their recruiting practices were asked this question. Percentages do not total 100% due to multiple response options.

**Source:** Preparing for an Aging Workforce: Manufacturing Industry Report (SHRM, 2015)
Creating a Strategy for Actively Recruiting Mature Workers

According to the EPG report *The Aging Workforce: Leveraging the Talents of Mature Employees*, there are two main categories of mature workers: 1) workers currently unemployed and seeking work, including those before and past traditional retirement age, and 2) workers who are currently employed and are either already working for the organization in a different job or working somewhere else but could potentially leave their current jobs either to do the same type of work or to embark on a completely new career path. The report advises the following steps to create a strategy for actively recruiting mature workers:

✓ Plan to recruit mature workers from the start by including recruiting and hiring of mature workers in diversity and affirmative action recruiting plans.

✓ Include mature workers in recruiting messaging by clearly stating in job postings and application materials that your organization seeks workers of all ages.

✓ Identify talent sources that are inclusive of individuals over 50.

✓ Seek partners that will help recruit mature candidates, such as community colleges, government-sponsored workforce development programs and nonprofit groups.

✓ Post jobs in locations where mature job seekers are likely to look. This can include organizations targeted to a 50+ demographic, such as the AARP and SeniorJobBank, as well as social media groups.

✓ Attend seminars and career fairs that attract job seekers of all ages.

✓ Publicize your efforts to have an age-diverse workforce. These efforts will have a positive impact on your employer brand.

✓ Prepare and incentivize recruiters to understand the changing workforce demographics and to take actions that will encourage job seekers of all ages to be excited about joining your organization.

For more detailed information on recruiting and retaining older workers, please refer to both the SHRM Foundation’s EPG report *The Aging Workforce: Leveraging the Talents of Mature Employees* and the SHRM sourcebook *Preparing for an Aging Workforce: Strategies, Templates and Tools for HR Professionals*. The sourcebook includes information and resources on the following topics:

- Targeting recruiting activities to appeal to mature job seekers.
- Working with hiring managers to dispel stereotypes and broaden perceptions of the available talent market.
- Selection process materials.
- The onboarding process.
- (Re)hiring retirees.
- Corporate alumni programs.
- Retaining mature workers.
- Samples, forms, templates and tools:
  - Diversity Outreach Letter.
  - Employee Referral Program Procedures.
  - New-Hire Employee Referral Form.
  - New-Hire Orientation Checklist.
  - New-Hire Survey.
  - Recruitment Satisfaction Survey.
  - Flextime Policy.
Preparing for an Aging Workforce:
Manufacturing Industry Toolkit

- Telecommuting Application Form.
- Flextime Request Form.
- Compressed Workweek Policy and Procedure.
- Summer Flextime Policy.
- Summer Flextime Request Form.
- Job Share Memo of Understanding.
- Recognition Policy: Service Awards and Retirement Gifts.
- Phased Retirement Plan Development Checklist.

The Role of Benefits in Attracting and Retaining an Aging Workforce

Because there are potentially hundreds of benefits that can be offered by employers, each organization must determine its own benefits strategy based on a solid understanding of the demographics of its workforce and candidate pool.

Key issues and strategies within the benefits realm that may be influenced by this demographic shift include the design and administration of health, disability and other insurance benefits as well as wellness benefits, retirement income and planning, and employee services, particularly caregiver benefits, such as senior care. Health care and wellness benefits will continue to be important as the workforce ages because the risk of many types of illnesses and chronic health conditions increases with age. Individuals also tend to be more health-conscious as they grow older.

The pressure to hold health care costs steady will become more intense as the workforce ages. Leaders of many organizations will expect their HR function to develop even greater expertise in negotiating better benefits contracts with vendors, self-funding health plans, altering health care benefits cost-sharing models to shift more costs to employees through increased deductibles or attaching a surcharge to spousal coverage—all without damaging recruitment and retention goals. They may also need to be skilled at adopting consumer-directed health plan designs, developing a robust employee wellness program, offering health risk assessments and creating health management program incentives and penalties.

Retirement benefits are often among the first employee benefits that come up when the discussion turns to an aging population—especially in policy discussions involving mandated benefits such as Social Security. The aging workforce is putting the spotlight on employer-sponsored retirement plans as a major recruiting and retention tool. As the workforce ages, more attention is likely to be paid to these types of retirement benefits offerings. Organizations may respond either by increasing the amount of their employer match or by shifting to a model where employees are automatically enrolled into a 401(k) plan but can choose to opt out. These steps can increase the percentage of eligible workers who participate in their employer’s 401(k)-type plan, thereby increasing retirement savings. Some organizations take this a step further by automating the increase in the employee contributions to these programs over time.

Because savings options can be complex, another type of benefit that more employers may adopt as the workforce ages is financial planning and education services. For some organizations, simply letting employees know about the financial education options available, such as those offered by an employee assistance program, may be a first step. Others may prefer to go further by offering classes on financial literacy or online investment advisory services, or individual financial planning services through a third-party provider.

Skill sets in the manufacturing industry—particularly technical and engineering-related work—are and will continue to be in high demand for the foreseeable future. Benefits packages can be an effective tool in the recruitment and retention of these workers, and HR professionals should leverage these offerings as part of their talent acquisition strategies. Recent SHRM research has shown that in 2015 two-fifths (40%) of HR professionals leveraged benefits to recruit highly-skilled employees, up significantly from 30% in 2013.

The SHRM Wellness Programs Resource Page provides key resources and articles to help members as a starting point with key tools and resources. The site offers guidance on regulations, program implementation, types of programs and external...
resources. Program implementation guidance includes the general development of a wellness program, case studies, communication, competitions, incentives/penalties and measuring the program’s return on investment (ROI).

SHRM’s Employee Benefits research report examines the use of hundreds of employee benefits and is available free for SHRM members at shrm.org/surveys. For more detailed information on leveraging benefits to attract and retain mature workers, please refer to both the SHRM Foundation’s EPG report The Aging Workforce: Leveraging the Talents of Mature Employees and the SHRM sourcebook Preparing for an Aging Workforce: Strategies, Templates and Tools for HR Professionals. The sourcebook includes information and resources on the following topics:

- Health care and wellness benefits.
- Retirement income, benefits and redefining retirement.
- Work/life benefits.
- Leave benefits.

Samples, forms, templates and tools:

- 401(k): Automatic Enrollment Election for New Hires.
- Employee Assistance Program (EAP) Policy: For Employees and Family Members.
- Retirement Plan Enrollment Form.
Skills, Training and Development

HR professionals who closely study the skills needs and potential shortages in their organizations and industries are stepping up to take on an important leadership role that goes well beyond their individual organizations. Many HR professionals are working within their industries and local communities to improve workforce readiness at the broader level. The causes of skills shortages are complex and therefore not easy to resolve. But there are basic steps that HR professionals can take to help their organizations become better prepared for skills shortages and to proactively meet the challenges these shortages represent.

According to SHRM research, more than one out of five (21%) manufacturing respondents said that their organizations attempted to capitalize on and incorporate the experience of mature workers to “a great extent.” Fewer than one out of five (15%) HR professionals in the manufacturing sector reported that their organizations did not capitalize on and incorporate the experience of mature workers at all (see Figure 10).

When asked about the advantages of having mature workers, HR professionals in manufacturing organizations were most likely to cite their extensive work experience (79%), their stronger work ethic (73%) and their maturity levels/professionalism (68%). Manufacturing industry respondents were less likely than HR professionals in other industries to value mature workers’ loyalty (47% compared with 53% in other industries), their stronger applied skills, such as critical thinking and problem-solving (42% compared with 49%), their institutional knowledge (39% compared with 49%), their established networks of contacts and clients (33% compared with 41%), their ability to add to diversity of thought/approach to team projects (28% compared with 39%), and their productivity (18% compared with 24%).

However, HR professionals in manufacturing placed higher value on mature workers’ technical skills compared with their peers in other industries (23% compared with 11%), their skills in mathematics (20% compared with 12%) and their skills in science (5% compared with 3%); they placed lower value on writing in English (31% compared with 48%) and spoken English (15% compared with 21%).

HR professionals in manufacturing organizations were significantly more likely than their counterparts in all other industries to say their organizations had increased training and cross-training efforts (53% compared with 40%) to prepare for potential skills gaps as a result of the loss of mature workers (see Figure 11). They were also more likely than their peers to have developed succession plans (39% compared with 32%), increased recruiting efforts to replace retiring employees (20% compared with 14%) and increased automated processes, such as using robotics (13% compared with 6%), to prepare for potential skills gaps.

Manufacturing HR professionals were less likely than their peers to have offered flexible work arrangements to attract a broader range of applicants (6% compared with 15%). They were also significantly less likely than their counterparts in all other industries to have not taken any steps to prepare for potential skills gaps as a result of the loss of mature workers (25% compared with 36%).

HR professionals in the manufacturing industry were significantly more likely than their peers in other industries to develop training and/or cross-training programs as a strategy to transfer knowledge from mature workers to younger workers (66% compared with 52%), as shown in Figure 12. They were more likely to conduct job shadowing (33% compared with 25%), employ apprenticeship programs (15% compared with 7%) and develop skill transition plans as a means of transferring knowledge from older to younger workers (18% compared with 13%). Manufacturing HR professionals were significantly less likely to not use any strategies at all (13% compared with 20%) to facilitate transfer of knowledge between the two age groups.

With more generations than ever before in the workplace, organizational success now depends on employees of all ages working together as a team. The increase in age diversity in the workforce is a new opportunity to build more effective and innovative teams, but these teams must be managed successfully.

Manufacturing, in particular, still suffers from perception problems among younger people, many of whom are steered toward white-collar work and four-year college degree programs. Many of the blue-collar factory settings from the past have, in fact, been replaced with high-tech, cleaner facilities that offer competitive salaries and career opportunities. Manufacturers have been trying to engage younger workers and present the industry in a different light. More than 2,300 companies participate
Figure 10 | Extent to Which Organizations Attempt to Capitalize on and Incorporate the Experience of Older Workers

<table>
<thead>
<tr>
<th>Extent to Which</th>
<th>Manufacturing</th>
<th>All other industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a great extent</td>
<td>21%</td>
<td>22%</td>
</tr>
<tr>
<td>To some extent</td>
<td>40%</td>
<td>38%</td>
</tr>
<tr>
<td>To a small extent</td>
<td>23%</td>
<td>24%</td>
</tr>
<tr>
<td>Not at all</td>
<td>15%</td>
<td>15%</td>
</tr>
</tbody>
</table>

*The difference between manufacturing and all other industries is statistically significant (p<.05).

Note: Manufacturing n = 267; all other industries n = 1,436.

Figure 11 | Steps Manufacturing Organizations Have Taken to Prepare for Potential Skills Gaps as a Result of the Loss of Older Workers Compared with Other Industries

<table>
<thead>
<tr>
<th>Steps</th>
<th>Manufacturing</th>
<th>All other industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased training and cross-training efforts</td>
<td>53%*</td>
<td></td>
</tr>
<tr>
<td>Developed succession plans</td>
<td>40%*</td>
<td></td>
</tr>
<tr>
<td>Increased recruiting efforts to replace retiring employees</td>
<td>20%*</td>
<td>14%*</td>
</tr>
<tr>
<td>Developed processes to capture institutional memory/organizational knowledge from employees close to retirement</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>Created new roles within the organization, specifically designed to bridge a skills or knowledge gap</td>
<td>17%</td>
<td>15%</td>
</tr>
<tr>
<td>Increased automated processes (e.g., use of robotics)</td>
<td>13%*</td>
<td>6%*</td>
</tr>
<tr>
<td>Offered flexible work arrangements to attract a broader range of applicants (e.g., job-sharing, telework)</td>
<td>6%*</td>
<td>15%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>None—we have not taken any steps</td>
<td>25%*</td>
<td>36%*</td>
</tr>
</tbody>
</table>

*The difference between manufacturing and all other industries is statistically significant (p<.05).

Note: Manufacturing n = 271; all other industries n = 1,436. Percentages do not total 100% due to multiple response options.
in the annual “Manufacturing Day” in October, for example. The event allows high school students to visit manufacturers around the country to learn more about their operations and employment opportunities.

In the manufacturing industry, just over half (51%) of respondents indicated employees in their organizations were receptive to working with mature workers to a great extent. Half (50%) of manufacturing professionals said their workers were receptive to learning from mature workers, and another 44% said they were receptive to being mentored by mature workers to a great extent. Only 1% of manufacturing respondents indicated that employees in their organizations were not at all receptive to working with and learning from mature workers—a very positive sign that there is a general awareness of the value of learning from mature workers within the industry.

Many HR professionals may decide to go beyond some of the steps taken within workforce planning initiatives to conduct a more detailed skills audit that gathers information about the skills, education and experience needed for different jobs and job families. Supply analysis in workforce planning will involve collecting data on the number of employees and their skills, as well as workforce demographics, and should reveal if the organization has a large number of workers nearing retirement age. If large numbers of retirements are forecasted, a more in-depth job and skills analysis at this stage may be needed. Jobs may also need to be redesigned to accommodate older workers who develop disabilities due to the aging process. Some organizations have found that they are able to attract and hire more dependable and loyal employees by engaging in job analysis and by redesigning jobs to appeal to older employees.

Retraining mature workers can often be more cost-effective for an organization than recruiting, hiring, onboarding, socializing and training new hires. Skills training may sometimes be needed to keep mature workers up to date so they can continue working productively. The activities of workforce planning, skills audits and job analysis can all lead to the realization that among a number of different strategies needed to address existing or predicted skills shortages, training is one of the most important. A training needs assessment (TNA) that identifies current level of competence, skill or knowledge in one or more areas and

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**Figure 12 | Strategies Manufacturing Organizations Use to Transfer Knowledge from Older Workers to Younger Workers Compared with Other Industries**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Manufacturing</th>
<th>All other industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training and/or cross-training programs</td>
<td>52%*</td>
<td>66%*</td>
</tr>
<tr>
<td>Job shadowing</td>
<td>25%*</td>
<td>15%</td>
</tr>
<tr>
<td>Mentoring programs</td>
<td>31%</td>
<td>33%</td>
</tr>
<tr>
<td>Development of skill transition plans</td>
<td>13%*</td>
<td>18%*</td>
</tr>
<tr>
<td>Development of a knowledge database</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td>Apprenticeship programs</td>
<td>15%*</td>
<td>14%</td>
</tr>
<tr>
<td>Organizing multigenerational work teams</td>
<td>17%</td>
<td>14%</td>
</tr>
<tr>
<td>N/A—organization does not use any strategies to transfer knowledge from older workers to younger workers</td>
<td>20%*</td>
<td>13%*</td>
</tr>
</tbody>
</table>

*The difference between manufacturing and all other industries is statistically significant (p<.05).

**Note:** Manufacturing n = 270; all other industries n = 1,436. Percentages do not total 100% due to multiple response options.

**Source:** Preparing for an Aging Workforce: Manufacturing Industry Report (SHRM, 2015)
compares that competence level to the level required for the position in question or another position within the organization may be a good way to determine priorities.

For more detailed information on how an aging workforce may influence learning and training strategies, please refer to both the SHRM Foundation’s EPG report *The Aging Workforce: Leveraging the Talents of Mature Employees* and the SHRM sourcebook *Preparing for an Aging Workforce: Strategies, Templates and Tools for HR Professionals*. The sourcebook includes information and resources on the following topics:

- Skills audits.
- Leveraging the knowledge, skills and experience of mature workers.
- Generational differences and similarities.
- Leveraging teams.
- Samples, forms, templates and tools:
  - Diversity Policy.
  - Job Analysis Template.
  - Career Development Plan Form.
  - Job Analysis: Desk Audit Review.
  - Skills Analysis Form.
  - Waiver of Claims Under the Age Discrimination in Employment Act.
  - Nondiscrimination/Anti-Harassment Policy and Complaint Procedure.
Endnotes


