THE SKILLS GAP
HOW TO TRAIN THE 21ST CENTURY WORKFORCE

SIEMENS USA
Eurojobs, American-style

WALMART
Filling the Management Pipeline

WEGMANS
Cutting Turnover or Bust!

JPMORGAN
Better Jobs Through Research
On the cover

Teya Richards
A Wegmans bakery manager, Richards graduated from the Rochester supermarket chain’s signature training program.
CONTENTS

THE GAP
Why and how American businesses are taking on the skills gap.
/ 02

CASE STUDIES
Drilling down with Siemens USA, Walmart, Wegmans, and JPMorgan Chase.
/ 08

THE FUTURE
Developing talent isn’t just about additional skills; it’s about the right skills.
/ 26

CEO’S NOTE
Tom Donohue: Who should train the employees of the future?
/ 28

PLUS
These should be flush times for American business. Interest rates are low. So are energy prices, give or take a weather-related spike. The stock markets continue to climb. The most aggressive rollback to regulations in a generation is under way. It’s a great time to expand. But all too often, those plans are running into a headwind. The problem? If you talk, like we did, to many executives in numerous industries and in businesses of all sizes, you’ll hear that the biggest stumbling block to growth is a shortage of skilled workers.

Welcome to The Skills Gap.
The extent of the problem can be measured in several ways, but all indicate a mismatch between supply and demand. One assessment, from CareerBuilder, notes that while there are 7.5 million unemployed people in the United States, two-thirds of employers can't find qualified candidates for open positions. That same report says that 60 percent of employers have vacancies that last 12 weeks or longer.

At the current pace, according to research by the Georgetown University Center on Education and the Workforce, more than 5 million positions could go unfilled by 2020. The cost to the economy? About $160 billion a year. That's lost revenue. Lost wages. And lost opportunity.

As the U.S. Chamber of Commerce Foundation states bluntly in a recent report, “The skills gap is a threat to American growth and competitiveness.” Or as Charlie Schilling, vice president of enterprise at General Assembly, which trains (and retrains) workers for digital careers, puts it: “We believe very strongly that the skills gap is the defining social and economic justice issue of our time.”

Businesses confront the skills gap when they are hiring and can’t find employees with the knowledge and training needed for the jobs being offered. But contrary to popular belief, the skills gap is not just a wage issue. It can’t be solved simply by offering more money and waiting for the job applicants to show up. That won’t happen if the skills aren’t there in sufficient quantity in the first place.

To better understand the skills gap, the U.S. Chamber Foundation contracted with Burning Glass Technologies, a Boston data analytics firm, to dissect the labor market and the challenges that employers face in finding workers.

Central to the firm’s analysis is the finding that the skills gap is not a single fault line cutting across the entire economy. “Rather than one canyon,” Burning Glass writes, “the gap is much more akin to a series of potholes, tripping up some industries and avoided by others.”

For some jobs, such as advanced positions in health care, there are simply more openings than applicants, and the extensive training required makes it difficult to quickly meet demand. In middle-skill positions, Burning Glass says, the skills gap is more complex. The job requirements have changed, and there hasn’t always been clear communication of those changes to talent suppliers. In addition, the Great Recession changed hiring practices. Employers found that they could often hire people with higher skills than in the past because the applicant pool was so large. Those higher skill expectations have remained in place, creating a skills gap where one might not have previously existed.

For example, the ratio of openings to workers for office and administrative support—a key middle-skill category—has swung from 0.95 openings per worker in 2012 to 1.05 in 2016, according to Burning Glass. There used to be 400,000 more workers than openings. Now, it’s the opposite, a fact that may be tied to employers changing the qualification requirements for these positions.

The language of training and retraining has its own vocabulary. Increasingly familiar terms include upskilling (training current employees for more complex jobs), workforce development (investing in or partnering with educational systems that train your employees), and career readiness (getting future employees interested in potential careers and developing the requisite skills long before they are ready to go to work). These programs all lead to the same conclusion. The skills gap can be closed with innovation, persistence, and attention to the needs of business.

In too many sectors, there is a chasm between what workers have been trained to do and what businesses now need them to do. It’s a utility company that can’t find powerline workers or a fabrication business that is desperate for welders. Anecdotally, this chasm is frustrating for companies. But collectively, it signals deeper problems, not just for the economy but for society as a whole. Middle-skills jobs pay middle-class wages and create stable middle-class societies. Lose one and you lose the others.

“For the employer side, they need to grow their business and compete in the economy,” says Sarah Steinberg, program officer for JPMorgan Chase’s New Skills at Work initiative, which is funding deep
research into labor markets and career readiness. “From the worker side, it’s important that more people get education and training to achieve a middle-class lifestyle.”

The skills gap didn’t appear overnight, and it’s not going to disappear quickly, either. What’s clear is that businesses and employer groups are taking the lead in creating solutions. They are upskilling their existing workforces, often in partnership with innovative schools. Take Partners Healthcare, for example. The sprawling Massachusetts hospital operator joined with Southern New Hampshire University to retrain employees for patient-centered care and a stronger emphasis on teamwork.

These types of collaborations are bearing fruit. Using a model developed by the U.S. Chamber of Commerce Foundation, businesses are also adapting best practices from supply-chain management to build robust talent pipelines. And they are widening their net, creating a larger supply of skilled workers by tapping underutilized pools of potential employees.

Even long-established training programs are getting a fresh look. The scope of apprenticeships is expanding and could receive a substantial boost from an executive order signed this summer by President Trump. Importantly, the president’s proposal is encouraging the private sector to play the lead role in developing these new job-training programs.

Labor markets are complex, and companies are using data analytics to better understand movements and trends in employment and training. These findings can then be used to offer workers better information about career choices and promote changes in our current educational models that emphasize credentials rather than degrees. Cargill Meat Solutions, for example, recently worked with officials in Kansas and Wichita State University to provide employees an online course in logistics.

The skills gap exists for many reasons, but much of the problem comes down to workers not being properly informed—early and often—about the skills they need to get a good job. In addition, today’s jobs, whether in factories, stores, hospitals, or offices, are different. Technology and automation have removed much of the brawn from the factory and many of the repetitive tasks from the cubicle. Yes, certain kinds of jobs have been eliminated, but equally important is that the ones that remain have been profoundly changed. Machine operators need to know how to make adjustments from a computer readout. A logistics technician needs to respond to streaming traffic reports. Teamwork and problem-solving (the soft skills) are essential. Even retail, often seen as low-skill work, has been transformed. Successful merchants, such as the highly regarded

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**BY THE NUMBERS**

**A SKILLS GAP SAMPLER**

**WORKFORCE**

67%

The percentage of employers who can’t find qualified candidates

60%

The percentage of employers who have vacancies for twelve weeks or longer

**COLLEGE**

11%

The percentage of business leaders who say they are confident college grads will be prepared for the workplace

**TECH/SCIENCE**

14X

The rise of tech and the demand for big data, has created a skills shortage. For example, in 2012, there were just 1,061 job postings for data scientists. By 2016, that had grown 14-fold, to 14,653.

**HEALTH CARE**

1.04m

The number of skilled health care jobs currently unfilled

THE SKILLS GAP IN MANUFACTURING

The lack of properly trained workers can stunt economic growth. Here’s one sector that’s struggling to fill its talent pipeline.

FACT

6 out of 10 open skilled production positions remain unfilled due to the skills gap...

...and, thus, it can take longer to find qualified employees.

FACT

3.5 Million manufacturing jobs must be filled in the decade from 2015 to 2025...

...but 2 million of those positions will go unfilled due to the talent shortage.

TIME IT TAKES TO RECRUIT HIGHLY SKILLED WORKERS

<table>
<thead>
<tr>
<th>Skilled production workers</th>
<th>Engineers, researchers, scientists</th>
<th>Other workers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>70</strong> Days</td>
<td><strong>94</strong> Days</td>
<td><strong>48</strong> Days</td>
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WHY DOES THIS MATTER?

Every manufacturing job creates 2.5 new positions in local goods and services... and for every $1 invested in manufacturing, another $1.40 worth of value is created in other parts of the economy.

SKILLS GAP BOOM

Unfilled jobs due to the skills gap:

- **600K** in 2011 vs. **2M** by 2025

THE GAP

The skills executives say current employees lack.

- **70%** of executives say current employees lack tech/computer skills
- **69%** of executives say current employees lack problem solving skills
- **67%** of executives say current employees lack basic technical skills
- **60%** of executives say current employees lack math skills

THE IMPACT

- **82%** of execs say the skills gap will adversely affect their ability to keep up with demand
- **78%** believe they won’t be able to implement new tech and increase productivity
- **69%** say the talent shortage will undercut customer service
- **62%** contend innovation and the development of new products will be harmed.
- **48%** say the skills deficit will slow international expansion

SOURCE: Deloitte/The Manufacturing Institute
supermarket chain Wegmans Food Markets, are fanatical about training their workers in the soft skills of customer service.

For years, there’s been a disconnect between what businesses want new employees to know before they show up for work and what the applicant pool actually knows. Consider this recent Gallup poll: only 11 percent of business leaders said they are confident that college graduates are well prepared for the workplace, while a full 96 percent of chief academic officers of colleges and universities report being somewhat or very confident that they are preparing students for success in the workplace.

The skills gap cuts across many sectors, including those professions that require advanced degrees. But for many of these positions in the so-called middle skills sector, the gap can be linked to the decline in vocational training. In the U.S. educational system, with its emphasis on attending college, this type of job training has suffered. When it comes to technical education, the United States is an outlier compared with other developed nations. According to 2013 data from the Department of Education, 46 percent of high-school students have taken at least one vocational course. But only 19 percent of U.S. students concentrate on vocational studies, commonly called CTE or career and technical education.

More is needed, and business leaders also say they’re best qualified to create programs with the highest value. “There’s a lot of discussion in Washington and throughout the country in terms of federal programs and agencies that are trying to get at vocational training,” says Judy Marks, the CEO of Siemens USA, which has a thriving apprenticeship program that has won national recognition. “But we believe we’re best at trying to define the skills we need.”

Closing the skills gap involves two key components. Both address the overall supply of workers with these middle-skills credentials. For people already in the workforce—whether employed in lower-paying jobs, unemployed, or underemployed—there is a vital need for training or retraining. Businesses are investing in new ways of training, often tightly focused on credentials demonstrating that a person has the hard and soft skills to do the work. Many of these businesses are working with community colleges and private-sector companies to design courses that bypass the conventional associate’s or bachelor’s degree.

There is also a more concerted effort to increase awareness of and interest in these good middle-skills jobs among young people—a stepped-up version of career day. It’s a recognition that the days when a young person went to work at a factory because his father or mother worked there are over.

Business leaders have always been concerned about finding skilled workers. But what’s shifted in recent years is the growing recognition that industry must be more assertive in leading the changes and in clearly defining what it needs and what it doesn’t need when it comes to training workers.

The U.S. Chamber of Commerce Foundation is also playing a leadership role here. Their Talent Pipeline Management Academy has spread to more than 60 communities in 17 states. And their Center for Education and Workforce is focused on the intersection of education reforms and workforce development. It’s also working to strengthen the entire pipeline through the K-12 system with consistent engagement with schools.

The public sector has a role to play, too. But business organizations are positioned to take the leadership and push for fundamental changes in training. The goal? Giving American workers the skills to obtain good jobs, build stable lives, and help companies prosper in the global economy.

In the following pages, you’ll read about how businesses and the organizations that support them are tackling “the gap.” These stories are powerful and transformative. The approaches vary, as you’d expect, but they share a commitment to demand-driven workforce development, both short-term and long-term, as well as an understanding that the best solutions to help businesses and workers will come from businesses.

“It’s important that more people get...training to achieve a middle-class lifestyle.”

SARAH STEINBERG
Program Officer, New Skills at Work Initiative, JPMorgan Chase
Good jobs are going unfilled because of the lack of trained candidates. Here’s how companies are taking matters into their own hands.

1. Apprenticeships
   Siemens USA

2. Upskilling
   Walmart

3. New Opportunities
   Wegmans

4. Career Readiness
   JPMorgan Chase
THE SOLUTIONS
Chad Robinson’s parents were surprised when he told them about his plans for life after high school. He was among the top students in his class. At one point his plan had been to study engineering at a four-year university. Yet Robinson’s plans had changed. He was now going to learn how to be a machinist at Siemens Charlotte Energy Hub in North Carolina, where more than 1,500 people make turbines and power generators that are sold around the world. He would, in other words, be an apprentice. It’s an intensive four-year commitment, attending classes at the local community college while clocking in at Siemens USA, where he would be mentored and monitored closely by the company’s skilled workforce. Siemens’s apprenticeship program is particularly robust. It provides three times more on-the-job training and more than 10 times more college hours than are typically required by programs registered through the U.S. Department of Labor. Siemens covers tuition and even provides a paycheck. And after graduation, the reward is clear: in addition to having no student debt, Robinson will begin a fulfilling job at Siemens with advancement potential and starting pay of roughly $55,000 a year. “It’s been drilled into many young people that attending a four-year university is the only way to be successful,” Robinson says. “That’s not the case. There are so many different pathways you can go.”
Roger Collins
Apprentice Supervisor,
Siemens Charlotte
Energy Hub
Charlotte, NC
There's also a lot to be said in favor of the pathway that Robinson has chosen by focusing on what are now called middle skills. Looking ahead, middle-skills positions in fields such as advanced manufacturing, information technology, energy, and health care represent half of all anticipated job openings through 2022. They require education beyond high school yet less than a four-year degree, along with strong technical skills. And they pay well, with many jobs earning close to six figures or more.

Employers are rediscovering apprenticeships as one way of closing the skills gap. Most successful apprenticeships, however, have evolved from the more informal work-learning arrangements of the past. Today's apprenticeships are more rigorous, are more competitive, and are as much about mastering soft skills as learning how to run a machine. They're also demand driven, intimately linked with the hiring needs of employers.

“It's a great feeder for our future,” says Judy Marks, CEO of Siemens USA. “From a business perspective, it's a win for us. From a business to society perspective, it's a win for society.”

Siemens began its U.S. apprenticeship program in 2011 when it moved a product line of gas turbines from Canada to Charlotte and was having trouble finding enough skilled workers. The solution was to train workers itself, borrowing a page from the company's German heritage.

The recruiting process at Siemens is demanding and selective. Siemens fans out to area high schools, community colleges, and veterans groups. Applicants must enroll at Central Piedmont Community College and attend five four-hour orientation sessions and take an aptitude assessment. Successful candidates get invited back for a six-week pre-apprenticeship, which includes two classes at the community college. During that time, they are interviewed by a wide range of Siemens employees and must obtain their safety certification. Finally, from this group of pre-apprentices, Siemens chooses to whom it makes offers.

Roger Collins, a machinist who runs the Siemens program in Charlotte, said the apprentices have gained respect on the shop floor because the quality of their work is so high. The apprenticeship program teaches the students how to use the tools and also provides ample instruction in teamwork, communication, accountability, and problem solving. “I see this as an investment in our human capital and our workforce pipeline,” Collins says.

After launching the Charlotte program, Siemens expanded its apprenticeship model to facilities in California, Georgia, and Alabama. This year, Siemens is expanding again, nearly doubling its number of apprentices as it starts programs in Pennsylvania, Kentucky, Louisiana, and Texas.

“Industry is probably the best place to get a demand signal,” Marks says. “Ultimately, we think companies need to lead, but we also need the academic community, the chambers of commerce, and government leaders involved to scale up these efforts.”

Start Small

Terra Verde began with one apprentice. It plans to sharply expand the program to about a dozen in 2018, tweaking as it goes based on early experiences.

Know Your Talent Needs

Terra Verde adjusted its basic requirements for apprentices after realizing that applicants needed to show a higher level of skill and interest in technology. It wants candidates to have at least some community college and a desire for credentials rather than the drive to pursue coursework for a traditional degree. “They don't necessarily want to take a liberal arts course load; they really want to get into the workforce,” Vasko says.


Terra Verde has begun extensive outreach programs, working with community colleges and even public schools to make sure its applicant pool is as wide and deep as possible.

Investments to Determine Goals

The state of Arizona pays for the certification training, but Terra Verde pays for the salaries of these workers as they learn. “I think it's important that the candidates understand the level of investment in terms of skills, and of the certification process,” Vasko says. “My objective out of this is that we have long-term, loyal employees who understand and execute our mission flawlessly and are still with us 25 years from now.”
In early 2015, Walmart Stores CEO Doug McMillon announced that the retail giant was going to make a $2.7 billion investment in its workers. Part would go to higher pay for store-level associates, part would go to hiring more managers, and part would go to creating training centers that would give employees the skills to drive sales and improve customer service. Two years later, the Walmart Academy isn’t just up. It’s running at a brisk pace, having trained 200,000 employees since opening. These employees—or associates, as Walmart prefers to call them—have gained skills that are as valuable to the associates as they are to Walmart. They’re more competent and confident and better prepared to take charge of their careers. There are currently 175 academies across the United States, with their classrooms often carved out of warehouse space that was freed up through the retailer’s inventory-reduction program. There will be 200 by year’s end. Each academy serves about 25 to 30 stores. Because of its size ($486 billion in sales) and workforce (1.5 million in the United States), what Walmart does matters. So this enormous investment in upskilling its frontline managers is being closely watched by the competition, by investors, and—of course—by senior company officials. Will it work? And will it deliver a return on investment with increased sales and profitability and better performance by and retention of its army of employees?
Jacqueline Cavalier

A support manager attends a class at the Walmart Academy in Fayetteville, AR.
“It’s not just opportunity within Walmart... they’re thinking about education differently. They are signing up to finish their GED or to further their education.”

KIRSTEN WILKINSON
Senior Director, U.S. Academies, Walmart

Kristen Wilkinson, senior director of Walmart’s U.S. academies, says, “The preparation for doing a good job is there. It’s still fairly early for sales. But the early signs are good.”

Academy training is mandatory. The largest groups of participants are department managers and their supervisors. These are the men and women who oversee specific sections inside a Walmart, such as bedding or pets. Wilkinson says that Walmart’s training in the past was more fragmented and informal, often relying on mentors at the store level to show people how things were done. Along with standardizing the training, the company also wanted to raise the bar and empower these managers so they would take more ownership of their aisles.

The academy concept had been in place at Asda stores, Walmart’s British subsidiary, for about 20 years. Wilkinson said Walmart took what Asda was doing and updated the training, in both content and delivery. There’s extensive use of iPads as well as virtual reality headgear to simulate what’s happening in the stores. For the two-week program, new supervisors learn about product promotion, inventory management and flow, retail math, and team leadership, among other things. Because most classrooms are inside stores, much of the learning is “kinesthetic,” taking place at the shelves and in the aisles, where the employees can see how it all comes together. One week is core training, applicable across Walmart. The second week is more specific, tied to particular departments. In addition to participating in the training, the employees form strong networks with people in other stores who are doing the same job and confronting the same issues. They learn from each other as well as the trainers.

Walmart wants consistency, but it also wants managers to think out of the box, so much of the training is about teaching employees how to balance those two ideals, which can be at cross-purposes if not approached correctly.

“The entrepreneurial element within Walmart is driving sales,” says Wilkinson. “What are you doing to display products, promote products, and create a great experience for customers and associates?”
Walmart has a shorter, two-day program for lower-level managers and a six-week program for assistant store managers. It also has just begun a program for store managers. Much of the content is digital, and it can be quickly revised to reflect new policies and procedures. The training happens in lieu of the associates’ normal work assignments, so employees can focus on learning.

Because of Walmart’s size, it can be a lightning rod for criticism. There is sniping that the skills taught at the academy are applicable only to jobs at Walmart and have little value outside the retailer. But Wilkinson says that’s just not the case. The instruction is both broad and specific. It helps Walmart employees do their jobs better, but it also makes them valuable to other companies, both inside and outside the retail sector.

“It’s not just opportunity within Walmart,” she says. Adding that “the training has an aspirational element that lasts and that affects employees in profound ways. They’re thinking about education differently. They are signing up to finish their GED or to further their education.”

Walmart faces intense competition from both brick-and-mortar and online retailers. Growth is essential, and a better-trained workforce is key to meeting the needs of customers and increasing sales. It might be paying off. Revenues at Walmart’s U.S. stores are up. So is operating income.

“It’s really a case of leadership skills that are being taught,” says Wilkinson. “By helping us drive even better results in our business, not only are they more skilled, but they are leading their teams differently.”
Q&A

CONSUMERS ENERGY
CREATING TALENT PIPELINES

Consumers Energy, the principal subsidiary of CMS Energy, was among the first companies to use the framework developed by the U.S. Chamber of Commerce Foundation to build a talent pipeline, teaming up with two community colleges to help ensure a supply of well-trained utility linemen. Based in Jackson, Michigan, Consumers is now also leading a larger initiative to create more of these pipelines across Michigan. These networks borrow heavily from the concept of supply-chain logistics, which already plays a big role in the state’s auto industry. Here’s how Consumers got going and what the company learned along the way.

Was there a trigger event that caused you to rethink the skills gap and how you were recruiting employees?

“In 2013, we were trying to hire 150 natural gas lines workers for a big infrastructure program,” says Dan Malone, Consumers’ senior vice president of engineering. The company received 4,000 applicants, but only 50 of them were qualified. “We found most did not have the requisite knowledge or basic skills needed to perform the job. This was a wake-up call, and I knew we needed to apply innovative thinking to provide the kind of services our customers want and need.”

What was the most challenging part of creating a talent pipeline?

“As a regulated industry, our training competencies are very stringent, so we had to really examine the curriculum closely and better align it with our requirements,” says Catherine Hendrian, senior vice president of human resources. She says the process involved working closely with organized labor, technical trainers, and faculty members at Alpena and Lansing community colleges. “To their credit, everyone rose to the challenge.”

Why is the business community best equipped to lead the effort to close the skills gap?

“We need to lead this effort because we know the qualifications that lead to successful employees,” says Malone. “It just makes sense for businesses to work together with the state, labor, and the educational community toward a common goal of meeting employment needs.”

What lessons has Consumers Energy learned from this process?

“Before we engaged with the Talent Pipeline Management (TPM) program, we had been very general in our employment approach,” says Hendrian. “We sometimes weren’t clear about when, where, and how many employees we needed, or the assumptions on which our needs were based. As a result, there were students, schools, and those funding the effort who became frustrated when hiring didn’t happen as expected. We realized we needed to really button down the employment projections more precisely and work with just a few schools to customize programs, rather than the more widespread approach we and most other companies had been using.”

Talent pipelines draw a lot of their inspiration and architecture from supply-chain management. How do we do that in a way that is respectful to people?

“The rigor of the TPM methodology is more respectful of the people being trained—and provides more job certainty at the end of their training,” says Malone. “This is a big improvement to the general approach society has used for many years that is basically an open call. If a person goes to a TPM-created program, they know what the real opportunities are that will be waiting for them when they’re done. They can match their skills and drive to defined pathways. It also minimizes the risk for their investment in training.”

PHOTOGRAPH COURTESY OF CONSUMERS ENERGY.
New Opportunities

Wegmans

It comes as no surprise that the supermarket chain, an industry innovator, tried to solve two big problems at once: give entry-level workers, many from poor communities, the skills to succeed—and cut down on turnover.

Wegmans food markets is known for its leadership in the supermarket industry, and that extends well beyond its wide array of gourmet store brands. So it’s not surprising that the chain also has a nationally acclaimed program aimed at closing the skills gap by widening the pool of qualified applicants. The Hillside Work-Scholarship Connection is 30 years old and still going strong. It began in the 1980s, when Wegmans was wrestling with two distinct problems in its home city of Rochester, New York.

First, its executives saw a generation of students growing up in poverty, needing jobs and not getting opportunities to develop the skills to build sustainable careers. Second, the stores were dealing with high turnover in their entry-level positions, the slots often held by teenagers—cashiers, general customer service employees, and “helping hands” who collected carts in the parking lots.

Wegmans has a track record of finding solutions to tough problems, and figured out a plan that helped these young people get skills and also improved employee retention. It clicked then, and it’s still clicking. The program was awarded a Points of Light award in 1991 by President George H. W. Bush, has received endorsements from the National Center on Education and the Economy, and has been studied by academics and industry trade groups.
“This has been a great source of skilled employees for Wegmans,” says Colleen Wegman, the company’s president and CEO. “Their training helps us provide exceptional customer service and the young students learn valuable lessons that stick with them through their careers.”

Here’s how it works. Wegmans began the program on its own and now operates it in partnership with the Hillside Family of Agencies, a nonprofit also based in Rochester. Interested students must meet eligibility guidelines. This could include living in poverty, earning poor grades, and/or having low attendance at school. In short, these are young people whom many employers might instinctively avoid. Not Wegmans. A key component of the program prior to employment is the 25-hour Youth Employment Training Academy (YETA), where Hillside instructors teach the students the basics: communication, proper attire, interview skills, and the importance of punctuality.

Once they complete that stage, the students can apply for jobs at employer partners including Wegmans, which operates more than 90 stores in New York, and five other states. The chain currently has more than 600 of these students working at its stores while they attend high school. Their extensive training continues at the store, as they learn the

Teya Richards
Bakery Manager, Wegmans
Pittsford, NY

PHOTOGRAPH BY SHANE LAVALETTE.
Q&A

GENERAL ASSEMBLY

General Assembly, based in New York, partners with leading employers, such as General Electric, Adobe, and L’Oreal, to address talent gaps and create diverse, proprietary talent pipelines by using skills-based assessments to accurately map the abilities of current employees to prospective hires—and deliver accelerated training programs in high-demand fields like digital marketing, data science and technology. Over the last six years, General Assembly has placed over 6,500 graduates at companies worldwide.

Charlie Schilling, the company’s general manager of enterprise, explains General Assembly’s work.

Are only certain people suited for information technology jobs?

Definitely not. We have worked with dozens of major employers to design assessments that identify and map latent talents and abilities. What we call “radical reskilling” is about creating pathways for even non-technical workers into fields like data science and web development. We’ve proven, across more than 40,000 alumni, that we can help companies to transform their existing workforce into the sort of talent they need to fill in-demand roles. It’s more about teaching people to learn and manipulate tools—and preparing them to adapt and learn new skills as workplace demands shift.

How are employers paying for the training?

In many cases, we’re seeing employers redirect budgets that they’d otherwise spend on recruiting and retraining toward collaborating with us on their talent pipeline. Lateral churn can be really costly within high-demand fields like data science, so our employer partners are able to establish a very clear ROI from the reskilling of existing employees. We also have campuses in twenty cities around the world where individuals can attend our programs. More than half of our part-time students on campus are being funded by their employer.

How do the students benefit?

For both the enterprise and the individual, we measure success in terms of job placement and retention. Whether they are participating in one of our programs through an enterprise partnership, or paying out-of-pocket at a General Assembly campus, the benefit to students is a transparent pathway to a career in a field they love and skills that they can apply as the workplace evolves—without the burden of massive debt.

Are four-year or two-year degrees a thing of the past?

No, but new models are certainly challenging the paradigm of higher education and vocational training. Employers looking for workers in high-demand fields care less and less about pedigree. In some cases, they’re seeing that reliance on credential-driven hiring requirements can make talent identification even more challenging. We think people should be hired for what they know, not where or whether they went to a particular school.

Does this change the talent pool for tech jobs?

Absolutely. We can make the mouth of the funnel wider. We’ve proven that to our partners. Skills gaps exist because employers can’t find talent with the competencies that they need, when they need them. Our approach is enabling employers to discover high-potential talent internally and externally, and they’re finding that when they invest in helping individuals to develop in-demand skills, they can actually improve retention. What’s equally exciting is that when we help companies to expand their talent pipeline, we’re able to help companies achieve other objectives that are equally important—like diversity and inclusion.
KENTUCKY
LEADING THE PACK

Kentucky has been a national leader in workforce development. Through the support of the Strada Education Network and JPMorgan Chase Foundation, the Kentucky Chamber of Commerce created a Workforce Center this year that draws heavily on the research of the U.S. Chamber of Commerce Foundation’s work in talent pipeline management and career readiness. It’s the first of its kind.

Beth Davison is the center’s executive director; Diana Taylor is a consultant with the Kentucky Chamber. Here’s their advice for how other states can get going.

Start small: The Workforce Center has begun two talent pipeline pilot projects, one in manufacturing and the other in health care careers. It plans to use those results to fine tune and then expand to other sectors of the economy. Next up are construction trades.

Embrace regional distinctions: Kentucky’s economy and geography are diverse. The workforce development needs in the coalfields in eastern Kentucky are different from those in the cities that hug the Ohio River. “Kentucky’s diversity in terms of income and geography and economics gives us an opportunity to try different approaches for different audiences,” says Taylor.

Know that basics matter: Employers have told the Chamber that so-called soft skills—communication, punctuality, accountability—are as important as more advanced skills, so the Chamber is working with elected officials to make career readiness a part of the state’s K-12 system.

Networks and partners: Several of Kentucky’s largest employers, including Toyota and UPS, have been leaders in skills and education initiatives. The Chamber wants to learn from and collaborate with them and other partners.

Listen to business: “We have to have a supply and demand system,” says Davison. “Only employers know what they are going to need in the future. The only way you get that is if you have employers stepping up to the table in meaningful and interactive ways.”

Wegmans approach to providing exceptional customer service, for which the supermarket chain is famous.

Joe Wesley, director of strategic workforce development at Wegmans, says a critical insight came early. Prior to the development of the YETA program, store managers were inclined to go easy on these new hires, believing they should not be held to the same standards as other employees. But they soon realized this was a mistake.

“We had this aha moment,” he says. The students needed to be treated as equal to all other employees. “These kids elevated their game. They were just as smart, just as capable. They just needed the opportunity to show it.”

Turnover for these employees is only about 20 percent, compared to close to 30 percent for similar positions across the company. That reduces the cost of training new employees. And seasoned employees are often better at their jobs. In addition, the Hillside students’ graduation rates are much higher than those of their peers in similar schools, Wegmans officials say. A big part of the success is due to the mentoring and support provided by youth advocates at Hillside—and by Wegmans—which can help these young employees when they are struggling with a problem at home, at school, or on the job. It’s not complicated, but that corporate commitment is essential.

Wegmans works with Hillside in four of its regions: Rochester, Buffalo, Syracuse, and Prince George’s County, Maryland. Just under 5,000 students are currently in the program. For participants, it formally ends upon graduation. Many stay with Wegmans, transitioning to full-time positions or working part-time while attending college. Hillside also works with other major employers in the Rochester area. There are close to 700 former Hillside students who are still working for Wegmans; nearly 75 percent of them are attending college.

For Wegmans, the program also has served as a talent feeder for its distribution and manufacturing facilities—and in its management-training program. It has also created a more diverse workforce, says Ashleigh Smith, the company’s director of talent development.

While most of the skills that Wegmans teaches entry-level employees aren’t technical, they are highly transferable to other jobs, particularly as teamwork and communication become vital to business success.

For the kids who sign up, there’s another upside. Even if they don’t return to Wegmans, store managers were inclined to go easy on these new hires, believing they should not be held to the same standards as other employees. But they soon realized this was a mistake.

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Career Readiness

JPMorgan Chase

Building a skilled workforce first requires planning—and insight into labor markets. The big bank’s role? Fund research that will help high school students and others make smart career choices.

Funny how a recession will change the way you think about things. First, a little background. Four years ago, JPMorgan Chase launched a $350 million initiative aimed at closing the skills gap not just at the bank but, boldly, across the world. The bank’s idea: workforce development needed to be driven more by facts. Not anecdotes. Not guesses. In other words, information would be power. That’s because the institutions that provided workforce training didn’t have sufficient data on employer needs. And the future employees? Well, they had little clue what their career options were at the point when they could make decisions about their futures, particularly when it came to jobs that offer career advancement—and require some postsecondary education but not a four-year degree. Sarah Steinberg, program officer for the bank’s New Skills at Work initiative, says the bank’s deeper involvement in the skills gap began in the years following the 2009 recession. “At the time, we were seeing that the economy was still recovering, but there were still high levels of unemployment.” She adds, “We were also hearing from many of our clients and companies that they were having trouble hiring the workers they need.” That was the tipping point. After all, it’s a problem for banks if businesses don’t borrow because they aren’t growing. “We thought, ‘What’s going on?’ We wanted to invest in the labor market,” explains Steinberg. “How do we better align our education systems with the demands of the labor market?”
First, JPMorgan and its team needed to understand what was happening from an employment standpoint in local areas. Its researchers dug into nine metro markets—Chicago, Columbus, Dallas, Detroit, Houston, Los Angeles, Miami, New York, and San Francisco—and produced wide-ranging assessments of what was present in each community—and what was needed to develop the middle skills in highest demand.

But it’s not just the demand side. Steinberg says the reality is that young people in high school are often unaware of their true career choices. They need earlier access to labor market information so they can take stock of the skills they have and those they need to obtain. It’s more than wages. It’s also what a career ladder looks like, what’s needed to advance, and how those advancements might be reflected in a paycheck.

In New York, for example, JPMorgan worked with the Council of Adult and Experiential Learning (CAEL), to build a website called www.bankingonmycareer.com, which highlights the wide range of good-paying (and often unknown) middle-skills jobs in the financial sector. In Houston, there’s a similar site called www.petrochemworks.com.

“What we are trying to do with these platforms is help young people see what a career path can look like for them in a particular industry,” says Steinberg. “They are demystifying what is out there, how you get into them, and what kind of skills are required.”

There’s a technology component at play as well.

A new generation that does everything on smartphones wants to be able to swipe for matches with employers. And to make sure students know about opportunities, the platforms are partnering with school systems and governments to talk with young adults early about careers in these fields. Steinberg says it can be a challenge to break through the digital clutter and get these websites in front of young adults. It’s an ongoing marketing effort.

Middle-skills jobs cover a broad swath of the American workplace. Steinberg cites research by Anthony Carnevale at Georgetown University’s Center on Education and the Workforce, funded through JPMorgan Chase, that reported there are 30 million well-paying middle-skills jobs in the U.S. economy, from computer technicians to property management. “People don’t think of them in the same way as the jobs that existed 40 years ago,” she says. “They’re in health care and financial services as opposed as manufacturing or mining, and they also require more than a high school diploma.”

The New Skills at Work initiative also wants to address gender inequality in these middle-skills jobs. Historically, there’s been a wide gender disparity in pay for equivalent middle-skills jobs depending on whether they are predominantly held by men or women, according to the Institute for Women’s Policy Research, which says women have only about a third of the best-paid middle-skills jobs. A key concern for Steinberg and others is changing that dynamic and helping women and people of color pursue these better-paying middle-skills jobs.

As part of its $350 million investment, JPMorgan Chase recently said it would spend an additional $75 million to expand skills-based education for young people to help bring down the youth unemployment rate. The goal there is to increase the number of young adults who are earning credentials in the most sought-after middle-skills jobs. For example, the company is working with other organizations, including Bloomberg Philanthropies and the U.S. Department of Labor to develop apprenticeships in careers such as technology and health care. Another effort includes working with education leaders in 10 states to improve their career and technical education systems.

Neither program is designed for quick results. But as far as Steinberg and JPMorgan Chase are concerned, it’s a great start.
The skills gap is real. The data confirms it and underscores what we—and you—see in offices and factories every day. But let’s not call it a problem. Let’s call it what it is: a challenge.

We’ve seen on these pages how businesses in all sectors and of all sizes are working to close the skills gap, particularly in what are called middle-skills jobs, those that don’t require a four-year degree. The next steps are critical. They involve making workforce development a core competency for all employers.

In its labor market analysis, Burning Glass Technologies notes that the complexity of the issue means there is no single solution. What helps one sector might harm another. Instead, the company says, “Ultimately, a combination of efforts with different partners and different time frames to attack problems may be the approach that has the most impact.”

Fortunately, businesses have many tools and strategies to use. Some are new, others are steeped in tradition and updated for the modern era. Apprenticeships, for example, never disappeared, but they are being applied to a wider range of careers. Upskilling—training existing employees to enhance their value and career prospects—has also been a staple. Walmart’s academies show the effectiveness of this strategy. But in talking with business leaders around the country, we found greater attention to the process and a sharper focus on teaching the right skills and creating apprenticeships for the jobs that do exist and in areas where demand is highest.

The long view is equally intriguing. Companies such as Consumers Energy are investing in talent pipelines to ensure a steady flow of qualified candidates so the right personnel are available at the precise time they are needed. This model, developed by the U.S. Chamber of Commerce Foundation, creates strong and flexible partnerships with educators. The Foundation is working to advance this approach across industries.

There’s also a broad consensus that reforms in the educational systems, both traditional and vocational, and an emphasis on career readiness, are required. Businesses are expanding outreach to K-12 students, so that future employees understand their options and know that rewarding jobs don’t necessarily require a traditional college experience. Employers are also digging deep into analyzing regional labor markets to understand the push and pull of career choices. This is vocational education that is ambitious in its scope, encouraging students of all aptitudes to explore these careers.

Part of the reform effort is geared toward developing new training models, creating innovative programming with public and private educators that deliver needed skills quickly and efficiently. It’s less about degrees and more about credentials and what employees need to know to get hired, and then their capacity to grow in their jobs.
“We need to retrofit our postsecondary education system to provide more viable earn-and-learn pathways that lead to careers and industry-recognized credentialing,” says the Chamber Foundation’s Jason Tyszko. “Our public policy shouldn’t pick one pathway, such as college, over another, i.e., careers, but should provide meaningful and dignified pathways for both.”

Businesses are leading the effort to close the skills gap, and they are also working closely with governments at the local, state, and national levels to fashion the right policies and incentives for training. Government should be a partner, but the push and the momentum are coming from the private sector, where employers intimately understand their workforce needs. Because of the diverse nature of the U.S.—both economically and regionally—there isn’t a one-size-fits-all solution.

Instead, the best practices are promoting innovation based on a deep understanding of local labor markets. Closing the skills gap isn’t just about giving American workers additional skills. It’s about giving them the right skills, the skills for the jobs that are in high demand, that offer good wages, stability, and opportunity. Demand is the key word. Workforce development is becoming demand-driven, as businesses fine-tune the exact skills they need and when they need them. By coordinating this demand with educators, businesses can maintain a skilled workforce that expands with their needs and creates value for customers, shareholders, employees and the communities in which they operate.

“There’s a lot of discussion in Washington and throughout the country in terms of programs that cross many different paths and agencies that are trying to get at vocational training,” says Siemens USA chief executive officer Judy Marks. “But we believe we’re best at trying to define the skills we need.”

**BEST PRACTICES**

**Introducing Talent Pipeline Management**

The U.S. Chamber of Commerce Foundation has implemented a new demand-driven program—Talent Pipeline Management (TPM)—to help close the skills gap.

TPM is an innovative approach that puts employers in an expanded leadership role as “end customers” of talent supply chain partnerships from select U.S. education and workforce programs. In other words, employers help directly develop skills training programs—when they need them.

The Foundation also has launched the TPM Academy, a training resource platform designed to help business associations—and employers—become experts in the best talent supply chain practices. The project has grown from only seven pilot partners in 2015 to more than 70, which includes more than 350 employers in 23 states.

In addition to TPM, the foundation is engaging in a wide variety of initiatives to strengthen the current—and future—workforce, including high-quality early education, youth employment, and career readiness across the K-12 and postsecondary education pipeline. For more information, go to www.TheTalentSupplyChain.org.
Business Leading the Way

The private sector must take charge—and champion solutions for workforce issues.

Thomas J. Donohue
President and CEO,
U.S. Chamber of Commerce

One of the U.S Chamber’s most important missions is to drive stronger growth in our economy, which will in turn create jobs, lift incomes, and spread opportunity for Americans. Jump-starting our long and lackluster recovery would help revive the American Dream for many who have felt left behind in the 21st-century economy.

It will take an all-of-the-above growth strategy to push our economy from its historically low rate of 2 percent annual growth to the 3 percent or more we really need. It will require an overhaul of our tax code, regulatory relief and reform, infrastructure investment, robust U.S. trade, and commonsense immigration reform. And crucially—as this publication discusses in depth—it will require a bold and aggressive effort to build and sustain a workforce that meets the needs of the modern economy and the needs of middle-class Americans.

Make no mistake, of all our nation’s abundant resources, our people are by far our most valuable. But shortcomings in our education and workforce training and retraining systems are contributing to a widening skills gap that is leaving people without jobs, and jobs without people. We must find better ways to re-employ the millions of Americans who are out of work and to provide younger Americans with rewarding careers. And we must ensure that employers have the skilled workers they need to hire, expand, and grow the economy.

We must begin by fixing our K-12 schools—not just with a few adjustments around the edges, but with bold and sweeping reforms that will prepare students for life after high school, whether that’s college or career. We also need new thinking when it comes to training Americans for the jobs of the future. Many of these jobs require specialized training, but not necessarily a four-year college degree. It’s important that we help young people obtain credentials—degrees, certificates, or otherwise—that are valued in the labor market.

Beyond their initial education, people also need to constantly improve their skills so they can keep up with the rapid changes taking place in the 21st-century economy. Learning must be a lifelong endeavor.

The federal government has taken the lead on addressing education and training challenges for decades, and while the intentions have been good, the results haven’t always been. The fact is government can’t predict the needs of a dynamic and constantly changing economy.
This is why the business community must play a leading role in solving workforce challenges.

One way businesses can do this is by managing their talent pipelines much like they manage the supply chain for any product or service they provide. The Chamber Foundation pioneered the Talent Pipeline Management approach, which empowers employers to communicate to education partners the skills they need, and the educators in turn can tailor their curriculum to prepare students for available jobs. As a result, the employers have access to the talent and skilled employees they need—such as data scientists—when they need them. And students can have confidence that they’re receiving education or training that will lead to employment.

I travel the country and meet innovative leaders every day, and I’m always struck by the creative things they are doing. General Motors, for example, works with local community colleges in New Hampshire to train car mechanics who can handle the sophisticated technology of today’s vehicles. When not attending classes, the students work at dealerships and get paid for their efforts. IBM’s P-TECH program graduates students in six years with a high school diploma and an associate’s degree in a discipline such as applied science, computers, or engineering. And these are just a few examples.

Businesses also need to help drive the modernization and expansion of apprenticeship programs. In June, President Trump signed an executive order to streamline the federal apprenticeship system and enable industry leaders to devise new programs that fit the needs of our economy. In response, the U.S. Chamber has convened a coalition of business groups to develop a proposal for an employer-led apprenticeship system, drawing on work the U.S. Chamber Foundation has been doing for the last several years. The employer-led model is still in the planning phase, but it’s not too early for businesses to begin taking steps to expand their existing apprenticeship programs. Doing so will allow them to create opportunities for talented and hardworking Americans to join their teams.

The business community stands ready to work with all the stakeholders—including government—to address this challenge. It’s the best and probably the only way to close the skills gap for good. The American Dream cannot survive, and our economy cannot thrive, without a workforce equipped to fill the jobs our businesses create. This much is clear: while business must drive the process, everyone needs a bit of skin in the game.

And you don’t have to be trained as a big data scientist to figure that one out.
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