



EMPLOYERS & JOB TRAINING

NEW JERSEY AS LABORATORY FOR AMERICA

TAMAR JACOBY
JUNE 2017



EMPLOYERS & JOB TRAINING

NEW JERSEY AS LABORATORY FOR AMERICA

TAMAR JACOBY
JUNE 2017

ABOUT THE AUTHOR

Tamar Jacoby is president of Opportunity America, a Washington-based nonprofit working to promote economic mobility. A former journalist and author, she was a senior writer and justice editor at *Newsweek* and, before that, the deputy editor of *The New York Times* op-ed page. Her articles have appeared in *The New York Times*, *The Wall Street Journal*, *The Washington Post*, *The Weekly Standard* and *Foreign Affairs*, among other publications. She is the author of “Someone Else’s House: America’s Unfinished Struggle for Integration” and editor of “Reinventing the Melting Pot: The New Immigrants and What It Means to Be American.” Since 2008, she has been president of ImmigrationWorks USA.

ABOUT THE ORGANIZATION

Opportunity America is a Washington-based nonprofit promoting economic mobility – work, skills, careers, ownership and entrepreneurship for poor and working Americans. The organization’s principal activities are research, policy development, dissemination of policy ideas and working to build consensus around policy proposals.

ACKNOWLEDGEMENTS

Opportunity America thanks the many employers, educators and policymakers in New Jersey who shared their time and insights about how employer engagement in workforce education is changing in their state. We’re particularly grateful to the educators at Camden County College and the small and medium-sized manufacturing employers who partner with them. Special gratitude goes to The Achelis Foundation for its generous support for this project.

EMPLOYERS & JOB TRAINING

NEW JERSEY AS LABORATORY FOR AMERICA

TAMAR JACOBY | JUNE 2017

EXECUTIVE SUMMARY

The consensus is all but universal: more needs to be done to prepare American workers for the jobs of the future – and employers need to be more involved in job training, whether providing it themselves or working with educators who provide it. Among other reasons employer engagement is critical, it's the only way to guarantee that workers are learning skills in demand in the workplace. The problem: despite this consensus and more than a decade of effort by policymakers and others, employer involvement lags well behind what many think is necessary to meet the nation's workforce needs.

Why is this so? What are the obstacles to more robust employer engagement? One place to look is on the ground where policy is implemented – in the states. This paper examines employer engagement in the state of New Jersey.

The Garden State boasts a highly skilled workforce with a high percentage of college graduates. But as in all states, challenges loom, particularly in the middle-skill job market – jobs requiring more than a high school diploma but less than a four-year college degree, expected to account for roughly half of state labor demand in years ahead. In New Jersey as elsewhere, middle-skill jobs are changing and many require significantly more training than in the past.

A new generation of lawmakers and business leaders has stepped up to respond to the challenge with a new state approach that borrows from and aligns closely with the latest national thinking about workforce policy. A statewide system of stakeholder partnerships aims to engage employers and educators in high-wage, high-demand industries. Each partnership recruits employers and convenes regular meetings to

discuss skills gaps and other labor market trends. Planning centers on training that leads not just to jobs, but to careers and industry-valued occupational credentials.

Employers need to be more involved in job training – it's the only way to guarantee that workers are learning skills in demand in the workforce.

On paper, it's a model system. What hasn't been much explored, partly because scant data are available, is how this and other, similar policies in other states are playing out on the ground. Is the New Jersey approach, so closely aligned with the best national thinking about skills, working as intended to produce results across the state? This paper aims to distill lessons for New Jersey, but also for other states and for federal policy. What works? What doesn't work? What issues remain to be resolved? New Jersey makes an ideal laboratory.

The paper draws on interviews and other input from some four dozen New Jersey employers, educators and policymakers, as well as visits to companies, colleges and training programs across the state.

Among the programs and partnerships featured in the paper:

- The state-funded Basic Skills Training Program, which brings companies and community colleges together to teach employability skills to incumbent workers, reaching 120,000 New Jerseyans over the past decade.

- A philanthropic funders collaborative that seeds employer partnerships to offer training: members include JPMorgan Chase, the Prudential Foundation, the Wells Fargo Foundation, PNC Bank and the Walmart Foundation.
- An automotive training program sponsored by the Ford Motor Company, working with some two dozen local auto dealers, that prepares unemployed men and women from inner-city Newark to work as maintenance and repair technicians.
- A retraining program at the Jersey City Medical Center that helps low-skilled, low-paid employees, including cleaning staff and food service workers, acquire skills that enable them to move up to better jobs.
- A state-funded, statewide program that brings companies and community colleges together to teach basic manufacturing skills to unemployed workers, helping them find jobs in the state's thriving advanced manufacturing sector.
- Five advanced manufacturing companies finding ways to partner with community colleges, developing curricula, screening potential trainees and helping to launch or fund new training programs.

The paper draws five principal lessons for policy.

Community college leadership. In New Jersey as in many states, companies and colleges are often ignorant or wary of each other and hesitant to partner on workforce training. New Jersey policy-makers are working to remedy this with two programs that incentivize educators and employers to collaborate, offering classes in employability and manufacturing skills. Neither program demands a great deal of employers, but results have been encouraging: over 10 years, some 7,000 companies, large and small, have partnered with community colleges to train workers, and many are now looking to take a next step, collaborating in a more intensive way on more advanced programs.

The takeaway for other states: policy can help prime the pump, funding initiatives that introduce companies and colleges to each other and show

them how to work together on a first collaborative effort.

Hard conversations. In all too many cases, even when they come to the table, companies and colleges end up talking past each other.

The emerging national consensus on workforce training puts a premium on sector strategies – employers, educators and others in a single industry coming together to plan and execute training initiatives. New Jersey's new approach is built on sector partnerships and regular, regional employer convenings. The initiative is generating interest and attracting employers, but some meetings are more meaningful than others. The lesson for policy: employers new to the issue need information and direction – and doable tasks they can accomplish together.

What hasn't been much explored: how the new national thinking is playing out on the ground.

The same is true at the college level and perhaps even more important. Occasional advisory board meetings and perfunctory advice are not enough. What's needed: more precision, more blunt talk, hard-headed negotiations and detailed agreements of the kind employers make with other types of suppliers.

Industry certifications. Among the most effective tools employers and educators can use to communicate with each other are occupational certifications. Competency-based credentials, often developed by industry associations, certifications signal to students the skills employers need and tell employers which job applicants have been trained to industry standards. The problem: many employers are unfamiliar with the certifications available in their industries, and many community colleges resist teaching to them. New Jersey shows what a state can do to create incentives for both parties.

Who should pay? Surprisingly enough, the question rarely comes up in New Jersey. As is, it's mostly the state that pays, far less often the businesses that stand to benefit from a more skilled workforce. Many people, employers and policymakers, seem to feel this is as it should be or that it's inevitable – firms will never pay. But conversations with employers across the state suggest otherwise: companies can and will contribute if the need is pressing enough.

A more workable answer would ask all parties with an interest in the outcome to share in the cost – employers, taxpayers and students. Among other reasons, employers who were paying something would pay more attention to training programs – they'd have more hard conversations with educators and make sure training produced workers with the skills they need at their companies.

Doable tasks. Perhaps the most striking lesson from New Jersey: given a limited, focused task, within their means and likely to produce an outcome of value to them, many employers will step up.

New Jersey policymakers have developed a series of small, simple asks: send some employees to employability skills training, pay their wages during class hours, spend some evenings screening candidates at a community college, host an intern for a few weeks, help design a new pro-

gram, interview and hire trainees. These are modest tasks, just the beginning of what's needed. But companies across the state are responding, and once they start to see the value of engaging, many seem willing to do more.

Is the New Jersey system, so closely aligned with the best new national thinking, producing results in the state?

Rudimentary or more advanced, it's a system built on partnerships. Employers share the burden with a network of strong institutions: high schools that offer career and technical education, community colleges, workforce-system training providers, credentialing associations and an array of intermediaries. Policymakers must do their part to fund and incentivize those institutions. But once they do, it's not unrealistic to expect employers to buy in as partners in the process.

The state of New Jersey is working to build a system that will challenge and engage employers in this way. So far, so good, although there is still much to be done.

EMPLOYERS & JOB TRAINING

NEW JERSEY AS LABORATORY FOR AMERICA

I. INTRODUCTION

It's a rare point of clarity and consensus in a world of economic uncertainty: more needs to be done to prepare American workers for the jobs of the future. Baby boomers are retiring. Technological change is transforming what's in demand in the workplace: more sophisticated, highly educated workers, but also – at the lower rungs of the jobs ladder – more specialized technical skills. Even as the unemployment rate drops toward the lowest point in a decade, near full employment, 6 million jobs stand empty across the U.S. – often because employers can't find workers with the skills to fill them. Worse still, many workers who lack needed skills are dropping out of the labor force.¹

There's much new thinking – intellectual ferment and policy proposals – about how to meet this challenge. But virtually all starts from the same core tenet: employers need to be more closely involved in job training, whether providing it themselves or working with educators who provide it. Among other reasons, this is the only way to guarantee that workers are learning skills in demand in the workplace. The problem: despite this growing consensus and more than a decade of effort by policymakers and others, employer engagement lags well behind what many think is necessary to meet the nation's workforce needs.

It's not for lack of trying. Engaging employers has been a key thrust of federal policy since the Workforce Investment Act was signed into law in 1998. New thinking about how to collaborate with business was incorporated in a reauthorized version of the legislation, the Workforce Innovation and Opportunity Act, or WIOA, passed in 2014. Both laws delegated workforce training, and with it, employer outreach, to the states, generating 50 different experiments in how to engage the private sector. The Obama administration bet on apprenticeship, one of the most demanding types of involvement for companies, spending \$260

million in an effort to double the number of apprentices nationwide. Private philanthropy shares in the vision and has also invested heavily over the years: tens of millions of dollars meant to seed partnerships between educators and employers and spur matching investments by companies.²

The result, virtually all agree, has been uneven at best. Employers do a lot of training: far more than the federal government. And spurred by the new thinking of recent years, a vanguard of companies is doing more, launching apprenticeship programs, training incumbent workers, partnering with community colleges and mentoring high school students, among other initiatives. But these are still pockets of excellence – far from the full-scale effort that's needed. Big companies do much more than small companies. Educated workers – managers and those with college degrees – get more than their fair share of instruction. Technical training is in particularly short supply. And those most in need – "middle-skill" workers with more than a high school diploma but less than a four-year degree – are often the most shortchanged.³

Why is this so? What are the obstacles to more robust employer engagement? One place to look is on the ground where policy is implemented – in the states. There's no typical state. All use somewhat different strategies to train workers and encourage employers to partner in providing training. But New Jersey is a telling exemplar.

New Jersey boasts a highly skilled workforce – it's number five in the nation in the percentage of college graduates. National rankings of state workforce policy often place it in a top tier, forward-looking and innovative. But as in all states, challenges loom, particularly in the middle-skill job market, expected to account for roughly half of New Jersey labor demand in years ahead. In the Garden State as elsewhere, middle-skill jobs are changing, and many require significantly more training than in the past.⁴

Although the state's legendary manufacturing sector is shrinking, from nearly half of all non-farm jobs in 1950 to less than 10 percent today, small, advanced manufacturing shops complain that they can't find the workers they need – adaptable, problem-solving technicians trained to use precision instruments and computerized equipment. So too in health care. Sixteen of the 20 jobs expected to grow fastest in New Jersey in the next decade are in health care, including emergency medical technicians, home health aides, personal care aides, phlebotomists and physical therapists' aides and assistants. These and other middle-skill jobs offer ample opportunity for upward mobility, but all require specialized training or retraining – with employers closely involved to ensure that workers are acquiring up-to-date skills.⁵

New Jersey hasn't always been in the vanguard of states working to improve workforce training – a decade ago, it rarely featured in national conversations. But a new generation of lawmakers and business leaders saw the need and pushed through an overhaul of state policy, now closely aligned with the best new thinking nationwide.

A statewide system of stakeholder partnerships aims to engage employers and educators in seven high-wage, high-demand industries, including health care and advanced manufacturing. Each partnership recruits employers and convenes regular meetings to discuss skills gaps and other labor market trends. Planning centers on training that leads not just to jobs, but to careers and industry-valued occupational credentials. In-demand industries, employer partnerships, career pathways, industry credentials – all are watchwords of current thinking about workforce training in Washington and nationwide.⁶

The state's largest and most influential employer group, the New Jersey Business and Industry Association, is an active partner in this overhaul. It and the state department of labor have spent lavishly to publicize the effort and get the message out across the state – to educators, employers, students, parents and others. Most distinctively in New Jersey, the state's 19 community colleges have stepped up to play a leading role in the new training, coming together as a group to partner with employers. And the effort

is amply subsidized by state funding – an array of competitive grant programs.⁷

What hasn't been much explored, partly because scant data are available, is how the initiative is playing out on the ground. Is the New Jersey system, so closely aligned with the best national thinking about skills, working as intended to produce results across the state?

**Over the past ten years,
7,000 New Jersey companies
have partnered with
community colleges to train
120,000 workers.**

Are employers engaging? Are the conversations in the new industry partnerships meaningful and focused on solutions? Are employers coming through with advice, and is their input helpful to educators? Most important, is the new training meeting employers' needs? And is the effort taking off? Are employers participating on a new scale – the scale that's needed in New Jersey and elsewhere?

This paper aims to answer these questions, distilling lessons for New Jersey, but also for other states and for federal policy. What works? What doesn't work? What issues remain to be resolved? New Jersey makes an ideal laboratory. New Jersey lawmakers and business leaders have articulated a vision in line with the best new national thinking, and they're working hard to translate it into action on the ground. The results so far are promising, but there is still work to be done.

Section II of the paper will look more closely at the new New Jersey workforce policy, including how it aligns with current thinking in Washington and other vanguard states. **Section III** draws on interviews and other input from some four dozen employers and community college educators to explore how the new policy is playing out on the ground. **Section IV** offers recommendations for policy.

II. A NEW VISION

In New Jersey as in every state, a significant portion of the job training budget comes from Washington DC, and passage of the 2014 Workforce Innovation and Opportunity Act required state policymakers to develop a plan implementing the new legislation. New Jersey launched an elaborate, six-month planning process: working groups, webinars, a statewide conference for 300 stakeholders – educators, employers, union leaders, community-based training providers, workforce investment boards and one-stop career center operators. By all accounts, it was a model process, and the plan was delivered to Washington ahead of schedule.⁸

But some state workforce officials later played down its significance. “WIOA aligned with what we were already doing,” one policymaker said. “It reemphasized concepts we were already focused on.” New Jersey policymakers were already overhauling state workforce policy – driven by much of the same new thinking that was driving change in Washington.

The old model, in New Jersey as many states, relied on two different strategies. The federal government dispersed funding to the states to spend on job training – mostly for unemployed or underemployed workers and delivered by nonprofits and community groups with little input from employers. Meanwhile, a largely separate stream, the state gave tax credits and cash assistance to individual companies to train incumbent workers – payments designed mainly to attract or retain firms in the state.⁹

The old system isn’t dead. Like all states, New Jersey still uses federal funds to train unemployed workers, and it still bolsters individual firms with money for customized training. But many workforce policymakers feel these strategies are no longer enough.

Too often in the past, because most training was done without consultation with employers, unemployed workers trained for disappearing industries, or they learned outmoded skills no longer in demand in the marketplace. In other

cases, a big company that would have trained in any case became adept at getting grants, and what was meant to be a lever for change became a permanent subsidy. Smaller companies were neglected. There was little effort to scale training or connect it to a larger vision of state economic development. Perhaps worst, there was no effort to build a talent pipeline. Most spending was on short-term remedies, whether for unemployed workers or for companies, and there were few incentives for employers or educators to look to the future: high schools, community colleges, companies and others coming together to build a system for the state.

The new consensus focuses less on company-provided training than employer-led collaboration with educators.

New Jersey policy changed incrementally. Officials describe a decade-long learning curve. National funders with a different vision invested in local experiments that influenced official thinking. State policymakers participated in a national competition where they were exposed to new ideas. The state’s community colleges began to focus more intensively on workforce education. The system is still evolving – officials talk about a work in progress. But over time, a new vision emerged – one that goes beyond subsidies and customized training to leverage a broad range of employers in a more deliberate, strategic way.

In New Jersey as nationwide, there’s some debate about what role employers play and should play in workforce development. There has been no federal survey of employer-provided training since the mid-1990s, and experts differ sharply over just how much is being offered. Some scholars – Wharton School economist Peter Cappelli is a leading proponent of this view – complain that employers have abandoned the role they once played in training and promoting workers, preferring to cut costs by relying on a churning, short-

term workforce. Other researchers counter that companies still provide the lion's share of training across the U.S. – more than two- and four-year colleges and the federal government combined.¹⁰

Almost everyone on all sides of the debate would like to see employers do more, especially for less educated workers. But a new consensus is emerging, focused less on company-provided training of the kind Cappelli calls for and more on employer-led collaboration with educators and other training providers.

New Jersey policymakers use the same shorthand as workforce experts everywhere to explain why this matters. It's no longer enough, they say, to "train and pray" that trainees will eventually find jobs – to teach the same skills year in, year out, with no regard to the changing job market. The new model looks to business for a wide range of inputs: real-time information about skills gaps, advice about industry trends, help designing curricula, mentoring, opportunities for trainees to visit the workplace and to put in time on the job as interns or apprentices, among other activities. Most educators' ultimate hope: that engaged employers will hire trainees, or at least consider hiring them.

The challenge, in New Jersey as elsewhere, is how to build these bridges between employers and educators. The two groups often approach the relationship with sharply different attitudes and assumptions. In theory, they speak the same language, but often end up talking past each other. College advisory committees are sometimes meaningful. But they're often a perfunctory exercise, too vague or remote to be useful.¹¹

Like WIOA and state workforce policy nationwide, the evolving New Jersey model is designed to overcome these obstacles. It's a vision that relies heavily on the state. New Jersey policymakers see it as their role to drive change at companies, particularly the smaller companies that account for 95 percent of the state economy, and at educational institutions, particularly community colleges. Workforce officials sometimes sound like social policy advocates: many talk about "systems change," with state government as the principal

"catalyst." But ultimately the goal is a public-private partnership.¹²

Like WIOA and the growing national consensus behind it, the New Jersey vision rests on four core pillars.¹³

Employer-driven partnerships. Workforce training isn't effective without employers, but employers alone probably can't do it either. Mobilizing a group of employers multiplies resources. It also provides a better picture of industry needs and trends. The ideal arrangement brings a cohort of employers from a single sector together with other stakeholders – educators, training providers, economic planners and others – first to develop, then execute a regional workforce strategy.¹⁴

New Jersey puts employer-driven partnerships at the center of its workforce policy. A system of Talent Networks established in 2011 convenes employers from seven sectors expected to create high-wage, high-demand jobs in years to come: health care; life sciences; advanced manufacturing; technology; financial services; transportation, logistics and distribution; and retail, hospitality and tourism. These networks in turn are charged with convening Targeted Industry Partnerships – smaller regional forums, also organized industry by industry, where employers meet on a regular basis to discuss trends and develop training programs. Three of the Talent Networks are associated with Talent Development Centers: community colleges or other training providers with expertise in training for particular industries that are also expected to form relationships with employers and coordinate training across the state.

Workforce intermediaries. Although the core principle behind the new thinking is that training should be employer-led, it can be hard to make that work in practice. Firms are competitive, resources are limited. And the emerging national consensus on workforce policy envisions a cohort of generally nonprofit go-betweens that convene employer partnerships, help them develop plans, connect them with training providers and, often, design and supervise training programs.¹⁵

The New Jersey system relies on several layers of intermediaries. The Talent Networks tend to be housed at educational institutions or industry associations. Two of the three Talent Development Centers are at community colleges. The New Jersey Business and Industry Association plays a major role in convening employers and coordinating state-funded training. So does the statewide Community College Consortium for Workforce and Economic Development.

Industry-valued credentials. The new vision relies on employers to do many things, none more important than describing the skills in demand in their industries. But that's often far from easy, particularly for a group of inexperienced employers all of whom produce somewhat different products or provide different services using different equipment. Many employer partnerships rely on skills surveys, others convene members to develop lists of competencies – a time-consuming, intensive task.¹⁶

Industry-valued occupational certifications are a handy shortcut. Developed by industry associations that have already done the hard work of determining the core skills in demand in their sectors, certifications function as a kind of currency, conveying vital information to both sides of the hiring transaction – signaling to students what skills employers need and signaling to employers which trainees are competent.

New Jersey workforce policy puts a high premium on industry certifications. The seven Talent Networks collect employer input about which certifications companies find valuable. The state has developed a list of in-demand credentials, and it reserves a share of state training funds for programs that lead to certifications.

A talent pipeline. Among the worst shortcomings of the old system: in most cases, the goal was training for a specific job, with little thought to what would come next – the long-term arc of a worker's career. The new goal is a career pathway – training that prepares for and builds on other training to sustain the recipient over the span of a lifetime.

The emerging New Jersey vision puts high value on career pathways. All state-funded training – including company-based customized training – is required to fit into a long-term arc. A diverse mix of state agencies – the department of education, the department of labor, the commission on higher education and the public workforce system – work together to create talent pipelines open to trainees at every stage in life. And the state's long-term goal is engaging business to help plan and build these pipelines.

Altogether, it's an ambitious plan. New Jersey also does more than many states to stretch the federal funding it receives for workforce training. According to commissioner of labor and workforce development Aaron Fichtner, total state and federal spending for the new strategy comes to about \$300 million a year – funds from an array of programs aligned toward a common end. Still, for Fichtner and others, it's a relatively small price to pay for what he hopes will be a "transformation at companies and colleges" across the state.¹⁷

III. ON THE GROUND

Basic Skills

New Jersey's biggest success to date stems from a partnership formed a decade ago between the state, the New Jersey Business and Industry Association and the New Jersey Community College Consortium, a nonprofit organization that coordinates the state's two-year public colleges. Launched in 2007 with a seven-figure grant from the state department of labor, the Basic Skills Training Program has provided instruction to some 120,000 New Jersey workers, many of them at small companies that would be hard pressed to arrange training on their own.¹⁸

As the name implies, it's very basic training: short courses in employability skills – verbal communications, presentations, business writing, computer applications. Employers pay nothing for the instruction. At best, they cover wages for the four to eight hours of class time and swallow the opportunity cost – workers pulled off the floor

or out of the office for a day or half a day. Still, many people in New Jersey workforce circles see the Basic Skills program as an important first step: proof that if you build it, they will come – employers will train their employees.

Educators and employers across the state say the program they now take for granted would not have been possible without a handful of key breakthroughs.

As recently as 2000, few of the state's community colleges devoted much time or energy to workforce training. Most were focused on remedial education or preparing students to transfer to four-year colleges and universities. To the degree the two-year schools focused on occupational skills, it was strictly "train and pray," according to one former college president. "We trained students and tried to place them, mostly unsuccessfully," he recalls. It didn't help that each of the 19 colleges was autonomous and independently governed, making any kind of scalable statewide initiative unthinkable.

Change came gradually. A handful of colleges came together in the late 1990s to retrain manufacturing employees thrown out of work when the Philadelphia Naval Shipyard closed. New Jersey education officials took note and in 2004 formed the statewide community college consortium, tasked with encouraging member schools to take on the challenge of job training. The consortium struggled at first. The main obstacle: no paying customers. The few big companies that could cover the cost of training usually did it in-house with no need for an outside vendor, and most smaller firms couldn't afford to train. The state wasn't much help, and the public workforce system looked mainly to nonprofits and community groups, not community colleges, to provide training.

The key breakthrough came in 2006: a partnership between the college consortium and the New Jersey Business and Industry Association. Survey after survey of the association's 20,000 members showed that employers were unhappy with workers' skills – especially their soft skills. The college consortium pulled 19 far-flung schools together to

offer what one veteran of the era called a "unified training response" – a single, suitable statewide partner for the statewide business association. Fortunately, the state government was also ready – eager to engage employers in workforce training and prepared to write the check.

Today, the Basic Skills Training Program touches some 10,000 to 15,000 workers annually, serving as many as 1,200 firms a year. Classes are delivered on college campuses but also at companies. The most popular subject: computer skills – especially Excel. There's also strong demand for communications courses – everything from basic writing and customer service to ESL. A few colleges offer math and measurement classes.

The program is designed to be as user-friendly as possible for employers. There's no complicated application process. Instructors will come to the company after hours and on weekends. For smaller firms that can't afford to train more than one or two employees at a time, the 19 colleges operate in 65 locations – no address in the state is more than half an hour's drive from a campus. Companies big enough to fill a class can customize the subject matter.

A key breakthrough came in 2006: the state's 19 community colleges came together to offer a unified training response.

The company client list reads like the state yellow pages: from global giants like Cigna and Dow Chemical to Esposito's Electric and Zoe Cleaning Services. In one recent year, the list of trainees included 3,922 different job titles – from administrative assistant and nurse's aide to restaurant manager and chief operating officer. According to the college consortium, nearly half of the workers who take classes make less than \$20 an hour.

Metrics are weak. The colleges administer a rudimentary skills assessment at the start and end

of each class. The consortium collects employer testimonials – generally glowing but hardly a reliable measure. State legislators have demanded more rigorous accounting, but so far there is no meaningful quantitative assessment. And popular as it is, the program is unlikely to satisfy critics who complain that today's employers no longer do their part to train workers.

The state keeps costs as low as possible. Big firms that train hundreds of employees report six-figure wage costs, but smaller companies often pay nothing – especially if classes are offered at night. The program requires no ongoing input from employers – no consultation about skills gaps or labor shortages. And trainees earn no credentials – nothing they can take with them to another job.

The question for the future is whether the program has planted seeds for the future – new practices and new habits that will grow into something larger and more significant at companies or community colleges. New Jerseyans who believe so point to two key features of the program.

The first is the concept of "open enrollment" – classes offered at a central location to which smaller companies can send just one or two employees at a time. In New Jersey as elsewhere, in the past most training was offered by large companies – for small firms, even the paperwork required for state funding was an obstacle. Open enrollment has the potential to close this gap. "It's the small firms that need the most help," a community college administrator explains. "And the best way for us to serve them is in a group." Building on the success of the Basic Skills program, a number of community colleges are now offering longer, more intensive open-enrollment courses in technical subjects.

The second important innovation: the role being played by community colleges. In New Jersey as nationwide, two-year colleges are a critical resource – not traditionally seen as the provider of choice for workforce education, but in many ways better positioned for the task than the nonprofits and community groups that provide most training for the public workforce system. Millions more Americans attend community col-

leges every year than pass through the workforce system. Community colleges are better funded, and they're unfettered by restrictions on who is eligible for training. The biggest challenge in the past: outside of a few maverick instructors in their noncredit divisions, many schools found it difficult to build relationships with employers. What the New Jersey Basic Skills program shows: when this obstacle is overcome, community colleges can emerge as a force to reckon with. New Jersey community colleges don't just provide Basic Skills classes; they and the consortium drive the statewide program – securing funding, marketing to companies, customizing classes and sustaining momentum year after year.

Meanwhile, employers as well as educators see the program starting to bear fruit in ways they didn't expect. One of New Jersey's leading health-care providers, the Atlantic Health System employs some 15,000 people at hospitals and other facilities across the state. The company originally enrolled in the Basic Skills program to upgrade clerical employees, but found the focus shift over time as higher level clinical staff became aware of the offerings – nurses being promoted to management needed training in Excel and PowerPoint. Community college educators say this isn't unusual; many talk about helping employers surface "latent" training needs. "Once a company understands what's being offered, they often come back for more," one educator explains. Atlantic Health now sends several hundred employees a year to Basic Skills classes. Human resources personnel see the local community college as a trusted partner, and the company is among the program's leading champions statewide.

For the greater good

In New Jersey as in other states, many employers who take an interest in workforce development do so for reasons that go beyond their own training needs – altruism, corporate social responsibility or a social-justice reform agenda.¹⁹

Some of America's best known corporate giants contribute to maintaining the talent pipeline in

New Jersey. Accenture works with high school students, writing a check every year to the non-profit Junior Achievement, which teaches coding and soft skills to young people from disadvantaged communities. Lockheed Martin maintains a partnership with Rowan University, providing internships and loaning engineers as adjunct professors. New Jersey's largest utility, the Newark-based PSE&G, gives back in myriad ways – in high schools, community colleges and an in-house training program – often with a focus on green jobs and diversity hiring. Prudential, Wells Fargo, PNC Bank and Walmart have all contributed generously over the years – often the company foundation working through the Newark nonprofit CareerWorks, which funnels funds to local training programs. Dwarfing them all is JPMorgan Chase. A long-time supporter of CareerWorks, the banking giant also invests independently – including, in recent years, a million-dollar grant to Jersey City for, among other things, a report on the city's skills gap and a summer internship program.

Many of these initiatives are impressive, making a difference where it counts in an array of companies and communities. But ultimately, they raise the same questions as Basic Skills. Is the program scalable? Can it become self-sustaining? Is it planting seeds that will grow into something bigger for the state of New Jersey?

A funders collaborative. CareerWorks demonstrates what can be accomplished with socially motivated workforce training of this kind – and also the challenges. Founded in 2010 on a model promoted by the National Fund for Workforce Solutions, the Newark nonprofit spent its first year recruiting big New Jersey firms to form a donors' collaborative. The National Fund contributed baseline financing. CareerWorks scrambled to match it, four to one, with grants from local funders. Once the matching funds were committed, CareerWorks functioned as an intermediary, funneling the pooled dollars to training programs, including some run by employers.

The goal from the start was not just training but, as the National Fund explained it, "promoting better outcomes for low-wage workers and job-seekers." Top items on the agenda: using

training to leverage higher salaries and convincing companies to upskill frontline workers and promote from within. It was understood that this would often involve showing the company a need it hadn't previously known it had – convincing management, for example, that training could pay off for the firm if it reduced turnover among low-level employees. That wasn't always an easy sell. But CareerWorks made important inroads. Between 2010 and 2017, it raised \$3 million in philanthropic dollars and funded training for some 1,000 workers.

Many employers take an interest in workforce development for reasons that go beyond their own training needs – altruism or a social-justice reform agenda.

CareerWorks' other crucial insight, also a core tenet of the National Fund: that the best way to engage employers, especially smaller employers, is to bring together a group of firms from a single industry and persuade them to act together for the greater good. It's the idea that eventually gave rise to sector partnerships – now the organizing principle for much workforce training nationwide. And CareerWorks staff believe they planted the seed that became the New Jersey Talent Networks – the idea of convening New Jersey employers, sector by sector, to develop shared talent pipelines.

There have also been challenges over the years. The first was recruiting employers. By 2012, CareerWorks had access to ample cash and a proven training model. The nonprofit was prepared to provide full funding, match a firm with a training provider and help manage the program as it moved forward – making it as easy as possible for companies to launch training initiatives. Still, takers were few and far between, and when firms did step up, there were further questions: would the program take root, and would it last?

The ultimate challenges for a collective like CareerWorks: scaling and sustainability. Even the nonprofit's well-heeled donors can seed only so much training at other companies. Foundation giving can prime the pump, but over the long haul, programs will not take off unless ordinary employers, small firms as well as corporate giants, see the value of training and pursue it out of self-interest – bona fide labor force needs, not altruism. CareerWorks' long-term hope: that as companies saw the payoff to training initially paid for by a foundation grant, they would be willing to step up and cover the cost themselves.

Two of the nonprofit's most successful experiments, one in Jersey City and one in Newark, demonstrate the challenge and the opportunity.

Upskilling for frontline workers. Like many employers who rely on frontline workers, the Jersey City Medical Center had a problem with employee engagement and retention. A mid-size health-care system with two hospitals and a trauma center, the system employs a churning tier of low-skilled, low-paid workers – cleaning staff, clerical help, food service workers – who often aren't invested in their jobs and don't stay long with one employer. But what if they could learn new skills that put them on a career track, moving up to better jobs like patient care technician or medical coder – from slots that pay, say, \$10 an hour to \$15 an hour? There would be obvious benefits for the worker, but also for the employer: better retention, reduced turnover costs and more engaged employees – the key to customer satisfaction.²⁰

It's not a path that makes sense for all employers. Many, particularly smaller firms, can't plan that far ahead or afford the upfront investment cost. But the idea was in the air nationwide in 2011, driven by a few brand-name corporations and big health-care systems. CareerWorks promoted it aggressively in New Jersey, offering full funding for employers to experiment with upskilling initiatives. Jersey City Medical Center staff were intrigued, and in 2011 they won a \$100,000 CareerWorks grant to train 20 frontline workers as PCTs and medical billers and coders: a six-month program offered on company time.

The program exceeded expectations at the hospital. It wasn't an easy lift, even with outside funding. Screening workers to participate turned out to be more complicated than anticipated. In many cases, the medical center had to pay for childcare and transportation. There were wage costs not covered by the grant, and the center had to foot the bill for the hands-on clinical training. But all 20 frontline workers in the first class earned certifications, all were promoted, and hospital management was thrilled by the results. CareerWorks renewed the grant the next year at a lower level, and the center picked up the extra cost.

In 2013, Jersey City Medical Center merged with the giant health-care provider Barnabas Health. But the Jersey City system maintains a robust workforce program: upskilling frontline workers, promoting from within and encouraging employees to take advantage of a generous tuition reimbursement program. According to CareerWorks, the center promotes on average 50 percent of its workers a year, and annual turnover is roughly 8 percent, far below the national average in health care.

For CareerWorks, the Jersey City experience was a high point. It proved that upskilling incumbents could produce benefits for employer and employees – and, when necessary, the employer might be willing to dip into its own pocket to cover costs.

Ford automotive training. One of the most successful training programs in struggling inner-city Newark was the brainchild of a local auto dealer looking for a way to give back to the community. Now heading into its third decade, the program trains unemployed men and women as automotive repair and maintenance technicians. The nonprofit training provider has been heavily subsidized over the years by a long list of philanthropic donors, including CareerWorks. But in 2016, it found a way to pay a significant part of its own way – a giant step toward sustainability.²¹

Rich Liebler was living in the suburbs and running a prosperous auto mall when his 17-year old son was killed in an auto accident in 1989. Looking for something to do to take his mind off his grief,

Liebler was drawn to Newark's South Ward. One of the worst neighborhoods in one of the most beleaguered cities in America, then as now it was known primarily for drugs, gangs, unemployment and pervasive hopelessness. But Liebler found a partner: the nonprofit New Community Corporation, already serving 5,000 local residents with subsidized housing and a nursing home.

He was also able to call on Edsel Ford, who he had met some years before when chairing the national Ford dealer council. Liebler kicked in \$100,000. Ford matched it and then some. They bought an abandoned building not far from the New Community Corporation, and Ford outfitted it as a training facility with state-of-the-art automotive equipment and a small fleet of vehicles for trainees to practice on.

There were 25 men in the first class. Many were ex-offenders, and all were at risk for falling back into the life in the neighborhood. At the end of the program, virtually all got jobs as certified automotive maintenance mechanics at Ford dealerships and other local repair shops.

Today, the training stretches over nine months, four or five hours a day – a combination of classroom instruction, hands-on practice and a big serving of what trainers call "life skills." Trainees are exposed early on to the workplaces where they hope to land jobs. Each puts in a day or two of job shadowing at one of two dozen local automotive businesses: a handful of Ford dealerships, three giant auto malls, Sears, Avis, Goodyear and Firestone tire outlets, including many in New Jersey's affluent white suburbs. The capstone of the program is an internship: 150 to 200 hours on the job at one of these employer-partner outlets.

Over 20 years, the program has trained some 850 men and women. Graduates come away with Ford certifications – portable credentials they can take with them to a next job or build on at a next training program. And New Community's director of workforce development, Rodney Brutton, says he can't train enough of them fast enough – the overwhelming majority get jobs.

Employers help in a variety of ways, some driven by charity, others by business needs. Ford still do-

nates cars and uniforms and sends representatives on a regular basis to inform trainers and trainees about the latest industry trends. A parade of other funders has contributed generously over the years: the New Jersey department of labor and a Who's Who of local and national donors in the CareerWorks collaborative – JPMorgan Chase, the Prudential Foundation, the Wells Fargo Foundation, the Walmart Foundation, PNC Bank and the National Fund for Workforce Solutions, among others. But local automotive employers also play a robust role – sponsoring internships and hiring trainees.

The big breakthrough: in 2016, the New Community Corporation's training division was accredited as an institution of higher learning – and now trainees who qualify for federal financial aid can use their Pell grants to pay for training. Federal funding won't fully cover tuition costs or New Community Corporation overhead, but it will go a long way toward making the program self-sustaining.

The lesson for employer engagement: like Basic Skills and the Jersey City upskilling experiment, the Newark experience suggests that employers will step up. Given a contained, doable task – sponsoring internships and hiring trainees – local auto dealers and other repair shops have come through.

Training to meet labor force needs

The hardest training to track and count, though often the most valuable and enduring, is in-house training at private companies. In New Jersey as elsewhere, no one knows how much is taking place. Unlike programs that involve state money or foundation giving, training at companies – formal and informal – is rarely tracked or evaluated.²²

Community college instructors, often hired to teach in-house programs, provide some window on what is taught – most often, they say, basic employability skills. Leadership, supervisory skills, project management, customer service, computer skills and communication top the list at most New

Jersey community college customized training divisions. "It's what every employer wants," the director at one college explained. "Soft skills are our bread-and-butter business." But several if not most New Jersey community colleges also send instructors to companies to provide technical training – skills for manufacturing, health care and transportation and logistics jobs, among others.

The state labor department offers another window on company-provided training in the state. New Jersey still maintains a robust customized training program: in FY 2017, grants totaling \$5.8 million were awarded to nearly 100 firms. Most checks ranged from \$10,000 to \$50,000, and employers are required to match state funding with company contributions – an obligation they often meet by covering wage costs. In 2016, close to 40 percent of the money went to manufacturing firms, followed by health care and construction – together about 30 percent. The skills listed in grant proposals run the gamut: from lean manufacturing, Six Sigma and machining skills to business management. There's also a fair amount of business communication and "team effectiveness."

What's hard to know: is this an accurate portrait of in-house training at New Jersey companies? Not all firms that train apply for grants, and those that do may not be representative. The New Jersey construction trades, for example, rely heavily on union apprenticeship programs. Employer associations like the Associated Construction Contractors of New Jersey work hand-in-glove with their union counterparts to determine training needs – skills gaps and worker demand. And though the state helps pay for some union training, in many cases, construction contractors cover the cost, contributing to a collective training fund – cents-per-dollar contributions for every hour worked.

All in all, according to officials, there are some 400 apprenticeship programs in place in New Jersey. The lion's share are run by unions and vocational training providers, but smaller construction contractors also step up. Relatively few employers in other sectors sponsor apprentices: just one manufacturing firm out of an estimated 11,000 in the state.

Another big gap in the state grant ledger is informal training. Nationwide, according to some scholars, there may be three times as much informal as formal employer-provided training. But there is no reliable way to estimate what's on offer in New Jersey.

The other outstanding question about state grants for in-house training: does state spending engender more? Does it prime the pump, encouraging employers to spend more and train more workers in the future? The most hopeful scenario: state investment helps the company offer instruction it otherwise would not have offered. Management sees a return on the investment – increased productivity, reduced turnover or more engagement by employees. Then, going forward, the company steps up to foot the bill. Commissioner of labor and workforce development Aaron Fichtner seeks to use state funding to encourage more engagement by employers, but he's also skeptical. Companies that dip into their own pockets to train workers do so for their own reasons – generally business reasons. And getting most companies to pay for training remains difficult.

Bottom line: it's as much of a conundrum for the state as it is for reform-minded advocates at CareerWorks and elsewhere. How to encourage employers to do more? How to scale workforce training? How to build something that's sustainable? For New Jersey, the answer is to look beyond company initiatives. In a perfect world, firms would see their self-interest and act on it – without help or interference by the government. But when that doesn't happen on the scale that's needed, New Jersey has a system in place – institutions and intermediaries to work with employers and help them find ways to train.

Case study: manufacturing skills training

The main campus of Camden County College sits in a nondescript New Jersey suburb some 15 miles southeast of Philadelphia. Approximately 12,000 students are enrolled in for-credit courses, working toward one-year certificates or associate

degrees. Roughly one-third that number take short, less formal, noncredit classes, many of them with a vocational slant. Just over half the students are black, Latino or Asian-American. The average age is 27. A typical degree costs \$7,000. The college has a tradition of strong technical training: nursing, automotive and laser engineering programs that go back two decades or more. But this focus has intensified in recent years, and Camden is taking on a new role as catalyst and convener of choice for local employers concerned about the skills gap and looking to engage.²³

A base to build on. Some of the college's employer relationships trace back many years. Camden is one of 50-plus technical and community colleges nationwide that host the GM Automotive Service Excellence Program. Students combine classroom learning with on-the-job experience at local GM dealerships, earning both coveted GM certifications and AAS degrees. It's like the Ford automotive program, only upscale and selective. And Camden administrators call the relationship with GM a model of employer engagement. The manufacturer provides the curriculum, trains instructors and keeps close watch on the quality of the program – oversight the educators call tough but vitally important.

Beyond GM, college officials estimate that perhaps one in four credit students is enrolled in an occupational program that maintains a relationship with a local employer. Other well-regarded partnerships include a nursing program run in conjunction with a nearby hospital and an ophthalmology major designed in consultation with local companies. In most cases, employers engage through an advisory board, and as at most schools, the boards vary greatly – from closely involved and helpful to largely perfunctory. The best boards meet regularly; members stay in touch informally with regular calls and emails. Faculty turn to the board with questions about curriculum and how graduates are performing on the job. The board provides advice and feedback – and member companies hire program graduates. In other instances, it's a struggle to get board members to campus, and educators rarely hear from them in between meetings.

Also on campus, albeit a largely separate track, Camden's corporate training institute oversees a variety of customized contract programs – non-credit courses, usually for incumbent workers and paid for by individual companies. Customized courses come in all shapes and sizes. And though Camden's highest volume has traditionally been employability skills, the school's reputation for occupational training also brings in more technical contracts: longer, more specialized courses, generally offered on-site at a firm in close consultation with its production personnel.

Camden County College built on a tradition of employer involvement and customized contract training.

Building relationships with companies is anything but easy, even at a college like Camden with years of experience. It starts with exposure and marketing. Camden president Don Borden sits on the local workforce investment board and says he speaks at every Rotary Club that invites him. The personnel in the college's corporate outreach office are among the hardest working people on campus, building and maintaining relationships with dozens of companies across the region. They say it's like any sales job: all about cultivating acquaintances, learning the clients' needs, checking in regularly and building from small steps to bigger things – from a cold call about a job opening to attendance at a job fair to participation in an advisory board to a full-scale customized contract. The culminating step: the college helps the company get a customized training grant from the state – money the company then pays the college for a tailored, in-house course.

Some workforce experts question the broader value of in-house customized training. Their chief concern: are employees learning general skills applicable outside the company, and do they earn portable credentials they can build on later in life? It varies from firm to firm. But there's nothing

perfunctory about the relationships between employers and educators who partner to provide contract training – collaboration that may hold lessons for other, less intense forms of cooperation between companies and colleges.

The contractual relationship works because both parties need it to work. Company personnel usually take a close interest in the curriculum. In some cases, company subject matter experts design the course. College faculty and company personnel may teach it together. Faculty members sometimes spend time at a company, learning production processes and diagnosing skills gaps. There's no question that trainees are learning skills the employer needs. Both parties – company and college – have incentives to communicate and respond to each other's concerns. And both have an interest in a quality product – training that benefits employer and employee.

Any community college in the state can now offer the new course in entry-level manufacturing skills.

Where customized training of this kind falls short: it's usually a small number of trainees – at Camden, not generally more than 100 or 150 at a time. And it doesn't help to build a talent pipeline. Courses are often ad hoc. There's no continuity. The credit and noncredit sides of the college frequently operate in separate silos and maintain their own employer relationships – with missed opportunities for sharing and synergy. Often left out: small and medium-sized employers, who can't fill a cohort for a customized training program.

The Basic Skills Training Program addressed some of these problems, replacing a lot of old-fashioned customized training with an answer that works even for smaller firms. According to Camden officials, the program is wildly popular with employers. Word got around

quickly, companies couldn't line up fast enough. Employers seeking to offer in-house training in employability skills no longer need to request funding from the state. And it's an easy lift for the corporate outreach office: instead of cultivating companies one by one, staff maintain a database of local firms and send out monthly emails announcing the class schedule.

Perhaps most important are the new relationships. "I used to meet people around town and tell them what I do," Camden business outreach account executive Carol McCormick recalls, "and they would say things like 'Oh, I didn't know the community college did workforce training.' I haven't heard anything like that in a long time." Basic Skills classes are just a few hours long; they don't require a big lift at the company. But the program has planted a new idea in the minds of thousands of New Jersey employers: community college educators can be their partners – willing and effective partners – in training and retraining the skilled workforce they need.

The challenge for Camden County College: how to build on this opening. A new opportunity arose in 2011: a next-generation collaboration between the state department of labor, the community college consortium and the New Jersey Business and Industry Association – on-demand advanced manufacturing training.

A new program. Bob Staudinger is president and CEO of a small, privately held advanced manufacturing firm, where his 175 employees work at computerized lathes and mills to make component parts for aerospace and medical manufacturers. A longtime member of NJBIA, passionate about workforce issues, Staudinger got involved in the new project through the community college consortium. "They were developing a new program," he recalls, "and they said, 'We need employer input.'" The goal: an entry-level manufacturing skills curriculum suitable across a range of companies that could be taught at community colleges, including in open-enrollment classes, like Basic Skills.²⁴

The consortium obtained a grant from the state to develop the program. Staudinger and one or two

other employers teamed up with Kevin Schmidt, long-time instructor at Camden County College. Schmidt wrote the first draft of the curriculum – a couple hundred pages of lesson plans and support materials – and sent it to Staudinger for feedback. Staudinger and his engineering manager pored over it and sent it back. And so it went for three or four months. The product is a 12- to 15-week introductory program meant to take people with no experience in manufacturing from zero to 60 – preparing them for an entry-level job in a shop like Staudinger's.

Unlike Basic Skills, which trains incumbent workers, the manufacturing course is for unemployed workers only. It starts with basic math and blueprint reading. Trainees learn to use precision equipment and operate computer-controlled mills and lathes. The course combines classroom instruction with hands-on training and culminates in a certification from the National Institute for Metalworking Skills. Graduates qualify for jobs as certified production technicians – generally a \$12 to \$15 an hour starting wage. And the hope is that companies will pick up from there, either with informal training or sending the worker back to school at night. A fully qualified CNC machinist with PLC skills can earn \$50,000 a year.

A rudimentary common curriculum cuts costs and reduces the burden on firms.

The manufacturing program debuted in spring 2012 at Middlesex County College. Twelve trainees completed the course; all found jobs. Building on that success, several additional institutions offered the class that summer, including Camden. The next obstacle: only four of the state's 19 community colleges had the equipment to offer advanced manufacturing training. The curriculum simplified things; most schools could find an instructor to teach it – but not the expensive machines.

The answer: another grant, this one from the federal government, to equip two mobile trailers as advanced manufacturing classrooms and send them around the state, stopping for 12 to 15 weeks at a time at community colleges that couldn't otherwise offer a basic manufacturing course. Camden County College used a Trade Adjustment Assistance Community College and Career Training grant to build the two 50-foot mobile labs. The trailers left Camden in late spring 2014. By 2017, some 370 people had been through the on-demand manufacturing program, and more than 85 percent of them had landed jobs.

Bottom line: once again, as with Basic Skills, a single training provider – the community college system – serves a group of employers with a rudimentary common curriculum, cutting costs and reducing the burden on companies. It's not a heavy lift for employers. The key is the structured, state-driven partnership between companies and colleges. It's not all that's needed: what's provided is very basic training. But it's a start. And in this case too, the program caught on rapidly across the state.

Many ways for employers to engage. Step by step, the infrastructure to implement the state's new training vision was falling into place. The department of labor's seven Talent Networks were launched just as the on-demand manufacturing program took off, and the Newark-based New Jersey Institute of Technology won the grant to run the advanced manufacturing network, building a statewide cohort of employers to advise about industry trends and help develop future workforce policy. Then in 2016, Camden County College secured the grant to launch the advanced manufacturing Talent Development Center.²⁵

The Talent Network and the Talent Development Center are meant to be complementary. The network focuses on the big picture, engaging employers, introducing them to educators, conducting needs assessments and planning new initiatives. Many of these conversations take place in regional meetings – what the state calls Targeted Industry Partnerships. The Talent Development Center, in contrast, is charged

with implementing workforce policy. It's the operational arm, on the ground, where trainers meet trainees and teach them skills – although the TDC too has a statewide reach, often helping to organize training at other colleges elsewhere in the state.

Altogether, the system presents multiple opportunities for manufacturing employers seeking to engage on workforce issues. They can join a Targeted Industry Partnership and go to regular planning meetings. They can participate in the advisory board at the Talent Development Center at Camden County College. They can join a community college advisory board overseeing a particular industry program – at Camden or elsewhere. If they prefer the public workforce system, they can serve on the local workforce investment board. Or they can contract for customized training, still an option, though less widely used than in the past. And even this doesn't exhaust the possibilities. This multiplicity of options is both a blessing and a curse – it offers something for everyone, but can also pose difficult choices for employers.

Employers screen applicants for training – a crucial first step in guaranteeing meaningful results.

Bob Staudinger likes to plug in at the ground level – at the so-called “information sessions” where community colleges screen applicants for the on-demand manufacturing program. The local workforce board sends candidates, certifying that they’re unemployed or have exhausted their unemployment benefits. College staff explain the program and the entrance criteria, starting with a clean drug test. Then the employers take over. Sometimes there are just a few in the room, sometimes a few dozen. Their first task: to explain why a career in advanced manufacturing is exciting – what the job is like and the pay. But even more important is what comes next: a round of “speed

interviewing.” The question for the employers: would you hire this person? Is it worth the state’s money and the college’s time to train him or her for a job at a company like yours? The employers don’t commit to hiring anyone, though some will return later and interview program graduates. Still, it’s vital input – the first step toward guaranteeing that the program will produce meaningful results.

Participating in the manufacturing Talent Network is a very different kind of experience – removed from the training process. Each of the seven statewide Talent Networks convenes regular regional employer meetings – Targeted Industry Partnerships, or TIPs. The primary goals of these sessions, open to any local employer in the industry: to report labor needs, identify industry trends, inform the state about certifications of value to employers and develop new training programs.

The consensus is all but unanimous in workforce circles nationwide: sector partnerships of this kind are the most effective way to engage employers, large and small, and drive training forward. The problem in New Jersey as elsewhere: the partnerships vary greatly in quality from region to region and industry to industry. More than 18 months since the TIPs were launched, some already have a robust membership – employers who return meeting after meeting to pick up the thread of an ongoing conversation. Others are still focused primarily on recruitment, and each meeting seems to start from scratch – employers attending for a first time and new to the issues.

A typical manufacturing TIP meeting takes place at a community college. Recruitment brochures stress the opportunity to learn about state funding for workforce training – an effective lure. But the employers who show up, many of them from small, privately owned businesses, don’t always come equipped to talk in a focused, constructive way about their company’s specific training needs. In some instances, the conversation is mostly venting – about the demise of vocational education or the stigma attached to manufacturing work. Many employers have yet to think through who should be responsible for training: they’re often unfamiliar with both the local community college and the local workforce board. Tasked with describing

their firms' labor needs, many don't know where to start. Different shops use different machinery; job titles aren't always comparable. And many employers don't know the certifications available in their fields – don't know which would signal that a job applicant had the skills to succeed at their company. Bottom line: there's often no common vocabulary – no way for the group to talk about skills or skills training. So instead of constructive planning, attendees fall back on complaining.

The good news: the manufacturing employers who attend TIP meetings are interested and eager to engage. They're taking time out from their businesses to come to a meeting and want to be part of the solution to a problem that's bearing down on their industry. The task for New Jersey sector partnerships: harnessing this energy. The intermediaries who run the partnerships are generally experienced organizers, and the state provides an array of tools for facilitating small-group conversations. But it remains a challenge to focus employer meetings, giving participants direction, a clear doable task and enough information to be effective.

Four companies finding ways to do more. Still another tier of New Jersey manufacturing employers want to engage directly with the college division that's offering job training. Many run small, local shops – 50 to 150 employees, or fewer. They tend to be knowledgeable about workforce issues; they've been exposed to conversations about pipelines and partnerships and industry-valued credentials through a national trade association or some other activity. They often sit on one or more college advisory boards, speak regularly to a business outreach office or to the instructors overseeing a training program. And ironically, in this case too, what's most encouraging about these owners and managers is their frustration – with the lack of training available and the pace of change.²⁶

As a group, they're concerned about the skills gap and looking for ways to engage. They often have strong ideas about what they want to see happen at the community college they partner with. Sometimes they're out ahead of the college

– want more than the college is delivering. But they want to be helpful – it's all constructive criticism – and they're eager to do their part. Bottom line: in the New Jersey employer community as at community colleges, people are keen to connect with each other and collaborate on training. What isn't always in place yet: an effective channel for that communication.

Among employers, as at community colleges, people are keen to collaborate. What isn't always in place: a channel for effective communication.

Dan Farber is CEO of Bright Lights USA, a small precision manufacturing firm just a few miles from the main campus of Camden County College, where he employs 90 workers to make spare parts for defense contractors. He's been on the advisory board of Kevin Schmidt's department – the Camden computer integrated manufacturing program – for more than 15 years and tries to help with every aspect of the operation. "I keep in touch," he says – with regular calls, questions and informal advice. He also donates equipment, hosts students for factory tours, attends speed-screening meetings and hires out of the program – close to a dozen graduates over the years. Asked if he feels he makes a difference by engaging with the college, he has no doubt – it's more than worth his while.

Still, surprisingly, Farber is brimming with ideas he says he hasn't communicated to Camden staff. He hasn't always been happy with the quality of the workers he's hired from the on-demand manufacturing program. He's skeptical about the state mandate that the program recruit only unemployed workers. He'd like to see the course run longer and turn out more sophisticated trainees. He thinks the department should hire a retired business person to expand its outreach to

local employers. Has he made these suggestions directly to the college? "They haven't asked," he says. Farber and the Camden staff aren't exactly talking past each other. They have a close, constructive relationship – just not as close, not as precise or demanding, as Farber has with many other suppliers of other inputs, whether parts or material.

It was Ted Toth's grandfather who founded the company where he now works as a senior adviser: a small machining and assembly plant, bought recently by a larger German firm, that makes components for satellites, including for NASA. It's an unforgiving business: satellite antennas either work perfectly or they don't work, they can't be repaired, and parts have to be accurate within a nanometer. Toth too has been on Camden's advanced manufacturing advisory board for more than a decade, and he too has a long list of ideas about how the college should do things – many of them, ideas he learned over nearly 20 years of involvement with a trade group, the National Tooling and Machining Association, with a strong interest in workforce policy.

Toth would like community colleges to focus more on teaching to industry certifications. 'Without that, the training is meaningless.'

The centerpiece of Toth's vision is industry credentials, starting with the NIMS credentials trainees earn on completion of the on-demand manufacturing program. Toth would like other New Jersey colleges to follow Camden's lead, focusing more intently on teaching to NIMS certifications. "Without that, the training is meaningless," he says. "Employers don't know what trainees can do, and students aren't trained to industry standards." Toth complains that many schools have been slow to see the value of industry certifications or build programs around them. He's frustrated by

employer meetings where attendees struggle to describe skills in demand at their companies – why don't they look to industry certification? He also wants Camden staff to ask more of him. He'd like the advisory board to meet more often – monthly instead of a couple times a year. And he'd like to see more employers have more input on every aspect of the program, from recruiting to funding – managing it as if it was their business or their company's supply chain.

Holtec International is a bigger firm, expanding in the region, aiming over time to hire perhaps 1,000 workers to build small modular nuclear reactors in a gleaming new plant under the bridge from Camden to Philadelphia. The company started from scratch at the new facility, hoping to hire 200 workers in a few months, only to discover there was no supply of skilled welders in Camden. The firm's response was a multipronged workforce strategy: outreach to high schools, the workforce system, community groups and several community colleges. The relationship it developed with Camden County College – a customized training contract – shows what can be done when a company sees a college as an integral supplier.

When Holtec first contacted Camden, the college had no welding program and no up-to-date welding equipment. But Holtec executives liked what they saw on campus, including the commitment to working with employers, and when they laid out what they needed, Camden administrators said they could build it. The company used its connections with state and federal government to help find funding, freeing up some \$375,000 of a larger federal grant for the community college to outfit a welding lab. Additional funding from the workforce system was used to pay tuition. Holtec supplied the curriculum – the nuclear welding program it uses at its main plant, in Pittsburgh. The company provided tools and materials. Holtec also hired an engineer to work full-time on the Camden campus, overseeing the first cohort of trainees as they moved through the program.

By all accounts, both company and college were more than pleased with the outcome. A couple of trainees washed out, failing the drug test. But Holtec hired all the rest, and a second cohort

started soon after. Holtec says it hopes to replicate the contract many times over, working with Camden to offer training for machine operators, machinists, materials management and production control, among other job titles. Tellingly, company and college sound the same note when they talk about the collaboration. "We were right there, over their shoulder, watching everything," a Holtec executive recalls. "We needed to know who we were getting and how they were being trained." Camden staff welcomed the oversight. "We want input and feedback from the company – the more, the better," one administrator explained. "We're educators and trainers, we know how to train. But everything we do is need-driven. And it makes our job a lot easier when the company knows what it needs."

Farber, Toth and Holtec all agree: an introductory community college course is only the beginning of what most workers need to succeed in advanced manufacturing. The on-demand program is entry-level. Most firms are looking for more specialized skills. "And the college doesn't have my state-of-the-art equipment," Farber explains. "I need machining that's accurate to .001 of an inch or .0005, not .003 – the standard at the college." All three companies continue to train entry-level workers, mostly informally at Bright Lights, in a somewhat more structured way at Toth's firm and through an in-house Holtec program that comes close to full-fledged apprenticeship. Both small companies would like to do more. The main constraints are funding and lack of an institutional partner – a school or other training provider equipped to take instruction to a next level.

A group of small manufacturing firms in central New Jersey has solved both problems, building on the state-funded introductory manufacturing course to develop and pay for a more advanced program of its own.

Kurt Grimm is founder and CEO of KWG Industries. Some 25 to 50 employees at his eat-off-the-floor facility in Hillsborough Township make precision engineered parts for aerospace companies and the military. Grimm had been com-

plaining about the skills gap for years but had no idea what his small firm could do to help address it. Then someone invited him to a speed-screening night at Raritan Valley Community College, evaluating applicants for what the school calls "advanced manufacturing boot camp" – the state-funded entry-level course for unemployed workers. Grimm liked what he saw of the college and the other employers he met that night; he came back 10 weeks later to interview program graduates and hired two. Soon, he was a member of the advisory board and working with a handful of other manufacturers to build a next tier of training.

Members of the board leveraged \$60,000 in corporate contributions to buy state-of-the-art computer-controlled equipment. They worked with the college to develop four new advanced manufacturing courses – classroom learning and 1,350 hours of structured, hands-on "practicum." The first cohort consisted of five students, all of them graduates of the boot camp now working for local companies. And in four out of five cases, their new employers paid full-freight for their tuition in the advanced program.

What New Jersey learned: state funding can prime the pump for more extensive employer engagement.

It's still a tiny program, just getting off the ground. But it suggests that the state of New Jersey may be on to something in its approach to workforce policy – state funding can prime the pump for more extensive employer engagement. There wasn't much Grimm alone could do to close the skills gap. And he and his colleagues on the Raritan advisory board don't have the appetite or inclination to develop a grand plan – they don't have time for brain-storming meetings. But once they had a working

model and a proven partner, they built on a relationship they knew – and knew would work – to create something more extensive to meet their specific needs.

Grimm takes ownership of the program – he says the board and the community college built it together. And he's adamant, it's useful because it makes business sense, serving business needs effectively. "This is not some social, feel-good, get-some-grant-money, nonsense program that goes nowhere," he told an audience at an NJBIA conference. "If our candidates aren't job-ready, employers will find out, and that will be the end of the program." He also has some stern words for fellow employers. "You can't just complain," he admonishes. "You've got to get involved. Bring your industry experience to the school and speak up – that's the only way to get the program to generate people with the skills you need." His bottom line: "We have to do this. If we don't, we won't close the skills gap."

IV. RECOMMENDATIONS FOR POLICY

New Jersey workforce policymakers would be the first to admit, the system they're building to train workers is still a work in progress. Some ideas are bearing fruit; others, less so. Programs evolve from year to year. Relationships are new and still tenuous. No one would yet call it a national model – it's too soon for that.

What can be said: New Jersey has created incentives that have awoken interest and changed behavior among the two groups that hold the most promise to build a better way forward – community college educators and small-business owners. And though the new approach is still evolving, several key elements are in place. The one piece that's missing, perhaps the most difficult for New Jersey or any state: who should pay? In New Jersey, until now, it's almost entirely top-down funding – national foundations, socially minded corporations and state government. The question for the future: is that model sustainable – and is there an alternative?

Three key ingredients

Community college leadership. Two decades ago, no one would have guessed that New Jersey's two-year colleges would emerge to play the role they're now playing. The 19 county-based schools were autonomous and mostly inward-looking. Many had little interest or experience with workforce training. Employers in search of training partners turned more often to labor unions; state government looked to the workforce system. But the colleges came together and found a way to play a statewide role, standardizing the training they offer and building relationships with employers. Perhaps most surprising, individual colleges are now emerging as some of the state's most successful intermediaries, able to recruit employers and convene stakeholders, building the partnerships that are so crucial for effective workforce education.

What did state policy have to do with this – and can it be replicated elsewhere? The first step was bottom up, not driven by the state: a nonprofit brought the colleges together to coordinate workforce education programs. A second key development was the partnership between the college consortium and the state's largest business association. But policy has helped considerably in the years since, channeling funds into that centralized employer-educator partnership in a way that encourages broad-based collaboration at the ground level – incentivizing educators and employers in every corner of the state to find each other and work together to offer training, whether Basic Skills or the introduction to manufacturing.

The new advanced manufacturing program at Raritan Valley Community College shows how this kind of incentive can pay off. Once the partners get to know each other, if they have bona fide mutual interests, chances are they will continue to build a relationship. What the state of New Jersey did: spend a little money to introduce companies and colleges and show them how to work together. It was a critical first step, now bearing fruit, that holds lessons for policymakers everywhere.

Hard conversations. Conventional wisdom isn't wrong: sector partnerships that convene a range of employers, large and small, to report

skills gaps, identify labor market trends, endorse occupational credentials and develop training programs are an essential building block of any workforce policy. What New Jersey shows: some sector partnerships are more effective than others, and how they are structured and managed can make all the difference in the world. Two poles to be avoided: largely unstructured convenings of employers new to the issues – and overly directed partnerships where intermediaries with an agenda advance their policy goals in the name of the group.²⁷

What's needed: more precision, more blunt talk, hard-headed negotiations, detailed agreements of the kind employers make with every other type of supplier.

A second, even more powerful lesson emerges on the ground in New Jersey, where employers and educators come together to design and deliver training, whether at the company or the college. Too often, even eager, engaged employers and educators end up talking past each other. Advice is vague, important questions go unasked. There are no hard conversations and no clear agreement about what kind of training is needed or what makes a successful job candidate.

The alternative: more precision, more blunt talk, hard-headed negotiations, detailed agreements of the kind employers make with every other type of supplier. What does the company need? What can the school provide? How will success be measured? Will the school even know if it fails? College advisory boards need to operate more like employers on the receiving end of customized contract training. Some educators may resist, but colleges that want to build enduring relationships will welcome the clarity. "We want feedback," a

Camden County College administrator explained. "Are we teaching what employers want? Are our students prepared for the job?" That's the key to a meaningful relationship. Everything else – day-to-day advice, workplace visits, loaned equipment, mentoring – is extra.

Can policy drive this? On the face of it, it's a job for educators and employers. But policy can create incentives for more meaningful partnerships, especially if the state is funding the training. The other essential tool: industry certifications – the best external, verifiable measure of whether a college is teaching the skills employers need.

Industry certifications. In New Jersey as nationwide, occupational certifications are still coming into their own. Many employers are unfamiliar with the certifications available in their industries. Many community colleges and other training providers resist teaching to them. Some certifications are better than others – more accurate and up-to-date indicators of the skills in demand in the industry. And consumers – employers, educators and students – often have no way to distinguish the good from the bad.

In this case too, there are limits to what policymakers can and should do. No one wants to see government regulate the associations that develop and accredit industry certifications. But surely it makes sense for state policy to heed the market signals sent when a certification is popular with employers. The state of New Jersey has worked with employers to compile a list of in-demand credentials that policymakers will use to guide state spending in the future. In fiscal 2017, 50 percent of state training grants went to programs that lead to industry-valued credentials. The proposed goal for 2021: 80 percent.²⁸

Another potential role for the state: educating employers about the certifications available in their industries. It's not the state's job to tell companies which credentials to use. On the contrary, policymakers should be listening for employers' preferences and endorsements. But the Talent Network regional convenings could provide a forum for more information sharing.

Who should pay?

Surprisingly enough, the question rarely comes up in New Jersey workforce circles. As is, it's mostly the state that pays, far less often the businesses that stand to benefit from a more skilled workforce. Companies contribute around the edges: in many cases, though far from all, firms pay wages to incumbent workers during the hours they spend in training. Companies also pay into the system as taxpayers, and some of the state training budget comes out of payroll tax revenue. But most of the instruction offered, whether by a college or other training provider, is subsidized by the government, generally in the form of a state grant.

Many people, employers and policymakers, seem to feel this is as it should be – or that it's inevitable. Defenders of the status quo argue that most employers, especially smaller companies, can't afford to pay for training. Others point out that taxpayers too have an interest in a skilled workforce. We subsidize college, the argument goes, why not occupational training? It's a better use of public funds than unemployment insurance, or incarceration. Others, particularly at community colleges, aren't sure there's an alternative to the status quo: they aren't sure there would be much training, including training for incumbent workers, if the state wasn't picking up the tab.

The truth is employers can and will pay for training if the need is pressing enough.

The truth is, employers can and will pay if the need is pressing enough. The Jersey City Medical Center carried costs that CareerWorks wouldn't cover. New Jersey construction contractors contribute to cents-per-dollar training funds for union apprenticeship programs. Big firms like Holtec make every effort to secure government help: in the case of the Holtec welding program at Camden County College, a grant to cover the

equipment purchased by the college, vouchers from the workforce system to pay college tuition and yet a third subsidy to help with wage costs when the company offered in-house training to workers coming off unemployment. Holtec executives are candid: "We couldn't have opened a facility like this in Camden without help from the government." But Holtec also calculates that it will spend some \$4 million on workforce training by the time the new plant is fully staffed. Even a small company like the Toth firm will step up if necessary. Ted Toth believes employers should be willing to carry more of the burden. "We'll pay if there's a usable product," he says, "graduates with certifications." And he calculates that his company plows some 5 percent of its annual revenue back into workforce development.²⁹

A state like New Jersey might still face a choice. When is state spending justified as a way to prime the pump – to seed partnerships between companies and colleges, for example, or show employers the return on investment in workforce training? And when do state subsidies create dependence that discourages or crowds out private-sector spending? People who argue that state taxpayers have a stake in a skilled workforce aren't wrong. But neither are those who question state-funded in-house training as a form of corporate welfare. And then there's the question of sustainability: how long can the state – or a philanthropic donor – be expected to subsidize even the most effective program?

The New Community Corporation's experience points toward one potential answer: a training center accredited as an institution of higher learning, opening the way for trainees who qualify for federal financial aid to use their Pell grants to pay for instruction. This also happens at community colleges when the instruction is for credit. But much training offered at colleges is not credit-bearing – not Basic Skills or the entry-level manufacturing course or the new program at Raritan Valley Community College.

It would take a major reform in Washington to make this option more widely available, allowing more students to use federal financial aid to pay for workforce education. No one expects this to

happen on a large scale any time soon, although there are small experiments under way, in Congress and at the Department of Education. This approach too entails taxpayers footing the bill, rather than companies. But for many, it's a more appealing and more justifiable use of public funding: state help for underprivileged students rather than state help for wealthy corporations. Federal financial aid is also more likely than state or foundation grants to provide sustainable funding for training programs.

Camden County College president Don Borden suggests another option. "Shouldn't all the parties with a vested interest in the outcome share in the costs?" he asks. "It ought to be a three-way proposition: employers, taxpayers and students." It's a persuasive argument. The devil is in the details: how exactly to make it work and what's fair for all parties. But in the long run, surely, all the consumers of the product ought to have some skin in the game. Among the other reasons, employers who were paying something would pay more attention to training programs – they'd have more hard conversations with educators and make sure the training produced workers with the skills they need at their companies.

V. CONCLUSION

Perhaps the most striking lesson from New Jersey: given a limited, focused task, within their means and likely to produce an outcome of value to their companies, many employers will step up.

Peter Cappelli's vision – large-scale, in-house, employer-provided training – no longer strikes most firms as doable, particularly not small firms. Among other reasons, technical training is more specialized today than it once was, more difficult to offer in-house, and educators and training providers make better, more effective teachers. But New Jersey policymakers have developed a series of small, simple asks: send some employees to employability skills training, pay their wages

during class hours, spend some evenings screening candidates at a community college, host an intern for a few weeks, help design a new program, interview and hire trainees. These are modest tasks, just the beginning of what's needed. But companies across the state are responding, and once they start to see the value of engaging, many seem willing to do more.

Rudimentary or more advanced, it's a system built on partnerships. Employers share the burden with a network of strong institutions: high schools that offer career and technical education, community colleges, workforce-system training providers, credentialing associations and an array of intermediaries. Policymakers must do their part to fund and incentivize those institutions. But once they do, it's not unrealistic to expect employers to buy in as partners in the process.

The lesson from New Jersey: given a limited, focused task, within their means and likely to produce an outcome of value to their companies, many employers will step up.

Ted Toth is as frustrated as anyone by his colleagues' hesitation to get involved. "They're busy running their businesses," he complains. "They don't want to come to meetings. They don't know enough about the new credentials. Many can't even describe the skills they need at their companies. But if they knew what was possible, many more would get involved. Once they know we're producing a product they can use – skilled workers – people will be eager to participate."

The state of New Jersey is working to build a system that will challenge and engage employers in this way. So far, so good, although there is still much to be done.

ENDNOTES

1. Bureau of Labor Statistics, The Employment Situation, March 2017, <https://www.bls.gov/news.release/pdf/empstat.pdf>.
Bureau of Labor Statistics, Job Openings and Labor Turnover Survey, April 2017, <https://www.bls.gov/news.release/jolts.nr0.htm>.
2. Workforce Investment Act, <https://www.doleeta.gov/regs/statutes/wialaw.txt>.
Workforce Innovation and Opportunity Act, <https://www.congress.gov/bill/113th-congress/house-bill/803/text>.
U.S. Department of Labor, ApprenticeshipUSA Investments, <https://www.dol.gov/featured/apprenticeship/grants>.
3. Anthony P. Carnevale, Jeff Strohl and Artem Gulish, "College Is Just the Beginning: Employers' Role in the \$1.1 Trillion Postsecondary Education and Training System," Georgetown University Center on Education and the Workforce, 2015, <https://cew.georgetown.edu/wp-content/uploads/2015/02/Trillion-Dollar-Training-System-.pdf>.
Council of Economic Advisers, "White House Report: President Obama's Upskill Initiative," Executive Office of the President, April 2015, https://obamawhitehouse.archives.gov/sites/default/files/docs/150423_upskill_report_final_3.pdf.
Robert I. Lerman, "Are Employers Providing Enough Training? Theory, Evidence and Policy Implications," National Academy of Sciences, 2015, http://sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga_168146.pdf.
4. U.S. Department of Education, "New State-by-State College Attainment Numbers Show Progress Toward 2020 Goals," 2012, <https://www.ed.gov/news/press-releases/new-state-state-college-attainment-numbers-show-progress-toward-2020-goal>.
Brooke DeRenzis, Amanda Bergson-Shilcock and Ashley Shaw, "Engagement Matters: A Case Study of New Jersey's WIOA Planning Process," National Skills Coalition, May 2015, <http://www.nationalskillscoalition.org/resources/publications/file/2015-05-19-Engagement-Matters-a-Case-Study-of-New-Jersey-WIOA-Planning-Process.pdf>.
Brooke DeRenzis and Bryan Wilson, "Sector Partnership Policy: 50-State Scan," National Skills Coalition, <http://www.nationalskillscoalition.org/resources/publications/file/Final-Revised-50-State-Scan-Sector-Partnerships-1.pdf>.
Association for Career and Technical Education, State Profiles, <https://www.acteonline.org/stateprofiles.aspx>.
National Skills Coalition, New Jersey's Forgotten Middle, <http://www.nationalskillscoalition.org/resources/publications/2017-middle-skills-fact-sheets/file/New-Jersey-MiddleSkills.pdf>.
5. Aaron Fichtner, "The Effect of State-Subsidized, Firm-Specific Training Programs on Firm Location and Training Decisions," dissertation, Graduate School-New Brunswick Rutgers, October 2005.
Bureau of Labor Statistics, Economy at a Glance: New Jersey, <https://www.bls.gov/eag/eag.nj.htm>.
New Jersey Policy Research Organization Foundation, Why Manufacturing Counts in New Jersey, 2012, <http://njprofoundation.org/wp-content/uploads/2014/08/srmanufacturing2012.pdf>.
Chris Kolmar, "These Are The 10 Fastest Growing Jobs In New Jersey In 2017," Zippia, January 2017, <https://www.zippia.com/advice/fastest-growing-jobs-in-new-jersey/>.
New Jersey Department of Labor and Workforce Development, "New Jersey Industry and Occupational Employment Projections, 2014-2024," http://lwd.dol.state.nj.us/labor/lpa/employ/indoccpj/14-24_ind-occ_projections_sp.pdf.
6. Interviews: Aaron Fichtner, commissioner, New Jersey Department of Labor and Workforce Development, July 1, 2016; Sivaraman Anbarasan, CEO and executive director, New Jersey Community College Consortium for Workforce & Economic Development, April 22, 2016; Padma Arvind, director, Healthcare Talent Development Center, Rutgers University, January 24, 2017; Raymond Vaccari, director, Advanced Manufacturing Talent Network, New Jersey Institute of Technology, January 24, 2017; Margaret McMenamin, president, Union County College, January 23, 2017; Marie Barry, director, New Jersey Department of Education, Office of Career Readiness, July 1, 2016.
New Jersey Department of Labor and Workforce Development, Talent Networks, http://careerconnections.nj.gov/careerconnections/partners/talent/talent_networks.shtml.
New Jersey Department of Labor and Workforce Development, Advanced Manufacturing Talent Network, http://careerconnections.nj.gov/careerconnections/partners/talent/amtn/advanced_manufacturing.shtml.
New Jersey Department of Labor and Workforce Development, Industry-Valued Credentials, http://careerconnections.nj.gov/careerconnections/prepare/skills/credentials/industry_valued_credentials.shtml.
7. Interviews with Tyler Seville, then associate director of education and workforce development, New Jersey Business and Industry Association, May 20, 2016; Robert Bowman, founder, New Jersey Community College Consortium for Workforce & Economic Development, October 20, 2015; Anbarasan.

Tyler Seville, "NJBIA Hard at Work for Workforce Development," New Jersey Business Magazine, June 6, 2016, https://njbmagazine.com/monthly_articles/njbia-hard-work-workforce-development/.

New Jersey Community College Consortium for Workforce & Economic Development, <http://njworkforce.org/>.

8. This and the following paragraph draw on the following interviews and sources:

Interviews: Fichtner; James Redstone, professional staff member, Committee on Education and the Workforce, U.S. House of Representatives, April 21, 2017.

WIOA.

DeRenzis, Bergson-Shilcock and Shaw, "Engagement Matters."

New Jersey Department of Labor and Workforce Development, "New Jersey Blueprint for Talent Development," <http://lwd.state.nj.us/labor/wioa/documents/resources/OverviewBlueprintTalentDevelopment.pdf>.

9. This and the paragraphs that follow draw on the following interviews and sources:

Interviews: Fichtner; Carl Van Horn, director, Heldrich Center for Workforce Development, Rutgers University, January 23, 2017; Bowman; Jane Oates, then vice president for external affairs, Apollo Education Group, October 6, 2015; Kathy Weaver, then vice president of programs, Newark Alliance, April 26, 2016; Barry; Anbarasan.

New Jersey Department of Labor and Workforce Development, "Christie Administration Invests \$6 Million in New Jersey Businesses to Improve the Skills of Their Workers," March 7, 2016, http://lwd.dol.state.nj.us/labor/lwd-home/press/2016/20160307_6MillImprovesbusinessskills.html.

10. Peter Cappelli, "Is 'Skill' a Topic for Policy?," The US Labor Market: Questions and Challenges for Public Policy, American Enterprise Institute, (Washington, DC: AEI Press, 2016).

Peter Cappelli, "Skill Gaps, Skill Shortages, and Skill Mismatches," ILR Review, January 2015, <http://journals.sagepub.com/doi/full/10.1177/0019793914564961>.

Carnevale, Strohl and Gulish, "College is Just the Beginning."

Council of Economic Advisers, "President Obama's Upskill Initiative."

Lerman, "Are Employers Providing Enough Training?"

Robert I. Lerman, Signe-Mary McKernan and Stephanie Riegg, "The Scope of Employer-Provided Training in the United States: Who, What, Where, and How Much?," Job Training Policy in the United States (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2004).

Jason A. Tyszko, Robert G. Sheets and Joseph B. Fuller, "Managing the Talent Pipeline: A New Approach to Closing the Skills Gap," U.S. Chamber of Commerce, 2014, <https://www.uschamberfoundation.org/sites/default/files/Managing%20the%20Talent%20Pipeline.pdf>.

11. Fichtner, Anbarasan, Seville, Van Horn, Vaccari interviews.

12. Fichtner and Arvind interviews.

U.S. Small Business Administration: Office of Advocacy, "New Jersey Small Business Profile," 2016, https://www.sba.gov/sites/default/files/advocacy/New_Jersey.pdf.

13. This and the paragraphs that follow draw on the following interviews and sources:

Interviews: Fichtner; Barry; Anbarasan; Seville; Van Horn; Arvind; Vaccari; Raymond Yannuzzi, president emeritus, Camden County College, January 17, 2017; Lisa Hiscano, director of continuing and professional education, Union County College, January 23, 2017.

New Jersey Department of Labor and Workforce Development, Talent Networks.

New Jersey Department of Labor and Workforce Development, Advanced Manufacturing Talent Network.

New Jersey Department of Labor and Workforce Development, Talent Development Centers, http://careerconnections.nj.gov/careerconnections/partners/talent/talent_development_centers.shtml.

New Jersey Department of Labor and Workforce Development, Industry-Valued Credentials.

Harold J. Wirths, "NJ Department of Labor Drives 21st Century Workforce Programs," New Jersey Business Magazine, May 30, 2016, https://njbmagazine.com/monthly_articles/nj-department-labor-drives-21st-century-workforce-programs/.

Lawrence A. Nespoli and Sivaraman Anbarasan, "Community Colleges Help Dissolve the Employability Skills Gap," New Jersey Business Magazine, June 13, 2016, https://njbmagazine.com/monthly_articles/community-colleges-help-dissolve-employability-skills-gap/.

Seville, "NJBIA Hard at Work for Workforce Development."

14. Anne Roder, Carol Clymer and Laura Wyckoff, "Targeting Industries, Training Workers and Improving Opportunities," 2009, <http://www.sectorstrategies.org/library/2009/ppv-final-report-sectoral-employment-initiative-targeting-industries-training-workers-a>.
- Thomas A. Kochan, David Finegold and Paul Osterman, "Who Can Fix the 'Middle-Skills' Gap?," Harvard Business Review, December 2012, <https://hbr.org/2012/12/who-can-fix-the-middle-skills-gap>.
- Brooke DeRenzis and Bryan Wilson, "Sector Partnership Policy."
- The National Fund for Workforce Solutions, "Characteristics of a High-Performing Industry Partnership," May 2014, https://nationalfund.org/wp-content/uploads/2016/10/Characteristics_of_a_High-Performing_Industry_Partnership_NFWS_12.29.14.pdf.
15. Maureen Conway and Robert P. Giloth, Connecting People to Work: Workforce Intermediaries and Sector Strategies (New York, NY: Aspen Institute, 2014).
- Heath Prince and Jerry Rubin, "Building New Labor Market Institutions: State Policies that Support Workforce Intermediaries," Jobs for the Future, November 2006.
16. National Network, Industry-recognized credentials, <http://www.nationalnetwork.org/resources/industry-recognized-credentials/>.
- Tamar Jacoby, "The Certification Revolution," Thomas B. Fordham Institute, December 2014, <http://opportunityamericaonline.org/wp-content/uploads/2014/12/The-Certification-Revolution.pdf>.
17. Fichtner interview.
- U.S. Department of Labor, "WIOA Adult Activities State Allotments: Comparison of PY 2016 Allotments vs PY 2015 Allotments," [https://www.doleata.gov/budget/docs/16adu\\$.pdf](https://www.doleata.gov/budget/docs/16adu$.pdf).
- U.S. Department of Labor, "WIOA Dislocated Worker Activities State Allotments: Comparison of PY 2016 Allotments vs PY 2015 Allotments," [https://www.doleata.gov/budget/docs/16dw\\$.pdf](https://www.doleata.gov/budget/docs/16dw$.pdf).
18. This section draws on the following interviews and sources:
- Interviews: Fichtner; Bowman; Anbarasan; Seville; Yannuzzi; Carol McCormick, senior account executive, Corporate Training Institute, Camden County College, January 17, 2017; Hiscano; Weaver.
- Nespoli and Anbarasan, "Community Colleges Help Dissolve the Employability Skills Gap."
- Amanda McGrath, coordinator, organizational development, Atlantic Health System, remarks at New Jersey Business and Industry Association Workforce Development Summit, Raritan Valley Community College, April 19, 2016.
- New Jersey Community College Consortium for Workforce & Economic Development, "New Jersey Basic Skills Training Program for Economic Growth Act: End of Year Report: FY'15," 2015, <http://njworkforce.org/wp-content/uploads/2015/09/FY15-Legislative-Report.pdf>.
- New Jersey Community College Consortium for Workforce & Economic Development, "New Jersey Basic Skills Training Program for Economic Growth Act: End of Year Report: FY'14," 2014, http://www.njleg.state.nj.us/OPI/Reports_to_the_Legislature/basic_skills_training_2014.pdf.
- Camden County College, Basic Skills Training, <http://www.camdencc.edu/corporatetraining/basic-skills.cfm>.
- New Jersey Community College Consortium for Workforce & Economic Development, "Atlantic Health's Nurse Coordinators Make Big Leap in PC Skills," <http://njworkforce.org/2013/09/atlantic-healths-nurse-coordinators-make-big-leap-in-pc-skills/>.
- New Jersey Legislature, bill number A1460, 2016, <http://www.njleg.state.nj.us/Default.asp>.
19. This section draws on the following interviews and sources:
- Interviews: Weaver; Regina Barboza, program director, CareerWorks, April 26, 2016; Fred Dedrick, President and CEO, National Fund for Workforce Solutions, August 9, 2016.
- Panel, New Jersey Business and Industry Association's Workforce Development Summit, April, 19, 2016. Panelists: Sally Nadler, manager, workforce development, PSEG; Scott Cirillo, talent strategy lead, New York Metro, Accenture; Michael Haberman, then head of global philanthropy, JPMorgan Chase Foundation; Bob Regensburger, project principal, economic development programs, Lockheed Martin.
- CareerWorks, <http://www.careerworksnj.org/>.
- CareerWorks, What is an Industry Partnership?, <http://www.careerworksnj.org/partners/>.
- CareerWorks PowerPoint presentations and brochures.
- The National Fund for Workforce solutions, Our Mission, <https://nationalfund.org/about/our-mission/>.
- The Annie E. Casey Foundation, "The National Fund for Workforce Solutions: A History of Collaboration," <http://www.jff.org/sites/default/files/publications/NFWSHistory.pdf>.

City of Jersey City, Mayor Steven Fulop and JPMorgan Chase Announce \$1 Million Workforce Investment in Jersey City to Provide Skills-Based Job Training for Residents, July 7, 2015, <https://www.jpmorganchase.com/corporate/Corporate-Responsibility/document/workforce-investment-announcement-jersey-city.pdf>.

The National Fund for Workforce Solutions, "Systems Change in the National Fund for Workforce Solutions," November 2015, <http://nyachnyc.org/wp-content/uploads/2015/12/NFWS-Sytems-Change-in-the-National-Fund-for-Workforce-Solutions.pdf>

20. This section draws on the following interviews and sources:

Interviews: Lourdes Valdes, manager of employment, training and development, Jersey City Medical Center, May 19, 2016; Weaver; Barboza; Arvind.

Business Wire, "CareerWorks: Greater Newark Workforce Funders Collaborative Awarded \$320,000 in Grants to Develop Workforce Partnerships," March 18, 2015, <http://www.businesswire.com/news/home/20150318006034/en/CareerWorks-Greater-Newark-Workforce-Funders-Collaborative-Awarded>.

Business Wire, "CareerWorks Awards \$100,000 to Prepare Barnabas Health Frontline Workers for Careers," March 27, 2013, <http://www.businesswire.com/news/home/20130327005877/en/CareerWorks-Awards-100000-Prepare-Barnabas-Health-Frontline>.

Jacob Clark, "National Fund Employers Recognized by Upskill America," The National Fund for Workforce Solutions, October 13, 2016, <https://nationalfund.org/national-fund-employers-recognized-by-upskill-america/>.

21. This section draws on the following interviews and sources:

Interviews: Richard Liebler, chief administrative officer, Sansone Auto Group, June 30, 2016; Rodney Brutton, director of workforce development, New Community Corporation, May 20, 2016; Weaver; Barboza.

Business Wire, "CareerWorks: Greater Newark Workforce Funders Collaborative Award \$100,000 Grant to New Community Workforce Development Center's Automotive Technician Program," July 10, 2013, <http://www.businesswire.com/news/home/20130710005310/en/CareerWorks-Greater-Newark-Workforce-Funders-Collaborative-Awards>.

Business Wire, "CareerWorks: Greater Newark Workforce Funders Collaborative Awarded \$320,000 in Grants to Develop Workforce Partnerships."

Roberts, "Automotive Training Steered Toward At-Risk Teens: Ford, Auto Mall Will Provide," Newark Star-Ledger, May 30, 1996.

"New Jersey Daily Briefing: 25 Future Auto Mechanics," New York Times, May 30, 1996.

Reginald Roberts, "Training Program Puts Students on Road to a Career," Newark Star-Ledger, December 5, 1996.

Carmen Juri, "Teen's Legacy Provides the Keys to Promising Career," Newark Star-Ledger, December 13, 1998.

Ted Sherman, "Report Criticizes License Suspension Priorities," Newark Star-Ledger, October 21, 2001.

Tasnim Shamma, "Repairing Cars, Rebuilding Lives: Training Program Puts Students on the Road to Success," Newark Star-Ledger, August 6, 2009.

22. This section draws on the following interviews and sources:

Interviews: Hiscano; McCormick; Fichtner; Michael Travostino and Jill Schiff, government affairs director and executive director of operations, Associated Construction Contractors of New Jersey, February 1, 2017.

Also a group interview with Camden County College leadership: Don Borden, president; Margaret Hamilton, vice president of academic affairs; McCormick; Melvin Roberts, then interim dean of school, community and workforce training programs; Margo Venable, dean of school, community and workforce training programs; Lawrence Chatman Jr., professor of engineering; Kevin Schmidt, then Computer Integrated Manufacturing coordinator, January 17, 2017.

New Jersey Department of Labor and Workforce Development, "FY 2017 Awarded Skills Partnership Grants," <http://lwd.state.nj.us/labor/wioa/ngo/training/fy17skillsspartnershipgrant.xls>.

New Jersey Department of Labor and Workforce Development, Grant Awards, http://lwd.state.nj.us/labor/wioa/ngo/ngo_index.html#awards.

U.S. Department of Labor, Sponsorship Database, <https://oa.dolleta.gov/bat.cfm>.

My Next Move, Apprenticeship Finder, Employment and Training Administration, <https://www.mynextmove.org/profile/ext/apprenticeships/51-4041.00?s=NJ>.

John Martinez, apprenticeship and training representative, U.S. Department of Labor, email exchange, April 28, 2017-May 23, 2017.

23. This section draws on the following interviews and sources:

Borden, Yannuzzi, McCormick, Schmidt, Hiscano, Camden County College leadership group interviews.

Camden County College, College Key Facts, <http://www.camdencc.edu/about/college-key-facts.cfm>.

Camden County College, "Annual Institutional Profile Report: FY 2015," September 2015, <http://www.nj.gov/highereducation/IP/IP2015/PDF/Camden.pdf>.

Camden County College, Workforce Training and CE, <http://www.camdencc.edu/ce/index.cfm>.

Camden County College, About the Corporate Training Institute, <http://www.camdencc.edu/corporatetraining/>.

Camden County College, Fact Sheet, 2016,
<http://www.autotechccc.com/uploads/5/0/5/1/5051039/2016automotiveprogramfactsheet.pdf>.

Camden County College catalogues and promotional materials.

24. This section draws on the following interviews and sources:

Interviews: Bob Staudinger, president, National Manufacturing Company, April 26, 2016; Schmidt; Anbarasan; Yannuzzi; Camden County College leadership group.

Camden County College, Free Training Program: Metal Fabrication/CNC Machinist, 2015, <http://www.camdencc.edu/corporatetraining/upload/unemployed-CNCtraining.pdf>.

Sivaraman Anbarasan, "NJ Manufacturing Training Initiative: Creating Good Jobs and Promising Careers for the Unemployed," New Jersey Council of County Colleges, 2014.

25. This section draws on the following interviews and sources:

Staudinger, Schmidt, McCormick, Camden County College leadership group, Arvind, Vaccari, Fichtner, Hiscano, Van Horn interviews.

Meeting at Advanced Manufacturing Talent Network central Targeted Industry Partnerships meeting, Raritan Valley Community College, February 2, 2017.

Minutes, handouts, worksheets and other notes from five additional Talent Network Targeted Industry Partnerships meetings.

Roder, Clymer and Wyckoff, "Targeting Industries, Training Workers and Improving Opportunities."

Kochan, Finegold and Osterman, "Who Can Fix the 'Middle-Skills' Gap?"

Brooke DeRenzi and Bryan Wilson, "Sector Partnership Policy."

The National Fund for Workforce Solutions, "Characteristics of a High-Performing Industry Partnership."

New Jersey Department of Education, "Career & Technical Education: Program Advisory Committee Handbook," <http://www.nj.gov/education/cte/study/approval/CTEProgramAdvisoryCommitteeHandbook.pdf>.

26. This section draws on the following interviews and sources:

Interviews: Dan Farber, president and CEO, Bright Lights USA, January 18, 2017; Ted Toth, senior technical adviser, Rosenberger, January 18, 2017; Lee Laurendeau, director of manufacturing, Holtec International, January 18, 2017; Schmidt; McCormick; Camden County College leadership group.

Kurt Grimm, founder and CEO, KWG Industries, remarks at New Jersey Business and Industry Association Workforce Development Summit, April 19, 2016.

New Jersey Community College Consortium for Workforce & Economic Development, "Bright Lights USA Hires Skilled Technicians Through Grant-Funded Manufacturing Training Initiative," New Jersey Business Magazine, print, January 2017.

Panel, New Jersey Business and Industry Association's annual Workforce Development Summit, April 19, 2016. Panelists: Grimm, McGrath, Shelley Samuels, chief program officer, Easter Seals New Jersey.

Raritan Valley Community College, Advanced Manufacturing, <http://www.raritanval.edu/career-training/career-training-programs/advanced-manufacturing>.

Tyszko, Sheets and Fuller, "Managing the Talent Pipeline."

27. I'm especially grateful to Carl Van Horn for his insights on this issue.

28. Van Horn, Hiscano, Toth, Camden County College leadership group interviews.

New Jersey Department of Labor and Workforce Development, "Industry-Valued Credentials."

Wirths, "NJ Department of Labor Drives 21st Century Workforce Programs."

29. Fichtner, Van Horn, Borden, Yannuzzi, Weaver, Brutton, McCormick, Camden County College leadership group, Hiscano, Valdes, Toth, Laurendeau, Farber interviews.

NJBIA Summit panel, Grimm, McGrath and Samuels.

Fichtner dissertation.



737 Eighth Street SE
Suite 201
Washington, DC 20003

opportunityamericaonline.org