



An Agenda for Growing High-Wage Pennsylvania Manufacturing Jobs

OCTOBER 2017

About This State Manufacturing Agenda

This agenda was developed with input from (in alphabetical order) the Alliance for American Manufacturing; Keystone Research Center; the Manufacturers' Association of South Central Pennsylvania; the Pennsylvania AFL-CIO; Steel Valley Authority; and the United Steelworkers. It both reflects some diversity of perspective across these groups and their shared commitment to the implementation of an ambitious and comprehensive Pennsylvania state agenda to grow good manufacturing jobs.

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About the Keystone Research Center

The Keystone Research Center (KRC) was founded in 1996 to broaden public discussion on strategies to achieve a more prosperous and equitable Pennsylvania economy. Since its creation, KRC has become a leading source of independent analysis of Pennsylvania’s economy and public policy. KRC is located at 412 North Third Street, Harrisburg, Pennsylvania 17101-1346. Most of KRC’s original research is available on the KRC website at www.keystoneresearch.org. KRC welcomes questions or other inquiries about its work at 717-255-7181.

AN AGENDA FOR GROWING HIGH- WAGE PENNSYLVANIA MANUFACTURING

- I. Establish a Growing High-Wage Pennsylvania Manufacturing Council
- II. Ride the Reshoring Wave and Retain Existing Manufacturing Jobs
- III. Expand Financing for Manufacturing and Innovation
- IV. Build Skills for 21st Century Making
- V. Boost Demand for Pennsylvania Manufactured Goods

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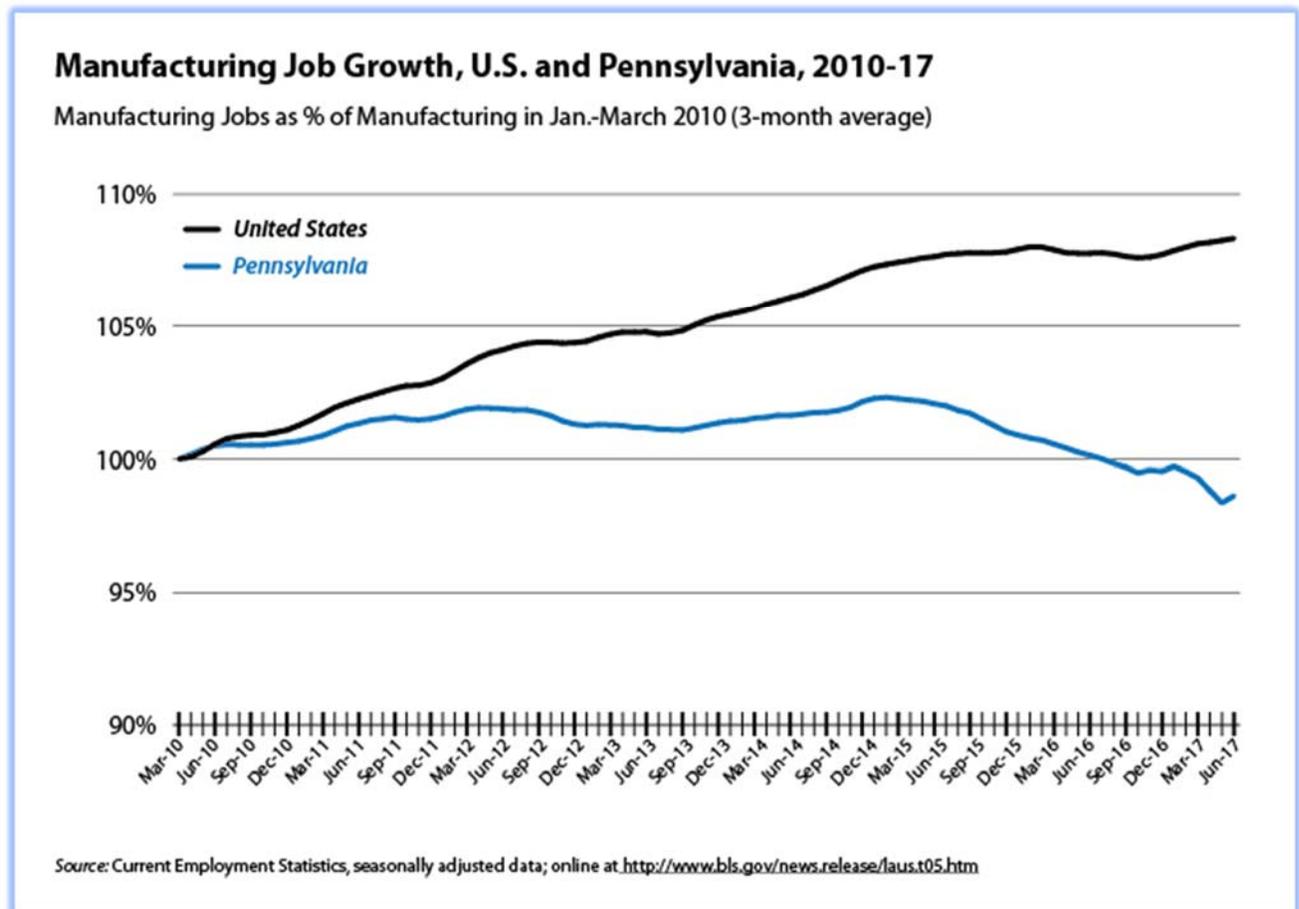
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WHY A STATE MANUFACTURING POLICY AGENDA NOW

Since early 2010, the United States has enjoyed its first growth in manufacturing jobs in nearly two decades, an increase of 955,000 jobs.¹ This steady growth could be a turning point, as more U.S. manufacturers recognize the downside of distant sourcing. Yet Pennsylvania has so far largely missed out, with its number of manufacturing jobs slightly down over the past seven years, a loss of 8,000 jobs rather than the 46,000 that would have resulted from keeping pace with the nation.



The “Agenda for Growing High-Wage Pennsylvania Manufacturing Jobs” could catapult the Keystone State to the front of the U.S. manufacturing renaissance, boosting the growth of good jobs, wages, innovation and profits through initiatives in five areas.²

- I. Establish a Pennsylvania Manufacturing Council
- II. Ride the Reshoring Wave and Retain Existing Manufacturing Jobs
- III. Expand Financing for Manufacturing and Innovation
- IV. Build Skills for 21st Century Making
- V. Boost Demand for Pennsylvania Manufactured Goods

A recurring theme in this agenda is the need to invest in the “industrial commons” that supports Pennsylvania manufacturers – the community infrastructures (or “industry specific public goods”) that boost the competitiveness of large numbers of manufacturers in industry clusters or all of manufacturing. As with traditional public goods that support businesses economywide – e.g., transportation, education, telecommunications, basic research – America and Pennsylvania today underinvest in infrastructure specific to manufacturing that underpins the success of large numbers of businesses: innovation partnerships with research universities, industry training partnerships, joint marketing (“Made in Pittsburgh”), and so on. In the global, network-based, knowledge economy this underinvestment is short sighted. Moreover, while Pennsylvanians may feel that the state currently has no resources available to invest in a new manufacturing strategy, the “2017-18 Governor’s Executive Budget,” (p. A1-11) notes that “Last year, the Department of Community and Economic Development approved nearly \$1.1 billion in low-interest loans, tax credits, and grants for projects across the commonwealth...” Some of the state’s existing subsidies for individual businesses should be redeployed to the industrial commons of a revitalized Pennsylvania manufacturing sector, including many of the specific policy options below.

I. ESTABLISH A COUNCIL FOR GROWING HIGH-WAGE PENNSYLVANIA MANUFACTURING JOBS

To provide ongoing input, oversee implementation, and sustain business-labor and bipartisan support for a state manufacturing strategy, Pennsylvania should establish a public-private council that brings together high-level manufacturing, labor, research University and state government representatives. The Council should be led by high-level staff in the Governor’s Office and Team Pennsylvania Foundation and by multi-agency implementation teams on key initiatives that include private sector partners.³ Additional intelligence on individual manufacturing sectors could be tapped within industry associations and Pennsylvania research universities.⁴

II. RIDE THE RESHORING WAVE AND RETAIN EXISTING MANUFACTURING JOBS

A. Promote Reshoring⁵

- **Establish a Pennsylvania Reshoring Team**

This small (three- or four-person) statewide team would be staffed by individuals with the specialized financial and production knowledge needed to help companies identify and implement profitable reshoring opportunities.

One starting point for efforts to grow good manufacturing jobs in Pennsylvania should be to reinforce the organic movement among manufacturing companies to “reshore” jobs – to bring previously offshored jobs back home.⁶ Starting in 2015, Pennsylvania initiated pilot reshoring efforts in the “T,”

Southeast Pennsylvania and Southwest Pennsylvania. These efforts have uncovered important lessons including the value of companies having access to no-cost services that can help them first consider reshoring and the benefits of regional collaboration among economic and workforce service providers to facilitate access to whichever providers' services are needed by a company. To provide the no-cost services, Pennsylvania should establish a Pennsylvania Reshoring Team with staff from existing entities that have the specialized knowledge companies need to persuade them of the profitability of reshoring. For example, the state's Strategic Early Warning Network (SEWN) (overseen by the Steel Valley Authority) could provide strategic planning, expertise on financial restructuring and customized financial tools that accurately compare total costs for offshore vs. reshored production; the state's Industrial Resource Centers (IRC) could provide production expertise; that Governor's Action Team (GAT) could provide knowledge of and access to financing.

- **Give reshoring companies priority for receiving financial assistance**

The state's initial reshoring efforts revealed that reshoring often has up-front or transition costs (e.g., to bring capital equipment back from China or to train new workers in Pennsylvania). Making reshoring companies priorities for state economic and workforce development assistance can help defray transition costs and should also increase the return on Pennsylvania's investment in business assistance: jobs will come back to Pennsylvania that would not otherwise have done so. With traditional subsidies for relocations or expansions, many jobs would have been created in Pennsylvania without the subsidy.⁷ Financial assistance should include operating capital, not just tax incentives, which can be complicated and insufficient to get companies to bring jobs back home. State financial support also needs to recognize that cycle times for reshoring are often more than two years from initial planning to full implementation.

- **Refine and diffuse tools, industry information, and capacities that support reshoring**

Reshoring involves a shift in the mindset of U.S. managers, many of whom have assumed for years that much lower wages overseas dictate a need to offshore more and more. Pennsylvania should develop and continuously improve financial accounting tools, industry information, and managerial capacities that support the needed shift in managerial mindset.

- Customized financial tools must capture the downsides of distance sourcing fully (such as the distance and language barrier between engineering and production, cost of shipping, slow response to market shifts, greater inventory in transit).⁸ Other tools include supply chain maps (see <http://supplypa.com/> for the maps created as part of the SE PA reshoring effort) and assessments of whether PA companies have capacities needed to bring back products now offshored.
- The Center for Workforce Information and Analysis (CWIA) within the Pennsylvania Department of Labor and Industry has generated substantial industry-specific information to support Pennsylvania's sectoral workforce approach and could also support reshoring efforts.
- The capacities needed include specialized knowledge about when reshoring could pay off and the skills to implement reshoring profitably in those cases. To expand the community

of reshoring practitioners at low cost, Pennsylvania could recruit a “Reshoring Corps” of experienced managers and engineers who want to “give back” for no or low cost to help rebuild Pennsylvania’s manufacturing economy.

- **Make reshoring eligible for state grants to manufacturing alliances and Next Gen sector partnerships**

Pennsylvania could also promote reshoring through networks of companies within regional manufacturing associations, in “Next Generation Sector Partnerships” (which unlike first-generation Industry (training) Partnerships focus on economic development as well as workforce development), or less formal “manufacturing alliances.” Self-organized, sector-specific networks could be effective channels through which to accelerate reshoring: network members will trust their peers if they say, “it worked for us,” especially when backed by product- specific financial analysis tools fine-tuned by successful reshoring in the same sector.

B. Maintain PA’s Strategic Early Warning Network (SEWN) layoff aversion program

Alongside ramping up its reshoring efforts, Pennsylvania should maintain its national model layoff aversion program, the Strategic Early Warning Network (SEWN), funded with federal Department of Labor (Rapid Response) funds. The SEWN network, now with five offices statewide, identifies through company announcements, press reports, data analysis and informal networks companies at risk of closing or large-scale layoffs. It then uses former manufacturing executives and corporate turnaround specialists to triage which companies can be saved, and to assist salvageable companies that want help. An annual evaluation based on SEWN’s case records shows that the program now saves more than 1,000 jobs annually at a program cost of less than \$1,000 per job, saving the state almost \$40 million in unemployment benefits in the last five years alone.⁹

III. EXPAND FINANCING FOR MANUFACTURING AND INNOVATION

A. Develop Pennsylvania Manufacturing Council Recommendations for Financing Good PA Manufacturing Jobs

Another critical dimension of manufacturing is financing and capital. Different types of companies have distinct needs, including those reshoring, small-and medium-sized manufacturers who need working capital, and established companies and startups seeking to innovate. There are many ideas but no magic bullets when it comes to financing for manufacturers. In addition, securing support from the state will not be easy: Pennsylvania’s government already struggles to raise revenues to meet its existing needs. To have a good chance of being incorporated into state legislation and the state budget, Pennsylvania needs bipartisan and labor-management support for financing options and specific ideas about where to find the revenues. To develop consensus financing options and revenue sources, the PA manufacturing

council should establish a financing task force. This task force should develop recommendations in the following categories.

- **Expand working capital available to small- and medium-sized PA manufacturers**

Especially since the Great Recession, small and medium-sized manufacturers face an increasingly risk averse and concentrated U.S. banking sector. Gone in many cases are the local bankers who have known the businesses and their owners for decades. Gone in some cases are the “workout departments” that have some knowledge of the industry and region and help restructure debt when a company gets in trouble.¹⁰ There have also been reductions in low-interest pools of capital available from the commonwealth because the state has used revolving loan funds to help meet state budget needs. In the first half of the 2000s when manufacturers faced shortages of working capital, Pennsylvania joined with Citizens Bank to create a new pool of funds. Though this partnership provided slightly lower interest rates, the state needs to consider larger write-downs of interest, as well as financial innovations, such as partnerships with asset-based lenders (which offer credit using a company’s buildings and equipment as collateral).¹¹ A growing national movement, with a [project affiliate in Pennsylvania](#), also endorses the creation of “public banks” by cities or states. Public banks could expand affordable working capital for local businesses and fund other local and state economic development projects in partnership with the private sector.

- **Expand capital for startups and economic development that grows manufacturing**

Pennsylvania also needs capital to take hardware startups from (a) concept to (b) prototype to (c) the seed funding stage and finally (d) scaling to commercial production. Various options for states have been proposed, including making it easier to “crowdfund” funding for in-state businesses;¹² establishing a state stock market,¹³ issuing “Make It in Pennsylvania” state bonds (including “green bonds” and mini-bonds small enough to allow many Pennsylvanians to participate) that allow civic-minded Pennsylvanians to simultaneously save and boost the state economy; providing financial incentives for state residents to save in venture funds similar to provincial Canadian “labor-sponsored venture capital corporations;”¹⁴ and facilitating greater use of Pennsylvania pension funds to promote in-state manufacturing and community development projects that source products and materials locally (see next bullet for more detail).

- **Make Pennsylvania’s pension capital more productive for the state**

While Pennsylvania has focused a great deal of public discussion on the state’s pension funds over the past several years, it has not yet considered how to achieve double bottom-line benefits through high-return projects that grow good Pennsylvania jobs. Globally, there is huge momentum toward a modern, responsible investment framework, most prominently signified by the United Nations (UN) Principles of Responsible Investment (PRI). The PRI now has 1,500 signatories, including retirement funds, banks, corporations, etc., and \$60 trillion in assets. Recently, the Department of Labor (DOL) issued new guidance based on the federal law overseeing retirement plans (the Employee Retirement Income Security Act or ERISA). The guidance confirmed the legality of RI and strongly encouraged that investors consider environmental, social and governance (ESG) matters in making their investments.

Using the new guidelines, it is time that the managers of Pennsylvania’s institutional investments joined the movement for responsible investment.¹⁵

For state and municipal funds considering PRI, responsibilities of a pension trustee board may vary but generally should include the adoption of an RI Investment Beliefs Policy and an Investment Policy Statement (IPS) that includes financial performance objectives and risk considerations including those related to material ESG factors. Pennsylvania’s pension funds should establish appropriate fund governance structures related to the fund’s long-term strategy and investment objectives, including an ESG manager who is focused on the integration of ESG into all investment decisions and stakeholder advisory bodies.

Such an approach would elevate in-state investments in rebuilding our cities, renewing our industrial commons (including private investment partnerships in reshoring opportunities), growing our clean economy and making corporations more accountable. These targeted strategies could include investments in mass transit companies, affordable and green building projects, renewable energy and community-scale infrastructure – all of which could fuel demand from Pennsylvania manufacturing suppliers.

- **Provide financial incentives for participative businesses, including employee-owned companies and those that share profits with employees**

Growing interest exists in “democratized” businesses such as employee-owned firms and those that share profits with employees. Among other advantages such businesses can access financing from employees if those employees have confidence that they will reap the benefits of additional investment in the future.¹⁶ To enable employees of worker-owned enterprises to diversify their savings, the state could also seek to grow a network of employee-owned businesses.¹⁷

B. Invest in Innovation

- **Set aside a portion of the R&D tax credit for innovation partnerships**

Pennsylvania currently invests \$55 million annually in the state’s Research and Development Tax credit that goes to individual companies (and which was made permanent by [Act 84 of 2016](#)). Some of these resources might deliver a larger payoff if used to foster multi-firm and university-industry innovation partnerships in technologies and industry segments in which Pennsylvania has a competitive advantage.¹⁸ A multi-firm credit might also create a more substantial pool of funds by leveraging support from participating businesses, Universities and even neighboring states. This kind of innovation partnership would resemble (although likely receive smaller amounts of funding than) the Obama Administration’s federal “Innovation Institutes.” The first of these, the National Additive Manufacturing Innovation Institute headquartered in Youngstown Ohio, launched in 2011 and includes firms and universities in eastern Ohio and northwest West Virginia as well as southwest Pennsylvania.¹⁹ (Additive manufacturing is another phrase for “3-D printing.”) Pennsylvania could establish a competitive process for awarding innovation partnerships, with criteria based on the potential innovation and jobs payoff and amount of matching funds.²⁰

- **Establish a flexible matching pool to support Pennsylvania proposals to the federal government that could grow good manufacturing jobs**

More generally, Pennsylvania could also establish a flexible pot of resources available when universities, industry groups, or individual firms make proposals to the federal government for resources for research and innovation that has demonstrable future job potential.

C. Enhance Pennsylvania's Business Climate

A foundation for financing advanced manufacturing and innovation in Pennsylvania should be to create a regulatory and business climate that encourages investment and job creation here at home. In recent years, progress has been made by finally phasing out the Capital Stock and Franchise Tax, adopting a single sales apportionment formula for calculating income subject to the Corporate Net Income Tax (benefitting companies that manufacture in Pennsylvania compared to those that only have a small sales force and property holdings in the state), and making permanent the R&D Tax Credit.

- **Reduce the corporate net income tax rate**

Pennsylvania's state corporate net income tax rate of 9.99 percent is the second highest in the nation and many competitor states have significantly lower rates. This high rate encourages manufacturers and other companies to reorganize as "pass-through" entities or use other tax strategies to reduce their taxes, diverting company resources to "tax planning" while disadvantaging smaller or Pennsylvania-only companies. A more competitive CNI rate will attract new manufacturing investment and retain operations in the commonwealth.²¹

- **Adopt regulatory and tax policies that support innovation**

Pennsylvania can increase its competitiveness and attractiveness for investment if it takes a more innovative approach to tax and regulatory policy.

- Uncap the Net Operating Loss Carryforward allowance. Currently Pennsylvania is one of the few states to limit the carryforward allowance by firms. Uncapping this loss carryforward will support early state technology firms as they tend to sustain losses in startup years. It will also benefit cyclical manufacturers and retain these businesses during downturns in demand.
- Align state and federal regulations where applicable. The additional burden for business to comply with two different standards can be greatly reduced when the federal and state regulations are better coordinated and aligned.
- Better communicate regulatory requirements to small business to improve compliance and understanding for these firms who may not have the resources to identify complex regulatory requirements.

- Establish regulatory standards in a predictable fashion that gives companies time to adjust and, with state support, innovate to meet demanding new environmental and other standards in ways that make them more competitive.²²

D. Support Job-Creating Initiatives of Multi-Firm Partnerships and Alliances

We live in a global, knowledge-based network economy, in manufacturing even more than other sectors. Yet Pennsylvania's traditional support for manufacturing ordinarily operates at the level of the individual business, not the multi-firm network or industry cluster. The state should change that going forward.

- **Support “Next Generation Sector Partnerships” in Manufacturing**

In the workforce area, Pennsylvania has established the value of multi-firm industry partnerships. These can lower the cost of training, better align education with industry needs, develop industry recognized credentials, career pathways, and sector-specific job matching arrangements, and promote learning across companies about effective management practices. In 2010 hearings on the state's workforce-related industry partnerships, former state Representative Scott Boyd (R-Lancaster) pointed out that multi-firm partnerships or alliances can also have benefits beyond the workforce arena. The Wolf Administration's “Next Generation Sector Partnerships” initiative also recognizes that industry partnerships can deliver a high return on investment on economic development initiatives as well as workforce. Potential economic development areas on which next generation sector partnerships could focus include joint marketing and branding (e.g., farmers' markets or furniture fairs, export promotion), deployment of modern technology, shared capital investment (e.g., community kitchens that serve many small local food producers, or the Makerspaces/co-working places mentioned below), supply chain development and reshoring. As above, some portion of existing grant funds (e.g., from the Regional Assistance Capital Program (www.racp.pa.gov) and the PA First fund) could be set aside to multi-firm proposals with strong job-creating potential.

- **Seek federal (NIST) funding for a network-based MEP pilot**

Pennsylvania's Industrial Resource Centers (IRCs), like the “Manufacturing Extension Partnerships” (MEPs) in other states, have largely operated based on a subsidized consulting model for individual firms. Economists who study “network failures” and national and state policymakers have recognized that MEPs might deliver a bigger bang for the buck if they also pursued industry-cluster approaches. As part of the Next Generation Sector Partnerships initiative, Pennsylvania should seek to model a network-based MEP pilot through which multiple firms collaborate in areas such as those listed under the previous bullet (joint marketing and branding, deployment of innovative technology, shared capital investment, supply chain development, and reshoring).

IV. BUILDS SKILLS FOR 21ST CENTURY MAKING

A. Invest in manufacturing apprenticeships and industry partnerships

Pennsylvania has a stronger foundation for creating an effective 21st century multi-firm training and career infrastructure for manufacturing than almost any other state. This foundation includes group apprenticeship programs (which coordinate classroom or “related instruction” for several dozen apprenticeship programs registered by individual manufacturing programs) in Pittsburgh and York, with a new one launching in SE Pennsylvania. It includes manufacturing industry partnerships in most regions of the state, most of which have continued to operate despite cuts or elimination of their state funding. These manufacturing industry partnerships are now helping the state expand manufacturing apprenticeship, with assistance from the Department of Labor and Industry’s new Office of Apprenticeship. While robust in the U.S. context, this foundation receives a tiny fraction of the private and public funding of apprenticeship training in West Germany. Now is the time for Pennsylvania to take its funding of manufacturing Industry Partnerships and apprenticeship programs to the next level. Therefore:

- Pennsylvania should reauthorize Pennsylvania’s Reemployment Fund, which from 2013 to 2017 set aside 5% of employee contributions to Pennsylvania’s Unemployment Insurance Trust Fund.²³ Priority for funding should go to manufacturers willing to match state funding at least one to one and to establish permanent training funds cost-shared by participating firms on an equitable basis.
- Pennsylvania should establish an apprenticeship and Industry Partnership tax credit. The Manufacturing Institute’s recent report predicts that by 2025 two-million manufacturing jobs will go unfilled due to the skills gap. Apprenticeship programs are one strategy to address this impending skills gap in manufacturing. Several states have established apprenticeship tax credits to encourage companies to invest more skilled training, especially in the skilled trades. In a similar vein, the Pennsylvania Senate Finance Committee in 2011 passed out of committee an Industry Partnership tax credit bill. This could have supported apprenticeship programs and other multi-firm training, growing sustainable public-private joint investment in critical skills.

B. Invest in maker and co-working spaces with tight connections to innovative companies

Pennsylvania is one of the leaders of the national “Maker Movement.” This began as a movement of hobbyists who make things but increasingly is seen as a source of product innovation and future manufacturing workers or “makers.” Both the economic and the workforce potential are now being enhanced by a growing number of “Makerspaces”—21st century machine shops with 3-D printers, CNC machine tools, water jets, and so on. In makerspaces, startups can develop their prototypes and potentially get assistance from other “makers” or from manufacturing specialists with the knowledge to conduct a prototype “design review,” make recommendations that would simplify (and reduce the cost

of) prototype manufacture, and make referrals to contract manufacturers that would make the product locally.²⁴

Makerspaces can also serve as a wonderful place to recruit and begin the training of next generation manufacturing workers. The spaces themselves viscerally communicate that digitized manufacturing is clean and cool. The spaces are also a great learning environment: recruits “learn by doing” and from each other, receive formal classes and project learning opportunities, and meet startups that pay them to do small-batch contract work, hire them, and occasionally give them part ownership. Combining makerspaces with “co-working spaces” (like incubators) that house small companies could further strengthen the “innovation eco-system” for Pennsylvania startups. Echoing these ideas, a report of Pennsylvania’s Green Ribbon Task Force, *Woods That Work* (p. 33) recommends investment of \$30 million in public and private funds to support 100 maker- and shared spaces that would help “bring back manufacturing” including in the furniture industry.²⁵ Pennsylvania has a chance to be the first state to jump on the innovation and workforce pipeline potential of the maker movement in a strategic way, and to brand itself the “Maker State.” We can be the “workshop of the world” again.

V. BOOST DEMAND FOR PA MANUFACTURING GOODS

A. Promote Fair Trade

- **Pass a state resolution for a U.S. fair trade policy and seek 100% Support from Pennsylvania U.S. Senators and members of Congress**

Pennsylvanians, Americans, and a growing number of American businesses, small and large, are finally fed up with a U.S. trade policy that has resulted in massive trade deficits, undercut businesses and whole sector, destroyed jobs, and undermined families and communities. It is time to break the pattern of promises about fair trade during elections followed by little or no change in post-election policy. To help break this pattern, Pennsylvania’s state legislature should enact a strong resolution calling on Washington to achieve a U.S. trade policy that eliminates the trade deficit over time and supports the reshoring and growth of American manufacturing jobs. That resolution should also call for every member of Pennsylvania’s Congressional delegation and both U.S. Senators to endorse a fair-trade policy and call on those who do endorse to advocate jointly and publicly to get the holdouts to change their mind.²⁶

- **Reopen the Pennsylvania Fair Trade Office**

Under Governor Rendell, Pennsylvania opened a fair-trade office in Washington D.C. that was a first step to giving Pennsylvania small- and medium sized businesses access to the protections available through U.S. anti-dumping and countervailing duty protections. That office should be reopened, potentially in partnership with other manufacturing states to increase its scale and capacity. As well as providing access to U.S. trade law protections for apple growers in Adams County, furniture makers in Union County, steelmakers across the state, and others, the office should report annually to the

Pennsylvania legislature on the number of jobs lost in the United States and Pennsylvania due to the trade deficit, the specific industries most hurt, and actions being taken to redress and eliminate these harms (whether via U.S. domestic trade law, the World Trade Organization, the dispute resolution mechanisms of other trade agreements, or more direct bilateral or multilateral channels outside any particular law or agreement).

B. Strengthen Pennsylvania's Buy Pennsylvania/Buy America procurement

- **Review and strengthen Pennsylvania's Buy Pennsylvania/By America procurement**

Despite the limits imposed by international trade agreements, U.S. states can encourage in-state and in-country sourcing of products and services procured by state and local government. For example, public transit is exempt from WTO restrictions on local procurement. In addition, states have the option of signing onto – or dropping out of – the procurement codes of trade agreements. (Signing onto these typically means a state cannot favor American products over the products of trading partners also signed onto the procurement codes.) Pennsylvania should review its current procurement obligations and laws and then strengthen its Buy America and Buy Pennsylvania provisions as much as possible. In some cases, this strengthening could dovetail tightly with reshoring initiatives: requiring that additional products, when possible, come from within Pennsylvania would provide added impetus to the search for Pennsylvania companies willing and able to enhance their capacities to supply state and local government directly or indirectly.

- **Strengthen Pennsylvania's buy local movement and branding**

The localization movement continues to strengthen in the United States and Pennsylvania. The state's Department of Agriculture currently supports this movement through, for example, the "Pennsylvania Preferred" brand (which also helps food processors which are part of manufacturing) and the department's support for farmers' markets. The state should strengthen its support for buying local manufactured goods including by considering the benefits of a "Made in Pennsylvania" brand; subsidizing markets at which Pennsylvania producers sell (e.g., furniture or craft markets or "Maker Faires" for new businesses seeking to break into commercial markets); and partnering in other ways with Pennsylvania industry associations and cities on buy local projects and branding.

C. Invest in PA Infrastructure

Pennsylvania and the United States massively underinvest in infrastructure, including transportation and water and sewer infrastructure. With record-low interest rates, this underinvestment is short-sighted. As well as reducing long-term productivity growth, underinvesting in infrastructure misses a golden opportunity to increase demand for U.S. steel, glass, concrete, machinery and other materials and products.

VI. END NOTES

¹ Manufacturing job numbers in this paragraph are seasonally adjusted Current Establishment Survey (CES) figures from Table 5 of <http://www.bls.gov/news.release/laus.t05.htm>. The U.S. manufacturing jobs number hit a trough in February and March 2010 and the Pennsylvania manufacturing jobs number in January of 2010. The estimates of jobs gained in the United States and lost in Pennsylvania since the first quarter of 2010 are based on a three-month average as is the estimate of how many jobs Pennsylvania would have gained if its total had grown at the rate that U.S. manufacturing jobs grew.

² For a state manufacturing agenda that overlaps the recommendations here, see Stephen J. Ezell and Robert D. Atkinson, *Fifty Ways to Leave Your Competitiveness Woes Behind: A National Traded Sector Competitiveness Strategy*, Information Technology and Innovation Foundation, September 2012. Pp. 45-50.

³ This council could be co-chaired by the Governor, a manufacturer and a labor leader, and include a representative of each legislative caucus. The Council could perform a role like the Obama Administration's Advanced Manufacturing Partnership but with deeper connections to critical Pennsylvania manufacturing sectors. In the skills area, the implementation team could be a revitalized "Pennsylvania Center for Advanced Manufacturing Careers," a public-private advisory body that provided industry input and research and policy analysis to support Pennsylvania's demand-driven workforce development strategy from 2006 to 2010.

⁴ The New Jersey workforce system has established centers of research and expertise (called "Talent Networks") on each of the state's targeted industries in partnership in most cases with New Jersey colleges and with some cases with industry associations. In Canada, industry associations also help fund and manage "sectoral human resource councils," including in several manufacturing industries.

⁵ This draws from "SE PA Manufacturing Reshoring Position Statement," submitted by the Chester County Economic Development Council on behalf of the RAMP It Up Reshoring Team, August 23, 2016; and Nancy Kunkle, "Incentives for Reshoring: Crafting a Competitive Package," August 31, 2016.

⁶ Harry Moser of The Reshoring Project estimates that the balance between offshoring of jobs and reshoring/Foreign Direct Investment (FDI) in the United States has shifted radically over the past dozen years. Whereas an estimated 240,000 jobs went offshore on average from 2000-03, with only 12,000 created through reshoring/FDI, by 2015 about 60,000 jobs moved in each direction. See Harry Moser, "Reshoring and FDI Prove Millions of Manufacturing Jobs Can Be Brought Back with the Right Policies," Power Point presentation at "What the Next President Should Do About U.S. Manufacturing: An Agenda for the First 100 Days," a conference convened by the Indiana University School of Public and Environmental Affairs (IU SPEA), September 14, 2016, National Press Club, Washington, D.C.

⁷ The Reshoring Project's Corporate Social Responsibility Estimator (CSRE) (<http://reshorenw.org/blog/corporate-social-responsibility-estimator-csre-project/>) seeks to add estimates of the environmental and domestic economy benefits of reshoring to the bottom-line impacts estimated by the TCO tool.

⁸ The Total Cost of Ownership (TCO) tool developed by the Reshoring Project seeks to weigh the trade-offs between offshore and reshored production and highlights many of the potential hidden costs of distance sourcing. The SVA's SEWN Program has found that to motivate companies to reconsider their sourcing it needs to work up "landed cost" estimates based on the company's own financials and then to cost out how to beat those estimates domestically. In a sense, what the landed costs estimate do is make concrete for the specific company what ITS costs are for distance sourcing, creating a platform for seeing if some of those costs can be avoided through reshoring. All this type of analysis will become easier, and more precise, the more it is done. Thus, the first state to create a community of practice which is expert at identifying the concrete costs of offshore production for distinct types of companies, and expert at finding out how to squeeze out some of those costs through local production, will become the first state to reshore significant jobs as a direct result of state policy.

⁹ See Elizabeth Stork, *Steel Valley Authority: Strategic Early Warning Network Program Evaluation 2014-15*, 2015 and the analogous report in the previous two years.

¹⁰ Outstanding small loans (less than \$1 million) to businesses – a proxy for small-business lending – remained 17% below its 2008 peak in the second quarter of 2014, with banks holding \$590 billion in such loans compared to \$711 billion in 2008. This is a 25% cut in inflation-adjusted dollars, with a slightly larger cut in the \$100,000 to \$250,000 range. Finance companies also dried up as source of debt. Finance companies include companies that finance the purchase of their own equipment, such as Caterpillar Finance, and stand-alone finance companies such as CIT, <http://www.cit.com/index.htm>.

¹¹ Rob Atkinson of the Information Technology and Innovation Foundation (ITIF) suggested that the state explore ways to give manufacturers priority for SB7a funds, which provide loans to small business owners who can't obtain financing through traditional channels,

¹² Under Securities and Exchange Commission (SEC) Rule 147, a securities' offering that takes place completely within one state (i.e., the recipient business is organized within the state, conducts most of its business in the state, and would use most of the funds raised in the state) is exempt from federal securities registration requirements (and from the investor protections that come with those requirements). As of May 2014, Alabama, Georgia, Indiana, Kansas, Washington and Washington had adopted legislation or regulations to capitalize on the Rule 147 exemption (<http://www.crowdfundinsider.com/2014/05/38730-states-sidestepping-jobs-acts-burdensome-crowdfunding-rules/>). To qualify for the federal exemption, state laws must limit the potential losses by an individual investor (i.e., to \$100,000 for non-accredited investors). In addition, most of the existing state laws limit the total raised to \$1 million or, in Indiana, Michigan, North Carolina and Wisconsin, to \$2 million if the issuer has audited financial statements. On Oct. 26, 2016, Rule 147 was updated to "modernize how issuers can raise money to fund their businesses through intrastate offerings while maintaining investor protections" (i.e., to allow offerings to be advertised outside the state via the internet); see <https://www.sec.gov/info/smallbus/secg/intrastate-offering-exemptions-compliance-guide-041917.htm>

¹³ On Michigan's legislation to establish a state stock market, see <http://www.nytimes.com/2014/10/25/opinion/a-way-for-local-businesses-to-grow.html? r=0>

¹⁴ For an update on Canadian tax subsidies for these funds, see http://mcmillan.ca/Files/187867_Labour-Sponsored%20Venture%20Capital.pdf

¹⁵ On this option see Thomas W. Croft and Anna Malhotra, *The Responsible Investor Handbook: Mobilizing Workers' Capital for a Sustainable World* (Saltire, UK: Greenleaf Publishing, July 2016); <http://www.greenleaf-publishing.com/the-responsible-investor-handbook>

¹⁶ For a history and profile of worker ownership in the United States, and additional suggestions of how government can grow worker ownership, see Christopher Mackin, "Property Not Pay: Restoring the Middle through Ownership," Rutgers University – September, 2017, paper prepared for the Institute for Work and the Economy Conference, "The Many Futures of Work: Possibilities and Perils," Chicago, IL, October 5-6, 2017; online at <https://www.futuresofwork.org/working-papers-resources/> (scroll down to "Download Now" below Christopher Mackin's name).

¹⁷ One challenge, in theory, with individual employee owned businesses is that is not wise for employee owners to put all their savings in the business they partly own because that would leave them "undiversified" and at risk of losing all their savings (as well as their job) if the business fails. In practice, however, new research shows that employee owners accumulate more quickly than similar, non-employee owners, and this difference is particularly pronounced for demographic groups such as minorities that historically have little wealth (personal communication with Christopher Mackin).

¹⁸ For a discussion of the benefits of collaborative research and development, see Matthew W. Stepp and Robert D. Atkinson, *Creating a Collaborative R&D Tax Credit*, June 2011; <http://www.itif.org/files/2011-creating-r&d-credit.pdf? ga=1.151052601.1221138187.1484510628>. While this report addresses the federal R&D tax credit that basic logic of the proposals also argues for using some of Pennsylvania's R&D Tax Credit to support multi-firm and university-industry innovation.

¹⁹ These Innovation Institutes were inspired by Germany's Fraunhofer Institutes (<http://www.fraunhofer.de/en.html>).

²⁰ Albeit with hundreds of times the resources Pennsylvania would have, the Defense Advanced Research Projects Administration (DARPA) has a highly respected process for identifying promising technologies and commissioning research on them. Pennsylvania could seek technical assistance from DARPA, and possibly matching funds, by making the argument that if the state models an effective vetting process for innovation partnerships, other states might emulate it and the overall research effort in support of national defense would benefit.

²¹ A related option, suggested by Rob Atkinson of ITIF, would be to let firms use the federal domestic production deduction section 199 to lower their state statutory CNI rate to say 5 percent. This would target the tax reduction to manufacturers. There is a question about whether this would be constitutional under Pennsylvania's uniformity clause. It could be if manufacturers were considered a separate class of business. In addition, incentives built into the tax code to benefit particular businesses (e.g., small business) rarely get challenged in Pennsylvania's courts.

²² On this basic approach, see Michael E. Porter and Claas Van der Linde, "Green and Competitive: Ending the Stalemate," *Harvard Business Review*, September-October 1995.

²³ In most states, employers make 100% of the contributions to the Unemployment Insurance Trust Fund, with the federal government requiring those employer contributions to be used strictly for providing unemployment benefits.

Pennsylvania is one of the few states in which employees contribute significantly to the UI Trust Fund (over \$200 million annually since the Great Recession). The state has more flexibility in the use of these employee contributions, including the freedom to use a portion of the funds for a flexible state training fund.

²⁴ This sentence and the next several describe the conceptual thinking behind a Pittsburgh project, “The New App for Making It in America,” funded by the U.S. Department of Labor from 2012-2015. Bernie Lynch of Strategic Development Solutions was the project manager and driving force behind the project which operated out of a for-profit makerspace, Tech Shop, in Bakery Square in Pittsburgh. Among other outcomes, the project developed a new nationally registered apprenticeship called the Maker Professional. Other participants in the project included Three Rivers Workforce Investment Board (the fiscal agent), Carnegie-Mellon University, the Pennsylvania AFL-CIO, Keystone Development Partnership and Keystone Research Center. The New App maker training and apprenticeship model, and an effort to create a job matching system for makers who want paid opportunities (“the Maker Bench”) with businesses that want to engage additional makers, is now being disseminated nationally with U.S. Department of Labor support under the banner “Made Right Here” (<https://www.maderighthere.me>).

²⁵ Pennsylvania Green Ribbon Task Force on Forest Products, Conservation, and Jobs, “Woods That Work”; online at http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_20032157.pdf

²⁶ Some elements of a fair-trade policy could include self-initiated (by government) and strategic industry-specific enforcement of U.S. anti-dumping and unfair subsidy laws; negotiations to end currency manipulation by trading partners; and voluntary agreements to increase the share of U.S. (and North American) motor vehicle value produced in the U.S. (and North America). Other than trade with China, the U.S. and North American motor vehicle industries account for the largest part of the U.S. and North American inter-bloc trade deficits. One possible name for such voluntary agreements, echoing the Voluntary Restraint Agreements (VRAs) negotiated in auto by President Reagan would be Voluntary Trade Restraint Under Managed Production Agreement; i.e., “Voluntary TRUMP Agreement.”