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Austin Polytech

Building the Road as We Travel

Executive Summary

Overview: Austin Polytechnical Academy (APA) is a developing model of a true private/public partnership, working to meet the educational requirements necessary to rebuild our manufacturing economy; revitalize communities; and empower students, particularly inner-city students, with the aspirations, knowledge, skills, and values to succeed in the many rewarding career opportunities available in the manufacturing economy.

History: Austin Polytech was formed by the Chicago Manufacturing Renaissance Council (CMRC) in 2007, with project staffing provided by the Center for Labor and Community Research (CLCR).

The Model: APA partners with over 60 local manufacturers, and supports development throughout the Austin community. The APA model does not aim to replace public education with private, often non-union charter schools, but rather to **add value to public school systems by:**

- Creating partnerships with local manufacturing companies to introduce students to modern manufacturing and opportunities for job shadowing, internships, and finally full-time employment, as well as a means to leverage financial and other investments in public education;
- Develop and promote courses as well as extra-curricular activities that enhance the educational experience for students providing context for learning, as well as creating true opportunities as an incentive for hard work and academic and social performance;
- Provide career and post-secondary options for all students whether they have the means, interest, or resources to go to college or not;
- Promote this kind of education as a springboard to promote local community development through linking residents with existing employment opportunities for well-paying jobs with benefits, the attraction of manufacturing companies, and, in the long run, the start-up of manufacturing companies; and
- Challenging traditions in the field of education that are alienated from and mis-understand the enormous potential for society in advanced manufacturing, that maintain low standards for performance in schools, that are cynical about the ability of students to learn, and that are ineffective in creating partnerships with the private sector.

As a new partnership between manufacturing companies and public education, in the context of a community facing many economic, social, and educational challenges, APA expectedly reflects both remarkable advances particularly in new partnerships as well as ongoing challenges particularly in

academic performance and low enrollment. The role of the CMRC has been to build support for this school, build a common culture in the school and community, fight like hell against the mindset of failure, and never quit. APA is the first effort to implement a new model of education in the context of an inner-city community. It's a model that has promise and corresponds to the needs of our country. It's a model that deserves to be applied in a variety of communities across the country to both refine and improve the model, as well as meet the immediate needs of our local manufacturing companies to find appropriately educated employees and the needs of our residents for employment and careers.

APA's Background

In 2005, the CMRC was formed with the mission of establishing Chicago as the global leader in manufacturing complex products led by a partnership of business, labor, government, community, and educators. Our long term goal of the CMRC is the development of our society in ways that are economically, socially, and environmentally sustainable and restorative.

That objective is impossible without a world class education system at all levels in Chicago and in the nation as a whole. CMRC was deeply influenced by the report prepared by the Chicago Federation of Labor and the Center for Labor and Community Research in 2001.¹This report was deeply influenced by best international practice in countries like Germany and Denmark. It called for, among other things, the creation of several small high schools in Chicago that would provide a consistent stream of educated and skilled young people to provide leadership in all aspects of manufacturing. This is the essential ingredient for the development of our overall economy as well as a foundation for the re-development of communities.

Leaders of CMRC met with Chicago Public School's CEO Arne Duncan in July 2005 to introduce him to our objectives and to establish an essential partnership with Chicago Public Schools. We discussed our concept of small high schools linked to manufacturing that could attract an active partnership with local companies who would provide not only resources for the school, but most importantly exposure to manufacturing careers through tours, job shadowing, internships, and finally career employment. Then as now, there are excellent jobs in manufacturing going unfilled because of the failings of our public school system. Duncan challenged us to propose such a school in the Austin community through the Chicago Renaissance 2010 process. We leaped at the opportunity—aware of the difficulties that went with starting a new school around a new concept in a community facing many challenges like Austin.

We applied for the school, choosing the "performance school" model rather than a charter or contract model. As a Performance School, we preserved the partnership with the Chicago Teachers Union and ceded management control of the school to CPS. Despite the difficulties of developing a new model of education without full management control, we still think our decision to go the performance school route was correct. Our desire then and today is to influence the quality of public education and winning support for a new model rather than take full responsibility for all aspects of school operations and trying to replace the public school system.

The Model

We see the following as the standards for measuring the performance of the school and the partnership between our efforts and the public education system.

- Anchored in a commitment to advanced manufacturing;
- Private/public partnerships;
- Academic performance;
- Links to post-secondary education including college and careers in manufacturing;
- Students securing nationally-recognized industry credentials;
- Partners with local manufacturing companies; and
- Promoting community development.

A Commitment to Advanced Manufacturing

First—what is advanced manufacturing? Advanced manufacturing is the intersection of the most advanced technology, science, human innovation, work, and critical thinking reflected in the physical production of things and products. It is called “high value-added” work that involves complex design, precision machining, very close tolerances in thousandths or even millionths of an inch, a number of production stages in making a single piece, and work that requires competency in the use of computers and programming, math, critical thinking and team work. Robots, MIR machines, wind turbines, heart pacemakers, and space shuttles come to mind. This is compared to “low value-added” work that is typically a product that is very simple to make such as simple lamp assembly, simple cut and sew patterns, and simple food products that require relatively low skill to produce.

We have generally lost our competitive advantage in making simple products that require low-skilled labor to a developing world that has low-skilled as well as low-wage labor. We still have a competitive advantage in advanced manufacturing. Without a dramatic change in our education system from K through 20, we won’t maintain much less extend this advantage. Today our education system in general is failing to meet the labor market needs of advanced manufacturing companies. We have 13 million unemployed and 3 million unfilled jobs reflecting this reality.

Our work in education including the founding of Austin Polytechis driven by a commitment to establish advanced manufacturing as the core of our society, and to become the global leader in the manufacture of complex products. Advanced manufacturing is the only sector that can re-build a broad-based middle class, give us the potential to end poverty, give us the capacity to solve the environmental crisis, and provide the opportunity to have work for a very large segment of our society that is of a truly transforming character. We can build social capital during work as well as provide a good standard of living after work. Advanced manufacturing is an essential framework for innovation. Of any sector in the economy, advanced manufacturing represents the highest possible fusion between public and private interests.

Private/Public Partnerships

The CMRC is a private/public partnership united around a shared economic and social mission of global leadership in advanced manufacturing. APA represents a partnership between the manufacturing sector in Chicago and Chicago Public Schools. CMRC was asked to submit a proposal outlining our vision and contribution, premised on the assumption that CPS would be a strong partner in commitment to a shared vision as they exercised management control over the principal and teachers. As could be expected in an early demonstration project, creating this partnership, in reality, has been challenging and required enormous effort and new thinking on both sides—CLCR and CPS. The challenges include:

- **Cynicism in manufacturing companies about the public sector and public education:** There's cynicism in the manufacturing sector about public education based on the disconnect between manufacturers and schools that accompanied the disappearance of a secondary vocational education system as well as the quality of education not keeping pace with the requirements of work in modern manufacturing. In order to overcome this cynicism, the design of APA was to raise the standards of public education, to have specialized programs in manufacturing such as Project Lead The Way and machining, to meet the requirements of the National Institute for Metalworking Skills, and to create meaningful partnerships and interrelationships rather than seeing companies simply as a potential source of financial support. We also hired an Industrial Coordinator with a deep background in manufacturing to facilitate building a relationship between companies and the school.
- **Community misconception of manufacturing careers:** There is a negative perspective in African American communities about the viability of careers in manufacturing. There is the widely held view in most communities that manufacturing is dying, and there has been the particular experience of African Americans of being placed in the lowest skilled, lowest paid, and most dangerous jobs in manufacturing in years past. This is a factor that has affected enrollment at APA. In order to address the negative misperceptions about manufacturing, we are engaged in consistent and constant outreach and community education on the viability of manufacturing and the fact that APA introduces students to careers in skilled production positions, management, ownership, engineering, and other careers—that have historically not been available to African Americans. We actively educate local leaders on the potential of advanced manufacturing to re-develop the community. As our students become old enough to work and have meaningful internships and jobs, as well as able to secure credentials, the misperceptions are more easily challenged and overcome.
- **Resistance to manufacturing in the educational community:** A few administrators, principals, and teachers including those connected with APA, have been skeptical or even hostile to a linkage of education to manufacturing—either holding the opinion that manufacturing was dying, or seeing manufacturing as leading only to dead-end and demeaning careers for students. The impact was to lessen the integration of key themes throughout the curriculum, to not encourage students to take advantage of opportunities to better understand manufacturing, and to not see the opportunities as one means or influence to accelerate learning. Through persistent education and increasing the contact between those in manufacturing and educators we have made progress. Some teachers have come to see that the real-world applications of classroom lessons can enhance student interest in learning and their achievement, and now see tangible opportunities for students in both advanced education and careers.

- **Institutional Bureaucracy:** Finally, we have had to struggle with the bureaucratic challenges and narrowness that can be found in a school system as big as Chicago's that contradicted the enthusiasm for the partnership by leaders like now Secretary of Education Duncan. We are still faced with structural obstacles to fully implement the core elements of our career program. For example, we were unable to hire an adequately skilled instructor until we had the funding to pay for this position—setting back our ability to secure credentials and jobs for students for a year. We are also still struggling to find a structure to allow students to participate in meaningful internships as part of their school day—a key component of the school's designed and inspired by the best practice of our European competitors.

Academic Performance

We proposed a demanding high school curriculum for APA. In addition to standard courses, we proposed four years of Project Lead the Way, a nationally-recognized pre-engineering program that introduces students to the principals of manufacturing and design, as well as advanced machining that prepares students to secure nationally-recognized credentials from the National Institute for Metalworking Skills. Meeting the minimum requirements of companies in advanced manufacturing for employment requires that our students have core academic competencies in math, science, communications, and soft skills. We regularly have to clarify that APA is not a trade or vocational school but one geared to all careers related to manufacturing including all positions within the firm as well as positions outside of the firm. Our career range includes skilled production technicians, marketing and management, ownership, a Ph.D researcher in nanotechnology, or a leader in industrial policy. We encourage our students to go as high as they can academically recognizing that the more education they have, the higher they can go in the firm as well as have access to careers related to manufacturing that are outside the firm. For example, one of our school partners is John Marshall Law School that just awarded \$65,000 in scholarships for 10 students who have demonstrated an interest and capacity in a program in the school on patent law and intellectual property rights. We see a lawyer doing intellectual property cases as a manufacturing career.

APA faces several key obstacles to academic achievement.

- The performance of public schools in elementary education on Chicago's West Side has regularly been of very low quality—meaning we have students coming into the 9th grade reading at a 4th grade level on average, limiting their ability to successfully perform in a demanding course like Project Lead the Way Engineering, or even their 9th grade level English, math and history classes.
- We have faced the perspectives inside the educational community that is skeptical about the ability of students from a community like Austin to accelerate learning and recover from the disadvantages of going to a sub-standard elementary school.

The success of our model depends on adequate academic performance by our students as a result of good educational performance by our administrators and teachers under the supervision of the Chicago Public School system. The role of the CMRC is limited in the academic realm to persuasion and complementary resources. However we operate to raise the awareness and broaden the acceptance in CPS that there are real-world incentives for good academic performance beyond test scores and college acceptance letters as we do everything we can to encourage academic performance and for students to aspire to achieving bachelor and advanced degrees. A student must be competent in math if they are

to secure a NIMS credential and thus earning the near-guarantee of being able to earn living-wages and enter a career pathway. A student must demonstrate strong communication and critical thinking skills if they want to be successful in summer jobs and internships.

This work of connecting students to real professional opportunities is just beginning to be visible this year with our summer jobs pilot program where we placed 30 students into summer jobs in manufacturing. This is the first time our students have had the opportunity to earn money based on their experiences as a student at Austin Polytech. One student, a senior, Michael Hudson, received high marks from his supervisor at DeCardyDiecasting Co. because he already knew how to use a micrometer, and needed little supervision while he made quality control measurements. This is a powerful motivator for both the student and the manufacturer, which is now only just beginning at Austin Polytech. This should also be a powerful motivator for CPS to further integrate work-readiness and exposure to careers related to manufacturing into more of its academic programs.

Work opportunities right after high school can also be the pathway to continuing post-secondary education and having a means to pay for it. A number of our partner companies are willing to pay for the continuing education of their employees. S&C Electric will pay for an employee's education up to a Ph.D that is fully reimbursable if the student makes A's and B's. Winzeler Gear contributes to post-secondary education as do others

Currently, we have a small percentage of students that are excelling or even doing moderately well academically. We have a large number of students who are having difficulty in their classwork and in the standardized tests like ACT. The failing rate in Project Lead the Way is quite high in light of its demanding curriculum and students entering APA with a weak foundation in math. In light of the school's academic performance for the first three years, the school is now on Academic Probation and must demonstrate solid progress to avoid intervention by CPS on a variety of levels including closure. We continue to support and provide assistance in addressing these issues and are confident APA will successfully demonstrate the power of this model even in a community with the multiple challenges that Austin faces.

We were aware of the academic challenges we would face when we founded APA. We wrote in our application: *The school will offer each student the opportunity to challenge herself/himself. Rubrics and expectations will be uniform for all students. Each student—not just the elite—will receive the advantages of individualized instruction, supported learning, and special, high-caliber experiences.*

CLCR's Alarm and Action Around APA's Poor Academic Performance: In the fall of 2008, we became aware of the fact that more than half of the students at APA were failing algebra and facing other academic challenges—a real threat to our ability to meet the objectives of the school we had founded. We brought our concerns to the principal and suggested a focus on individualized instruction based frequent assessments of the student's success in learning as the first step in developing effective instructional methods. We acknowledged then as we do now—we had suggestions and concerns—but finally the decision was in the hands of the principal and Chicago Public Schools. Our suggestions were rejected. We raised \$100,000 to have a pilot project in APA and a local elementary school to test an approach that could accelerate learning of students that was again rejected. We took our concerns regarding academic performance at APA to top leadership in CPS, the top leadership in the CMRC, as well as the Mayor's office, seeking to increase the effectiveness of our public/private partnership. Overtime, suspicion and resistance to CLCR's role (perceived as an "outsider") gave way to increased collaboration and a stronger partnership with CPS.

This last summer, the founding principal transferred and took a position in CPS. APA was assigned a new principal, Fabbie Williams, with a commitment to the mission of the school as well as a strong leadership style and a determination to improve the academic performance of the school. Immediately Principal Williams set new and higher standards for performance by both teachers and students. There are adjustments being made to allow incoming or struggling students to have greater focus on academics until they have gained an appropriate level before participating in some aspects of the career program and Project Lead the Way. There is a fuller integration of CLCR staff into the everyday affairs of the school. We are confident in the success of the school in meeting academic standards as well as career objectives as the benefits of our approach to education and partnership with the manufacturing sector have the time to become visible. The recent adjustments by CPS give us confidence in the effectiveness of our on-going private/public partnership to work together in developing this model approach to career and technical education. As a result of all of these measures, and by increased attention from CPS, we are very confident in the ability of this school to leave Academic Probation.

Our experience in secondary education has convinced us that we have to intervene in elementary education to both encourage higher performance of these schools, as well as to introduce students to STEM education at an earlier age and introducing them to the themes of APA so we attract students to enroll at APA that are motivated by the theme of our school and eager to take advantage of the opportunities it offers. We will be sending out teams including staff and our students along with a LEGO robotic kit to start discussions with elementary school students, teachers, and guidance counselors. CPS has started a similar program with several area elementary schools. We think these initiatives by CPS and CLCR will show results over the mid-term.

Links to Post-Secondary Education and Careers in Manufacturing

Creating opportunities for post-secondary education including college and advanced degrees is a deep commitment of the CMRC. For our country to sustain its global leadership in manufacturing complex products, we need highly educated young people at all levels of the supply innovation chain in manufacturing. It was recently cited that 60% of men who graduate from Harvard enter the world of finance and consulting. A large percentage of graduates from Northwestern University are now recruited into finance rather than applying their education to innovation in production. As a country, we need our colleges and universities to be generating the talent needed to compete globally, and we need students from Austin being part of that pool. In addition to our involvement in secondary education, the CMRC has been deeply involved in Chicago's post-secondary education system—particularly City Colleges of Chicago. Our approach has been the same public/private approach as in APA. We did an assessment of the programs in City Colleges related to manufacturing, found enormous deficits, proposed a course of action regarding equipment, curriculum, teaching staff, and accreditation by the National Institute of Metalworking Skills. Our approach was utilizing our strength as a city-wide partnership in face of sustained resistance by City Colleges. Four years later, we have a very productive partnership with City Colleges and have an evolving program that we think can become one of the best in the country.

City Colleges of Chicago is now working with APA, with the assistance of the CMRC, for programs providing dual enrollment and dual credit. APA and City Colleges will be guided by the same overarching standards. APA's staff includes a Post-Secondary Coach who has been creating linkages and tours to

area colleges and universities. Northern Illinois University will give 6 credits to students from APA who pass the Project Lead the Way exam. One of our partners for APA is John Marshall Law School that recently awarded \$65,000 in scholarships to our students.

A major problem for Austin students as well as others throughout the country is the cost of going to college. Some of our manufacturing partners are willing to pay for college. S&C Electric will pay for an employee's college education up to a Ph.D that is 100% reimbursed if the student makes A's or B's. Winzeler Gear is willing to pay for post-secondary education for its employees as are other companies. As we secure employment for our Seniors with partner companies, we are encouraging the companies to include a program for post-secondary education for APA graduates. In an educational world that only focuses on "college prep" without regard to the increasingly prohibitive costs of college and university education, the kinds of careers that are actually available to this generation that achieves a college degree, APA opens up a number of complementary opportunities. As one of our students said in a recent video, our students can get a decent job with the skills and credentials they receive during their high school education—and then are positioned to pursue a variety of post-secondary opportunities including college once they are personally and financially prepared for this step—and often with a very clear career opportunity in mind.

Achieving nationally-recognized credentials

A key measurement for the success of APA is our students securing nationally-recognized and portable credentials in manufacturing. Our focus has been on credentials with the National Institute for Metalworking Skills (NIMS). These credentials are recognized around the country, and a person with such a credential can easily secure employment with starting wages at \$15.00 an hour and quickly go up from there. In many companies are more important than a high school diploma as they prove competency. In a presentation recently given by Aarti Dhupelia, Director of CPS College and Career Preparation, CPS graduates in 2007, ages 18-24, earned on average \$11,439 annually. Nationally, in the same year, young people with a high school diploma, between the ages of 18-24 earned on average \$24,557 annually. A student graduating from APA with NIMS credentials earning \$15 an hour stands to earn \$28,800 annually not including overtime.ⁱⁱ With the financial support of our partner companies and trade associations, we were able to secure over \$100,000 to build a state of the art manufacturing technology center with sophisticated CNC lathes and mills, which were placed at APA. Learning hands-on operation of these kinds of machines is important, not only, for production positions in companies but also, the ability to apply engineering concepts to production. Northwestern University's Engineering School has similar machines as do manufacturing companies across the country. Despite our inability to hire a full-time NIMS qualified instructor for the first year of the Manufacturing Technology Center, we were able to prepare 25 students to secure NIMS credentials—more than any other school in the city. Now that we have a NIMS qualified instructor at APA with a salary paid for by manufacturing partners, we expect 80 students to secure their first NIMS credential this year, and 60 to secure their second. We expect APA to be the first high school in Chicago with a NIMS Accredited program.

Partnership with local manufacturing companies

An important distinction we make is different interests in local public education by different kinds of companies in the manufacturing sector. When most people think of corporations in manufacturing, they think in terms of the larger publicly-traded companies that are well-known such as Motorola,

Boeing, Caterpillar, and General Electric. Because of their scale, capacities, and connections, these companies can go to any place in the world to solve a labor market challenge and often with very favorable terms. There are about 13,000 publicly-traded companies. On the other hand, there are 8 million privately-held companies that are typically locally owned and smaller. They don't have the global options of the larger companies. They don't have the reserves and expertise to have extensive remedial education programs for incoming employees. They literally depend on a competent public education system for survival. These are the local companies that are, in their aggregate, the life-blood of the urban industrial economy. These are the companies that we have recruited typically as partners for Austin Polytech. They are our partners for a variety of reasons, but at the heart of their interest in our school is a powerful self-interest in having a pool of students who they know and in who's education they have confidence. This is the kind of motivation we can trust and rely upon.

Our ability to get companies to partner with the school was the first claim we made to Arne Duncan in 2005. APA now has over 60 company partners. These partners are typically small, privately-held manufacturing companies that are eager to recruit our students to work for them at all levels within the firm. These firms and associations have:

- Provided over \$250,000 of financial support to this school during the worst recession in 80 years;
- Opened their doors for tours by students and teachers;
- Hosted students for job shadowing experiences;
- Hired our students for summer jobs and are committing to provide full-time jobs for our graduating seniors;
- Participate in quarterly partner meetings in the school;
- Serve as an advisory committee for our machining program to ensure high quality; and
- Mentored teachers interested in finding new ways to integrate manufacturing themes into standard courses.

This has provided a unique opportunity for our students to be exposed to the opportunities for careers in manufacturing. Our students see firsthand what work can be like in one of these companies. For example, one student, Stran'ja Burge job shadowed the President of DeCardyDiecasting. Tiera Logan and London Hicks worked doing data-entry at Freedman Seating. Marquiese Booker got to Laystrom Manufacturing at 5 AM every morning for his summer job. Torian Hughes Jr. learned Brite Site's accounting software and even paid 10 of the companies bills that day he job shadowed with the company's accountant. Ten sophomores and juniors just earned \$65,000 in law school scholarships at John Marshall Law School for participating in a workshop and mock trial simulating a patent law case. Three freshmen students interned with Bill Vogel—who has 50 years of sales experience – to help recruit manufacturing companies to become partners to the school.

We believe this network of partners in manufacturing is unprecedented in both quality and quantity for such a small school. We think that over time, this relationship will be a major component in cementing APA's leader as a model for career and technical education in the U.S.

Promoting community development

The purpose of APA is to provide an educational resource that will lead to the re-development of the Austin community. Austin once had 20,000 industrial jobs that employed a large number of Austin residents. Owners of local companies lived in Austin. It now has 3,000 manufacturing jobs and most of those are held by non-Austin residents. Austin is plagued by poverty, unemployment, exclusion, and exploitation. Economic justice and development are the requirement of any demand for social justice in communities like Austin.

Linking local education to local jobs:We have always defined the goal of Austin Polytech as one of rebuilding the community. We have now created an active linkage between Austin young people and good paying and career-type jobs in regional manufacturing companies—a first if small step in addressing the patterns of poverty and exclusion that have haunted Austin for the last 20 years. Our focus is now expanding to other aspects of the community.

- We are now opening the Manufacturing Technology Center at the school on evenings and weekends to provide the parents of Austin Polytech students with the 280 hours of instruction needed to secure NIMS credentials in CNC machining as well as to be placed in local companies.
- City Colleges of Chicago has agreed to significantly increase their marketing and promotion efforts for their manufacturing programs in the Austin Community with the same goal in mind. City Colleges has the capacity to provide education and placement to several hundred adults a year—and we are targeting their focus on the Austin Community.
- We are establishing a program with NIMS and the Safer Foundation to provide the same training, certification, and job placement to men returning to Austin from prison. The Safer Foundation is a nationally-recognized leader in working with those who are leaving the criminal justice system and returning to the community. Without good family-supporting jobs, these ex-incarcerated often return to the criminal justice system. This reality has to be addressed in effective ways or communities like Austin can't break out of the cycle of poverty.
- In partnership with Ald. Deborah Graham of the 29th Ward, we have set up a committee to explore the creation of the Austin Renewable Energy Innovation Park—a research and industrial incubator linked to the wind turbine and other renewable energy sectors. This type of development is relatively common in Europe and could site in one of the many vacant industrial sites in Austin and attract the partnership of other universities, research labs, and companies—leading to the attraction and start-up of companies over the next decade.

This combination of programs begins to create an infrastructure of future development that can truly rebuild the middle class in Austin through increased employment opportunities for Austin residents, create the foundation for attracting companies to again move to the Austin area, and, in the long-run, promote the start-up of new companies in Austin—maybe owned by Austin Polytech graduates.

Conclusion

APA has demonstrated an effective model for education linked to the needs and possibilities of advanced manufacturing in America. It is a work in progress. It has definite weaknesses and limits but also extraordinary strengths. It is truly an evolving partnership between Chicago's manufacturers, a community, and Chicago Public Schools with the CLCR as the intermediary. Despite the periodic frustration of not being in control and the necessity of trying every possible way to have influence and impact—we believe that this model of a private/public partnership in shaping public education is the only way that this approach can go to scale in this country. This type of education permits us to meet the opportunities in the global economy and establishing advanced manufacturing as the foundation for our nation's economy—anchored firmly in communities like Austin.

We have been supported in these efforts by JP Morgan Chase, the Chicago Community Trust, the Field Foundation, the Polk Brothers Foundation and national support through the Nathan Cummings Foundation, the Surdna Foundation, and the Kendeda Fund—leveraging additional resources for the Austin Community. We have attracted the attention of the *New York Times* and other media in light of the favorable comparison to other efforts at education and development. Communities, businesses and government officials at all levels are seeking to learn more about this effort to influence their public education systems in creating a meaningful linkage between manufacturing companies desperate for employees with skills and education and communities whose residents are desperate for jobs and careers. Recently such leaders formed the San Francisco Bay Area Manufacturing Renaissance Council and are exploring the possibility of replicating the Austin Polytech approach in West Oakland. We can lead the way on guiding others to the opportunities and challenges of this distinctive approach as we all work to re-establish our country and our communities as global leaders with a secure future.

ⁱ*Creating a Manufacturing Career Path System in Cook County*, 2001. Published by the Center for Labor and Community Research and the Chicago Federation of Labor, funded by the U.S. Department of Labor.

ⁱⁱSpeech by Aarti Duplelia, Career To Education Program, Chicago Public Schools.