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Following is our proposal to the MacArthur Foundation—our answers to their questions. We share this proposal to serve as a template for what scale of the kind of programming required to build an inclusive manufacturing ecosystem could look like. MR also prepared a budget for the programming referenced in this proposal. This was an on-line application requiring very brief answers limited to 250 words or less.

MacArthur 100&Change Proposal

A. EXECUTIVE SUMMARY

According to Harvard Professor William Julius Wilson, the cycle of poverty in minority communities was caused by de-industrialization, beginning in the late 1970s.¹ This remains the context for growth of income inequality and social exclusion. This reality has been exacerbated by the destruction of the vocational education system linked to manufacturing.² Manufacturing Renaissance’s strategy addresses systemic poverty through re-establishing linkages between communities and the regional manufacturing sector. While all sectors are important, manufacturing significantly multiplies economic growth for other sectors³. Today, thousands of manufacturing jobs are unfilled.⁴ By addressing this issue, all communities will have access to secure careers, family-supporting wages, and benefits. Upon full implementation, Manufacturing Renaissance will be able to inspire the expansion of these programs across the country, increasing opportunities for impoverished communities.

B. YOUR TEAM: WHO ARE YOU?

TEAM PURPOSE

The crisis of poverty, particularly in minority populated communities, can be solved through a partnership engagement strategy focused on education, training, industrial retention, and employment in manufacturing. As Don Turner, former head of the Chicago Federation of Labor, commented regarding controversial issues that can divide us, “We were all responsible for these problems, we all need to be part of the solution of these problems.” This is Manufacturing Renaissance’s (MR) mantra.

MR is a backbone organization, skilled in creating partnerships focused on re-discovering and re-building manufacturing linked to minority communities in the Chicagoland region. MR develops innovative models to serve a wide range of individuals, young adults, displaced workers, and business owners. This collective approach provides various entry points into MR’s services, providing a holistic solution in

¹*The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*, William Julius Wilson, 1987

² <http://www.ncee.org/2012/01/the-death-of-vocational-education-and-the-demise-of-the-american-middle-class/>

³ <https://www.mapi.net/blog/2016/04/infographic-new-model-manufacturings-multiplier-effect>

⁴ <http://www.wsj.com/articles/as-skill-requirements-increase-more-manufacturing-jobs-go-unfilled-1472733676>



solving systemic problems. MR seeks expansion of these strategies to support growth in communities suffering from economic downturn and marginalization.

TEAM LEADERSHIP **TEAM STRUCTURE**

Manufacturing Renaissance (MR) is a small but mighty organization comprised of 12 employees. Day-to-day operations are led by the Executive Director, who reports to the MR board of directors. MR staff oversee all programs including Manufacturing Connect and the Chicago Manufacturing Renaissance Council (CMRC). The CMRC is comprised of manufacturers, labor, government, community-based organizations and education representatives who provide insight and support to MR programs.

The passionate MR team is comprised of individuals with diverse experiences and are typically operating in hybrid positions to generate as much of an impact as possible, given their capacity. For example, MR has one staff person addressing industry partner cultivation while also managing and supporting students who are participating in current programming.

MR works consistently with partners including the National Institute for Metalworking Skills (NIMS), National Career Pathway Network, Chicago Teacher's Union, Chicago Urban League, Chicago Federation of Labor, Safer Foundation, Chicago Public Schools, and others to be the champions of our successful strategy and solution.

C. WHAT'S THE PROBLEM & HOW WILL YOU SOLVE IT?

THE PROBLEM STATEMENT

Societal issues including ill health, broken families, political polarization and violence are caused, in large part, by poverty. Recent Illinois poverty statistics reflect significantly disproportionate poverty rates of African Americans and Hispanics compared to Whites at 23%, 17% and 7% respectively⁵.

According to Harvard Professor William Julius Wilson, this cycle of poverty in minority communities was largely caused by de-industrialization, beginning in the late 1970s.⁶ This was the context for increased income inequality, social exclusion, and marginalization. This cycle continues today with the education system's limited connections to manufacturing, leading to continued scarcity of African Americans and Hispanics owning manufacturing companies.

Manufacturing Renaissance (MR) believes manufacturing is the only sector capable of re-building the middle class because of its economic multiplier effect. As such, manufacturing must be profoundly linked to social inclusion or it will contribute to even greater income inequality in the future. The most powerful means to create this linkage is through building an educational infrastructure.

⁵ <http://kff.org/other/state-indicator/poverty-rate-by-raceethnicity/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>

⁶ *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*, William Julius Wilson, 1987



Previous and current attempts for change in disadvantaged communities have focused singularly on school reform, college attainment, gun control, policing, and increased social services--disconnected from a strategy for development. These efforts have been implemented in isolation. MR has initiated first steps in developing programs that reconnect education, workforce development, and communities to manufacturing. This requires significant financial investment in order to take them to scale.

YOUR SOLUTION

Manufacturing Renaissance's (MR's) strategy addresses poverty through re-establishing linkages between communities and the regional manufacturing sector. While all sectors are important, manufacturing serves as the catalyst for economic growth. For every \$1.00 of domestic manufacturing value-added, another \$3.60 of value-added is generated elsewhere⁷. Each manufacturing job creates 5 other jobs in the economy—far greater than the service and retail sectors.

MR's promotion of manufacturing profoundly linked to social inclusion and community development is unique. Typically, community development and education reforms are disconnected from manufacturers; and manufacturers are disconnected from broad public interests like ending poverty, solving the environmental crisis, and building social capital.

MR's approach is based on building a strategic partnership amongst manufacturers, labor, communities, educators and government with a common vision. MR utilizes international best practices linking education, manufacturing, and community. MR suggests a multi-pronged approach through:

- Recalibrating the education system through career pathway programs for children grades 7-12, and adults guided by the needs of manufacturers.
- Restoring manufacturing by closing the skills gap, supporting succession planning and establishing a system providing alternatives to small manufacturers in crisis.
- Promoting ownership of manufacturing companies by employees and entrepreneurs of color.

MR builds a public educational infrastructure linked to 21st century manufacturing including disadvantaged youth and adults, and those returning to the community from prison. MR prepares students for careers in all aspects of manufacturing including production, management, and ownership. This comprehensive career pathway system is guided by both industry standards and community values.

YOUR TACTICS & TECHNOLOGY

Manufacturing Renaissance (MR) will expand on existing programming to offer a wider range of services and support to students, school systems, adults, and the manufacturing sector including:

- Manufacturing Connect: Each of these programs, listed below, include a training and education component that serves a different audience and training skillset.

⁷ <https://www.mapi.net/blog/2016/04/infographic-new-model-manufacturings-multiplier-effect>



- Adult Training (including adults returning from prison)
- Train the Trainers
- Middle School Enrichment
- Manufacturing Career and College Connect (MCCC)
- Manufacturing Advancement Project: These programs ensure security and advancement for employees and the retention of companies.
 - Company Career Pathways Project
 - Succession Conversion Project
- The Chicago Manufacturing Renaissance Council and the CMRC Fellowship Program: This program supports leadership development and promotes awareness and importance of MR's solution.

MR has previous experience with most of the activities above, however the Train the Trainer Program, Company Career Pathways and Fellowship Program are new and developing initiatives. The use of technology will include machining equipment, Fab Lab equipment (3-D printers, laser cutters, etc.) and programming databases to support implementation and tracking. These programs are essential in creating awareness for students, and opening horizons to new opportunities at all levels within the firm.

YOUR TIMELINE AND KEY MILESTONES

In the first year, Manufacturing Renaissance (MR), will scale up the process of expanding new and existing programs, as well as the staff and partnerships required for implementation of new programming in year two. Major milestones in year one include development of a school readiness assessment; development of an early warning system; development of a company acquisition team; construction and implementation of an operations system supporting program expansion; hiring leadership staff; and developing curriculum for the Manufacturing Connect programs and Fellowship Program.

In years two, three, and four, through the partnership with CEO of Chicago Public Schools and other school districts, MR will expand Manufacturing Connect Programs to 10 high schools and 20 middle schools. In year two, MR will host its first Fellowship Program, targeting 15 leaders in manufacturing, labor, community, government and education. Following the initial Fellowship Program class, MR will enroll 15 individuals annually. By the end of year four, MR will collect information (including data on finances, changes in labor management, etc.) and provide succession planning services for company partners. By the end of the fourth year, the adult training programs will serve 810 adults with approximately 650 entering the work force annually.

In the fifth and sixth years of the program, the major milestones will focus on evaluation and sustainability of the program. Upon complete expansion and evolution of the programs in Cook County, MR will explore opportunities to bring the model to scale in communities across the country.



D. WHAT'S THE EVIDENCE THAT YOUR SOLUTION WILL WORK?

EVIDENCE OF EFFECTIVENESS

Manufacturing Renaissance's approach is anchored in international best practices connecting education and manufacturing with community development. The successful German dual system, linking academic preparation with work experience in manufacturing during the school year, has inspired and informed the Manufacturing Connect (MC) program. Since 2007, MC worked with over 90 manufacturers in providing paid internships, industry credentials, dual-credit classes, mentoring and leadership development opportunities, career and college counseling leading to full-time jobs and college enrollment. MC has:

- Facilitated 363 work experiences, including paid internships, summer jobs and job shadows in manufacturing for youth, earning participants collectively over \$291,000.
- Trained 283 participants to earn 347 nationally-recognized industry credentials.
- Facilitated placement of 46 individuals into 63 full-time manufacturing jobs, earning \$20,000-\$75,000 annually with benefits.
- Proven success within the Chicago Public Schools, resulting in expanding the MC program to an additional high school.

Additionally, German partnerships between labor, government, educators, and industry bring major players together to design programs alleviating unnecessary disruptions in implementation. This experience has inspired and informed the creation and development of the Chicago Manufacturing Renaissance Council (CMRC), which has been sustained for the past ten years. The CMRC Fellowship program design leverages the University of Chicago's successful Urban Education Institute⁸ model, shifting the focus to cross-sector and cross-agency manufacturing and education leadership.

The work of MR focused on assisting with ownership transition of companies through employee purchases or acquisitions by minority entrepreneurs is inspired by the successful Mondragon Cooperative Corporation in Spain.⁹

RISK ASSESSMENT

Manufacturing Renaissance identifies the following risks:

Short-term:

- Misunderstanding the exponential impact of manufacturing related to community development.
- Critical shortage of qualified teachers in manufacturing to educate in diverse communities.
- Ability to scale drastically in a short period.

Long-term:

⁸ <https://uei.uchicago.edu/>

⁹ Creating a Manufacturing Career Path System in Cook County. Chicago Federation of Labor and the Center for Labor and Community Research. December 2001.



- Financial and partnership sustainability while executing extensive and inclusive programming.

MR offers solutions to mitigate these risks:

- Programs require community buy-in. MR has strong existing partnerships and strategies to increase recognition of manufacturing's economic and social impact, including a commitment from Mayor Rahm Emanuel to remove obstacles challenging the goals.
- MR is implementing a "Train the Trainer" Program specifically addressing the shortage of teachers.
- As a 12-person organization, this investment requires rapid growth. Expanding the board of directors to include nationally recognized leaders with direct experience managing large scale programs, and hiring experienced management staff to guide development of a scale-up strategy will be essential to successful management and sustainability.
- MR approaches all aspects of programming in a collective manner. All programs are supported through several partners and funding sources. The program's implementation does not rely on one entity alone. Financially, MR has demonstrated success with private, public and grant funding, and will continue pursuing hybrid-funding streams to support programs.

EVALUATION

The Manufacturing Renaissance (MR) will institute a robust evaluation system focused on proactively identifying program strengths and weaknesses to ensure continuous improvement. MR will hire an external evaluator to create and implement an evaluation design using the most rigorous methodology possible to capture long-term changes in participant outcomes over time, demonstrating the unique impact MR programs have on community development.

MR's holistic solution serves as the catalyst for change. To demonstrate this, metrics measuring institutional collaboration and impact on community needs will be incorporated. Each MR program will have a unique set of leading and trailing indicators demonstrating what is working, why it is working, under what conditions, and for whom.

To assess the educational programming, MR will enhance the current evaluation underway through the U.S. Department of Labor, including longitudinal participant tracking.

MR will initiate a return-on-investment study to assess and measure the local economic impact as a result of the Manufacturing Advancement Project.

The external evaluator will use an implementation evaluation and case studies demonstrating the impact of cross-agency leadership development at the community level to assess the Chicago Manufacturing Renaissance Council (CMRC) Fellowship Program.



A dashboard of indicators will be reported on a quarterly basis to each program’s advisory group and CMRC as a feedback mechanism. The findings and insights learned through program outcomes, qualitative feedback, and quantitative feedback will drive curriculum of the MRC Fellowship Program and will be shared with regional and national partners through periodic reports, publications, and conferences.

E. WHAT’S THE EVIDENCE THAT YOU CAN DO IT?

YOUR PREVIOUS PERFORMANCE

Manufacturing Renaissance (MR) has a track record of success with programs launched in communities facing challenges.

- **Chicago Manufacturing Renaissance Council (CMRC):** MR built the CMRC with leaders from government, labor, manufacturers, educators, and community-based organizations. The CMRC has been sustained over 10 years in the complex Chicago political environment.
- **Manufacturing Connect (MC) high school programs.** This program started in 2007, and is being expanded to new schools. The design of the program is to work within public school systems. Sustaining a strong partnership with Chicago Public Schools (known for its challenges) is a testament to our effectiveness, persistence, and leadership.
- **MC Adult Programs:** MR has initiated successful adult training programs including a pilot program for men returning from prison in partnership with the Safer Foundation and NIMS. MR had a 100% placement rate in good paying manufacturing jobs and excellent retention for men returning from prison.
- **MC’s Young Manufacturing Association.** The YMA is primarily for young African American workers to develop leadership skills and recruit other young adults to careers in manufacturing. This innovative program was recently awarded \$200,000 under the Cook County Violence Prevention program. As County Commissioner Boykin commented, “The best way to stop a bullet is a job.”
- **Early Warning System.** MR developed and implemented the Early Warning Systems in partnership with the City of Chicago and the Empire State Development Corporation in New York. This approach identified companies facing a problem before it became a crisis leading to successful interventions.

YOUR ORGANIZATIONAL CAPACITY

MacArthur funds will be used primarily to scale Manufacturing Renaissance’s (MR) organizational capacity. MR has a strong foundation in the knowledge, skills, and expertise needed to implement the



proposed solution, but lacks the manpower and resources needed without additional investment in order to expand to the scale needed.

MR's partners play a fundamental role in providing guidance to ensure that standards and performance metrics are met. MR's list of partners is extensive. Most notably, Chicago Public Schools (CPS) has committed to supporting and expanding MC programs, ensuring cross-sector and cross-agency collaboration and sustainability for years to come.

To manage the growth and expansion, MR is in the process of expanding the board of directors to include individuals with extensive experience managing large scale growth efforts on a local and national level. Additionally, MR's human resources staff will grow to support new staff. A core focus will be on maintaining organizational culture and ensuring MR's mission is engrained in all institution activities. MR currently has advisory functions to monitor success and provide oversight. This includes third party validation to fulfill accreditation requirements – a level of oversight that is unique to MR's programs.

FINANCIAL RECORDS

We require information necessary for our judges to understand your financial health and sustainability.

Please provide audited financial reports from the past three years for the principal organization. If your organization does not have them or cannot provide them, please upload a letter from the most senior executive at the principal organization, explaining your inability to provide them.

F. WHAT'S YOUR SOLUTION GOING TO COST?

BUDGET NARRATIVE

Full Cost of Solution over 5 years: \$124,883,400

Personnel: Approximately 200 personnel will be hired over the duration of program planning and implementation to perform necessary duties to meet program performance goals and anticipated outcomes.

Fringe Benefits: Benefits are calculated at 25%. Full-time benefits include: Social Security, Medicare, retirement, health, dental and life insurance contributions.

Travel: Includes staff local travel to engage a variety of partners, participants, and stakeholders, and travel for program participants to participate in fieldtrips, employment, and other enrichment opportunities.

Equipment: Predominantly consists of equipment for training facilities and fabrication laboratories including Computer Numerical Controlled turning and milling machines and related equipment as well as fabrication laboratory equipment including 3D printers and laser cutting machines, and includes computers for new staff hired to serve grant-funded programs.

Materials and Supplies to operate and support the following: training facilities including feed stock and cutting tools, fabrication laboratories, program promotion and outreach, participant services, and stakeholder meetings.



Contracted Services: Includes hiring technical advisers and consultants to design training facilities, provide supplemental services to program participants, provide professional development and training for program staff, and provide data management services.

Other Direct Costs: Includes costs for accreditation and rent for meeting and office spaces.

Monitoring Learning and Evaluation: Includes costs for the design, development and implementation of evaluation tools to assess efficacy of program implementation.

Overhead Costs: Indirect costs are budgeted at 15% of Total Direct Costs excluding equipment

TOTAL RESOURCE REQUIREMENTS AND SUSTAINABILITY

Manufacturing Renaissance's (MR) objective is to solve the problem identified. The cost of this project considerably exceeds the total amount of funding available from the MacArthur Foundation. However, to be successful this effort has to be capitalized at the level reflected in our budget.

MR has been operating most of the projects included in this proposal over a long period of time. These programs have been adequately supported by local and national government grants, philanthropy, individual and corporate donations, and fees for services. Through the life of this grant, MR will be able to take all the components of this work to scale in the short term in a manner that will attract increased support from our traditional financial supporters. MR's budget includes development staff that will be able to raise the additional funds reflected in the five-year budget.

MR is confident that the success of this project over the next five years will result in an appropriate shift in national priorities and in the focus of private and public investment in education linked to the manufacturing sector that will sustain this initiative over the long term.

OTHER CONSIDERATIONS

Manufacturing Renaissance (MR) is leading a paradigm shift. Historically, development of the manufacturing sector has been guided by the private sector and their interests for greater accumulation of personal wealth. While MR recognizes the necessity for a great return on investment for investors, MR sees the development of manufacturing as an essential means to achieve a society that is economically, socially, and environmentally sustainable and restorative, led by the public sector in partnership with the private sector.

This paradigm shift will create tensions. MR seeks to minimize these tensions through broad partnerships. In order to implement positive change, traditional roles of the public, civil, and private sector must be redefined. To achieve this, MR's proposal has many details that will be negotiated with creativity and persistence with private, civil, and public sector partners. MR is confident in our ability to succeed because of our history of success in the complex environment of Chicago and the scale of impact that will be possible with the support of the MacArthur Foundation.

G. YOUR VIDEO PITCH : <https://youtu.be/7n4B6vJF3Yw>



H. MACARTHUR FOUNDATION POLICIES

CHARITABLE PURPOSE

The charitable purpose of this program is to serve and support economic and community development in communities facing socioeconomic hardships through creating a strong linkage between these communities and their regional manufacturing sector. Manufacturing Renaissance (MR) seeks to serve all people and community members facing the hardship of poverty, with a special awareness of communities with large African America and Hispanic populations that face the added challenge of discrimination and exclusion. These programs serve individuals throughout various stages of life and provide them with the educational opportunities leading to full-time employment in family-supporting jobs and meaningful career paths. Additionally, MR will work to overcome past and current policies that exclude particularly African Americans and Hispanics from positions in skilled production, management, and ownership of companies. We are confident that this holistic approach will lead to rebuilding communities and restoring hope and confidence in its residents.

PRIVATE BENEFIT

Manufacturing Renaissance's (MR) solutions address these issues directly in a manner that increases the benefit to low-income minority communities. In the Chicagoland region, 20,000 manufacturing jobs¹⁰ are going unfilled because of the absence of a linkage between public schools and manufacturing. MR's program restores that linkage and creates the opportunity for residents to secure careers in manufacturing. Ninety-nine percent of manufacturing companies in Illinois are white-owned¹¹ and thousands are in danger of closing because of the retirement of baby boomer owners and the absence of a suitable successor. MR is creating the opportunity for employees as well as African American and Hispanic entrepreneurs to own these companies. MR assists companies to retain skilled employees rather than losing them because of insufficient internal programs for advancement.

In these programs, the owners of companies benefit incidentally yet the public benefit far outweighs the private benefit. In fact, achieving our goal of creating a meaningful linkage between low-income communities of color and the manufacturing sector is impossible without providing some incidental private benefit.

TEAM STORY

Manufacturing Renaissance (MR) has been the catalyst for an unlikely partnership of leaders that believe that society's future depends on a merger of advanced manufacturing with social inclusion. MR's team includes a labor leader who recognizes the necessity of the labor movement to engage in the creation of wealth as well as its redistribution; a former leader in the National Association of Manufacturers who knows that manufacturing must be explicitly tied to social inclusion; and a leader in vocational education who knows that America must exceed international best practices. Together MR realizes that failure to build an educational infrastructure in inner-cities linked to 21st century manufacturing reflects a policy of 21st century segregation that excludes communities of color from

¹⁰ <http://www.chicagojobs.com/2015/08/04/chicago-manufacturing-jobs-a-big-focus/>

¹¹ <http://www.mbda.gov/sites/default/files/ManufacturingFactSheet2014.pdf>



participating in a key sector in the global economy. MR firmly believe that this threat can be successfully addressed and have a society that is truly sustainable and restorative.