

Investing in Transformation: Redeploying Northeast Ohio's Manufacturing Assets for Economic Growth



PRISM

Partnership for Regional Innovation
Services to Manufacturers

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EXECUTIVE SUMMARY

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any growing finished-goods markets offer the opportunity to leverage the abundance of manufacturing- and technology-related assets in Northeast Ohio. Doing so would help to reverse the decades-long decline of the region’s manufacturing sector.

However, established small-to-medium sized manufacturers (“SMM’s”), representing the heart and soul of the region’s manufacturing sector, often lack many of the in-house skills and capabilities to effectively pursue these opportunities. Resources found in educational institutions, government, economic development organizations, and the non-profit and for-profit service sectors potentially could help, but SMM’s find it challenging to access and apply them due to organizational constraints.

Partnership for Regional Innovation Services to Manufacturers (hereafter “PRISM”) is a collaborative effort that will create and prove out a comprehensive, integrated economic development ecosystem to support the growth activities of SMM’s. An innovative service model will assist SMM’s in identifying, accessing, and applying the appropriate resources in the ecosystem to develop and support their particular innovation-related growth projects.

The success of PRISM will be determined in large part by the ability to execute in three key areas:

1. Development of an effective ecosystem able to meet the needs of SMM’s
2. Attraction of firms to the service that are capable of achieving the growth objectives of the initiative
3. Delivery of value added services to the SMM’s that have a meaningful impact in their ability to achieve their growth targets

Various strategies will be deployed to ensure execution in these areas, including the use of a purposeful approach to ecosystem development and the development of a service model with a compelling value proposition for the types of firms that are needed to the achieve the objectives of the initiative.

The Manufacturing Advocacy and Growth Network (MAGNET), an organization with a 27-year history of the supporting the growth efforts of local manufacturers and of operating within relevant networks, will lead the initiative and drive its execution. Execution of PRISM will lead to 3200 incremental jobs and \$470 million in incremental revenue from participating firms, and will create a sustainable ecosystem to enable SMM’s to play a leading role in growing the region’s manufacturing sector well into the future.

An investment of \$2.425 million is requested to develop the infrastructure to implement the initiative. The funds will be used to hire new personnel, develop information technology, and conduct necessary market research. Access to \$8.5 million in capital will be needed to support the investments of the 56 firms that will be served over the course of the project. This will come from pools of capital currently available and from new pools of capital that will be developed as part of the PRISM initiative. ♦

INTRODUCTION

It is increasingly recognized that the advanced manufacturing will play a critical role in the next generation national economy. With a wealth of manufacturing and technology assets, Northeast Ohio is well positioned to capitalize on opportunities in major growing local, national, and global markets, including in clean energy, health care and aerospace. In particular, the region houses hundreds of small and medium sized manufacturers with substantial technological and human capital assets that can be deployed into these growing markets. Achieving this deployment at a meaningful scale will require sophisticated and deliberate support systems and resource networks. They are needed to help identify specific market opportunities for manufacturing firms, and to connect the companies to the market analysis, business planning, strategy and product development, training, talent and financial resources that will enable them to move into and advance the emerging clusters. Having accessible and robust networks and systems will enable a transformation of the region's manufacturing sector, one that enables firms to continually effectively respond to changing market opportunities and to better leverage technology and information in executing on those opportunities. This is the focus of the PRISM initiative—to build and activate these networks and systems in order to lead the transformation of the region's manufacturing sector. ♦

MARKET ANALYSIS

Many growing finished-goods markets offer an opportunity to leverage the abundance of manufacturing and technology related assets in Northeast Ohio (See Table 1). Found not only at the manufacturers themselves but also in the supporting networks and organizations in education, economic development, government, and the private sector (see Table 2), these assets position the local economy to reverse the decades-long decline in

output and jobs (see Figures 1 and 2). However, broad redeployment of these assets from the legacy industries upon which they were built will require that some of the factors that have led to this decline are addressed, including the decline in the innovation capacity of the sector and a cultural aversion to collaboration, both of which have evolved over time as a result of the competitive nature of these legacy industries.

TABLE 1: GROWTH MARKETS FOR MANUFACTURED PRODUCTS

	Historical Market Size	Year	Projected Market Size	Year	Annual Growth Rate	Relevant Competencies/Capabilities Found in Northeast Ohio Manufacturing Sector
Home Medical Equipment	\$6.3B	2009	\$7.9B	2012	6%	instrumentation, controls, electronics
US Implantable Medical Devices	\$33B	2009	\$49B	2014	8%	advanced materials, corrosion prevention
US Disposable Medical Supplies	\$65B	2008	\$79B	2013	4%	plastics, quality management, lean manufacturing
World Biofuels	92M metric tons (MT)	2008	158M MT	2011	20%	pumps, controls, reactors, generators, heat exchangers
US Demand Wind Turbines	\$7.3B	2007	\$10B	2012	7%	coatings, advanced materials, motors, gears
World Fuel Cell Demand	\$560M	2008	\$1.9B	2013	28%	coatings, advanced materials, materials handling and storage, vehicle systems
World Electric Vehicles	\$24B	2010	\$473B	2020	28%	electric motors, battery storage systems, power electronics, sensors
World Organic Electronics	\$7.5B	2010	\$24.5B	2013	48%	plastics, advanced materials, sensors, roll-to-roll processing
World Lighting Fixtures	\$96B	2009	\$127.5B	2014	6%	optics/glass, electronics, plastics
US Smart Grid	\$29.4B	2008	\$71.5B	2014	16%	power electronics, electrical components, energy storage, sensors/controls

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TABLE 2: SUPPORT ORGANIZATIONS IN THE REGION

Support Organizations	Examples	Role in Manufacturing Sector
Universities and Community Colleges	Case Western Reserve University, University of Akron, Ohio State University, Kent State University, Youngstown State University, Lorain County Community College, Cuyahoga Community College, Lakeland, Stark, Eastgate	Technical expertise in relevant disciplines including advanced energy, materials, medical devices, others; testing and analytical capacity; talent development, management practices (e.g. finance, marketing, innovation); talent development
Economic Development Organizations	JumpStart, NorTech, WireNet, BioEnterprise, PolymerOhio, BioOhio, Ohio Aerospace Institute, Edison Welding Institute, Team NEO, Greater Cleveland Partnership, Akron Chamber, Youngstown Chamber, Edison Incubators, Austin BioInnovation Institute	Market and technical insights in Advanced Energy, Health Care/Medical Devices, Aerospace, Advanced Materials, Next Generation Automotive; outreach, networking
Government / National Labs	Ohio Third Frontier, Cuyahoga County Innovation Loan Fund, NASA, World Trade Center, International Trade Assistance Center	Capital, financial incentives, intellectual property, technical support, export support
Service Providers	Banks, accounting firms, consulting firms, marketing firms, legal firms	Capital, financial advice, consulting services, legal (intellectual property) support, financial support

Established small-to-medium-sized manufacturers (“SMM’s”—firms with revenues \$5 million to \$500 million) represent an attractive focal point for economic development interests to play a role in this redeployment. Representing greater than 45 percent of the output from the sector but only 15 percent of the firms in the region (>1200), SMM’s offer the prospect for growth from a significant base of revenue across a comparatively small base of clients. SMM’s have demonstrated the ability to perform in demanding markets, including those described above, and there is great diversity in size, markets, capabilities and geography among them, offering the prospect that increased connectivity between these firms and with other firms in the region will lead to increased innovation. Lastly, SSM’s are an underserved market with needs that can be addressed by the many assets in the region, and the executives at SMM’s are accessible and can be readily engaged when the opportunity to address those needs are realized.

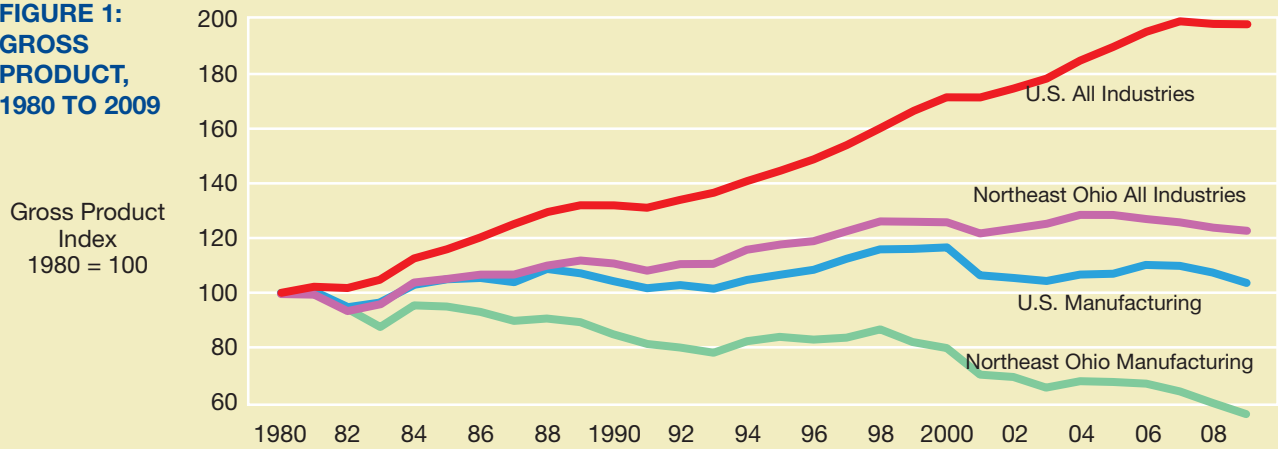
Many SMM’s are prone to missing opportunities that represent a leap from their current business but are a strong fit for their core competencies because they do not have the proper staffing that

would allow them to identify, develop, and execute on those opportunities. SMM’s in many cases are not sufficiently staffed in functions that traditionally hold this responsibility (e.g. research and development, strategic marketing), so personnel that are focused on executing on the current business (sales, application engineers, human resource managers) are given the responsibility to also develop these opportunities. For these professionals, the urgent (current business) most often wins out to the important (future business) and development of these new opportunities languishes for months or is delayed indefinitely.

One option for addressing this issue would be to hire the appropriate staffing, but making the business case to hire can be a challenge in an organization that does not have the knowledge of the markets on which the business case is made and that is not used to making decisions with such a high degree of uncertainty. Or, even if the SMM’s choose to hire without a fully developed business case, hiring for a function or for a skill set that is new to the organization can also be a risky proposition.

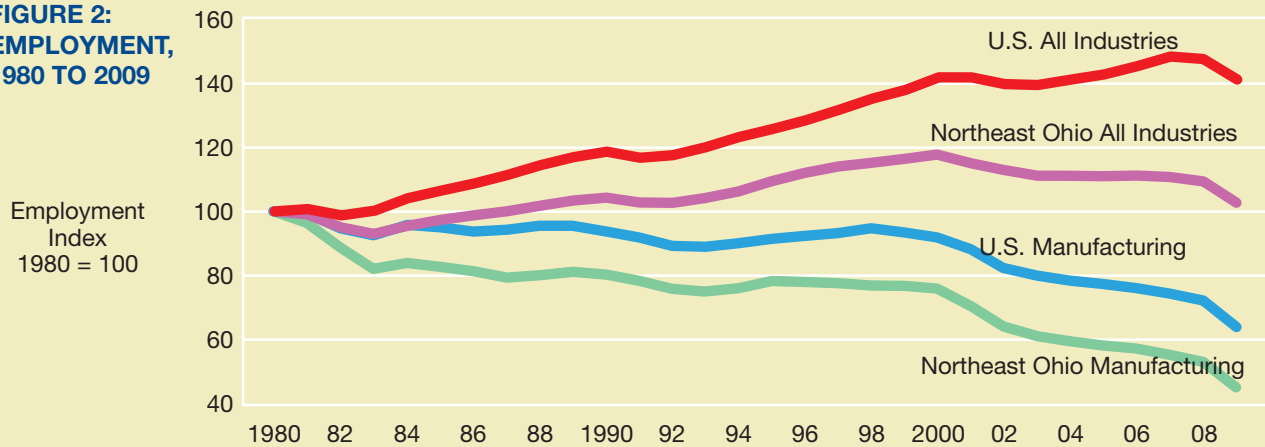
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**FIGURE 1:
GROSS
PRODUCT,
1980 TO 2009**



Northeast Ohio includes the following counties: Portage, Summit, Stark, Carrol, Cuyahoga, Geauga, Lake, Lorain, Medina, Richland, Mahoning, Trumbull, Ashland, Ashtabula, Columbiana, Wayne

**FIGURE 2:
EMPLOYMENT,
1980 TO 2009**



Source: Cleveland State University Levin College of Urban Affairs update of data by contained in http://urban.csuohio.edu/economicdevelopment/reports/EconomicBrief_2010_Final.pdf

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As an alternative to hiring staff, many firms utilize outside resources (e.g. market, technical, or management experts) to play a key role in developing the opportunity until a business case can be sufficiently developed to justify further spending. The use of external resources in these efforts can result in reduced lead times and improved payback, and enables firms to pursue new opportunities at a reduced risk to the current business. This approach can also be problematic for SMM's inasmuch as

finding the right resources at the right cost can be time-consuming and can often lead to dead-ends, especially for personnel that are only able to focus on this search on a part-time basis, and especially when many of those resources (e.g. personnel or labs at universities) are not easily accessed by SMM's. The opportunity for economic development in this segment, then, lies in enhancing the ecosystem such that it takes these organizational limitations into account. ♦

STRATEGIES AND SERVICES

PRISM Overview

Partnership for Regional Innovation Services to Manufacturers (hereafter “PRISM”) is an initiative to develop and prove out a comprehensive, integrated economic development ecosystem for supporting the growth activities of SMM’s. The service model that will be developed as part of this initiative will assist SMM’s in identifying, accessing, and applying the appropriate resources in the ecosystem to develop and support their particular innovation-related growth projects (See Figure 3).

The success of PRISM will be determined in large part by the ability to execute in 3 key areas

- ◆ Development of an effective ecosystem that meets the needs of SMM’s
- ◆ Attraction of firms to the service that will result in a portfolio of firms that are capable of achieving the growth objectives of the initiative
- ◆ Delivery of value added services to the SMM’s that have a meaningful impact in their ability to achieve their growth targets

Various strategies will be deployed to ensure execution in these areas:

ATTRACT A DIVERSE SET OF FIRMS WITH AGGRESSIVE GROWTH PLANS

SMM’s that are strong candidates for PRISM will have executive-level support for annual growth rate targets of 10 percent or greater and will have ideas or projects in their pipeline that offer strong prospects for achieving those targets. Further, participating SMM’s will reflect the diversity of the sector both to catalyze the identification of as-yet-unrealized growth opportunities and to account for the risk inherent in innovation and growth projects.

CONNECT SMM’S TO MARKETS THAT ARE KEY TO NORTHEAST OHIO’S FUTURE

The ability to identify and develop market opportunities that stretch from the core business is a well-recognized weakness in the local manufacturing sector. Market and technical expertise found throughout the ecosystem, especially in economic development organizations whose missions are to develop this expertise for the region (e.g. NorTech in advanced energy; BioEnterprise in healthcare; and PolymerOhio in polymers), will be leveraged extensively in connecting firms to those opportunities that have been identified as central to the future economy of Northeast Ohio, including advanced energy, healthcare, next generation automotive, advanced materials, and aerospace.

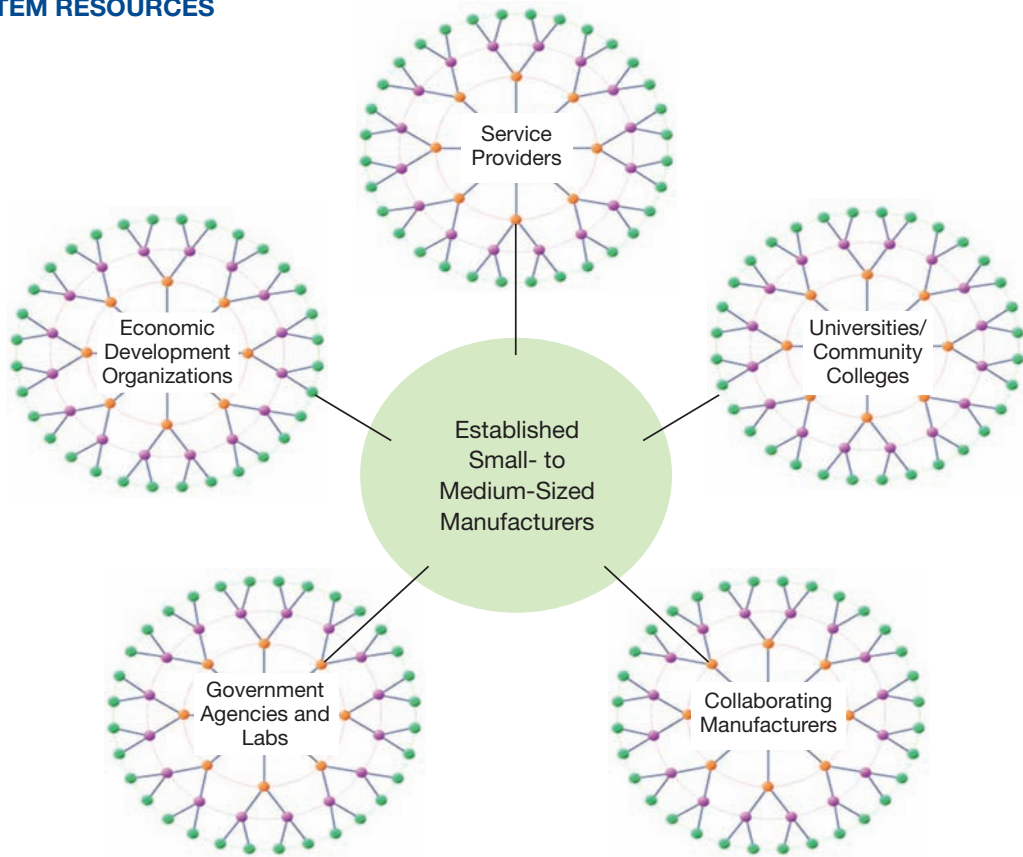
OFFER A COMPELLING VALUE PROPOSITION TO THE CEO/PRESIDENT

Because executive-level support is key for successful execution of new growth opportunities, benefits of the service will be emphasized that are attractive to the CEO/President, including improved payback, accelerated growth, reduced lead times, and minimization of risk to the current business.

LEVERAGE EXISTING RESOURCES AND ADDRESS GAPS IN ECOSYSTEM CAPABILITIES

Though many assets and resources exist in the ecosystem in its current state, many of them are not easily accessible by SMM’s and there are likely gaps in the capabilities of the ecosystem. PRISM will focus both on increasing access to existing resources and addressing gaps in ecosystem capabilities.

FIGURE 3: CONNECTING SMM'S TO ECOSYSTEM RESOURCES



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Ideation	Business Plan Vetting	Engineering Capacity	Testing Capacity	Export Support
Opportunity Vetting	Funding	Technology	Talent	Launch Support
Intellectual Property	Export Support	Analytical Capacity	Workforce Training	Product/Service Marketing Support
Market Reports	Grant-Writing Support		Market Validation	

Management Expertise / Program Management Support / Market Expertise / Technical Expertise

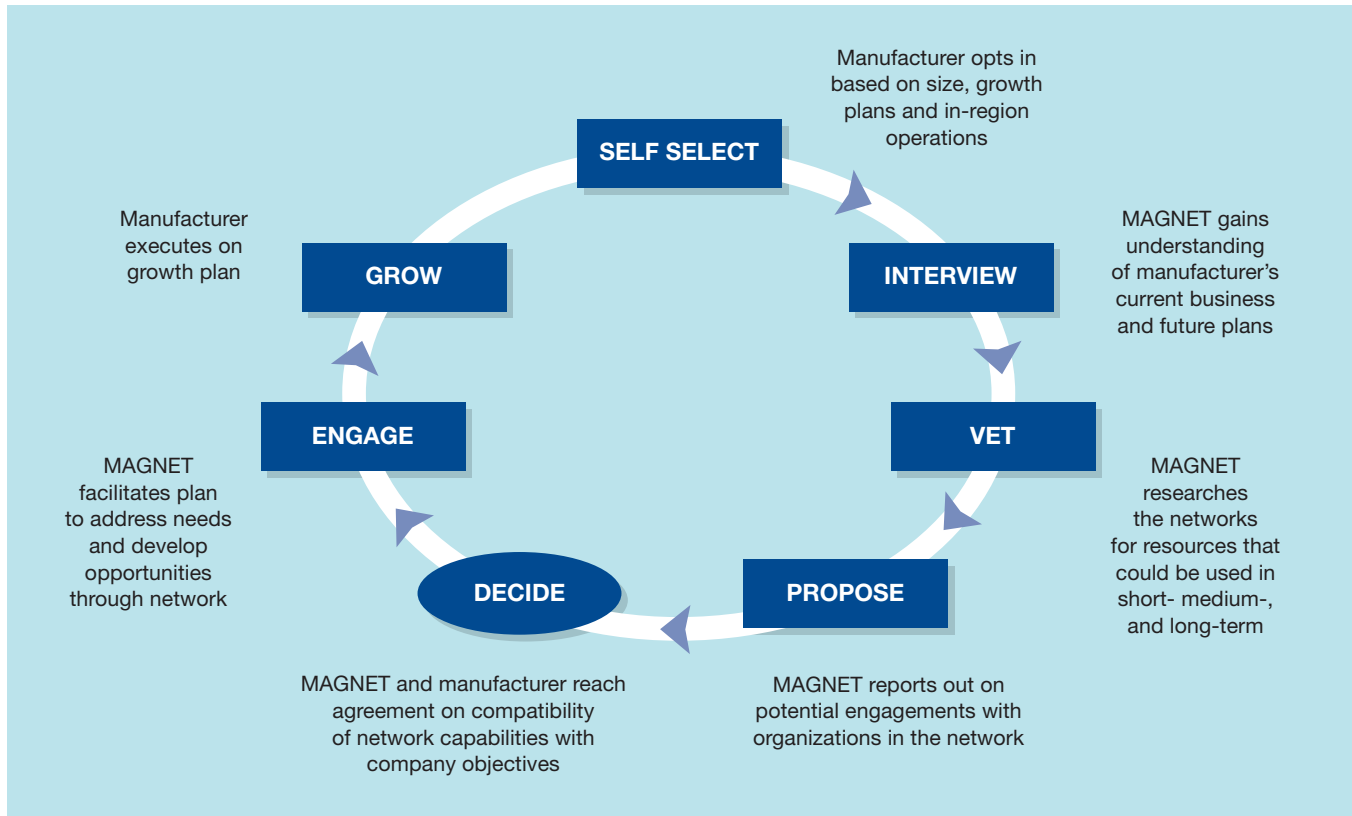
ADDRESS GAPS IN ECOSYSTEM CAPABILITY PROACTIVELY AND REACTIVELY

A proactive approach to resource development is optimal for attracting SMM's to the service, but an effective reactive approach will also be necessary to meet the unique needs of organizations that are already engaged in the service. The PRISM service will strike an effective balance between these two approaches.

GARNER BROAD SUPPORT FROM NETWORK ORGANIZATIONS

To realize the desired diversity in the portfolio of firms, a diverse set of resources and capabilities in the network will be needed. The service will focus on leveraging a variety of resources from a broad range of organizations.

FIGURE 4: PRISM ENGAGEMENT AND EXECUTION MODEL



MINIMIZE RISK TO SMM ORGANIZATIONAL RESOURCES

The aim of the PRISM service will be to minimize the amount of organizational resources that an SMM utilizes in *identifying* and *accessing* relevant external resources, so that the SMM can focus their limited resources on *applying* those resources in the execution of their growth project(s).

HOLISTIC APPROACH TO INNOVATION

Innovation by its nature is a cross-functional organizational discipline, requiring support from executive management, sales and marketing, research and development, human resources, finance, and operations. The service will account for the roles of all of these functional areas.

PORTFOLIO APPROACH

Services will be delivered to SMM's to meet the individual needs of each firm as well as to address needs to that are common within the portfolio of firms, thus providing the opportunity to address common needs affordably and to benefit from shared experiences.

PRISM Service Model

VALUE PROPOSITION FOR SMM'S

Target customers for the PRISM service are SMM's that would like to better leverage external resources in the pursuit of growth opportunities but who struggle to do so because of organizational limitations. The service will connect the SMM's to external resources at a reduced risk to the internal resources that support the current business, and will result in higher success rates in executing on new opportunities and in reduced lead times and payback periods. The service will also help them to develop internal capabilities to pursue subsequent growth opportunities.

SMM ENGAGEMENT

For an individual SMM, the PRISM service will consist of a *pre-contract* phase, during which the compatibility between company growth plans and the objectives of the initiative are determined, and a *post-contract* (See Figure 4) phase, during which local resources are leveraged in the execution of company growth plans.

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TABLE 3: CRITERIA FOR SMM INCLUSION IN PRISM PORTFOLIO

Growth Plans	Target of 10%+ annual growth rates
Idea/Project Pipeline	Ideas/projects in pipeline that offer strong potential to achieve 10%+ growth
Capabilities and Knowledge	New capabilities/knowledge needed to execute
Role of External Resources	External resources can play a significant role in developing new capabilities/knowledge

Pre-Contract Phase

The pre-contract phase starts with a self-selection step in which firms determine whether they are likely to meet the criteria for participation in the initiative (See Table 3). If the SMM agrees, the executive team at the SMM will then be interviewed by a team from MAGNET, the lead organization in PRISM (see operational goals section below for more information on MAGNET), so that MAGNET can develop high-level understanding of the business. A half-to-full day interview will be held that will involve at a minimum the president/CEO, the chief technical officer, chief commercial officer, and chief financial officer. During this interview, the following areas of the business will be explored:

- ◆ *Current business*, including products and services, historical revenue trends, markets, business model, financial position
- ◆ *Future business*, including growth targets, anticipated changes in products, services, business models and particularly analysis of potential new markets, new capabilities and knowledge needed, how growth will be financed
- ◆ *Ideas/projects in pipeline*, including summary of products and services that will enable them to achieve their growth targets and the value proposition of those products and services
- ◆ *Commercialization processes*, including development processes, typical development lead times, development metrics, roles and responsibilities, type of design responsibility (e.g. contract mfg vs design solutions vs product development)
- ◆ *Management systems*, including culture, strategic planning process, incentive systems
- ◆ *Engagement in the region*, including suppliers, customers, memberships, trade associations

The information from the interview will be used to direct the research of the network that will determine what organizations and resources can be leveraged to support the SMM’s growth plans. If it is determined that a broad set of local resources can play a significant role in supporting the growth plans of the SMM, and if those growth plans area found to be compatible with the objectives of the initiative, a high-level proposal will then be given to the SMM, highlighting the relevant organizations and resources in the local ecosystem and how those resources could be applied to address their needs, and what role MAGNET will play in these engagements. This proposal will provide the foundation for the development of a retainer consulting contract between the SMM and MAGNET.

If the SMM finds value in the proposal, the SMM and MAGNET will establish a retainer contract for the PRISM service. Under this contract, MAGNET will assist the SMM in identifying, accessing, and applying resources external to the SMM in the execution of their growth plans. This service contract will specify the following, among others:

- ◆ goals for the SMM and how those match with the objectives/goals of PRISM
- ◆ the types of organizations and resources that will be targeted
- ◆ the role(s) that MAGNET will play in identifying, accessing and applying those resources
- ◆ other conventional MAGNET services that the SMM will (or may) purchase, including any prime/subcontractor arrangements
- ◆ the duration of the contract and the fee paid by the SMM

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Post-Contract Phase

MAGNET will have an Innovation Advisor for each SMM that joins the initiative. The responsibilities of the Innovation Advisor will be to:

- ◆ work with the Partnership Development Manager (see organizational goals section below) to identify options for resources and present these options to the SMM
- ◆ monitor, update, and document MAGNET's knowledge on the SMM, using the above interview outline as the ongoing framework for that knowledge
- ◆ adjust the service as organizational needs change and new opportunities develop
- ◆ work with the Partnership Development Manager to help the SMM access relevant resources with minimal use of SMM resources in this process
- ◆ advise the SMM on how to best apply those resources in the context of their growth projects
- ◆ work with the Business Consultant at MAGNET to develop contracts for consulting services not included in the PRISM service

The SMM is free to engage with any service provider they choose, whether identified via the PRISM service or not, and free to choose not to engage with any organization identified under the PRISM service. If fee-for-service service providers are identified via the PRISM service, a discount on the fees will be included where applicable.

The client has the option to execute service contracts with MAGNET, either with MAGNET in the role as service provider or MAGNET in the role of prime and another service provider as subcontractor. These are not included in the PRISM service fee, though discounts may apply.

An important feature of the PRISM service model is that, when it is practical and effective from the perspective of the SMM, some services will be provided as part of a group rather than as individual entities. By continually updating the information on each of the SMM's service dimensions (current business, future business, ideas, commercialization processes, and management systems) and comparing the needs and opportunities across the portfolio, MAGNET will be able to identify common needs and deliver services that better address the financial constraints of the SMM's.

This model builds on MAGNET's existing service model and leverages its capabilities in providing instructional seminars and workshops in large group settings.

ECOSYSTEM DEVELOPMENT

The engineering schools and business schools in the region are anticipated to play a key role with the majority of the SMM's engaged in the service. In the past, gaining access to higher education resources has been particularly challenging for SMM's. For this reason, increasing the ease of access to the resources found in colleges and universities will be emphasized in the early stages of the initiative, even before many of the SMM's are identified. Increasing the accessibility to capital from government entities, including the Ohio Third Frontier (OTF) and the Small Business Administration (through local banks), and through other resources such as the Cuyahoga County Product Innovation Loan Fund (ILF) will also be emphasized early in the initiative.

Ultimately, the actual needs of the participating SMM's will be the primary driver for addressing gaps in the capabilities of the ecosystem. It is thus through the interactions with SMM's and the subsequent engagement of organizations that gaps in the capabilities of the ecosystem will be identified and a path to address those gaps will be established. ◆

OPERATIONAL PLAN

Develop a Comprehensive, Integrated Approach

Enhancing the local ecosystem to better address the needs of SMM’s will require a purposeful and coordinated approach. The Manufacturing and Advocacy and Growth Network (MAGNET) will be the lead organization for the initiative and will be the primary interface between the participating manufacturers and the supporting organizations in the ecosystem. In this role, MAGNET will scout for resources, act as an intermediary between the SMM’s and the organizations with those resources, and advise the manufacturers on how to best apply those resources in their growth projects.

MAGNET is well-positioned to take on the leadership role, as it has a 25 year+ history of supporting the growth plans of manufacturers and of operating within the networks that will contribute to the initiative (see Table 4). Further, various personnel at MAGNET have played an instrumental role in developing the PRISM concept to date and are positioned to drive further development and lead its execution. Among these is the Director of Innovation, who will be responsible for ongoing development and execution of the project plan (see Appendix).

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TABLE 4: MAGNET’S INVOLVEMENT IN RELEVANT NETWORKS

NETWORK	
Economic Development	MAGNET is well-connected with Edison Centers and its Northeast Ohio sister organizations under the umbrella of the Fund for Our Economic Future. MAGNET is also developing working relationships with three regional chambers of commerce: The Greater Cleveland Partnership, the Akron Chamber, and the Youngstown-Warren Chamber.
Government	MAGNET is partially funded by state (Ohio Department of Development/Edison Program) and federal (NIST-MEP) entities, and works closely Cuyahoga County on the Innovation Loan Fund as administrator of the program.
Manufacturing	MAGNET has a strong brand in the manufacturing sector from its years of delivering consulting services to manufacturers in the areas of lean, quality, workforce training, and product development, and others.
Universities and Community Colleges	Cleveland State University, Case Western Reserve University, University of Akron, and Lorain County Community College are all represented on MAGNET’s board, and MAGNET also has a working relationship with other educational institutions such Cuyahoga Community College, Kent State University, Youngstown State University, and Stark Technical College.
Service Providers	As part of its conventional consulting practice, MAGNET has developed a network of service providers to which some of the work has been subcontracted, including market research firms, growth coaches, strategy consultants, and workforce development organizations. Further it has developed working relationships with local banks, legal firms, and accounting firms.

Improve Accessibility of Relevant Resources

A Partnership Development Manager will be added as a new position at MAGNET to identify relevant resources in these networks and improve their accessibility.

The responsibilities for this role include:

- ◆ identifying resources that are relevant to prospective and existing portfolio firms
- ◆ strengthening the working relationships with organizations in the network
- ◆ developing methods for reducing the lead time between the identification of relevant resources and engagement of that resource
- ◆ establishing service contracts with service providers
- ◆ developing internship and externship models with educational institutions
- ◆ identifying new opportunities in the ecosystem to address the needs of SMM's

Enhance Strategic Marketing Capacity

A clear weakness of the local manufacturing sector in general is in the strategic marketing function, which includes market research and needs assessment and the application of the research towards the development of strategic plans of the SMM. To add market research capacity to the network, a Strategic Marketing Specialist will be added as a new position at MAGNET.

The responsibilities for this role include:

- ◆ executing market research on manufacturers in the region
- ◆ applying market research in targeting SMM's for the initiative and in making connections between the portfolio SMM's and other manufacturers
- ◆ executing market research for the SMM's
- ◆ supporting the SMM's in applying the research toward the execution of their growth plans

Increase Access to Capital

Several public programs exist in the region that offer SMM's the opportunity for financial support in their growth plans, including the Ohio Third Frontier (OTF) Program¹ and the Product Innovation Loan Fund (ILF).² Although these programs are open to SMM's, usage data shows that SMM's do not benefit from them as much as they could. PRISM will focus on increasing access to capital on growth projects for SMM's in three ways:

- 1.) Work with OTF and/or ILF to address the factors leading to the lack of participation by SMM's;
- 2.) Work with SMM's on developing grant proposals and/or business plans that will increase their likelihood of receiving the awards and/or being more attractive to investors and/banks; and
- 3.) Establish a capital fund (or set of funds) that will be used specifically for SMM's, building off of the OTF or CCL models (see "Financial Goals" section for more on this). MAGNET will be responsible for managing this fund and will use in-house resources or contract with an outside firm.

Increase Available Talent

The PRISM service model will help SMM's to better access full-time and part-time talent that can advance their growth plans. The Director of Education and the Partnership Development Manager will collaborate to identify opportunities to increase access to talent for the portfolio firms, including through internships and externships at partner universities and community colleges, and to develop in-house talent via local service providers including workforce investment act agencies and community colleges.

Validate the Service Model

The scope of this initiative is to develop the service model and demonstrate it as an effective and sustainable component of the local economy. The validation of the service model will be achieved by engaging with 56 SMM's from across the region and measuring the jobs and revenue growth of these firms (see below). ◆

¹ <http://ohiothirdfrontier.com/ThirdFrontierCalendar/default.aspx>

² <http://development.cuyahogacounty.us/en-US/economic-development.aspx>

FINANCIAL PROJECTIONS

The development of a sustainable business model for delivery of PRISM services will be pursued over the three-year duration of the initiative's first phase. The goal is to ensure that the PRISM service model will be available on an ongoing basis to support growth in the local manufacturing sector without requiring ongoing financial support from the federal government (excluding the funding received from NIST through the State of Ohio for the MEP program). Requested funding of \$2.425 million will be used to build out the service infrastructure at MAGNET and to subsidize services over the first three years of the initiative to motivate early adopters.

Table 5 is a pro-forma income statement reflecting projected costs and revenues associated with building out this infrastructure. The following is a high-level summary of each line item

REVENUES

These line items represent sources of revenues at MAGNET directly related to the execution of PRISM, including grants.

◆ Retainer-based fees

These are the revenues to MAGNET resulting from delivery of the PRISM service. In years 1 and 2 we expect to offer this service at a discounted rate to attract early adopters, but a minimum annual fee of \$15,000 per SMM is expected years 3 and beyond.

◆ Project-based consulting fees

These are the revenues to MAGNET resulting from the delivery of conventional MAGNET services (e.g. product engineering, program management, market diversification). In years 1 and 2 we expect to offer these services at a significantly discounted rate to attract early adopters to PRISM.

◆ Other local funding

This line item represents known local funding sources in years 1 and 2, including grants from the Cleveland Foundation and Fund for Our Economic Future. In years 3, 4, 5, this could include grants from local philanthropy, private donors, and surplus fees from portfolio firms.

◆ NIST-MEP grant

Portion of NIST-MEP e-car funding that is aligned with PRISM.

COSTS

These line items represent costs to MAGNET that will be incurred as a direct result of the execution of PRISM. These do not include other MAGNET resources that may be leveraged in the execution of PRISM but that are already paid for through other grants, including those paid for by NIST-MEP general funding (e.g. sales/business consultants) or by other local grants (e.g. Director of Education).

◆ Personnel

Includes Director of Innovation, Strategic Marketing Specialist, Partnership Development Manager, and other MAGNET staff whose time is not paid for by other grants (e.g. Vice President of Consulting Delivery). This includes a salary, benefits, and overhead, and may include contract personnel dedicated to the project.

◆ Contract Services

Includes fees paid to outside service providers such as market research firms and strategy consultants that will be used to support either the development of the service or the execution of the service.

◆ Workforce Development Contracts

Includes all outlays to outside entities related to workforce development and training, including for internships.

TABLE 5: PRO FORMA INCOME STATEMENT FOR SERVICE INFRASTRUCTURE

Revenue to MAGNET (\$000's)	Year 1	Year 2	Year 3	Year 4	Year 5
Retainer-based fees	50	300	675	750	750
Project-based consulting fees	50	150	300	550	625
Other local funding	250	300	350	455	405
NIST-MEP grant	50	100	0	0	0
Total Revenues	400	850	1325	1755	1780

Costs to MAGNET (\$000's)	Year 1	Year 2	Year 3	Year 4	Year 5
Personnel	700	700	700	700	700
Contract services	250	250	200	150	100
Workforce development contracts (e.g. internships, training)	50	100	125	125	125
Databases/information technology	150	150	50	50	50
Outreach/marketing	50	50	50	30	30
Capital fund administration	150	150	150	150	150
Total incremental operating costs	1350	1400	1275	1205	1155
Delivery of project-based services	250	300	425	550	625
Total Costs	1,600	1,700	1,700	1,755	1,780

Other Grants for Operating Budget	1,200	850	375	-	-
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- ◆ **Databases/Information technology**
Includes costs related to development of proprietary databases and other information technology assets at MAGNET that will assist in the execution of the initiative. Also includes cost related to continued development of other local databases that will aid in the execution of PRISM, include the Edison Manufacturers Network (www.EMN.com) and Ohio Manufacturers Network for Innovation (OMNI), under development by Ohio State University and TechSolve.
- ◆ **Outreach/Marketing**
Includes costs related to outreach to candidate manufacturers, service providers, and other partners.
- ◆ **Capital Fund Administration**
Includes costs related to administration of capital fund, both internal and external contract services.

- ◆ **Delivery of project-based services**
Includes costs related to delivery of MAGNET’s conventional services including product engineering, program management, quality management, lean manufacturing, market diversification, ideation, etc.

\$8.5 million (\$150,000 per SMM in the portfolio) will be needed to support the development and commercialization activities of the portfolio SMM’s as described above. A portion of this will come from existing public programs such as OTF and ILF. Additional local and federal funding will be sought to address the shortfall, and the pool(s) of capital, but revenue to maintain the pool after year 5 will come only from local sources, including repayment of loans by the SMM’s and/or royalties from the projects. ◆

PERFORMANCE MANAGEMENT

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The PRISM initiative will be considered a success if MAGNET and its partners can demonstrate that:

- ◆ the services developed are effective in assisting SMM's in the execution of their growth plans;
- ◆ the services can be delivered at a sufficient scale so as to "move the needle" on the \$29 billion manufacturing sector; and
- ◆ the services can be sustainable, with minimal ongoing funding needed from outside the state.

MAGNET will use three measurement systems to monitor progress in each of these areas:

- ◆ Minimally Acceptable Impact Measures (MAIMs) from the National Institute of Standards (NIST) Manufacturing Extension Partnership (MEP) program
- ◆ Jobs, investment, and revenue growth from a portfolio firms
- ◆ Operational metrics at MAGNET

The rationale for using each of these metrics along with the target levels of performance in each set of metrics is summarized.

NIST MAIMS

MAIMS (Minimally Acceptable Impact Measures) are those metrics chosen by NIST to evaluate the impact of MEP-affiliated centers such as MAGNET. These metrics monitor number of clients (manufacturers) served and economic impact of the services. Economic impacts include investments, sales revenues, and cost savings, along with jobs created or retained. In addition, all interactions with companies, including workshops, consulting projects, informational sessions and others) as reported by those clients, are tracked.

MAGNET's performance on the economic impact metrics is shown in Figure 5. The decline in economic impact from 2008 to 2010 is in part attributable to the economic recession, but also of concern is that dating back to 2005 only about four percent of the reported economic impact is attributable to the growth services offered by MAGNET. With the services that will result from PRISM, MAGNET seeks to dramatically improve upon the overall economic impacts and more specifically the impact realized that is attributable

FIGURE 5: ECONOMIC IMPACT OF MAGNET SERVICES

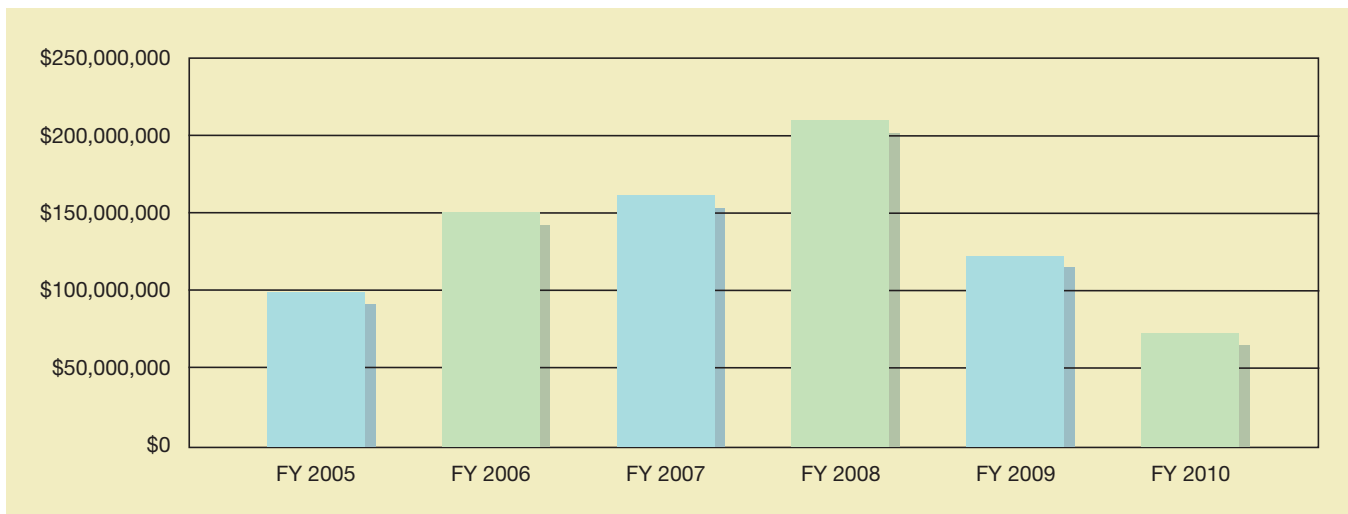


TABLE 6: REVENUE AND JOBS TARGETS FOR ORIGINAL PORTFOLIO OF 56

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 8
SMMs entering	10	20	26	Other firms entering		
SMMs exiting	0	0	10	20	26	0
Year end total of original 56 SMM's in the portfolio	10	30	46	26	0	0
Portfolio incremental jobs targets	0	0	90	550	1100	3200
Portfolio incremental revenue targets (\$000,000s)	0	0	\$14	\$65	\$160	\$470

to growth. Our targets for the initiative are to achieve average annual growth in the economic impact metric of 20 percent over the five years of the initiative year and for the economic impact from growth services to represent one-third of the total.

JOBS, INVESTMENT, AND REVENUE GROWTH IN PORTFOLIO FIRMS

Ultimately for the sector to grow a broad range of manufacturers varying in business model, size, markets, and location within the region will need to grow. PRISM services, then, must prove to be effective at supporting the growth efforts of a broad range of firms. To ensure that this objective is being met, MAGNET will track the business plans and actual revenues of the portfolio SMM’s.

The target revenues of the portfolio firms are shown in Table 6, along with some of the key assumptions on which these targets are based. Although these targets would reflect modest impact within the sector relative to the \$29 billion regional product, achievement of these targets would provide strong indication that the continued availability of these services would—in the long term—“move the needle” in the sector.

OTHER OPERATIONAL METRICS

Important operational metrics—including SMM’s served under the PRISM service model, MAGNET conventional consulting projects delivered to portfolio firms, surplus generated, the diversity of participating firms (by geography, by product line, by market)—will be tracked to ensure progress toward achieving sustainability proving the effectiveness of PRISM model in achieving the desired growth. ♦

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SUMMARY:

THE RIGHT IDEA; THE RIGHT PLACE; THE RIGHT TIME.

PRISM is the right idea for Northeast Ohio. The recent success of Northeast Ohio manufacturers such as GrafTech and Cardinal Fastener in turning their expertise (in these cases, in graphite products and industrial fastenings, respectively) to new clean energy uses illustrates the growth opportunities open to “old-line” firms that pursue in-demand markets. In light of these cases, PRISM offers a clear value proposition: the provision of innovation-enhancing resources that can help selected manufacturing firms make their own transitions to the “next” economy.

Northeast Ohio is the right place to pilot an approach like PRISM, as the region has a strong concentration of older manufacturing firms with untapped innovation potential and an impressive array of existing innovation assets. In addition, Northeast Ohio has proven adept at cultivating effective public-private partnerships, like the Third Frontier initiative and the Edison program, and other multi-stakeholder efforts, like Fund for Our Economic Future.

It is also the right time in Northeast Ohio for PRISM. The region currently enjoys substantial momentum when it comes to regional economic revitalization, as demonstrated by the broad support for the effort by leading organizations in each of the networks that will be play an important role in its development and execution. By getting off the ground now, PRISM can inform and engage participating manufacturers with the various regional efforts striving to strengthen many of the high-growth industry clusters, which include BioEnterprise’s efforts to grow the region’s bioscience and health care sectors, NorTech’s work focused on clusters in advanced energy and flexible electronics, WIRE-Net’s experience with the Great Lakes Wind Network and the Ohio Aerospace Institute’s work in aviation and aerospace. ♦



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