City Of Philadelphia
Pennsylvania

OFFICE OF THE CONTROLLER

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Anchoring Our Local Economy:
Developing a Local Procurement Strategy for
Philadelphia's Higher Education and
Healthcare Institutions

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City Controller
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Contents

Executive Summary

Controller Alan L. Butkovitz launched the Anchor Procurement Initiative in January 2014 with the release of "Survey of the Current and Potential Impact of Local Procurement by Philadelphia Anchor Institutions." The 2014 report drew upon publicly available data supplemented by surveys of procurement officers at the City's major higher education and healthcare institutions ("Eds-and-Meds anchors"). It identified $5.3 billion in non-payroll spending, in very general categories. A $14 billion sector supporting over 100,000 employees and over 100,000 students and visitors, Philadelphia's Eds-and-Meds anchors procure a wide variety of goods and services. While many if not most *services* are procured from local vendors, the January 2014 report estimated that about $1.14 billion in *commodities* are procured from sources outside the City. This means that the anchors are exporting a substantial proportion of their procurement dollars, and thus are probably not maximizing their economic impact on Philadelphia. The current report drills down into actual purchasing data to identify promising opportunities for procurement from local manufacturers.

Since the release of the January 2014 report, the Controller's Office has deepened its engagement with the City's largest Eds-and-Meds anchor institutions. Thanks to excellent cooperation from the major institutions, which provided nearly $3 billion in fine-grained procurement data, the Controller's Office is now prepared to offer a much more detailed and specific analysis of the anchors' supply chains – what sorts of things are purchased in large quantities across institutions and where they are bought. Using this 'demand' data in conjunction with the 'supply' data produced in 2013 by the Mayor's Manufacturing Task Force, the current report provides an analysis of the gap between what the anchors demand and what the local economy currently supplies. **The Controller's office has identified over half a billion dollars in promising growth opportunities in 13 manufacturing sub-sectors**. Those with the most potential are surgical appliances, medical supplies, HVAC equipment, and office supplies, representing $531 million in annual spending; currently only $102 million (19%) is local.

The present report can inform a roadmap to developing clusters of economic activity driven by demand from the City's largest institutions. By leveraging existing local demand, the Controller believes that Philadelphia-based manufacturers can grow to serve regional and even national supply chains. Where manufacturing capacity is lacking, this report points to the types of enterprises that Philadelphia might attempt to attract and nurture using its economic development policy tools. This report also breaks new ground in probing the function of "integrators" like Office Depot and Owens & Minor in the supply chain of large institutions, and proposes an important role for them in developing a local procurement program. In the final analysis, the Controller understands that this approach must make **business sense** for all involved: it must not be charitable impulses that drive this program, but what renowned Harvard Business School professor Michael Porter calls "shared value."

Finally, this report makes concrete recommendations toward following the lead of cities like Cleveland, Baltimore, Detroit, Newark, and Chicago in devising a plan to implement an anchor-led procurement strategy. The Controller's Office has had numerous conversations with partners in the Eds-and-Meds anchor world, as well as with numerous other institutions and organizations that would form the nucleus of a support coalition, and all seem willing to get behind this agenda.

Why the Controller undertook this study

Since taking office in 2005 as the City's fiscal watchdog, Controller Butkovitz has focused on ways to raise revenues and otherwise improve the City's fiscal health without raising taxes. He launched the Anchor Procurement Initiative in 2014 to explore whether Philadelphia's largest tax-exempt institutions were maximizing their impact on the local economy. The Controller's initial report estimated that Philadelphia's largest Eds-and-Meds institutions, critical "anchors" of the local economy, spend over $5 billion on goods and services on an annual basis. The current report builds upon and refines the initial analysis. Utilizing actual procurement data supplied by the largest anchor institutions, The Controller's office has identified hundreds of millions of dollars in potential opportunities to expand local production and distribution to meet demand from these institutions. This report is envisioned as a touchstone for a citywide strategy that will bring together the major institutions and others in a shared commitment to organize the demand side with an eye toward localization. While potential opportunities exist in many sectors of the local economy, this report focuses primarily on manufacturing opportunities.

Several individual Philadelphia institutions have already demonstrated commitment to local purchasing, and have developed basic structures for group purchasing. In cities like Cleveland, Detroit, Baltimore, Newark, and Chicago, however, the anchors are working together to leverage their combined purchasing power to create new businesses and expand existing ones. This report recommends the creation of a new entity in Philadelphia, along the lines of Chicago Anchors for a Strong Economy (CASE) or Evergreen in Cleveland, that will facilitate coordination and link existing businesses to a purchasing program; further, this entity should be charged with helping develop and grow local businesses that can meet demand. There is much upside and virtually no downside to this initiative.

Findings

- The Controller's Office analyzed $3 billion of procurement data from five of Philadelphia's largest anchor institutions and determined that **approximately $800 million (27%) is spent annually with Philadelphia-based vendors**.
- The institutions bought about **$860 million in manufactured goods**, of which $136 million **(15.8%) was procured locally**.
- The analysis suggests **more than $530 million in total promising opportunity for increasing manufacturing output**. The top sectors are summarized in the chart below:

Commodity Category	Annual Spend (mil $)	Local Spend	Local Spend %	Growth potential (+25%)	Total impact*
Surgical Appliances and Supplies	$300	$27	9%	$68	$186
Medical Equipment and Supplies	$146	$69	47%	$19	$53
HVAC & Commercial Refrigeration	$34	$2	6%	$8	$21
Manuf & Repro of Magnetic Media	$18	$0	2%	$4	$12
Office Supplies Excl Paper Products	$13	$3	20%	$3	$7
Sporting & Athletic Goods	$7	$1	9%	$2	$4
Scales and Balances	$8	$0	1%	$2	$5
Printing	$5	$1	15%	$1	$3
TOTAL PROMISING OPPORTUNITY	**$531**	**$102**	**19%**	**$107**	**$292**

* See Appendix B-2 for multipliers

- If the anchor institutions increased local procurement in these targeted sectors by 25% of what they are currently 'importing,' it would generate an additional $107 million in direct economic impact and $292 million in total impact. Such a shift would create **1,250 direct manufacturing jobs** and an additional **4,000 indirect jobs**.
- The Controller's analysis suggests that many local manufacturers already have the capacity to supply anchor demand or would need minimal assistance to be competitive; the sectors in which they operate are already either growing faster or have a larger comparative workforce relative to the nation.

Recommendations

The Anchor Procurement Initiative aims to encourage Philadelphia's large, private, not-for-profit healthcare and higher education institutions to voluntarily spend more of their procurement dollars locally. It aims to do so by facilitating the coordination of demand among the anchor institutions, as well as by coordinating supply among vendors and manufacturers in targeted sectors; it also identifies an important role for supply-chain integrators. The participating institutions have already demonstrated great commitment to local procurement, as well as a willingness to do more, as possible and where it makes business sense to do so. But it is outside the general purview of any particular institution to help organize the demand side, and even less so to organize the supply side. The Controller believes that local government can and should play a role in facilitating an economic development strategy that leverages anchor institution demand. The Controller also believes that such a strategy represents perhaps the best opportunity for the anchor institutions to maximize their local economic impact through sustainable, deep, market-driven engagement. As such, the Controller recommends:

- **Convene all concerned parties.** Bring together University leaders and procurement directors with workforce developers, financial institutions, civic leaders, business groups, and manufacturers. Hold a one-day conference to share the results of the current study and produce a commitment to further engagement.

- **Form a broad coalition** to build support and capacity. The coalition should include the anchor institutions, workforce developers, community development financial institutions, business groups, and City officials.
- **Build a permanent organization to drive the work.** Following in the footsteps of Chicago Anchors for a Strong Economy and Cleveland's Evergreen Cooperatives, each major anchor institution might make a relatively modest financial commitment that could leverage philanthropic support for the creation of "Philadelphia Anchors for a Strong Economy" (PHASE).
- **Facilitate the organization of the demand side.** Working with procurement directors at the anchors, PHASE would help to create an inter-institution collaborative purchasing structure.
- **Facilitate the organization of the supply side.** Working with manufacturers' organizations such as the Delaware Valley Industrial Resource Center, the Manufacturers Alliance of Philadelphia, the Chamber of Commerce, and the Sustainable Business Network, as well as the Mayor's Office of Manufacturing, PHASE should perform a deep census of what is produced locally, to serve as a baseline for development. This could include creating a database and a portal that would allow procurement officers to readily locate local suppliers.
- **Invite supply-chain integrators to play an active role.** PHASE would work with major wholesale suppliers such as Office Depot, Owens & Minor, Aramark, Sodexo, Grainger, and Cardinal to create opportunities for local businesses to gain access to regional and national supply chains.
- **Create a business development program.** Following in the footsteps of CASE, PHASE should create a program that connects local businesses to opportunities in the anchor sector, and provides technical and capital assistance to enable them to scale up to earn anchor business. Such a program could be run by a combination of Philadelphia's excellent local business schools in partnership with experienced developers like DVIRC, Interise, and Next Street.
- **Coordinate business development with workforce development.** A common complaint among local businesses is a lack of qualified workers. PHASE would work to align the City's major workforce development providers with the training needs of local manufacturers as they expand to meet new demand.
- **Determine a reasonable benchmark and timeframe for increasing local procurement.** It is important to set an initial goal and how this goal can grow in the future
- **Use the City's policy tools to create targeted incentives for investment in production for manufacturers.** Among the obstacles to significantly increased localization is the ability of local manufacturers to compete on price and quality with existing suppliers. While guaranteed demand will help, the City should provide performance-based financial incentives. These incentives need to be flexible, grow and adapt to the different stages a firm will go through. The incentives need to drive investment rather than reduce costs. They must be tied to job creation.
- **Track input commodities so second tier commodity manufacturers can grow in the future.** It is important to develop the supply chain both vertically as well as horizontally.

SECTION 1 Background

Philadelphia is blessed with a very high concentration of major higher education and healthcare institutions. More than 30 universities, colleges, and academic medical centers call the City home. They employ more than 150,000 people and educate over 100,000 students, most of whom reside in the City; the health centers serve over 170,000 patients annually. In total, the Eds-and-Meds "anchor institutions" represent about 30% of the City's economy. By definition, anchor institutions are rooted in Philadelphia. Each has major physical infrastructure built over decades; each considers itself to have a mission to improve its community, and their largely tax-exempt status derives from their public purpose. In short, they all have both a moral and an economic stake in the vitality of their local communities.

The University of Pennsylvania and Drexel University have long been considered national leaders in investing in their West Philadelphia communities. For many years, Penn and Drexel have devoted substantial resources to real estate development, cleaning, greening and public safety, supporting neighborhood-based public education, and creating direct employment opportunities for West Philadelphia residents. More recently, Drexel has been the driving force in attaining Promise Zone designation for the challenged Mantua neighborhood in West Philadelphia and has embarked on a deep process of engagement around community economic development. Temple has made huge strides in increasing local and diverse hiring on its major construction projects, and is partnering with organized labor to increase employment opportunities for North Philadelphia residents. Jefferson is recognized in the area of local food procurement and measures its annual local impact at $130 million. The Children's Hospital of Philadelphia has prioritized local procurement in its neighborhood-based projects. In sum, these efforts add up to a major economic impact on the City, directly and indirectly.[1]

Despite this laudable work, the economic health of the neighborhoods surrounding many of these institutions lags the City. Even institutions as large as Penn, Drexel, Temple, CHOP, and Jefferson have limited direct-employment opportunities for Philadelphians, especially those who lack college degrees. The long-term solution is, of course, to increase the proportion of Philadelphians in these neighborhoods with college degrees; in the short and medium-term, though, it makes sense to consider other ways the economic vitality of the anchors can create jobs. The Controller's Office has found that a focused program of localizing procurement can form the core of a feasible citywide development strategy that leverages already existing circumstances – the fact that the anchor institutions purchase large amounts of goods and services. Many services are already procured locally, however only a few manufactured goods are.

A few institutions already privilege local purchasing, albeit mostly individually and without challenging fundamental supply chain relationships. Penn has long prioritized local spending: about $100 million of its $1 billion procurement budget is spent in West Philadelphia, and Penn Purchasing

[1] Philadelphia City Controller, "Survey of the Current and Potential Impact of Local Procurement by Philadelphia Anchor Institutions," January 2014 (http://www.philadelphiacontroller.org/publications/AnchorInstitutions_January2014.pdf). For impact of higher Ed institutions, see Philadelphia Higher Education Government Relations Officers Group, "The City of Philadelphia and its Higher Eds: Shared Goals, Shared Missions, Shared Results," October 2013 (http://www.econsultsolutions.com/?wpdmdl=35740). "What Does the West Philadelphia Promise Zone Mean for Drexel?" *Drexel Now*, May 7, 2014 (http://www.drexel.edu/now/archive/2014/May/Promise%20Zone%20Q-and-A/)

Services provides incentives to its purchasing agents to find and utilize local suppliers.[2] There have been a few attempts to create new supply-chain relationships that help develop local suppliers. In a well-publicized case, Penn and Drexel together actively helped develop a local office supply vendor from a Tier Two diverse subcontractor into a Tier One supplier.[3] This case demonstrates an appetite for the approach advocated in this report. Reaching the next level requires cooperation and coordination across multiple institutions. It requires sophisticated analysis and it requires leadership.

The Controller's January 2014 "Survey of the Potential of Anchor Procurement" revealed much about the economic potential of the anchor sector and how leveraging an increased proportion of its $5 billion procurement spending could benefit Philadelphia's economy. Thanks to gracious cooperation on the part of Philadelphia's largest anchor institutions, in the past year the Controller's office has collected and analyzed nearly $3 billion in actual procurement data. The data suggest that approximately 25% of goods and services are supplied by local vendors. The Controller's analysis demonstrates that in terms of manufactured commodities, local suppliers comprise between 9.4% and 15.8% of total procurement. Since suppliers are more likely to be distributers than actual producers, this number overstates the proportion of goods that are <u>manufactured</u> locally. In short, about 5% of the goods the anchors purchase are manufactured inside the City of Philadelphia. To determine whether it is plausible to increase the proportion of locally manufactured products in the anchors' supply chains, this report has taken a sectoral approach to the data, using 4, 5, and 6-digit NAICS codes to attempt to match anchor demand with local manufacturing output, both actual and potential.

Thus the analysis in this report begins by compiling the anchor procurement data and categorizing it by manufacturing sector. The report identifies the specific commodities that are most commonly purchased by Philadelphia's anchor institutions, and match this information with the current output of the local manufacturing sector. Mapping supply and demand in this manner generates a market analysis that elucidates the existing gaps which might be filled with an intentional combination of relatively minor changes in the anchor institutions' supply chains and the application of policy tools.

In short, the report has identified potentialities: Specific sectors in which it seems plausible that existing local manufacturing capacity could be developed to meet existing anchor demand, and where anchor demand could in turn, help to grow particular manufacturing sectors so that they might become exporters to broader markets. Some economists have called this approach a local version of import substitution industrialization (ISI) – using local demand to spur deeper economic development by increasing the export of tradable commodities.[4]

There are numerous reasons why there are currently gaps between anchor demand and the local economy's ability to provide supply. These include information asymmetry, where supplier and purchaser are unaware of each other's needs and capacities, margins that are too small or need for capital investment too large that a particular commodity is not manufactured in the City, lack of an appropriately skilled workforce, well-worn supply chains that aren't oriented toward local procurement, and so on. Thus there is a wide spectrum of opportunity for development, from connecting existing supply and demand on the one hand to the creation of entirely new local industries on the other. This

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[2] Rita Axelroth and Steve Dubb, *The Road Half Traveled, University Engagement at a Crossroads,* 2010.
[3] Athena Merritt, "Big Deal, Small Firm," *Philadelphia Business Journal*, Apr 21, 2008; interview with Todd Rose, Sept 23, 2014
[4] See Joseph Persky, David Ranney and Wim Wiewel, "Import Substitution and Local Economic Development," *Economic Development Quarterly*, 1993, vol. 7, issue 1, pp. 18-29.

report will also focus on the role of a heretofore under-studied aspect of institutional procurement, namely that of the large supply-chain integrators like Office Depot and Owens & Minor.

SECTION 2 Spending by Philadelphia's Anchor Institutions

The Controller's Office asked each of Philadelphia's largest anchor institutions to provide a recent and typical year's worth of procurement data enumerating their most frequently purchased commodities and the billing zip code for the supplier of each commodity. Philadelphia's 5 largest institutions – comprising 4 higher education institutions and 4 health systems – supplied usable data.[5] It became clear rather quickly that despite differences in data systems, the major institutions operate more similarly than differently. The data provided by these institutions amounts just over $3 billion in procurement spending, of which $798.1 million (27%) was identified as local.[6]

For purposes of analysis, the data has been divided into 3 general categories: Construction-related expenditures, Healthcare-related expenditures, and Other expenditures. A summary of the data is found below.

Construction-Related Expenditure Summary

The largest category of anchor spending is in Construction and Construction-related expenditures. It accounted for $1.13 billion of the $3 billion, and the data indicate that $420.8 million (37.3%) was spent locally.

Drilling down further, construction-related categories with the highest proportion of local spending are *electrical equipment, furniture,* and *general construction*. Local spending in these categories ranges from 35% to 50%. Included under general construction are materials such as wood, steel, cement, finishing, and paint. Because of their size, the anchors account for a sizeable percentage of the Philadelphia market's overall demand for these commodities. In 2011, the entire Philadelphia market was $4.3 billion in electric commodities and $588 million in furniture; in both categories, spending by the anchors is equal to approximately 5% of aggregate City demand.[7]

Among construction-related expenses, the subcategory demonstrating the smallest proportion of local spending is Heating Ventilation Air Conditioning (HVAC) equipment: with $58.7 million in total spending, just $3.6 million (6.1%) was procured locally. There is a substantial local market for HVAC equipment: overall demand in the City for Heating, Air Conditioning, Refrigeration and Ventilation

[5] Data was received from The Children's Hospital of Philadelphia, Drexel University, Temple University and Temple Hospital, Thomas Jefferson University and Health Systems, University of Pennsylvania and Penn Health Systems.

[6] The January 2014 report examined 34 Philadelphia Eds-and-Meds anchor institutions. The sample used in this report, comprised of the 5 largest anchor institutions, is both representative and constitutes the vast majority of procurement in the Eds-and-Meds space in the City. All claims are based only upon the commodity data provided by our sample institutions. It is possible that procurement patterns among the smaller institutions are significantly different. Because some institutions provide more complete data than others, some extrapolation was necessary to derive comparable data. See the Appendix for details regarding the projection method.

[7] In terms of procurement, the local spend number is likely lower because the majority of reported construction spending is accounted for by contract, not specific items.

equaled $645 million in 2011.[8] Thus, demand from the sample anchors constituted 9.1% of the City's overall market in this subcategory.

Table 1 Anchor Construction Spending

	Estimated Total Spend	Estimated Local Spend	Local Spend %
Furniture	$22,023,540	$10,649,163	48.4%
HVAC	$58,658,804	$3,561,664	6.1%
General Construction	$573,256,494	$238,619,410	41.6%
Misc Facility Products	$327,068,008	$110,488,587	36.5%
Electrical	$108,050,924	$38,324,062	35.4%
Telecommunications	$37,525,391	$10,197,772	27.2%
Total	**$1,126,583,162**	**$420,840,658**	**37.4%**

Healthcare Expenditure Summary

Healthcare commodities comprise the next largest category of anchor spending. The data broke down into four primary health-care procurement subcategories: *pharmaceuticals, medical equipment, laboratory equipment* and *chemical subjects.* Across the seven institutions examined, healthcare commodities account for $950.5 million in overall spending, $154.9 million (16.3%) of which is procured locally.

Medical equipment is the largest subcategory within healthcare accounting for $552.1 million of the reported institutional spending, $133.8 million (24.2%) of which was local. This subcategory includes such patient care supplies as adhesives and bandaging, as well as specific medical machinery and instruments. Since medical equipment procurement is often left to individual doctors, there is a wide array of brands that the suppliers offer.

Laboratory supplies are the next largest commodity within the healthcare category, accounting for $144.1 million of the overall spend, with $8.7 million (6.0%) local spend. Laboratory supplies include glass products, observatory instruments, and related equipment. The chemical subjects and gases subcategory includes biochemical compounds, reagents, oxygen, specialty gases, and the associated research costs. This subcategory amounts to $56.7 million with $4.5 million (8.0%) spent locally.

Table 2 Anchor Healthcare Commodity Spending

	Estimated Total Spend	Estimated Local Spend	Local Spend %
Laboratory	$144,137,918	$8,662,298	6.0%
Medical	$552,115,778	$133,815,331	24.2%
Pharmaceuticals	$197,489,368	$7,832,914	4.0%
Chemicals and Gases	$56,733,702	$4,543,109	8.0%
Total	**$950,476,767**	**$154,853,652**	**16.3%**

[8] Manufacturing Task Force "Manufacturing Growth Strategy for Philadelphia," December 2013 (http://www.manufacturingonline.org/resources/FULL%20REPORT%20Manufacturing%20Growth%20Strategy%20FINAL.pdf)

Other Expenditure Summaries

Office Supplies

Spending in the general office subcategory is $82.4 million with $19.8 million (24%) spent locally. It should be noted that commodities that would generally belong under this subcategory (writing utensils, storage supplies, tapes & adhesives, etc) are regularly accounted for under other subcategories because the purchases are not carried out by a centralized procurement department – they are purchased separately by specific departments. That being noted, it is likely that the data underestimates the demand for these commodities.

Paper Products and Printing

Across the institutions studied herein, spending for paper products amounts to $5.2 million, with a $1.6 million (31.1%) local spend. Paper products are pervasive in nearly every industry and are in heavy demand. In 2011, the Philadelphia market for paper products was $3.9 billion. That amounts to 0.13% of the total Philadelphia market. These figures probably underestimate actual spending, since paper product costs are also likely to fall under more general purchasing categories such as administrative services or general supplies. The robust citywide demand for paper products speaks to the manufacturing opportunity.

Paper production has a strong relation to the printing industry. In 2011, the Philadelphia market for printing-related services was over $1.5 billion. The institutions spent $21.2 million with approximately $5.1 million (23.2%) spent locally. Total spending across the sample institutions represent 1.4% of aggregate demand.

Cleaning Products and Supplies

Anchor spending on Cleaning, Housekeeping, and Custodial Services was $14.1 million, $1.7 million (12%) of which was procured from local vendors. Approximately 40% of the total amount is likely manufactured goods – the rest of the spending was reported under a general "housekeeping costs" label. Like many other commodities mentioned in this report, there is broad demand for cleaning products beyond the anchor institutions.

City contract spending displayed significant spending in snow removal products. Although there are no snow removal costs specified by the institutions, it's certainly a commodity that the Universities have to purchase and may be beneficial to look into further.

Food-Related

The Anchor Institutions spent $32.5 million on food-related procurement, $18.7 million of which was spent locally. However, more than half of this amount is attributed to "catering services," implying a service contract. Large food service companies such as Sodexho and Aramark, and regional firms like Bon Appétit have explicit commitments to buying local; the "buy local" food movement is broad and growing, and obviously, demand for food products is huge beyond the anchor sector, suggesting that larger-scale urban agriculture spurred by anchor demand could be a promising manufacturing opportunity. The institutional food service supply chain is also reasonably consolidated, and thus conducive to scaling. In addition to food, food service contractors and institutions also purchase kitchen products and vending machines; together these comprise approximately $3 million in spending across institutions.

Computer Technology

The overall annual Information Technology – hardware, software, etc - spend amounts to $182.6 million with $ 9.9 million spent locally. Institutional hardware and software purchases make up the bulk of this spending, and they are generally bound in contract agreements, but there is potential opportunity regarding the manufacturing of such commodities, specifically magnetic software products, and basic hardware such as keyboards or speakers.

Sports Recreation

Anchor Institutions spent $16.8 million on Sports Recreation equipment in 2011, of which $1.5 million (9.1%) was locally procured. Potential commodities of interest include athletic apparel and workout equipment. The citywide market for Sports and Athletic products was $409 million in 2011. Our sample would thus constitute about 4.1% of total city demand.[9]

Miscellaneous Residual Commodities

Unfortunately, a substantial proportion of the data, roughly 23%, did not fit neatly into one of the 17 commodity categories. Of the 'residual' $630.6 million in spending, $169.1 million (26.8%) is procured locally. The majority of the residual is denoted as "purchased services," "general expenses," or "subcontract services." The Controller's Office is hoping to work with the institutions to drill down into these generic categories in the future.

Table 3 Other Anchor Spending

	Total Spend	Local Spend	Local Spend %
Paper	$5,182,143	$1,612,952	31.1%
General Office	$113,564,122	$19,834,664	24.1%
Cleaning Supplies	$14,067,191	$1,691,769	12%
Food-related	$32,461,823	$18,703,889	57.6%
Technology	$182,560,176	$9,960,878	5.4%
Sports & Rec	$16,807,372	$1,533,606	9.1%
Uncategorized	$630,645,952	$169,105,360	26.8%
Total	**$964,155,703**	**$224,443,117**	**23.1%**

In sum, the categories that account for the most spending by anchor institutions are construction services ($573 million), medical supplies ($552 million), facility-related spending ($327 million), pharmaceuticals ($197 million), technology ($183 million), laboratory spending ($114 million), general office spending ($114 million) and electrical services ($108 million). In three categories, anchors spend more than 40% locally – Food-related, Furniture and Construction Services. In six categories,

[9] Only two institutions reported sports recreation spending. An estimate was made based on averages and extrapolated from that point

anchors spend less than 10% locally – HVAC, Laboratory, Pharmaceuticals, Chemicals, Sports & Recreation Equipment, and Computer Technology. These numbers can cut both ways: there may be room for growth in those categories that are already well-represented locally, and in some cases, less room in those categories that are poorly represented in the local economy. Understanding more precisely the growth opportunities requires an analysis of the city's manufacturing and supply sector.

These numbers paint a rough picture of the 'demand' side of anchor procurement. The next section will examine the manufacturing sectors in Philadelphia that are best suited to fill anchor institutions' demand. A large institution rarely buys a commodity directly from a manufacturer. The institutional supply chain is complex, controlled by a relatively small number of large 'integrators.' Understanding how a local manufacturer enters the supply chain is critical, thus this will comprise the final section of the report.

SECTION 3 The Supply Side: What Philadelphia Makes

Philadelphia has historically had and continues to have a diverse manufacturing base. It produces both secondary commodities, sold to distributors or to the final user, as well as primary commodities, sold to other manufacturers. These commodities include petrochemicals, freighters, confectionaries and furniture. These manufactures sell products all over the world.

In December 2013, the Mayor's Manufacturing Task Force (MTF) issued "Manufacturing Growth Strategies for Philadelphia," a report aimed at understanding the nature of manufacturing in contemporary Philadelphia. The MTF report provides an invaluable set of foundational knowledge about what is currently manufactured in Philadelphia. The report produced four statistics that are useful for the gap analysis and market mapping: SDR, RPC, growth sectors, and sectors that have a location quotient larger than 1.0.[10] The Supply-Demand Ratio (SDR) measures the proportion of what is produced in the City for local consumption; it is the total supply available in the region in a given sector divided by the total demand in the region for that sector's output. A low SDR indicates there is more local demand than local supply. The Regional Purchase Coefficient (RPC) measures the share of demand for an input by all users in a region that is purchased from producers in the region. An RPC of 10% means companies in the region requiring it as an input purchase only 10% of their demand from producers in the region. The MTF looked at a sector's growth relative to the national economy, as well as the relative size of the workforce in that sector, captured by the Location Quotient (LQ); an LQ greater than 1.0 means there is a larger percentage of people working in a sector in Philadelphia relative to the rest of the country.

These statistics facilitate the grouping of sectors into clusters and permit analysis of which sectors are growing, and which are unique to the city, as well as where the greatest opportunity exists for well-established sectors to potentially compete on a national level. The MTF report also provides an approach to calculating the employment impact of 100 new jobs in a sector on the local economy, as well as the multiplier effect of how much new sales increase total output. The MTF report enumerated the top ten sectors that have an LQ above 1.0 and are growing faster locally than nationally.

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[10] A Location Quotient larger than 1.0 means there is a larger percentage of people working in a particular sector in Philadelphia relative to the country.

In this section eight of the commodity categories described above will be investigated: HVAC products, Electrical Equipment, Furniture, Facility Commodities, Medical Equipment, Laboratory Equipment, Paper Products, and Office Supplies.[11] These broad commodity categories are represented by thirteen 4-digit NAICS codes. These 13 sectors are still relatively general and include some sub-sectors that do not derive much demand from Eds-and-Meds anchor institutions; however the vast majority of these sectors manufacture commodities that all anchor institutions purchase. These 13 sectors also constitute a large proportion of the total manufacturing sector in Philadelphia, with 250 firms employing 4,636 people, with an average yearly wage of nearly $55,000. Within the City limits there are roughly 750 manufacturing firms with 23,000 employees, at an average wage of nearly $59,000; the 13 sectors discussed represent one-third of all firms and 20% of all manufacturing employees.[12]

Within these 13 sectors there are 51 sub-sectors, of which 41 contain firms that manufacture commodities that are purchased by anchor institutions.[13] These 41 sub-sectors represent 15% of all the manufacturing sub-sectors defined by NAICS. The sub-sectors vary greatly in terms of scale, capacity of firms, and proportion of business done locally. In 28 of these sub-sectors, more than 50% of local supply is consumed by local demand; of these, 11 sub-sectors have a SDR over 100%. This implies there is more supply in the region than demand. However, there are only two sub-sectors with a Regional Purchase Coefficient greater than 50%. This implies a majority of what is being purchased in the city is not being made here in the city. Put another way, there could be large potential for expanding capacity to fulfill large amounts of local demand with high quality local supply.

[11] These sectors are identified by codes assigned by the North American Industry Classification System, the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. The NAICS codes in question are: 3221 Pulp, Paper, Paper Mills; 3222 Converted Paper Product; 3231 Printing and Related Support; 3256 Soap and Cleaning Supplies; 3272 Glass & Glass Products; 3333 Commercial and Service Industry Machinery; 3334 HVAC and Commercial Refrigeration Equipment; 3345 Electronic Instruments; 3351 Electric Lighting Equipment; 3371 Household and Institutional Furniture; 3372 Office Furniture & Fixtures; 3391 Medical Equipment & Supplies; 3399 Other Miscellaneous Manufacturing.

[12] "Manufacturing Growth Strategy for Philadelphia."

[13] There are 51 5- and 6-digit NAICS codes within these 13 sectors

Table 4 Commodity Sub-Sectors with Supply/Demand Ratio > 50%

NAICS	Commodity Description	Commodity Output (In Millions)	Gross commodity Demanded (In Millions)	SDR	RPC	Net Commodity Supply (In Millions)
32223	Stationery product	$152.8	$147	100.0%	30.7%	$155.3
322291	Sanitary paper product	$906.7	$389	100.0%	33.3%	$495.7
32312	Support activities for printing	$190.4	$140	100.0%	21.7%	$207.9
32562	Toilet preparation	$1,894.3	$771	100.0%	19.3%	$1,460.3
327215	Glass product made of purchased glass	$228.3	$55	100.0%	19.2%	$97.6
333311 333313	Vending, commercial, industrial, and office machinery	$160.3	$113	100.0%	14.8%	$134.5
333319	Other commercial and service industry machinery	$552.1	$475	100.0%	17.1%	$572.3
334514	Totalizing fluid meters and counting devices	$110.4	$72	100.0%	13.5%	$114.5
334611 334612	Software, audio, and video media reproducing	$313.3	$124	100.0%	21.3%	$311.3
32221	Paperboard container	$1,112.0	$952	100.0%	59.9%	$1,069.6
327213	Glass container	$173.0	$ 92	100.0%	50.6%	$165.0
339114	Dental equipment and supplies	$174.6	$144	99.3%	13.7%	$143.1
32311	Printing	$1,861.1	$1,406	88.2%	16.9%	$1,240.2
339116	Dental laboratories	$77.0	$ 88	86.1%	15.8%	$75.8
33512	Lighting fixture	$292.5	$ 299	85.9%	14.0%	$257.3
32561	Soap and cleaning compound	$1,088.6	$1,243	85.4%	17.2%	$1,060.8
333411 333412	Air purification and ventilation equipment	$159.5	$162	78.6%	9.0%	$127.7
327211	Flat glass	$71.7	$41	77.7%	20.2%	$31.6
339112	Surgical and medical instrument	$836.0	$811	75.1%	6.8%	$609.8
334513	Industrial process variable instruments	$640.1	$537	75.1%	10.7%	$403.4
322299	All other converted paper product	$69.4	$82	71.4%	26.0%	$58.8
334516	Analytical laboratory instrument	$581.8	$365	69.0%	8.8%	$251.4
32212	Paper mills	$756.0	$1,478	68.1%	19.8%	$1,005.9
334515	Electricity and signal testing instruments	$304.7	$272	66.8%	6.9%	$181.8
333415	Air conditioning, refrigeration, and warm air heating equipment	$314.5	$386	66.2%	11.0%	$255.4
339113	Surgical appliance and supplies	$644.5	$920	60.3%	10.0%	$ 554.7
334517	Irradiation apparatus	$527.3	$502	51.8%	9.3%	$260.0
339115	Ophthalmic goods	$192.5	$313	51.4%	4.6%	$160.9

Besides those sub-sectors with SDRs above 50%, there are 13 which are below 50%. However all but three of these sub-sectors have an SDR greater than 10%, which means their output is at least 10% of local demand. None of these sub-sectors have an RPC greater than 19% and almost all are under 10%. This means there is a high local demand for what these sub-sectors produce; but it also means that it is not being produced at a large enough scale to fulfill the existing demand.

Table 5 Commodity Sub-Sectors with Supply/Demand Ratio < 50%

NAICS	Commodity Description	Commodity Output (In Millions)	Gross commodity demand (In Millions)	SDR	RPC	Net Commodity Supply (In Millions)
334518 334519	Watch, clock, and other measuring and controlling device	$243.9	$247	49.5%	6.4%	$122.1
33994	Office supplies (except paper)	$46.9	$115	44.5%	6.6%	$51.0
334510	Electromedical and electrotherapeutic apparatus	$195.3	$341	43.7%	18.7%	$149.1
333414	Heating equipment (except warm air furnaces)	$35.5	$97	38.2%	10.1%	$36.9
334512	Automatic environmental control	$31.3	$63	37.9%	3.6%	$23.8
32213	Paperboard Mills	$207.3	$438	34.9%	13.8%	$153.1
333314	Optical instrument and lens	$111.6	$108	22.8%	1.6%	$24.6
333315	Photographic and photocopying equipment	$0.9	$39	22.4%	0.4%	$8.7
33992	Sporting and athletic goods	$80.6	$409	19.4%	2.8%	$79.3
337124 337125	Metal and other household furniture (exc wood)	$27.9	$145	12.0%	3.1%	$17.5
337127	Institutional furniture	$21.2	$217	8.0%	0.9%	$17.4
33511	Electric lamp bulb and part	$2.3	$84	2.2%	2.2%	$1.9
334613	Magnetic and optical recording media	$ -	$51	0.0%	0.0%	$ -

Most of the sectors in Philadelphia that supply the commodities demanded by anchor institutions are either growing faster or have a larger comparative workforce than the rest of the nation. Household & Furniture (NAICS 3372) and Medical Equipment & Supplies (3391) are both growing faster and have larger comparative employment numbers than the rest of the nation. Glass & Glass Products (3272) and Commercial & Service Industry Machinery (3333) are growing faster than the national average, but have a smaller comparative workforce in Philadelphia. Four subsectors display the converse characteristics: not growing as fast as the national average, but with a larger comparative local workforce; these are Printing & Related Support (3231), Soap, Cleaning Compound & Toiletry (3256), Electronic Lighting (3351) and Other Miscellaneous (3399). Three subsectors lag behind the nation in terms of both growth rate and size of workforce – HVAC & Commercial Refrigeration (3334), Electronic Instruments (3345), and Household & Institutional Furniture (3371).

In short, Philadelphia's manufacturing economy already comprises most of the sectors and sub-sectors that produce much of what the anchor institutions purchase; further, these sub-sectors probably have the capacity to supply or would need minimal expansion to be competitive, and they are either growing faster or have a larger comparative workforce relative to the nation. These sectors are primed for growth, and need only an increase in business and investment. They are already a prominent force in the nine already-existing manufacturing clusters in Philadelphia. Of these, manufacturers that could potentially be driven by anchor demand comprise a sizable portion of the following: Pharmaceuticals & Chemicals, Electronics, Machinery & Metal Products, Textiles Clothing & Paper and Non-Metallic Minerals. These clusters account for 57.4% of the employment and 30% of the real output in the manufacturing sector. In other words, investment in these sectors would likely spill over into supporting industries and strengthen the cluster as a whole.

The industries in these sectors have tremendous impact within and outside of their cluster. They are interrelated and have large employment and output multipliers. Every 100 new jobs in manufacturing produces 322 new jobs in other sectors, and overall output increases by 1.64 times for each additional $1 million in sales.[14] There are nine manufacturing sectors of a total of 15 that strong direct support to the Anchor Institutions. These Nine sectors are above the median in the output per sales multiplier and all nine sectors have a higher output multiplier than the Citywide manufacturing average.[15]

SECTION 4 Bridging Supply and Demand

Following the lead of the Manufacturing Task Force, the Controller's analysis suggests that developing a mechanism to bringing the City's anchor institutions together collaboratively with the manufacturing sector could create an opportunity for major leverage that could, in turn, create a great deal of economic growth. For decades, local and state economic development policy has focused primarily on business attraction or the development of start-ups; while these are important elements of a growth strategy, Philadelphia has largely missed the opportunity right under our proverbial noses: the existing demand of our legacy institutions. As the Controller's Office demonstrated in its work on the Keystone Opportunity Zone Program, untargeted business attraction and retention program produce small multiplier effects and generally fail to produce sustained growth.[16] The approach advocated in this report has become common in many so-called "legacy cities," from Detroit and Cleveland on the most distressed end, to Baltimore, Pittsburgh, and Chicago on the more developed end. It is important to note that few cities possess the number, comparative quality, or scale of anchor institutions as Philadelphia. Utilizing their demand to bolster and grow the manufacturing sector can help shape the local economy by creating clusters, which in turn have large spillover agglomeration effects. Moreover, by working with national supply chain integrators, local firms that have heretofore been focused on a very small market can be induced to scale up to build export capacity and thereby grow exponentially.

Extracted from the institutional procurement data, approximately $860 million worth of commodity purchases were matched directly with manufacturing NAICS codes.[17] Of this $860 million, just $136 million or 16% was procured locally.[18] Grouping the commodities into categories by NAICS codes help to elucidate those sectors upon which local anchor institution demand might have the greatest impact. It also allows for a direct comparison to what is actually being manufactured in the city.

At present, the data suggest that Philadelphia's anchor institutions already procure a majority of commodities locally in three categories – Food, Electrical Equipment, and Furniture. There has been considerable research and investment on how to expand local food procurement from anchor institutions and this is a promising area for investment.[19] There are local manufacturers of both electrical equipment and furniture within Philadelphia. Another possibility for growth is miscellaneous

[14] "Manufacturing Growth Strategy for Philadelphia."
[15] See Appendix for Chart of manufacturing sector multipliers
[16] Philadelphia City Controller "An Analysis of the Keystone Opportunity Zone Program, 1999-2012," March 2014 (www.philadelphiacontroller.org/publications/KOZ-Report_March2014.pdf).
[17] See Appendix A-2 for more information
[18] These numbers are not projected, and only reflect the institutions that supplied data.
[19] E.g., Initiative for a Competitive Inner City (ICIC), "Anchor Institutions and Food Systems," April 2014 (http://www.icic.org/ee_uploads/publications/ICIC_whatworks_anchors_food.pdf).

manufacturing, as Table 6 below shows, NAICS code 339 (Miscellaneous Manufacturing) accounts for $479 million, which is 56% of the total spending. This is because the medical equipment manufacturing sector, which accounts for $458 million, is captured under NAICS Code 339. This category also includes Sports Recreation Equipment and Office Supplies, which account for $6.7 million and $13 million in spending, respectively. The manufacturing subsectors of Machinery, Computer Electronics, and Chemicals also feature a significant amount of reported spending.

The durable manufactured goods with the most potential for local procurement appear to be Fabricated Metal, Electrical Equipment, and Furniture; as shown in the Table below, these range from 38% to 48% local. These sectors, along with Paper Products and Miscellaneous Manufacturing, already have a strong base in Philadelphia. As indicated by the low Regional Purchase Coefficients for these sectors shown in Table 5 above, most of the demand for these commodities is coming from outside of the region; at the same time the Supply/Demand Ratio for these commodities is close to 100. This suggests sufficient local capacity to supply these commodities to local institutions, as well as sufficient size to compete on a regional national or global scale.

Table 6: Spend Location by 3-Digit NAICS Code

Code	NAICS Descriptor	Total	Local	Local %
311	Food	$4,505,150	$3,114,880	69.1%
313	Textile Mills	$353,382	$9,562	2.7%
314	Textile Product Mills	$4,484,318	$344,790	7.7%
322	Paper	$5,401,168	$695,230	12.9%
323	Support Printing	$6,706,481	$1,137,387	17.0%
324	Petroleum Coal	$33,418	$17,522	52.4%
325	Chemicals	$232,981,586	$13,858,797	5.4%
332	Fabricated Metal	$3,786,368	$1,455,084	38.4%
333	Machinery	$60,076,664	$3,812,810	6.3%
334	Computer Electronics	$52,838,972	$4,529,460	8.6%
335	Electrical Equipment	$1,639,986	$632,716	38.6%
336	Transportation Equipment	$369,787	$26,264	7.1%
337	Furniture Related	$7,789,427	$3,692,295	47.4%
339	Misc Manufacturing	$479,233,950	$104,093,385	21.7%
31-33	**Total Manufacturing**	**$860,200,657**	**$136,160,292**	**15.8%**

Chart 1: Procurement Spending, Local vs Non-Local, Top Categories

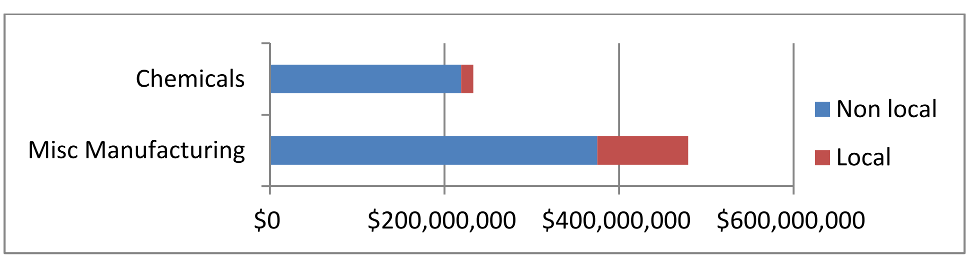
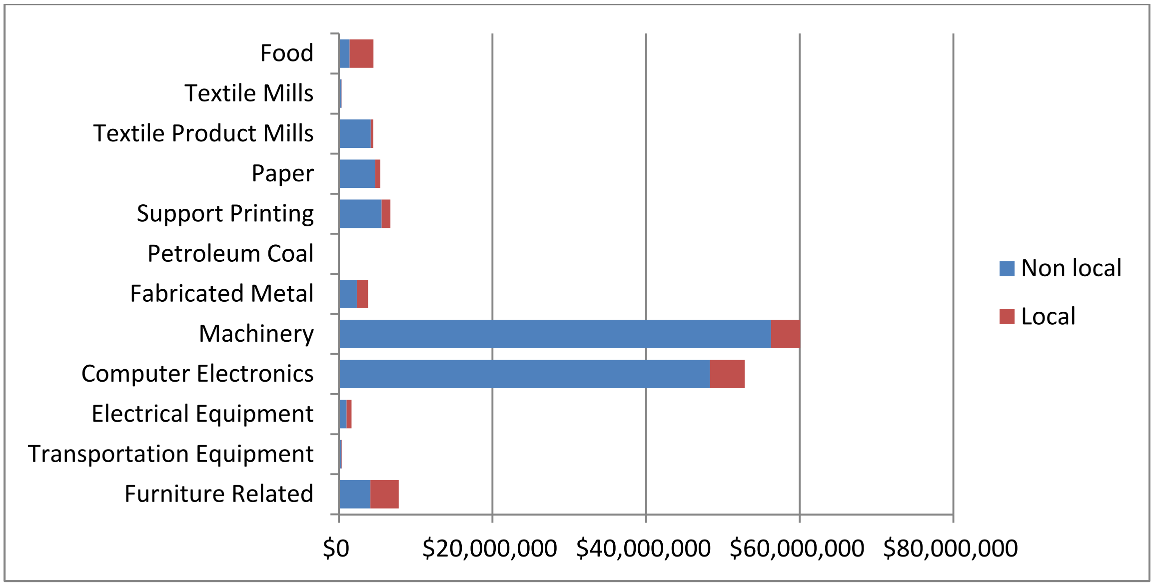


Chart 2: Procurement Spending, Local vs Non-Local, by 3-DigitNAICS Categories



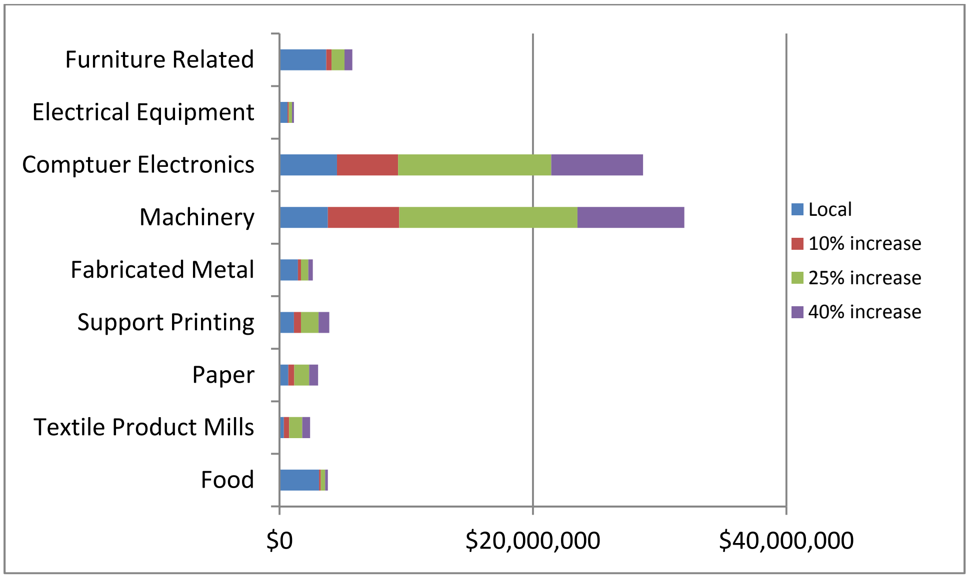
In sum, assuming that local manufacturers are able to compete on price and quality, a shift by the anchor institutions of some of their spending could have a substantial impact on the local economy. Table 7 below estimates the impact of a 10%, 25%, and 40% shift in each sector. A 25% increase in spending towards local procurement from the sample institutions would result in at least $46.6 million in additional economic activity from direct spending, and another $76.5 million from indirect spending.[20]

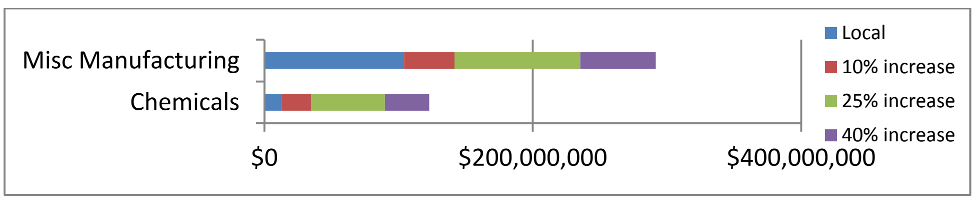
Table 7 Direct Effect of Increased Anchor Spending by Sector

NAICS Code	NAICS Descriptor	Current Local Procurement	10% increase	25% increase	40% increase
311	Food	$3,114,880	$3,253,907	$3,462,448	$3,670,988
313	Textile Mills	$9,562	$43,944	$95,517	$147,090
314	Textile Product Mills	$344,790	$758,743	$1,379,672	$2,000,601
322	Paper	$695,230	$1,165,824	$1,871,715	$2,577,605
323	Support	$1,137,387	$1,694,296	$2,529,660	$3,365,024
324	Petroleum Coal	$17,522	$19,112	$21,496	$23,880
325	Chemicals	$12,598,906	$34,637,174	$67,694,576	$100,751,978
332	Fabricated Metal	$1,455,084	$1,688,212	$2,037,905	$2,387,597
333	Machinery	$3,812,810	$9,439,195	$17,878,774	$26,318,352
334	Computer Electronics	$4,529,460	$9,360,411	$16,606,838	$23,853,265
335	Electrical Equipment	$632,716	$733,443	$884,534	$1,035,624
336	Transportation Equipment	$26,263	$60,616	$112,145	$163,673
337	Furniture Related	$3,692,294	$4,102,008	$4,716,578	$5,331,148
339	Misc Manufacturing	$104,093,385	$141,607,442	$197,878,527	$254,149,611
31-33	**Total Manufacturing**	**$136,160,282**	**$208,564,328**	**$317,170,383**	**$425,776,438**

[20] See Appendix B for multipliers

Chart 3: Direct Effect of Increased Anchor Spending by Sector





A 25% increase in local procurement among the anchor institutions would generate $181 million additional dollars in manufacturing revenue. Utilizing the same metrics used in the Controller's January 2014 report and the Manufacturing Task Force Report, this additional spending would create 1,250 new manufacturing jobs and an additional 4,000 indirect jobs.[21]

The charts below summarize the analysis based on the data at hand, omitting categories that suggest little or no opportunity for improvement regarding local procurement. The sectors shown below represent the most plausible opportunities for leveraging almost half a billion dollars in anchor procurement spending to create local economic activity.[22]

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[21] In the January 2014 report, Econsult Solutions' model assumes that for every $145,000 in redirected anchor procurement, 1 new direct local job is created. Indirect job figures are calculated using the same multiplier utilized by the Manufacturing Task Force: for every 100 manufacturing jobs created 322 other jobs are created; See Table B-2 in the appendix for more detailed information on multipliers.

[22] The most notable category omitted is pharmaceutical spending, which accounts for $197 million dollars. Despite the fact that so many pharmaceutical companies are headquartered in the Greater Philadelphia region, very few manufacture their products here. The data in Table 8 above correlates commodities purchased by the anchors with 5 or 6-digit NAICS Codes, and thereby almost assuredly filters out spending on human resources. This reduces the local procurement figure below 10%, suggesting that there is much room for growth

Chart 4: Promising Opportunities > $100 million[23]

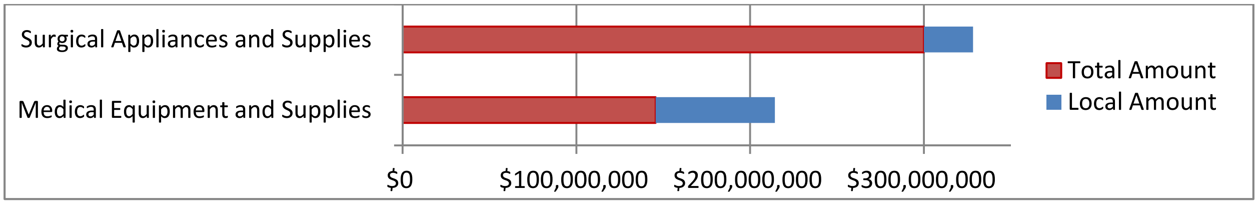
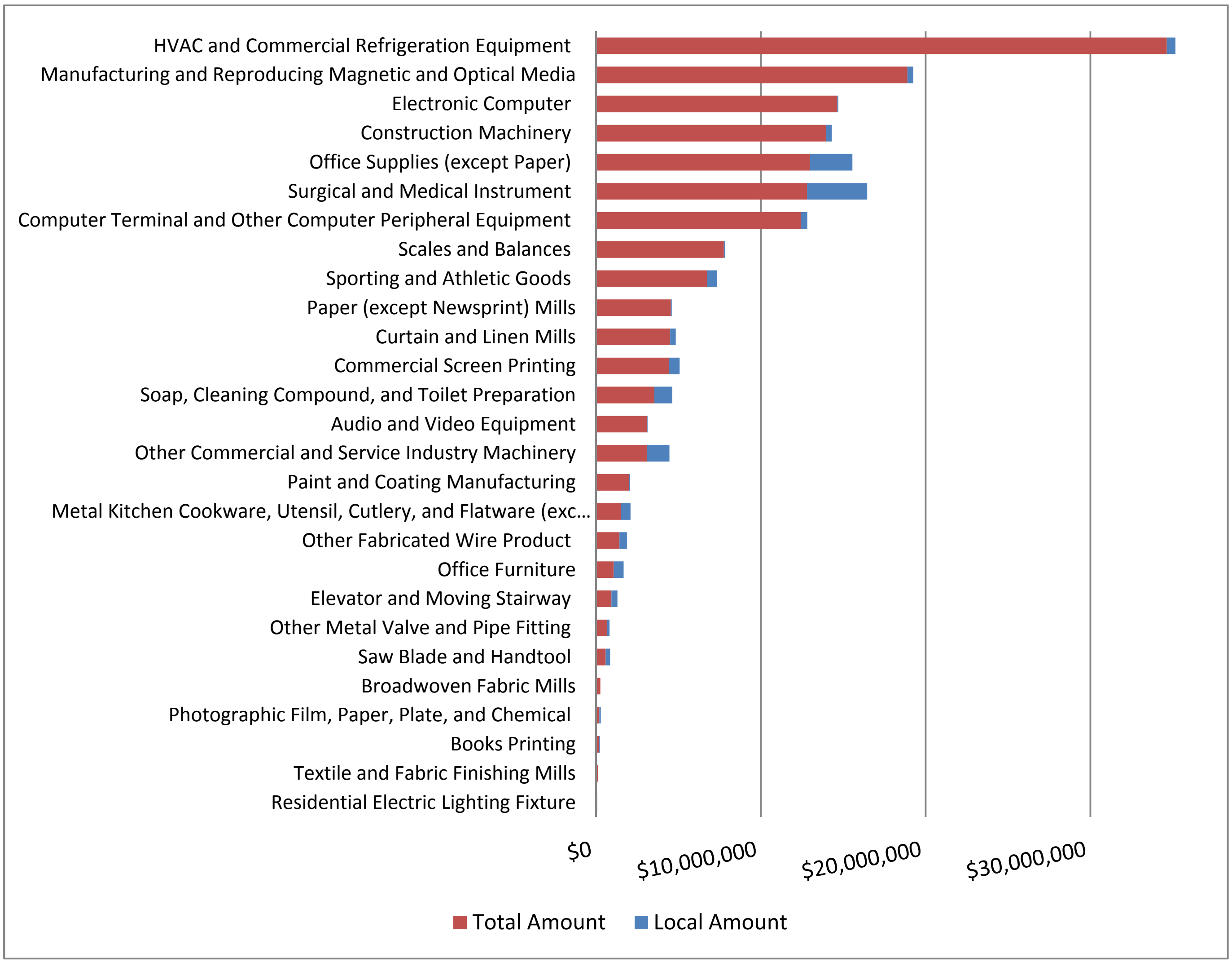


Chart 5: Promising Opportunities < $100 million



Where possible, the data was parsed by five- and six-digit NAICS codes, which provides greater certainty that the category contains primarily spending on goods and not on human resources. Looking

[23] See appendix for table B-1

at only those categories in which the data could be broken down this way, the local spending proportion drops below 10%. This suggests that there is much room for growth.

Table 9 below presents selected data by Supply-Demand Ratios, to illustrate possible opportunities for sectoral expansion. A larger SDR indicates there is more local supply than local demand. Particularly promising opportunities are found in Printing (32311), Lighting Fixtures (33512) and Surgical Appliances and Supplies (339113). The latter, accounting for $300 million in annual anchor spending, represents far and away the largest opportunity. Additionally, the data suggest that it makes sense to explore further the potential for localizing procurement of Medical Equipment & Supplies (3391) as well as HVAC & Commercial Refrigeration (33341).

Additionally, there are also sectors with lower SDRs that may be worth exploring; these are sectors in which local demand outstrips local supply. These include Manufacturing & Reproducing of Magnetic Media (33461), Sporting & Athletic Goods (339920), and Office Supplies Excluding Paper Products (33394). The first category, Magnetic Media, is associated with the manufacturing of compact discs for computer software, accounting for $18 million in anchor spending, only 1.9% of which is local.

Table 9 Promising Opportunities with Complementary SDR & RPC

Code	Commodity	SDR	Total Spent	Locally spent	Local %
33913	Surgical Appliances and Supplies	60.3%	$300,026,086	$28,265,607	9.4%
3391	Medical Equipment and Supplies	> 50%	$145,638,328	$68,598,395	47.1%
33341	HVAC & Commercial Refrigeration	> 50%	$34,640,412	$1,991,485	5.7%
33461	Manufacturing & Reproducing of Magnetic Media	100.0%	$18,886,964	$360,602	1.9%
33394	Office Supplies Excluding Paper Products	44.5%	$12,981,707	$2,572,735	19.8%
339920	Sporting & Athletic Goods	19.4%	$6,722,949	$613,442	9.1%
32311	Printing	88.2%	$4,573,571	$705,320	15.4%
33512	Lighting fixtures	85.9%	$55,822	$0	0.0%
	TOTAL		**$523,525,839**	**$103,107,586**	

All of the commodities in Table 9 also have a Regional Purchase Coefficient (RPC) of less than 20%, and most are under 10%. In other words, despite extant local demand from the anchors, less than 20% of these commodities are being purchased locally. There are a number of possible reasons for this, of course – information asymmetry, inability to compete on price or quality, barriers to entry into institutional supply chains, lack of access to capital, among others. In sum, this chart represents an outline of perhaps the 'first cut' of opportunity.

SECTION 5 Accessing Institutional Supply Chains

It is rare for a large medical or educational institution to purchase commodities directly from a manufacturer; a large proportion of anchor procurement happens through large regional, national, and international suppliers, called "integrators" or "aggregators" in industry parlance. Integrators reduce procurement costs by increasing efficiency through providing one-stop shopping, verifying the quality of a manufacturer's goods, ensuring the reliability of distribution, and minimizing price asymmetries, among other factors. The report has heretofore focused on identifying data-driven opportunities to grow and develop local manufacturing firms driven by anchor demand, growth both within and beyond the local market is dependent upon gaining access to these suppliers' catalogs. Like their counterparts elsewhere, Philadelphia's anchor institutions rely on a variety of wholesale suppliers both diverse and commodity specific; however, the data shows that most anchors utilize a small number of major suppliers, including Office Depot, Grainger, Premier, Owens & Minor, Cardinal, Aramark, Sodexo, and a few others. While there is considerable growth potential simply supplying the needs of local anchor institutions, the economic impact would be much greater if local demand served as a catalyst or gateway to provide access for local firms to regional and national distribution networks.

Many of Philadelphia's institutions have developed what Michael Porter would call "shared value" partnerships directly with local businesses or programs designed to foster them. Drexel University partners with The Enterprise Center (TEC) in West Philadelphia to provide mentoring services to help local suppliers compete for university procurement dollars; the recent establishment of the Dornsife Center will greatly expand Drexel's efforts along these lines. Temple's Fox School of Business has small consultancy that focuses on developing the capacity of minority and women owned businesses. Perhaps the most well-developed of these local anchor efforts is at the University of Pennsylvania, where the combined work of the Netter Center, Wharton's Small Business Development Center and its efforts to develop a small minority-owned office supply firm, Telrose Corporation, into a Tier One supplier, has garnered national attention. Penn's food service provider, Bon Appétit, buys baked goods from local entrepreneurs operating out of the commercial kitchens at TEC's Culinary Enterprise Initiative. Additionally, area universities organized themselves into the Philadelphia Area Collegiate Cooperative (PACC), through which they bulk-procure a limited basket of goods at lower cost, with an eye toward local and diverse purchasing. In 2013, PACC institutions collectively procured $23 million from their suppliers.

A number of models have emerged as anchor institutions across the country increasingly decide to pursue localization strategies. In some cases, a single institution has taken upon itself to develop programs to expand local purchasing; one of the more successful of these initiatives is the "Streetwise MBA" program run by Interise at Columbia University in New York City. Small businesses receive direct guidance from the experts at Interise, who also work closely with university procurement officials to ensure that the businesses are producing what Columbia needs.[24] A second model, adopted in Cleveland, started with an initiative by the Cleveland Foundation to increase local employment; the Democracy Collaborative worked with anchors and the Foundation to create the Evergreen Cooperatives, which has in turned spawned several worker-owned firms driven primarily by demand from institutions like the Cleveland Clinic, University Hospital, and Case Western Reserve University. The Greater Cleveland University Circle Initiative has created over a hundred new jobs and generated $14.3 million in annual economic impact.[25] Chicago Anchors for a Strong Economy (CASE) provides a third model, in some ways a hybrid of the Columbia and the Cleveland approaches. More than a dozen Chicago institutions have come together to intentionally create new opportunities for local suppliers by analyzing

[24] Interview with Interise staff, January 6, 2015.
[25] Cleveland Foundation, "Cleveland's Greater University Circle Initiative," 2013 Report (http://www.clevelandfoundation.org/wp-content/uploads/2014/01/Cleveland-Foundation-Greater-University-Circle-Initiative-Case-Study-2014.pdf)

their spending and identifying the potential for localization. The most innovative aspect of the CASE approach is an accelerator program run by Next Street, a Boston-based "merchant bank for urban enterprise" that provides guidance to businesses as well as access to capital. The program is funded by contributions from each anchor institution, which have been supplemented by local foundations.[26]

Despite all of this great work, the Controller knows of no concerted attempt to use organized demand on the part of anchor institutions to facilitate partnerships between local manufacturers and major national integrators.[27] This sort of collaboration would provide a vehicle for local manufacturers to enter national supply chains, the attendant scale up greatly increasing the multiplier effect on the local economy. Thus this report proposes the creation of a model that synthesizes the best of the others – targeted local business development strategies along the lines of what Drexel and Penn are already doing, scaling up and collaborating in the spirit of CASE, the market-wide approach and workforce development emphasis of Cleveland – but with the added element of working in partnership with integrators to create pathways to 'export' of tradeable goods.

Integrators: The Key to Scaling Up

While the local economies in Philadelphia, Cleveland, New York, Detroit, and Chicago get a measurable boost from increased local spending by individual institutions, and still more of a boost from coordinated spending, the impact is obviously limited by the local institutions' aggregate demand for any particular commodity. In economic terms, the import substitution effect on growth is limited by the size of the 'domestic' market. The ultimate goal of the import substitution strategy, however, is leveraging domestic demand to grow an industry such that it becomes an exporter of goods. From the "Homespun" movement during the American Revolution, which spurred the development of the American textile industry, to the emergence of the "Asian Tigers" in the late 20th Century, the import substitution model of development has a venerable history. The impact on business growth and the local economy would be increased exponentially if a local business is able to gain access to a national market by entering the supply chain of a major integrator. Assuming a collaborative purchasing organization could be created among Philadelphia's anchor institutions, developing a partnership between this organization and major integrators would allow local firms to learn to navigate institutional purchasers' supply chains, while expanded business opportunities would permit them to scale up at the appropriate pace. Conversations with several of the major integrators suggests that they are constantly in search of innovative products from small and medium-sized businesses, they desire supplier diversity, and many of them employ more or less developed mentor-protégé programs and other forms of technical and financial assistance to facilitate partnerships with small and medium-sized manufacturers.

Major national integrators like Office Depot and Owens & Minor, as well as large corporations like Comcast and Aramark have a track record of diversifying their supply chains to include women- and minority-owned firms as well as small and medium-sized local businesses. Over the past decade, most major integrators, corporations, large non-profits, and governments alike have devoted increasing

[26] World Business Chicago: CASE. http://www.worldbusinesschicago.com/case; http://www.nextstreet.com/about_us.

[27] As mentioned, Penn and Drexel collaborated with Office Depot to help develop the Telrose Corporation into a Tier One distributor, allowing Telrose to achieve astounding growth. As such it is an important initiative that demonstrates the appetite for and potential of this approach. Merritt, "Big Deal, Small Firm."

resources and attention to supplier diversity and local sourcing. Whether driven by government incentives, specific goals enshrined in Economic Opportunity Plans, or leadership-level commitments to corporate social responsibility, integrators are constantly seeking opportunities for historically underutilized businesses to break into the supply chain and compete on the national market. The Anchor Procurement Initiative could plug into many companies' already existing programs. Where such programs do not formally exist, City government could work with integrators and partners among community development financial institutions such as the Philadelphia Industrial Development Corporation (PIDC), The Reinvestment Fund (TRF), Local Initiatives Support Corporation (LISC), and Finanta, business groups such as the Greater Philadelphia Chamber of Commerce (GPCC), the Delaware Valley Industrial Resource Center (DVIRC), and the Sustainable Business Network (SBN), and business development centers at Philadelphia's academic business schools to create them.

Research suggests that there is no simple formula for a business to successfully enter and thrive in a large supply chain, but that the common denominators for success include commitment on the part of both integrator and institutional customer, as well as the availability of financial and technical assistance to firms. As a major study of attempts by small businesses in New York City to achieve scale found, purchasing decisions in modern supply chains are increasingly customized, making it difficult for small suppliers to access the primary decision-maker at the end consumer directly.[28] The first point of entry is almost always through the outer edges of the supply chain, via a Tier One or Tier Two partner. With the right mix of leadership, innovation, persistence, and assistance, some businesses attain the breakthrough contract that allows them to achieve enough scale to move beyond their domestic market. The strategy being proposed for Philadelphia aims to more intentionally create a pipeline into the major integrators' supply chains. This will require work at three levels – collaboration among the institutional purchasers, a relationship between a local purchasers' collaborative and the integrators, and a program to recruit and develop businesses to scale. This is precisely the unique role that Philadelphia Anchors for a Strong Economy (PHASE) would play.

Most integrators tout their commitment to diversity and inclusion, and most have a more or less well-developed program to attract certified Historically Underutilized Businesses (HUBs) or Women-, Minority- or otherwise Disadvantaged Business Enterprises (W/M/DBEs). Existing suppliers and prime contractors can serve as mentors to small businesses seeking entry into large supply chains. Existing suppliers have experience dealing with the larger entity, and understand its expectations and its corporate culture; sharing this knowledge can prove tremendously helpful to a prospective supplier.[29] Though networking and cultivating long-term relationships are time-intensive, the potential payoff can be tremendous for a small upstart business. Recommendations and introductions from an already established supplier carry a greater weight with a large purchaser than tactics like sending product samples blindly. Subcontracting is a low-risk way for prime contractors in a supply chain to invest in a new business seeking access to a major dealer, in addition to elevating its business status within that organization and the potential benefits that stem from increasing its consumer base.[30]

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[28] Center or an Urban Future, "Small Business Success," 2014 (https://nycfuture.org/pdf/Small-Business-Success.pdf).
[29] Center for an Urban Future, "Breaking into the Corporate Supply Chain," 2010 (https://nycfuture.org/pdf/Breaking_into_the_Corporate_Supply_Chain.pdf)
[30]ICIC, "Using Procurement To Grow Inner City Businesses," 2009 (http://www.icic.org/ee_uploads/publications/USING-PROCUREMENT-TO-GROW.PDF)

Fostering a relationship with the integrators and developing an immersion strategy to break into the supply chain first entails a realistic evaluation of a company's own manufacturing and economic capacity. The avenue into a national distribution network can be overwhelming and broad. Ultimately business growth depends on a multitude of factors – each small business and major dealer relationship is unique and there are controllable factors to attract a major dealer. Conversations with small businesses that have established relationships with major integrators make it clear that facility with contemporary technology is expected – lagging behind technically immediately diminishes a business's viability. Technology drives down cost and increases efficiency. In today's marketplace, a business must be capable of seamlessly integrating into a wholesaler's internet marketing program; one senior official at a major integrator told us that "e-commerce has democratized entry" to supply chains, but many vendors still focus on "old-retail" like how to "get the product on the shelves." If a vendor with a truly innovative product cannot handle the requirements of e-commerce internally, the integrator may connect the company to a more experienced partner that possesses the appropriate technological resources. In today's market customers have access to products in at least three distinct ways: retail, virtual, and e-commerce sales. Preparing strategies that acknowledge this variety is essential. It is also critical that a business set attainable and realistic goals for growth, to avoid the common problem of overextension in an unfamiliar market space. Major national distributors do not have the bandwidth to financially or even technically assist all Tier Two suppliers, one of many reasons that mentor-protégé programs are critical. Central to the role of PHASE will be developing mentor-protégé relationships for local businesses that seek to gain access to integrators' supply chains and providing the necessary technical and financial assistance.

Case Studies – Office Supply

In the office supply sector, Office Depot boasts an extensive diverse supplier network. Every year since 2008, the company has produced its Historically Underutilized Business (HUB) catalog, featuring hundreds of commodities supplied by companies owned by women and people of color; the 2014 edition features 1,800 products supplied by 34 companies, 14 of which are certified minority-owned and 15 of which are women-owned. The company has spent over $5 billion with diverse suppliers since 1999.[31] Relationships with HUB companies accounted for $600 million of Office Depot's $3.7 billion in gross income for Fiscal Year 2014.[32] Consistent with any successful business, Office Depot seeks business and economic sustainability; the goal of its Supplier Diversity model is to sustain growth with current vendors while prospecting additional businesses, for constant consumer expansion and diversity. A survey of the HUB catalog reveals a complex supply chain in which some products are manufactured domestically while many are procured by Tier Two wholesalers from manufacturers abroad. Office Depot's Supply Diversity Chain model has three dimensions; Vendor Diversity, Supplier Diversity, and Tier One. Office Depot prides its overall Supplier Diversity program the exposure and partnerships businesses gain through integration. Instead of direct financial assistance, Office Depot's partnership philosophy cultivates financial sustainability. Via a multitude of connections and resources, Office Depot offers HUB businesses the capacity to develop capabilities to become self-reliant. Other

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[31] Office Depot "Historically Underutilized Businesses" 2013
[32] Interview with Office Depot staff;

integrators also provide their diverse partners with a mentor-protégé program, differing in approach for each business, but with the ultimate goal of establishing a durable relationship. RFP contract requirements are customized for every product dependent on supply access and innovation. The effort to expand a company's toolbox are provided through training sessions with organizations, for instance, the Small Business Administration (SBA), and develop relationships with existing partners and other partner networks as key values in the Supplier Diversity program.

Another example from Office Depot's HUB catalog is storage pallet supplier Addendia, a female owned and operated company that manufactures its product in Massachusetts. A certified WBE, Addendia utilized certification as a primary pathway to reach distributors. Without a large employment or broad networking foundation, the outreach opportunities afforded by the Women's Business Enterprise National Council (WBENC) provided the greatest opportunity to reach dealers. Success with Office Depot allowed Addendia to expand its customer base and expand its market to include other integrators, such as Grainger.

The Alliance Rubber Company of Hot Springs, Arkansas also demonstrates the importance of relationships with integrators like Office Depot. Alliance is a certified WBE, led by CEO Bonnie Swayze since 1981; its partnership with Office Depot began in 1987, well before the existence of the HUB catalog. Alliance has leveraged its relationship with OD to form partnerships with other major wholesalers like SP Richards and United Stationers. Founded in 1923, Alliance has maintained steady growth in part because of the market share they have grown through Office Depot's supply chain and exposure. Today, Office Depot accounts for $3.7 million of Alliance Rubber's total annual revenues of about $35 million; according to Swayze, revenues have increased by 35% in the last decade and are growing about 5% annually. In 2014, Alliance invested $600,000 in the expansion of their Hot Springs headquarters, which allowed the company to add 15 workers for a total of 165 employees. The relationship with Office Depot and other wholesalers allows a company like Alliance to plan for secure and steady growth.[33]

Finally, although it is not a manufacturing firm, the story of the Telrose Corporation is instructive. A Xerox business product specialist servicing the University of Pennsylvania in the early 1990s, Todd Rose developed a strong working relationship with key business administrators at Penn, who came to rely on him. He became a diversity contractor for Xerox, but Xerox lost its Penn contract; at Penn's suggestion, Office Depot asked Todd to become a diverse Tier Two supplier, and in 1995 the Telrose Corporation was born. For three years, Rose recounts, the company made on-time deliveries to Penn yet owned not a single truck. Drexel and Penn collaborated with the City's Minority Business Enterprise Center to create the Diversity Supplier Development Program, which identified minority firms for contracts with the universities, and Telrose's portfolio of university business grew tremendously. The DSDP explicitly aimed to help build capacity among diverse firms. Because Office Depot also has its own program to develop and mentor diverse partners, when its contract with Penn was up for renewal, Office Depot agreed to 'flip' the contract and allow Telrose assume the primary contractor role. Thus was Telrose catapulted from the ranks of a Tier Two delivery company to a full-service Tier One supplier. Today Telrose has 22 employees, 10 trucks, and counts as customers not only Penn and Drexel but major engineering and

[33] Interview with Bonnie Swayze, March 18, 2015; James Haggerty, "U.S. Rubber-Band Maker Survives by Stretching Its Portfolio of Products," *Wall Street Journal*, June 1, 2014 (http://www.wsj.com/articles/u-s-rubber-band-maker-survives-by-stretching-its-portfolio-of-products-1401382522); GlassCeiling.com, "Passion-Driven Careers: Bonnie Swayze," (www.glassceiling.com).

construction firm Day & Zimmerman, Independence Blue Cross, and Comcast, among others. According to Rose, Telrose now fills 1,100 orders a day, a far cry from the 3-person bootstrap operation of 20 years ago. As this example shows, intentional effort on the part of both a major client such as Penn or Drexel in partnership with a major integrator like Office Depot, which recognizes the "diversity space as a growth engine," in Rose's words, can lead to impressive growth.[34]

Case Studies – Healthcare

In the healthcare field, major suppliers such as Amerinet, Owens & Minor, and Premier banded together in 2003 to form the Healthcare Supplier Diversity Alliance (HSDA). Most HSDA members produce special "diverse supplier" catalogs to make it easier for procurement officials to meet diversity goals. The case of Kerma Medical Manufacturing is instructive of the potential of an integrator-centered growth strategy. Founded by Earl Reubel, an African American veteran of the Vietnam War, Kerma began as a small, direct supplier to the Veterans Administration in the late 1980s, doing about $1 million in annual business. When the federal government changed its procurement practices in the 1990s to a prime contractor model, Kerma lost its biggest contract almost overnight and was forced to quickly regroup. In the words of Reubel's nephew Joe, Earl's successor as Kerma's CEO, "Earl threw a Hail Mary pass and cold-called at the Richmond headquarters of [major hospital integrator] Owens & Minor." Fortuitously for Reubel, federal procurement policy incentivized O&M to seek diverse suppliers on its federal contracts; O&M sponsored Kerma's entry into a mentor-protégé program under the auspices of the Department of Defense. O&M also provided technical and financial support to Kerma, enabling the $1 million company to scale up over the course of a decade and a half to become a $90 million enterprise employing about 100 people in its Suffolk, VA manufacturing plant. Initially driven almost exclusively by Owens & Minor's business, today Kerma has a broadly diverse portfolio of customers: it is a private label manufacturer for O&M, sells directly to Group Purchasing Organizations as a Tier One supplier, and has a relationship with Owens & Minor's major competitor, Cardinal. With the new structure of incentives under the Affordable Care Act regarding demonstration of community impact, M/W/DBE firms in the healthcare industry will likely see greater opportunities to tread the path blazed by Kerma and others. As renowned healthcare consultant and former Director of External Affairs at the U.S. Department of Health & Human Services Anton Gunn puts it, healthcare is a $3 trillion industry that is "never going away."[35]

Century Hosiery, a medical supply manufacturing company out of North Carolina, built partnerships with existing suppliers to achieve its relationship with Owens & Minor, achieving the MediChoice Supplier of the Year award in 2009, after just six years of collaboration. Initially Century Hosiery concentrated efforts on sending samples to the retail sector, which deemed inefficient. After reworking their model, they sought experienced suppliers who were able to directly deliver samples and showcase the product to the purchasing and sales team of major dealers. Since the start of its relationship with Owens &Minor, Century Hosiery has experienced greater than 130% employment growth and a near-complete shift to production for the healthcare sector, which today accounts for 95%

[34] Merritt, "Big Deal, Small Firm"; interview with Todd Rose, Sept 23, 2014.

[35] Interview with Joe Reubel, January 22, 2015; interview with healthcare consultant Anton Gunn, January 23, 2015.

of the firm's revenues. As a result of Century's success with Owens & Minor, like Kerma it has been able to develop relationships with other major integrators such as Cardinal Health and Medline.

Similarly, MAC Medical, a woman-owned medical supply manufacturer and distributor in the Chicago area, started with a small contract with Owens & Minor and leveraged it to grow. As noted, healthcare procurement rules are largely structured by federal mandates for inclusion of historically disadvantaged and underutilized businesses. MAC's Millie Maddocks seized on the opportunity to partner with Owens & Minor, finding a tremendous mentor in Angela Wilkes, the long-time director of supplier diversity and sustainability for O&M and founder and chair of HSDA. MAC has posted 30% annual growth in the past several years.[36]

Case Study: Food Services

The trend toward localization is perhaps most pronounced and advanced in the food services industry, where major global companies seek to capitalize on the "locavore" and sustainability movements by increasing procurement from local farmers and entrepreneurs. In 2001, the huge France-based multinational Sodexo implemented a commitment to supplier diversity, focused on pursuing opportunities to build diverse growth and development in the community. Sodexo's local food service providers account for 45% of total market share, organized through local distribution networks. In 2014 Sodexo's Supplier Diversity program consisted of 1,298 diverse vendors, totaling $773 million, or 18.7% of the company's total spend. Sodexo's local distribution networks rely upon third-party gatekeepers to ensure quality control. In the Mid-Atlantic region, J. Ambrogi Food Distribution serves as Sodexo's main produce supply gatekeeper, aggregating the output of 3 dozen family farmers in New Jersey, Pennsylvania, and Delaware. Jerry Ambrogi, the CEO of the $100 million South Jersey-based produce distribution company says that "Sodexo's emphasis on local produce has definitely helped us – and these farmers – thrive by not only providing access to a larger market for their products, but also by visiting farms and inspecting processes to ensure that their produce is grown in the best conditions and to their high standards." In the Midwest, diverse Tier One supplier Midwest Foods works with more than 90 Sodexo accounts to source specialty produce and support regional farms and communities through numerous mechanisms, such as training and education, fresh farmers markets, seasonality charts, and storage tips.[37] Suppliers channel the products from local farmers into Sodexo's supply chain creating a web of local business networks driven by Sodexo's demand. Other major food integrators such as Aramark operate in much the same manner. Conversations with Sodexo supply chain officials indicate a strong desire to continually develop local sources.

A critical element in a strategy of procurement localization, then, should include understanding the pathways to entry into major integrators' catalogs, and at what point in the supply chain it makes the most sense to focus – on distribution or on manufacturing, for example. On its face, there might appear

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[36] Interview with Angela Wilkes, January 21, 2015; Mark Taylor, "Capitalizing on an opportunity: MAC Medical Supply Company," Yahoo Small Business (https://smallbusiness.yahoo.com/advisor/capitalizing-on-an-opportunity--mac-medical-supply-company-233555301.html)

[37] Sodexo "Supplier Diversity – Why is it important?" 2014 (http://californiadiversitycouncil.org/wp-content/uploads/2014/11/Supplier_Diversity.pdf); "Fiscal 2013: Inside Sodexo" (http://fiscal2013.sodexo.com/boost-community-economies/); "Registration Document Fiscal 2013" (http://exercice2012-2013.sodexo.com/wp-content/uploads/2013/09/Sodexo-Registration-Document-Fiscal-2013_interactif1.pdf)

to be a potential misalignment of interests, or at least priorities, among major Tier One integrators and anchor institutions: the former typically operate in global, national, or regional markets and place primary emphasis on supplier diversity, while the latter, as place-bound institutions by definition, operate in particular local contexts and thus place at least an equal emphasis on supplier location. Fortunately, in cities like Philadelphia, local and diverse are often coincident; additionally, the other powerful market trend toward 'sustainability' works in favor of localization. Further, in a City with so many large anchor institutions, it seems plausible that concerted and collaborative effort on their part could influence wholesaler behavior to a lesser or greater degree.[38] But such arrangements will not emerge organically; they will require the work of an intermediary organization like PHASE.

Conclusion

Over the past two decades, Philadelphia's anchor institutions have shown tremendous national leadership in terms of community-based development strategies. The major institutions have, to lesser or greater degrees, played substantial roles as real estate developers, employers, and consumers. Numerous economic impact studies have shown that Philadelphia's anchors make enormous contributions to the local economy. Other than through the Philadelphia Area Collegiate Cooperative (PACC), they have done so individually. From conversations with anchor institution leaders, the Controller's Office concludes there is tremendous will to pursue a coordinated program of local procurement. Research suggests that there are ample, tangible opportunities for them to do so, particularly in manufacturing.

A strategy of localization succeeds or fails based on whether the local economy produces what the institutions need, and at comparable price and quality to other suppliers. Research suggests that Philadelphia's economy produces much of what the anchors need, or at least closely related commodities. With coordination among the buyers – organization on the demand side, so to speak – as well as collaboration on the supply side, it may be possible to significantly increase the proportion of anchor dollars spent locally. Every dollar spent locally not only increases direct and indirect employment, but also produces tax revenues and decreases expenditures on social services.

While many other studies in other cities have come to similar conclusions, and have been the springboard for initiatives to use procurement to grow local business, by focusing on the role of integrators this report has added a new facet to the strategy. A local version of import substitution would organize demand from anchor institutions so that it builds local manufacturing capacity; in the short and medium term this will create more local economic activity. In the long term, by partnering with integrators like Office Depot, Owens & Minor, and Sodexo, this initiative can help firms enter much larger supply chains and produce much larger multiplier effects. Because there are a small number of large integrators supplying the anchor institutions, this may pose both challenges and opportunities for small firms; growth starts with supplying some of the needs of one or more local anchors, but the path to exponential growth requires entering the supply chain of a large national integrator.[39] This will require a concerted business development strategy that should include mentor-protégé relationships

[38] In fact, preliminary conversations with several integrators suggest an openness to an approach that combines localization and diversity.

[39] Center for an Urban Future, "Breaking into the Corporate Supply Chain."

and access to technical assistance and capital. CASE has developed such a program in Chicago, and conversations with a wide variety of business development groups indicate great interest in creating a similar program in Philadelphia. With commitment and support from major anchor institutions, this strategy seems well within reach.

Appendix A

1. Regarding Data Classification Methods

The data provided was of a general nature, included a mix of specific commodities and basic categorical spending. Contracted service costs permeate the data. This data was compiled this data into 17 categories to begin to identify the manufacturing sectors from which these commodities came, as well as defining how much was local spending. The most basic approach to defining local spending was taken - as purchases from a manufacturer or supplier located within one of Philadelphia's 39 "191xx" ZIP codes. These categories were then further sorted under three umbrellas:

- "*construction-related*" includes the categories of general construction, HVAC, Telecommunications, furniture, electrical, and miscellaneous facilities.
- "*healthcare-related*" Includes the categories of medical equipment, pharmaceuticals, laboratory equipment, and chemical research.
- "*other procurement*" Includes the categories of paper products, office supplies, cleaning supplies, food products, technology, sports & recreation, and miscellaneous.

It should be noted that this report uses aggregate data and is not meant to reflect any single institution's purchasing patterns. This report examines only the manufactured commodities that the largest Anchor Institutions in Philadelphia consume. Though not all the anchor institutions reported the same categories of spending, the general nature of the categories allows for assumptions to be made based on averages of the reported data. It is difficult to project how much more these totals would grow when the other 30 Anchor Institutions' procurement is added.

2. Regarding NAICS Codes

Definition

The North American Industry Classification System (NAICS) classifies business establishments of Canada, Mexico and the United States according to the type of economic process or productivity they are involved in. It is frequently used in business and government. NAICS codes are anywhere between 2 and 6 digits. The longer the code is, the more specific the industry. The first two digits designate the largest business sector. This report focuses on the manufacturing sector, NAICS codes 31-33.

In the Manufacturing Section

Proceeding is a list of the commodities used to represent the anchor institution in the manufacturing section of this report. Commodities are represented by 4-digit NAIC codes: 3221 Pulp, Paper, Paper Mills; 3222 Converted Paper Product; 3231 Printing and Related Support; 3256 Soap and Cleaning Supplies; 3272 Glass & Glass Products; 3333 Commercial and Service Industry Machinery; 3334 HVAC and Commercial Refrigeration Equipment; 3345 Electronic Instruments; 3351 Electric Lighting Equipment; 3371 Household and Institutional Furniture; 3372 Office Furniture & Fixtures; 3391 Medical Equipment & Supplies; 3399 Other Miscellaneous Manufacturing.

In The Merging Supply and Demand Section

This report analyzes only $860 million in spending rather than the entire $2.7 billion reported because not all spending could be directly associated with NAICS codes – mainly due to a lack of symmetry between the way purchases were reported and the way that NAICS divides the manufacturing sector. If a reasonable assumption could be made that rolled-up contract spending could make up any part of a reported cost, it could not correlated with a NAICS code. By eliminating the possibility of human resource costs, a better idea of what percentage of commodities are being purchased locally is represented. In practical reality, this means that projections are conservative, that actual spending is underestimated.

Appendix B

Table B-1 Promising Opportunities for Procurement Localization

NAICS Code	Description	Total Amount	Local Amount	Local %
335121	Residential Electric Lighting Fixture	$55,822	0	0.00%
313310	Textile and Fabric Finishing Mills	$101,975	$9,562	9.40%
323117	Books Printing	$162,507	$50,935.53	31.30%
325992	Photographic Film, Paper, Plate, and Chemical	$186,578	$92,736	49.70%
313210	Broadwoven Fabric Mills	$251,408	$0.00	0.00%
332216	Saw Blade and Handtool	$573,557	$273,355	47.70%
332919	Other Metal Valve and Pipe Fitting	$666,851	$145,513	21.80%
333921	Elevator and Moving Stairway	$922,126	$363,715	39.40%
33721	Office Furniture	$1,057,777	$605,158	57.20%
332618	Other Fabricated Wire Product	$1,408,909	$452,579	32.10%
332215	Metal Kitchen Cookware, Utensil, Cutlery, and Flatware	$1,498,040	$583,637	39.00%
325510	Paint and Coating Manufacturing	$1,996,821	$59,361	3.00%
333318	Other Commercial and Service Industry Machinery	$3,081,645	$1,362,519	44.20%
334310	Audio and Video Equipment	$3,104,992	$21,887	0.70%
3256	Soap, Cleaning Compound, and Toilet Preparation	$3,529,333	$1,085,431	30.80%
323113	Commercial Screen Printing	$4,411,064	$654,384	14.80%
314120	Curtain and Linen Mills	$4,484,318	$344,790	7.70%
322121	Paper (except Newsprint) Mills	$4,528,417	$54,063	1.20%
339920	Sporting and Athletic Goods	$6,722,949	$613,442	9.10%
333997	Scales and Balances	$7,748,046	$83,848	1.10%
334118	Computer Terminal and Other Computer Peripheral Equipment	$12,424,588	385,324	3.10%
339112	Surgical and Medical Instrument	$12,797,658	$3,654,844	28.60%
339940	Office Supplies (except Paper)	$12,981,707	$2,572,735	19.80%
333120	Construction Machinery	$13,968,193	$330,601	2.40%
334111	Electronic Computer	$14,636,085	$57,100	0.40%
33461	Manufacturing and Reproducing Magnetic and Optical Media	$18,886,964	$360,602	1.90%
33341	HVAC and Commercial Refrigeration Equipment	$34,640,412	$1,991,485	5.70%
3391	Medical Equipment and Supplies	$145,638,328	$68,598,395	47.10%
339113	Surgical Appliances and Supplies	$300,026,086	$28,265,607	9.40%
Total		**$612,493,156**	**$113,073,609**	**18.46%**

Table B-2 Economic Multipliers for 3-digit Manufacturing Sector[40]

NAIC Code & Description	Employment Increase per 100 New Jobs	Output Increase per $1Million in New Sales
311 Food	277	1.66
312 Beverage & Tobacco	391	1.49
313 Textile Mills	179	1.63
314 Textile Product Mills	195	1.88
316 Leather & Allied	178	1.78
321 Wood Products	173	1.7
322 Paper	321	1.78
323 Support - Printing	193	1.89
324 Petroleum & Coal	987	1.34
325 Chemical	584	1.76
326 Plastics & Rubber	208	1.64
327 Nonmetallic Minerals	241	1.87
331 Primary Metal	463	1.79
332 Fabricated Metal	223	1.77
333 Machinery	256	1.69
334 Computer & Electronics	307	1.71
335 Electrical Equipment & Appliances	263	1.67
336 Transportation Equipment	275	1.54
337 Furniture & Related	206	1.75
339 Miscellaneous mfg	233	1.73
Total Manufacturing	322	1.64

[40] Highlighted Area show sectors with significant anchor that support anchor procurement.

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City Controller's Office Mission Statement	The City Controller's Office is the independent watchdog agency of the City of Philadelphia that strives to promote honest, efficient, effective, and fully accountable city government. We address this mission by: providing timely and objective analysis on the availability of funds for all city contracts; preventing inappropriate spending of public funds; and providing objective, timely, and relevant information to city officials, the public, and other interested parties about financial operations of the city, and on ways to improve city operations and the use of public resources.
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