



Targeted Industry Analysis and Marketing Plan for the Tryon Technology Park & Incubator Center – **FINAL REPORT**

Task 3 – Target Industry Analysis

prepared for the

Fulton County Board of Supervisors

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December 2016

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Task 3 – Target Industry Analysis

3.a.1 – Methodology for Identifying Targeted Industries

In this section, potential industry clusters for the Fulton-Montgomery Co. Region are presented by examining industries for the two combined counties that comprise the Study Area. The methodology for this analysis is the Location Quotients (*LQ*) tabular and charting technique. In this method, industry employment is plotted for the projected 2012-2022 period using the New York State Department of Labor’s Long-Term Industry Employment projections¹.

In the preceding task, seven potential industry clusters were identified through a “crosswalk” of common Labor Market Area advantages (Task 2, page 15). The qualifying criteria were Occupational Employment, Industry Employment, and Salaries and Wages. From the Task Two - Labor Market Analysis, the seven clusters are as follows:

- Management
- Information technology
- Health care
- Personal Services
- R & D
- Food
- Energy

The objective of this task is to further evaluate these cluster candidates by examining in finer detail the component industries that would be covered by them. The analysis initially demonstrates which existing industries have growth potential for the Region, and therefore promotional consideration. Increases in employment are generally considered as the truest indicator of business growth, revenue gains and profitability.

The analysis then considers those industries that are not present in the two-county area Region but have development opportunity in New York State and especially for the two

¹ State of New York Department of Labor, Labor Statistics, Long-Term Industry Employment Projections, 2012-2022; <http://www.labor.ny.gov/stats/lproj.shtm>



neighboring Metropolitan Areas, the Capital District and the Utica-Rome MSA. The Fulton-Montgomery County Region’s unique location to serve both of these markets is the key driver for the second half of the target industry selection.

Location Quotients Analysis

Given that the Study Area is within the Mohawk Valley Labor Market (see Task Two, page 3), a weighted average of 8.7% growth has been created from the yr. 2022 employment projections for the three intersecting labor markets (Capital Region, Mohawk Valley and North Country). Weighting factors are as follows, derived from projected private sector employment:

Labor Market	Employ't. 2010	Employ't. 2020 ²	Employ'. Diff'l.	% Growth over period	
				% Change	% Annual
Capital Reg.	443,290	485,300	42,010	9.5%	0.91%
Mohawk Valley	177,210	190,660	13,450	7.6%	0.73%
North Country	131,710	141,850	10,040	7.5%	0.57%
Total	794,940	860,450	65,500	8.7%	0.80%

The employment projections used to generate a yr. 2022 outlook for the Study Area are shown in 2-digit NAICS summary form in the Table 3.a.1(1) below.

Table 3.a.1(1)- Combined 2012-2022 Regional Labor Market Area Industry Employment Projections					
NAICS	Description	10-Yr. Change rate %			
		State of New York	Capitol Reg.	Mohawk Valley	North Country
11	Agriculture, Forestry, Fishing and Hunting	7.0%	-13.1%	1.8%	-5.3%

² NYS DOL projections for LMA’s are for the 2010-2020 period, whereas Statewide are 2012-2022; interpolations for the longer period were addressed in the data.



21	Mining, Quarrying, and Oil and Gas Extraction	-7.2%	-6.3%	-18.8%	-22.2%
22	Utilities	-4.9%	-6.9%	-7.2%	-7.4%
23	Construction	18.4%	12.4%	11.0%	10.8%
31-33	Manufacturing	0.1%	-6.3%	-9.7%	-8.3%
42	Wholesale Trade	4.1%	4.9%	7.0%	3.1%
44-45	Retail Trade	8.3%	6.1%	4.8%	7.9%
48-49	Transportation and Warehousing	7.2%	10.2%	6.6%	12.1%
51	Information	2.0%	-6.8%	-6.5%	-5.6%
52-53	Financial Activities	0.7%	0.8%	-4.6%	-2.5%
54-56	Professional and Business Services	23.0%	17.1%	14.8%	17.8%
61	Educational Services	25.1%	5.3%	3.8%	2.7%
62	Health Care and Social Assistance	20.8%	19.0%	3.8%	17.8%
71	Arts, Entertainment, and Recreation	25.1%	13.0%	26.6%	9.4%
72	Accommodation and Food Services	24.6%	11.2%	12.0%	7.2%
81	Other Services	16.7%	19.6%	12.0%	16.0%
	Total private sector	13.2%	9.5%	7.6%	7.5%

Source: NY Dept. of Labor - Long Term Industry Employment Projections 2010-2020, interpolated for 2012-2022

From this table, it becomes clear that many industries in upstate New York are in decline (shown in red text). Conversely, there are industries which are forecasted as standouts, outperforming their overall category averages for the State and all three LMA's. As shown in shaded highlight on the above table, these standout industries are:

- Construction
- Professional and Business Services
- Arts, Entertainment, and Recreation
- Other Services³

³ NAICS Sector 81 – Other Services – includes: Automotive repair & maintenance; Electronic & precision equipment repair & maintenance; Commercial & industrial machinery & equipment (except automotive & electronic) repair & maintenance; Personal and household goods repair & maintenance; Personal care services; Death care services; Dry-cleaning & laundry services; Other personal services; Religious organizations; Grant making & giving



What is an LQ and How is it Used?

A Location Quotient (LQ) is a way of quantifying how concentrated a particular industry cluster is in a Region as compared to the Nation or State. LQ's are developed by comparing the local employment concentration by industry against a larger sample, in this case the State of New York. By example, if an industry has a local employment of 150 which might represent 5% of the local employment total and the same industry for New York State has a 7% share of the State's total, the LQ for this industry is produced through the quotient of 5% divided by 7%, or, an LQ of 0.71.

The goal of the LQ analyses is to identify local industries that are performing at higher levels of employment concentration than their state counterparts, thereby indicating that these industries have a more important role locally than regionally. Locally strong industries are more easily promoted and reinforced by economic development initiatives and help to identify the locality's unique characteristics. Thus, an industry of LQ greater than 1.0 (parity with State levels) reveals an indication that this industry should be considered as locally relevant.

New York State considers industries with LQ's above 1.0 as those with export capability—the industry is producing more than is consumed locally. For industries at LQ of 1.0, demand is being met. And for industries below 1.0 LQ, industries of import demand – i.e., producing less than is consumed locally.

Another element of this method is the change of LQ's over the evaluation period. Positive annual percentage gain in LQ reinforces the industry's importance; loss indicates a decline in performance.

Finally, the actual numbers of latest employment is a key feature that when combined with the LQ time change, provides a measure of “gravity”, i.e., the **LQ Impact Factor**. Industries with large employment concentration and large positive LQ growth will be considered as the primary candidate as target industries.

services; Civic & social organizations; Business, professional, labor, political, & similar organizations; and, Private households. Note; this sector excludes Public Administration.



How Are Industries Represented?

Industries are organized into the North American Industrial Classification System (NAICS) hierarchy. The data is drawn from the US Census Bureau’s County Business Patterns for private non-farm employment and number of establishments.

Using the County Business Patterns, employment data is segmented into 20 sectors containing 290 four-digit sub-components. These components represent more detailed refinements of the original 20 sectors. NAICS provides industry detail down to the six-digit level covering over 800 individual industry categories. However, for purposes of this study, the four-digit level of detail is utilized.

In order to streamline some of the NAICS categories, the following major grouping of industries has been created of which all subsequent industry analyses is organized:

AFFH	Agriculture, Forestry, Fishing & Hunting
M&U	Mining & Utilities
CONST	Construction
MFG	Manufacturing
WT	Wholesale Trade
RT	Retail Trade
T&W	Transportation and Warehousing
INFO	Information
FA	Financial Activities
P&BS	Professional and Business Services
EHCSA	Education, Healthcare & Social Assistance
T&R	Tourism & Recreation
OS&U	Other Services & Unclassified

The LQ Chart

The LQ chart is important resource as industries can be graphically represented in four quadrants that point out the SWOT conditions during the time period evaluation. Year 2022 employment by industry is shown as “bubbles”; the LQ change over time is the “X” axis; and



the 2022 LQ is the “Y” axis. The X axis crosses the Y axis at the value of 1.0, thereby plotting the results for either success in exceeding NY State parity or failing to meet this criterion.

Each quadrant is labeled as follows and uses the same SWOT descriptors from the Task Two SWOT Analysis: **Strength** – dominant industries in the Region; **Opportunity** – emerging industries not yet achieving critical mass; **Threat** – formerly strong industries that are losing power and influence; or, **Weakness** – industries that may be in danger of non-sustainability in the Region demonstrates the industries’ role for the local economy.

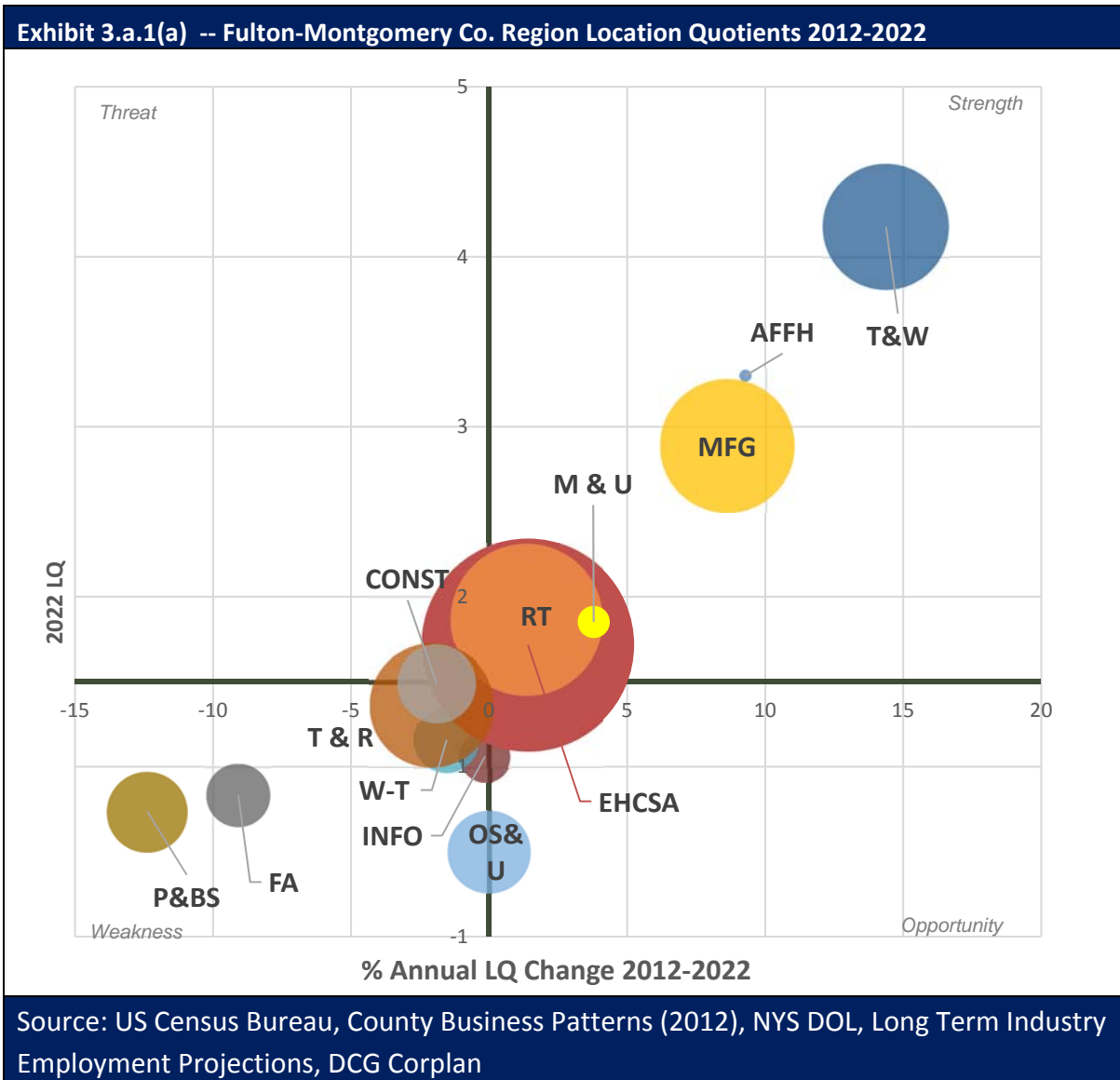
Graphic visualization using the LQ chart illustrates how industries within the local economy interact with each other. The location of the employment “bubbles” on the chart by virtue of which quadrant they occur and their diameter indicate relative growth, decline, or stagnation based on the distance of bubbles from the cross axis center point. For example, high concentration of related industries such as goods-producing (manufacturing, natural resources & mining, and construction) in the *Strength* quadrant can indicate that an economy is more export-oriented and that the industry is producing more than is consumed locally.

Appendix Exhibits 3.a.1(1) through 3.a.1(13) break down each two-digit grouping into the four-digit NAICS industries contained within. For each chart and accompanying table, the group heading is highlighted in yellow in the data and shown as a red outlined circle on the graphic. This entry is actually developed as a weighted average of the individual industries that comprise the group which are displayed as spheres, similar to the above exhibit.

Bubble positions, corresponding SWOT codes and LQ Impact Factors reveal the performance of the component industries and allow for a more efficient selection of targeted industries from the overall group.

The LQ Chart provides a convenient graphical interpretation of this data evaluation. Exhibit 3.a.1(a) below illustrates LQ chart for the Fulton-Montgomery Co. Region for two-digit industries:





Location Quotient Impact Factors

The LQ Impact Factor could be imagined as a ball on a string being spun in a circle. A smaller and lighter ball on a long string could equal the similar amount of force as a heavier ball on a shorter string. However, the ideal condition would be produced by a heavy ball on a long string. Industries with large employment concentration and large positive LQ growth produce the highest impacts and are of the most importance, both positively and negatively.



Relative positions and size of employment bubbles in the chart indicate the impacts to Fulton-Montgomery Co. Region’s economic environment. A formula has been produced to describe these LQ impacts:

$$\text{LQ Impact Factor} = (2012 \text{ Employment} \times \text{LQ Annual Change \%} \times \sqrt{2012\text{LQ}}) / 100$$

The LQ Impact Factors for the two-digit Exhibit 3.a.1(a) summaries range from a high of 944.2 for Transportation & Warehousing (S) and a low of -84.3 for Professional and Business Services (W). Table 3.a.1(2) below provides support to the graphic materials in the Exhibit 3.a.1(a) LQ Chart above and entries with LQ Impact Factors of value higher than 12.7 (see *Preliminary Target Industries* section below for explanation of the 12.7 figure). Checkmarks in the Target Industries column and shaded rows indicate the results.

Table 3.a.1(2) - Fulton-Montgomery Co. Reg. Location Quotients 2012-2022									
Abbrev.	NAICS Group	Description	2022 Fulton-Montgomery Co. Reg. Employ.	2022 LQ	2012 LQ	2012-2022 LQ Annual % change	SWO T Code	LQ Impact Factor	Target Industry
AFFH	11	Agriculture, Forestry, Fishing & Hunting	33	2.80	1.15	9.27	S	5.1	
M & U	21-22	Mining & Utilities	226	1.35	0.93	3.79	S	10.0	
CONST	23	Construction	1,328	0.99	1.20	-1.90	W	-25.1	
MFG	31-33	Manufacturing	3,894	2.39	1.04	8.62	S	518.8	■
W-T	42	Wholesale Trade	932	0.66	0.77	-1.53	W	-11.6	
RT	44-45	Retail Trade	5,036	1.36	1.19	1.36	S	80.2	■
T&W	48-49	Transportation & Warehousing	3,426	3.68	0.96	14	S	944.2	■



INFO	51	Information	569	0.56	0.57	-0.15	W	-0.6	
FA	52-53	Financial Activities	875	0.33	0.86	-9.08	W	-45.8	
P&BS	54-56	Professional and Business Services	1,404	0.24	0.88	-12.38	W	-84.3	
EHCSA	61-62	Education, Healthcare & Social Assistance	9,873	1.22	1.06	1.41	S	153.22	■
T & R	71-72	Tourism & Recreation	3,351	0.86	1.06	-2.06	W	-64.1	
OS&U	81-99	Other Services & Unclassified	1,468	0.91	0.92	-0.11	W	-1.6	
Total			32,414						

3.a.2 -- Preliminary Target Industries

Resulting from these 13 studies, 193 4-digit NAICS industries that are present in the Fulton-Montgomery County Region have been analyzed as the field of industries that are the subject of the initial target industry selection⁴. Year 2022 estimates were obtained by combining NYS DOL projections for the three labor market areas that impact the F-M Co. Region and making assumptions that new employment might occur in industries not yet having employment in 2012 if shown to be occurring in the LMA's. Appendix Summary Table 3.a.2(a) tallies the 193 four-digit industries and indicates the breakdown of SWOT categories as well as the preliminary targeted industries.

Grouping are follows: 73 Strength Industries (S); 87 Weakness Industries (W); 21 Opportunity Industries (O); and, 12 Threat Industries (T). From these 193 entries, a range of LQ Impact Factors from 2,447.6 to -84.3 produced a median value of 12.7 after negative and zero values

⁴ In the NAICS structure, there are 290 4-digit non-farm private sector industries. In 2012, by virtue of number of employees, Fulton County covered 169 industries; Montgomery County covered 164; in net combination the two-county area covered 193 industries.



were suppressed⁵. By virtue of selecting industries with LQ Impact factors above the median, a preliminary list of 47 target industries emerged and are shown below (45 *Strength*, 2 *Opportunity* industries):

Strength Industries (S) for Fulton-Montgomery County Region			
INDUSTRY	LQ Impact Factor	INDUSTRY	LQ Impact Factor
Alumina and Aluminum Production and Processing	2447.56	Motor Vehicle Parts Mfg.	19.05
Animal Food Mfg.	313.76	Navigational, Measuring, Electromedical, and Control Instruments Mfg.	31.97
Architectural and Structural Metals Mfg.	105.82	Nonmetallic Mineral Mining and Quarrying	17.38
Automobile Dealers	32.56	Nursing Care Facilities (Skilled Nursing Facilities)	31.83
Automotive Parts, Accessories, and Tire Stores	13.30	Other Ambulatory Health Care Services	60.36
Coating, Engraving, Heat Treating, and Allied Activities	35.67	Other General Merchandise Stores	19.48
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	17.28	Other Misc. Mfg.	15.17
Converted Paper Product Mfg.	20.41	Other Misc. Store Retailers	15.38
Dairy Product Mfg.	249.00	Other Motor Vehicle Dealers	84.07
Death Care Services	16.85	Other Specialty Trade Contractors	182.70
Direct Selling Establishments	17.12	Other Textile Product Mills	674.56
Drycleaning and Laundry Services	50.77	Other Wood Product Mfg.	185.07
Fabric Mills	33.08	Paint, Coating, and Adhesive Mfg.	632.54

⁵ Inclusion of negative and zero values for LQ Impact Factors produce lower median values. Only positive LQ Impact Factors values were selected for use in the analysis to try and limit the field of potential industry candidates to a more reasonable size.



Gasoline Stations	46.70	Paper and Paper Product Merchant Wholesalers	55.11
General Freight Trucking	50.12	Plastics Product Mfg.	43.70
General Medical and Surgical Hospitals	164.25	Printing and Related Support Activities	28.39
Glass and Glass Product Mfg.	813.33	Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	818.62
Grocery Stores	28.96	School and Employee Bus Transportation	60.50
Household and Institutional Furniture and Kitchen Cabinet Mfg.	31.98	Social Advocacy Organizations	24.10
Individual and Family Services	182.58	Specialized Freight Trucking	415.11
Lawn and Garden Equipment and Supplies Stores	17.25	Textile and Fabric Finishing and Fabric Coating Mills	96.27
Medical Equipment and Supplies Mfg.	25.58	Warehousing and Storage	2345.60
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	13.22		
Opportunity Industries (O) for Fulton-Montgomery County Region			
INDUSTRY	LQ Impact Factor	INDUSTRY	LQ Impact Factor
Apparel, Piece Goods, and Notions Merchant Wholesalers	22.63	Home Health Care Services	20.82

These 47 industries are achievable in the Fulton-Montgomery County Region by virtue of their existing employment pattern and projections for continued growth through yr. 2022. The list contains encouraging promise for Manufacturing in the area as 19 targets have emerged which reinforces the overall *Strength* position that this sector demonstrates through the LQ analysis in the Region. Other important sectors such as Healthcare (6 industries), Transportation & Warehousing (4 industries) and Wholesaling (3 industries) have



a strong presence in this group. The nine targeted industries in the Retail sector are important for locations other than Tryon, yet, some on-site mix of retail and service businesses related to automotive or other vehicle sales may be of applicable potential.

Clearly missing, however, is the Professional and Business Services sector as well as other scientific or technical businesses. While on overall Weakness is associated with this sector, the bright spot of NAICS 5619 –Other Support Services as an Opportunity (emerging) position for Professional and Business Services suggests that there is opportunity to develop a cluster or two oriented to office or industrial support operations and white or grey collar⁶ industries. Concerted effort to bolster the Professional and Business Services sector in the Region is quickly needed as it represents potential wage growth and employment opportunity for technically trained individuals and is in some danger of non-sustainability. The following list of sectors is represented by the 47 individual 4-digit industry targets and indicates the cluster potential for the immediate area.

Industry Sector	# of Targets
Manufacturing	19
Retail Trade	9
Education, Healthcare & Social Assistance	6
Transportation & Warehousing	4
Other services & Unclassified	4
Wholesale Trade	3
Mining & Utilities	1
Construction	1
Total	47

Identification of Other Opportunities

⁶ A skilled Technician, typically someone who is both white and blue collar, i.e., Information Technology workers. They are principally white collar, but perform blue collar tasks with some regularity Grey-collar workers often have associate degrees from a community college in a particular field. They are unlike blue-collar workers in that blue-collar workers can often be trained on the job within several weeks whereas grey-collar workers already have a specific skill set.



What Industries are We Missing?

In this section, the unmet potential of the Fulton-Montgomery Co. Region is identified. Review of National, State, and regional employment projections have been undertaken to determine which industries are not present in the area but represent opportunities for the Region to capitalize on in its marketing and outreach activities as well as development of the Tryon site.

Federal and State Projections

In order to forecast cluster growth in otherwise untapped markets for the Fulton-Montgomery County Region, examination of national and State trends is necessary. Employment growth projections in the top 20 US industries for yr. 2022 is shown in Table 3.a.2(1) Industry data in this table is presented by the US Bureau of Labor Statistics in a range of 2-digit, three- and 4-digit NAICS. Industry descriptions, therefore, do not exactly match the format being utilized in this study as strictly 4-digit NAICS.

Sector	Industry Description	Compound Annual Rate of Change 2012—2022
Health care and social assistance	Home health care services	4.8%
Health care and social assistance	Individual and family services	4.4%
Health care and social assistance	Outpatient, laboratory, and other ambulatory care services	3.8%
Professional and business services	Management, scientific, and technical consulting services	3.5%
Professional and business services	Computer systems design and related services	3.2%
Manufacturing	Cement and concrete product manufacturing	3.1%
Professional and business services	Office administrative services	3.0%
Health care and social assistance	Offices of health practitioners	2.7%
Manufacturing	Veneer, plywood, and engineered wood product manufacturing	2.7%



Professional and business services	Facilities support services	2.7%
Construction	Construction	2.6%
Financial activities	Commercial and industrial machinery and equipment rental and leasing	2.4%
Information	Software publishers	2.3%
Professional and business services	Other professional, scientific, and technical services	2.2%
Professional and business services	Employment services	2.2%
Educational services	Junior colleges, colleges, universities, and professional schools	2.2%
Health care and social assistance	Nursing and residential care facilities	2.2%
Educational services	Other educational services	2.1%
Financial activities	Funds, trusts, and other financial vehicles	2.1%
Health care and social assistance	Child day care services	2.1%

Source: US Bureau of Labor Statistics, Employment Projections 2012-2022

For New York State, projected growth industries are significantly different. According to the NYS Department of Labor, the following are the 20 fastest growing industries Statewide. The State presents its data in 3-digit format, again complicating comparison procedures:

Table 3.a.2(2) – Fastest Growing NY Industries

Sector	Industry Description	Compound Annual Rate of Change 2012—2022
Information	Other Information Services	4.6%
Health Care and Social Assistance	Ambulatory Health Care Services	3.1%
Professional and Business Services	Waste Management and Remediation Services	2.9%
Arts, Entertainment, and Recreation	Amusement, Gambling, and Recreation Industries	2.7%
Transportation and Warehousing	Scenic and Sightseeing Transportation	2.6%
Accommodation and Food Services	Food Services and Drinking Places	2.3%



Professional and Business Services	Professional, Scientific, and Technical Services	2.2%
Other Services	Religious, Grantmaking, Civic, Professional, and Similar Organizations	2.1%
Professional and Business Services	Administrative and Support Services	2.1%
Accommodation and Food Services	Accommodation	2.0%
Construction	Specialty Trade Contractors	2.0%
Agriculture, Forestry, Fishing and Hunting	Animal Production	1.9%
Health Care and Social Assistance	Social Assistance	1.9%
Health Care and Social Assistance	Nursing and Residential Care Facilities	1.9%
Arts, Entertainment, and Recreation	Museums, Historical Sites, and Similar Institutions	1.7%
Arts, Entertainment, and Recreation	Performing Arts, Spectator Sports, and Related Industries	1.7%
Retail Trade	Electronics and Appliance Stores	1.6%
Professional and Business Services	Management of Companies and Enterprises	1.6%
Transportation and Warehousing	Warehousing and Storage	1.6%
Transportation and Warehousing	Transit and Ground Passenger Transportation	1.5%

Source: NY State Dept. of Labor, Labor Statistics, Long Term Industry Projections 2012-2022

Through use of a crosswalk of the frequently-occurring industry sectors from the above two tables, four sectors common to both the national and State growth pattern emerge, as shown below:

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Task 3 – Target Industry Analysis

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FEDERAL		NY STATE
Construction		Accommodation and Food Services
Educational services		Agriculture, Forestry, Fishing and Hunting
Financial activities		Arts, Entertainment, and Recreation
Health care and social assistance		Construction
Information		Health Care and Social Assistance
Manufacturing		Information
Professional and business services		Other Services
		Professional and Business Services
		Retail Trade
		Transportation and Warehousing

From a sector-level evaluation, it is clear that four industry groups are prevalent among both US and State of New York projections. They are:

- Construction
- Health care and social assistance
- Information
- Professional and business services

It is noteworthy to indicate that one of the “supersectors” – Education, Health Care, & Social assistance – is segmented into two sub-components: Educational services; and, Health Care & Social assistance. While the Health Care & Social assistance sector is prevalent in both the US and New York State analyses, the Educational services sector does not feature highly in the New York State projections (36th place).

Albany-Schenectady-Troy, NY MSA

As one of the two adjoining markets to the Fulton-Montgomery Co. Region, the Albany-Schenectady-Troy MSA, otherwise known as the Capital District, has been evaluated for target industries using the same LQ approach. Appendix Table 3.a.2(b) shows the 264 four-digit NAICS industries present in the MSA. From these, 65 industries emerge as targets for the Albany-Schenectady-Troy MSA. Forty-one of these are dominant industries (*Strength*) and twenty-four are emerging (*Opportunity*), as shown below:



Strength Industries (S) for Albany-Schenectady-Troy MSA			
INDUSTRY	LQ Impact Factor	INDUSTRY	LQ Impact Factor
Agencies, Brokerages, and Other Insurance Related Activities	25.82	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	8.33
Automobile Dealers	12.21	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	59.22
Automotive Parts, Accessories, and Tire Stores	3.95	Nonmetallic Mineral Mining and Quarrying	1.20
Beverage Manufacturing	1.48	Office Supplies, Stationery, and Gift Stores	1.59
Building Material and Supplies Dealers	46.43	Other Furniture Related Product Manufacturing	14.77
Business, Professional, Labor, Political, and Similar Organizations	11.98	Other General Merchandise Stores	32.49
Child Day Care Services	10.93	Other General Purpose Machinery Manufacturing	8.01
Colleges, Universities, and Professional Schools	15.46	Other Miscellaneous Store Retailers	1.10
Community Food and Housing, and Emergency and Other Relief Services	3.37	Pipeline Transportation of Natural Gas	1.63
Couriers and Express Delivery Services	10.35	Plastics Product Manufacturing	1.09
Department Stores	28.80	Psychiatric and Substance Abuse Hospitals	41.06
Engine, Turbine, and Power Transmission Equipment Manufacturing	34.43	Semiconductor and Other Electronic Component Manufacturing	49.50
Freight Transportation Arrangement	18.33	Software Publishers	16.55
Furniture Stores	6.74	Support Activities for Mining	6.37
General Medical and Surgical Hospitals	556.97	Support Activities for Rail Transportation	7.19
Highway, Street, and Bridge Construction	2.00	Support Activities for Road Transportation	1.80
Home Furnishings Stores	7.41	Vocational Rehabilitation Services	3.67
Insurance Carriers	124.20	Warehousing and Storage	12.17
Lawn and Garden Equipment and Supplies Stores	5.01	Wholesale Electronic Markets and Agents and Brokers	7.22
Lumber and Other Construction Materials Merchant Wholesalers	4.13	Wired Telecommunications Carriers	10.17
Machinery, Equipment, and Supplies Merchant Wholesalers	16.50		
Opportunity Industries (O) for Albany-Schenectady-Troy MSA			
INDUSTRY	LQ Impact Factor	INDUSTRY	LQ Impact Factor
Activities Related to Real Estate	2.03	Metal and Mineral (except Petroleum) Merchant Wholesalers	1.71
Civic and Social Organizations	2.45	Miscellaneous Durable Goods Merchant Wholesalers	8.22



Clothing Stores	2.37	Newspaper, Periodical, Book, and Directory Publishers	23.71
Depository Credit Intermediation	11.45	Nondepository Credit Intermediation	1.51
Electric Power Generation, Transmission and Distribution	2.55	Office Furniture (including Fixtures) Manufacturing	1.64
Elementary and Secondary Schools	3.19	Other Financial Investment Activities	13.88
Grantmaking and Giving Services	1.48	Professional and Commercial Equipment and Supplies Merchant Wholesalers	11.97
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	2.86	Religious Organizations	11.06
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	5.43	Scheduled Air Transportation	3.52
Individual and Family Services	19.78	Securities and Commodity Contracts Intermediation and Brokerage	5.21
Lessors of Real Estate	3.71	Social Advocacy Organizations	1.77
Management of Companies and Enterprises	4.99	Specialty (except Psychiatric and Substance Abuse) Hospitals	15.61

Sector summaries for the 65 Albany-Schenectady-Troy MSA targeted industries are as follows:

Industry Sector	# of Targets
Retail trade	11
Wholesale Trade	9
Education, Healthcare & Social Assistance	9
Manufacturing	8
Financial Activities	8
Transportation & warehousing	7
Other services & Unclassified	5
Mining & Utilities	3
Information	3
Construction	1
Professional, scientific & technical services	1
Total	65



Utica-Rome, NY MSA

The Utica-Rome MSA is the other flanking market area that has an impact on the Study Area. Appendix Table 3.a.2(c) shows the 241 four-digit NAICS industries present in the MSA. From these, 53 industries emerge as targets for the Utica-Rome MSA. All fifty-three of these are dominant industries (*Strength*) as shown below:

Strength (S) Industries for Utica-Rome MSA			
INDUSTRY	LQ Impact Factor	INDUSTRY	LQ Impact Factor
Agriculture, Construction, and Mining Machinery Manufacturing	115.17	Medical and Diagnostic Laboratories	55.18
Animal Slaughtering and Processing	48.63	Medical Equipment and Supplies Manufacturing	379.25
Architectural and Structural Metals Manufacturing	30.74	Metal and Mineral (except Petroleum) Merchant Wholesalers	34.38
Bakeries and Tortilla Manufacturing	100.04	Metalworking Machinery Manufacturing	253.76
Boiler, Tank, and Shipping Container Manufacturing	152.39	Motor Vehicle Manufacturing	817.87
Building Material and Supplies Dealers	55.98	Nonferrous Metal (except Aluminum) Production and Processing	4465.94
Business Support Services	68.78	Nonscheduled Air Transportation	27.50
Civic and Social Organizations	28.33	Nursing Care Facilities (Skilled Nursing Facilities)	1360.23
Coating, Engraving, Heat Treating, and Allied Activities	39.83	Offices of Physicians	40.33
Computer and Peripheral Equipment Manufacturing	1592.17	Other Electrical Equipment and Component Manufacturing	38.52
Cutlery and Handtool Manufacturing	27.37	Other Fabricated Metal Product Manufacturing	1034.59
Data Processing, Hosting, and Related Services	65.64	Other General Merchandise Stores	239.26
Death Care Services	55.29	Other Textile Product Mills	522.10
Depository Credit Intermediation	130.60	Other Wood Product Manufacturing	49.98
Direct Selling Establishments	28.80	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	21.49
Electric Lighting Equipment Manufacturing	35.45	Pipeline Transportation of Natural Gas	23.49
Forging and Stamping	21.55	Psychiatric and Substance Abuse Hospitals	1137.02
General Medical and Surgical Hospitals	32.26	Rooming and Boarding Houses	50.37
Glass and Glass Product Manufacturing	50.05	School and Employee Bus Transportation	78.60
Grain and Oilseed Milling	154.75	Social Advocacy Organizations	856.41
Health and Personal Care Stores	51.22	Steel Product Manufacturing from Purchased Steel	123.74
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	141.09	Support Activities for Air Transportation	235.71



Individual and Family Services	93.77	Traveler Accommodation	1732.21
Industrial Machinery Manufacturing	104.15	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	95.94
Insurance Carriers	55.87	Vocational Rehabilitation Services	29.64
Logging	24.64	Warehousing and Storage	215.36
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	138.94		

Sector summaries for the 53 Utica-Rome MSA targeted industries are as follows:

Industry Sector	# of Targets
Manufacturing	26
Education, Healthcare & Social Assistance	7
Transportation & warehousing	5
Retail trade	4
Other services & Unclassified	3
Financial Activities	2
Tourism & Recreation	2
Forestry, fishing, hunting, and agriculture support	1
Wholesale Trade	1
Information	1
Professional, scientific & technical services	1
Total	53

Summary

When comparing the targeted sectors for Fulton- Montgomery Co. Region and the two adjoining MSA's, it becomes readily apparent of the opportunity for the three yellow-highlighted sectors of Financial Activities, Information, and Professional, Scientific & Technical Services which are absent in the Study Area's target list as shown in Exhibit 3.a.2(a) below.



To a secondary degree, the sectors of Forestry, Fishing & Agricultural Support and Tourism & Recreation, which also absent in the Study Area’s target list, are more oriented toward Utica-Rome specifically.

The crosswalk below illustrates these relationships. Where sector commonality across all three market exists, the table cells are merged.

Exhibit 3.a.2(a) – Crosswalk of Common Industry Targets		
Albany-Schenectady-Troy MSA	Fulton-Montgomery Co. Region	Utica-Troy MSA
Construction		
Education, Healthcare & Social Assistance		
Financial Activities	FINANCIAL ACTIVITIES	Financial Activities
	FORESTRY, FISHING, HUNTING, AND AGRICULTURE SUPPORT	Forestry, Fishing, Hunting, And Agriculture Support
Information	INFORMATION	Information
Manufacturing		
Mining & Utilities		
Other Services & Unclassified		
Professional, Scientific & Technical Services	PROFESSIONAL, SCIENTIFIC & TECHNICAL SERVICES	Professional, Scientific & Technical Services
Retail Trade		
	TOURISM & RECREATION	Tourism & Recreation
Transportation & Warehousing		
Wholesale Trade		

In all, there are 165 four-digit NAICS industries that are distributed among the target list of the three markets. To recap, the targets list is the following:



Market area	# of targeted NAICS Industries
Albany-Schenectady Troy MSA	65
Utica-Rome MSA	53
Fulton-Montgomery Co. Region	47
Total	165

This list becomes measurably smaller when making two or more comparisons. For example, when seeking which industries from the 65 Albany-Schenectady-Troy targets and the 53 Utica-Rome targets are shared, the number is only seven in all. Of these, only three are shared with the Fulton-Montgomery Co. Region, as showed in below:

Industry description	Sector
Other General Merchandise Stores	Retail Trade
Warehousing and Storage	Transportation & Warehousing
Social Advocacy Organizations	Other services & Unclassified

The remaining four targets from both MSAs that the Fulton-Montgomery Co. Region does not have complementary industry representation are as follows:

Industry description	Sector
Metal and Mineral (except Petroleum) Merchant Wholesalers	Wholesale Trade
Pipeline Transportation of Natural Gas	Transportation & Warehousing
Psychiatric and Substance Abuse Hospitals	Education, Healthcare & Social Assistance
Vocational Rehabilitation Services	Education, Healthcare & Social Assistance

In order to gauge the true unmet potential for the Fulton-Montgomery Co. Region, it is important to examine the full range of target industries in the surrounding area that could be addressed locally. Not all of these industries are applicable, and will be edited in the next part. The below text lists the 69 targets common to either or both the Albany-Schenectady-Troy and the Utica-Rome MSAs, but excludes any of the Fulton-Montgomery Co. Region’s targets.



Construction (1)

- Highway, Street, and Bridge Construction

Education, Healthcare & Social Assistance (9)

- Child Day Care Services
- Colleges, Universities, and Professional Schools
- Community Food and Housing, and Emergency and Other Relief Services
- Elementary and Secondary Schools
- Medical and Diagnostic Laboratories
- Offices of Physicians
- Psychiatric and Substance Abuse Hospitals
- Specialty (except Psychiatric and Substance Abuse) Hospitals
- Vocational Rehabilitation Services

Financial Activities (8)

- Activities Related to Real Estate
- Agencies, Brokerages, and Other Insurance Related Activities
- Depository Credit Intermediation
- Insurance Carriers
- Lessors of Real Estate
- Nondepository Credit Intermediation
- Other Financial Investment Activities
- Securities and Commodity Contracts Intermediation and Brokerage

Forestry, fishing, hunting, and agriculture support (1)

- Logging

Information (3)

- Newspaper, Periodical, Book, and Directory Publishers
- Software Publishers
- Wired Telecommunications Carriers

Manufacturing (15)

- Beverage Manufacturing
- Other Fabricated Metal Product Manufacturing



- Engine, Turbine, and Power Transmission Equipment Manufacturing
- Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing
- Metalworking Machinery Manufacturing
- Motor Vehicle Manufacturing
- Nonferrous Metal (except Aluminum) Production and Processing
- Office Furniture (including Fixtures) Manufacturing
- Other Electrical Equipment and Component Manufacturing
- Other Furniture Related Product Manufacturing
- Other General Purpose Machinery Manufacturing
- Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing
- Semiconductor and Other Electronic Component Manufacturing
- Steel Product Manufacturing from Purchased Steel
- Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing

Mining & Utilities (2)

- Electric Power Generation, Transmission and Distribution
- Support Activities for Mining

Other services & Unclassified (4)

- Business, Professional, Labor, Political, and Similar Organizations
- Civic and Social Organizations
- Grantmaking and Giving Services
- Religious Organizations

Professional, scientific & technical services (1)

- Management of Companies and Enterprises

Retail Trade (6)

- Building Material and Supplies Dealers
- Clothing Stores
- Furniture Stores
- Home Furnishings Stores



- Department Stores

- Office Supplies, Stationery, and Gift Stores

Tourism & Recreation (2)

- Rooming and Boarding Houses
- Traveler Accommodation

Transportation & Warehousing (9)

- Couriers and Express Delivery Services
- Freight Transportation Arrangement
- Nonscheduled Air Transportation
- Pipeline Transportation of Natural Gas
- Scheduled Air Transportation

- Support Activities for Air Transportation
- Support Activities for Rail Transportation
- Support Activities for Road Transportation
- Warehousing and Storage

Wholesale Trade (8)

- Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers
- Household Appliances and Electrical and Electronic Goods Merchant Wholesalers
- Lumber and Other Construction Materials Merchant Wholesalers
- Machinery, Equipment, and Supplies Merchant Wholesalers

- Metal and Mineral (except Petroleum) Merchant Wholesalers
- Miscellaneous Durable Goods Merchant Wholesalers
- Professional and Commercial Equipment and Supplies Merchant Wholesalers
- Wholesale Electronic Markets and Agents and Brokers



3.a.3 – Identification of Cluster Candidates

Clusters are often catalogued as: “Traded”, meaning that they bring outside investment into an area; “Local”, in that business interchanges are normally local in nature; and, “Natural Resources”, meaning that they are heavily dependent on leveraging resources only found within the area.

DCG Corplan has developed a “mapping” technique whereby the 290 national industries in 4-digit NAICS format can be distilled to 59 cluster categories (channels) created from a “best practices” review of multiple cluster analyses from other US communities and states, cluster mapping white papers for the US Dept. of Commerce, and primary-related industry taxonomies from numerous commercial enterprises. The clusters and the number of their corresponding 4-digit NAICS industries included in each category are as follows (multiple application occurs in many instances resulting in 681 matches):

Cluster	# of Industries
Retail	61
Consumer Products Mfg.	46
Financial Services	40
Transportation Services	35
Business Services	32
Professional Services	28
Computer Software	27
Wholesale	27
Health Care	25
Computer Hardware Mfg.	22
Media	22
Food Mfg.	20
Insurance	19
Arts, Entertainment & Recreation	18
Semiconductor & Other Electronic Component Mfg.	17
Telecommunications Services	16
Construction	14
Real Estate	14



Transportation Equipment Mfg.	14
Agriculture & Forestry	13
Consumer Services	11
Rental & Leasing	11
Beverage Mfg.	10
Machinery Mfg.	10
Telecommunications Equipment Mfg.	10
Lodging	8
Restaurants, Bars & Food Services	8
Education	7
Mining	7
Chemical Mfg.	6
Electric Power Generation	6
Electrical Products Mfg.	6
Nonmetallic Mineral Product Mfg.	6
Control, Electromedical, Measuring & Navigational Instruments Mfg.	5
Fabricated Metal Product Mfg.	5
Pharmaceutical Mfg.	5
Wood Product Mfg.	5
Electric Power Transmission, Distribution & Marketing	3
Government	3
Membership Organizations	3
Nonprofit Institutions	3
Paper & Packaging	3
Primary Metals Mfg.	3
Security Products Mfg.	3
Biotechnology Product Mfg.	2
Health Care Products Mfg.	2
Magnetic & Optical Media Mfg. & Reproduction	2
Miscellaneous Mfg.	2
Oil & Gas Exploration & Production	2
Petroleum & Coal Products Mfg.	2
Plastics & Rubber	2
Textiles	2
Water & Sewer Utilities	2
Contract Electronics Mfg.	1
HVAC Equipment Mfg.	1

Final Report

Task 3 – Target Industry Analysis

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Managed Application & Network Services	1
Mgmt. of Companies & Enterprises	1
Natural Gas Distribution & Marketing	1
Nonclassifiable establishments	1
Total	681
Source: DCG Corplan	

With the Fulton-Montgomery Co. Region targets re-combined with the 69 targeted industries created from combined Albany-Schenectady-Troy MSA and Utica-Rome MSAs, a new figure of 116 total targets emerges. The 116 industries have been filtered through the Cluster Mapping evaluation and have been corresponding matched against the initial cluster selections from the Task Two Labor Market Analysis. Once again, these initial considerations were as follows:

- Management
- R & D
- Information Technology
- Food
- Health Care
- Energy
- Personal Services

Table 3.a.3(2) below provides the tabular results of 49 potential clusters in ranked order by the number of applicable industries. (Note: some repeats of industries have occurred that inflate the 116 targets to 132 total categories.)

Table 3.a.3(2) – Ranked Cluster Mapping of Targeted Industries			
Cluster	# of Industries	Match to Task 2 Clusters	Task 2 Clusters
Retail	14		
Health Care	12	■	HEALTHCARE
Consumer Products Mfg.	11		
Transportation Services	11		



Wholesale	10		
Fabricated Metal Product Mfg.	5		
Food Mfg.	4	■	FOOD
Machinery Mfg.	4		
Financial Services	4	■	MGMNT
Nonprofit Institutions	4	■	MGMNT
Business Services	3	■	MGMNT
Primary Metals Mfg.	3		
Biotechnology Product Mfg.	2	■	HEALTHCARE/R&D
Chemical Mfg.	2	■	HEALTHCARE/R&D
Construction	2		
Consumer Services	2	■	PERS. SRVS.
Education	2		
Electrical Products Mfg.	2		
Insurance	2	■	MGMNT
Lodging	2		
Real Estate	2		
Textiles	2		
Transportation Equipment Mfg.	2		
Agriculture & Forestry	1		
Arts, Entertainment & Recreation	1		
Beverage Mfg.	1	■	FOOD
Computer Hardware Mfg.	1	■	IT/R&D
Computer Software	1	■	IT
Contract Electronics Mfg.	1	■	IT/R&D
Control, Electromedical, Measuring & Navigational Instruments Mfg.	1	■	IT/R&D
Electric Power Generation	1	■	ENERGY
Electric Power Transmission, Distribution & Marketing	1	■	ENERGY
HVAC Equipment Mfg.	1		
Managed Application & Network Services	1	■	IT
Media	1	■	IT
Membership Organizations	1	■	MGMNT



Mgmt. of Companies & Enterprises	1	■	MGMNT
Mining	1		
Miscellaneous Mfg.	1		
Nonmetallic Mineral Product Mfg.	1		
Oil & Gas Exploration & Production	1	■	ENERGY
Paper & Packaging	1		
Plastics & Rubber	1		
Rental & Leasing	1		
Security Products Mfg.	1		
Semiconductor & Other Electronic Component Mfg.	1	■	IT/R&D
Telecommunications Services	1	■	IT/R&D
Wood Product Mfg.	1		
Total	132		

Cluster Selections

The Task Two initial clusters were developed as a guideline for the final target selections, based on competitive area comparisons and SWOT analyses. Through the above cluster mapping exercise, 4- and 6-digit targeted industries from the Albany-Schenectady-Troy MSA, Utica-Rome MSA, and the Fulton-Montgomery Co. Region were matched against the Task Two clusters to arrive at a final list of recommended clusters. A degree of subjective interpretation has been employed to rename the clusters in more business-ready titles than use the cumbersome terminology of the NAICS structure. While the Task 2 Labor Area Analysis concentrated in the quality and availability of the labor supply, the target industries identified in this section are based on local and regional projections of industry sustainability and growth.

From the cluster mapping exercise from above and the Match to the Task Two cluster recommendations, the following are the cluster selections for the Fulton-Montgomery Co. Region. The foundational tie back to the Task 2 initial target selections are shown below each category.



BIOMEDICAL R & D

- Concentrates on the Research and development and Scientific aspects of the Task 2 preliminary selections of Health Care and Life Sciences.

ELECTRONICS

- Concentrates on the Research and development and Scientific aspects of the Task 2 initial selections of IT and Computers.

FOOD & BEVERAGE

- Concentrates on the Food preparation aspects of the Task 2 initial selections of Food Services, especially in specialty prepared foods.

HEALTH CARE PRODUCTS & SERVICES

- Concentrates on the technical and support service aspects of the Task 2 initial selections of Health Care.

HQ & BUSINESS SERVICES

- Concentrates on the Management and Business/Personal services aspects of the Task 2 initial selections of Health Care.

RENEWABLE ENERGY

- Provides a framework for industry development of alternative fuels/utilities to reduce high costs of electricity for local businesses.

SOFTWARE & MEDIA

- Provides a cross-industry vehicle for technical support services in Health Care, Arts/Recreation, Management, and IT & Computers aspects of the Task 2 initial selections.

In each of the following summaries of the clusters, the initiating four-digit target industry is presented with a selection of subcomponent six-digit industries that in DCG Corplan's opinion are the optimum detailed targets that are achievable for the Region as well as the Tryon site. Other subcomponent industries that may be normally grouped in the four-digit category have been suppressed as not applicable to the study.



If the subcomponent industry is prevalent (at least three establishments) in either of the two adjoining MSAs, a red checkmark is shown. Industries that are not present but offer new recruitment potential are marked as “Opportunity” and highlighted in yellow.

Biomedical Research & Development

This cluster represents a group of startup or entrepreneurial enterprises that will provide proof-of-concept or pilot-manufacturing products in the biotechnology and medical fields. Research and development activities are anticipated to require incubator-style laboratories and meeting spaces.

NAICS	Description		
3254	Pharmaceutical and Medicine Manufacturing		
		✓	325411 Medicinal and Botanical Mfg.
		✓	325412 Pharmaceutical Preparation Mfg.
	Opportunity		325413 In-Vitro Diagnostic Substance Mfg.
		✓	325414 Biological Product (except Diagnostic) Mfg.
3391	Medical Equipment and Supplies Mfg.		
		✓	339112 Surgical and Medical Instrument Mfg.
		✓	339113 Surgical Appliance and Supplies Mfg.
		✓	339114 Dental Equipment and Supplies Mfg.
		✓	339115 Ophthalmic Goods Mfg.
		✓	339116 Dental Laboratories
3345*	Electromedical, Electrotherapeutic & X-Ray Apparatus Mfg.		
		✓	334516 Analytical Laboratory Instrument Mfg.
	Opportunity		334517 Irradiation Apparatus Mfg.

*(partial industry)



Electronics

Contract electronics manufacturing will be the most common activity within this cluster. Bench assembly of purchased components on a customer demand basis.

NAICS	Description		
3341	Computer and Peripheral Equipment Manufacturing		
		✓	334111 Electronic Computer Mfg.
	Opportunity		334112 Computer Storage Device Mfg.
		✓	334418 Printed Circuit Assembly (Electronic Assembly) Mfg.
3344	Semiconductor and Other Electronic Component		
		✓	334412 Bare Printed Circuit Board Mfg.
		✓	334419 Other Electronic Component Mfg.
3345*	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing		
		✓	334512 Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use
		✓	334613 Blank Magnetic and Optical Recording Media Mfg.
		✓	334515 Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
		✓	334519 Other Measuring & Controlling Device Mfg.

*(partial industry)

Food & Beverage

This cluster will capitalize on the already successful food manufacturing cluster present in the Region. Ethnic foods and beverages are anticipated as the key drivers.



NAICS	Description		
3111	Livestock & Other Animal Food Mfg.		
		✓ 311111	Dog and Cat Food Mfg.
		✓ 311119	Other Animal Food Mfg.
3112	Grain & Oil Seed Milling		
	Opportunity	311230	Breakfast Cereal Mfg.
3114	Fruit and Vegetable Preserving and Specialty Food Mfg.		
	Opportunity	311411	Frozen Fruit, Juice, and Vegetable Mfg.
		✓ 311412	Frozen Specialty Food Mfg.
3115	Dairy Products Mfg,		
	Opportunity	311514	Dry, Condensed, and Evaporated Dairy Product Mfg.
		✓ 311520	Ice Cream and Frozen Dessert Mfg.
3118	Bakery Products Mfg,		
		✓ 311813	Frozen Cakes, Pies, & Other Pastries Mfg.
		✓ 311821	Cookie, Cracker, & Pasta Mfg.
3121	Beverage Mfg.		
		✓ 312120	Breweries
		✓ 312111	Soft Drink Mfg.
		✓ 312112	Bottled Water Mfg.
		✓ 312130	Wineries
	Opportunity	312140	Distilleries

Health Care Products & Services

The dynamics of the Health Care industry requires more flexible approaches toward patient care which in turn is prompting the need for smaller and more accessible facilities.

NAICS	Description		
6214	Mental Health & Substance Abuse Services		
		✓ 621491	HMO Medical Centers
		✓ 621492	Kidney Dialysis Centers



		✓	621493	Freestanding Ambulatory Surgical and Emergency Centers
		✓	621498	All Other Outpatient Care Centers
6215	Medical & Diagnostic Laboratories			
		✓	621511	Medical Laboratories
		✓	621512	Diagnostic Imaging Centers
6219	Other Ambulatory Health Care Services			
		✓	621910	Ambulance Services
		✓	621999	All Other Miscellaneous Ambulatory Health Care Services
6243	Social Assistance			
		✓	624310	Vocational Rehabilitation Services

HQ & Business Services

Regional growth of professional and business services will necessitate new office development and new location opportunities for established corporations seeking lower cost operating environments with good market access to multiple urban centers.

NAICS	Description			
5222	Lending Institutions			
		✓	522210	Credit Card Issuing
		✓	522220	Sales Financing
		✓	522291	Consumer Lending
		✓	522292	Real Estate Credit
5241	Insurance			
		✓	524113	Direct Life Insurance Carriers
		✓	524114	Direct Health and Medical Insurance Carriers
		✓	524126	Direct Property and Casualty Insurance Carriers
		✓	524130	Reinsurance Carriers
5511	Management of Companies & Enterprises			



	✓	551111	Offices of Bank Holding Companies
	✓	551112	Offices of Other Holding Companies
	✓	551114	Corporate, Subsidiary, and Regional Managing Offices
5614	Business Support Services		
	✓	561410	Document Preparation Services
	✓	561422	Telephone Call Centers
	✓	561431	Private Mail Centers
	✓	561439	Other Business Service Centers (including Copy Shops)

Renewable Energy

Alternative energy generation is nationally recognized growth target and the opportunity to construct biomass cogeneration, solar farms, geothermal recovery or other renewable system for any major new investment is a priority.

NAICS	Description		
2211	Alternative Power Generation		
	✓	221114	Solar Farms
	Opportunity	221116	Geothermal Electric Power Generation
	Opportunity	221117	Biomass Electric Power Generation
	✓	221118	Other Electric Power Generation
	✓	221121	Electric Bulk Power Transmission and Control
5416	Management, Scientific, and Technical Consulting Services		
	✓	541690	Other Scientific and Technical Consulting Services



Software & Media

This cluster combines all of the information-based targets. Traditional publishing is quickly becoming a software industry, with e-books now accounting for nearly a quarter of all book sales, both hard and soft cover. Gaming software continues is a prime market driver.

NAICS	Description		
5111	Newspaper, Periodical, Book, and Directory Publishers		
	✓	511120	Periodical Publishers
	✓	511130	Book Publishers
	Opportunity	511191	Greeting Card Publishers
	✓	511199	All Other Publishers
5112	Computer Software		
	✓	511210	<ul style="list-style-type: none"> ▪ Games, computer software, publishing ▪ Operating systems software, computer, packaged
5171	Cable & Satellite Services		
	✓	517110	<ul style="list-style-type: none"> ▪ Broadband Internet service providers, wired ▪ Closed circuit television (CCTV) services ▪ Satellite television distribution systems
5182	Managed Application & Network Services		
	✓	518210	<ul style="list-style-type: none"> ▪ Optical scanning services ▪ Web hosting ▪ Video and audio streaming service



Targeted Industry Clusters Summary

The preceding analysis has provided seven target industry clusters for the Fulton-Montgomery County Region covering twenty-six 4-digit NAICS industries and seventy-one 6-digit level subcomponent industries. From the review, there are ten new 6-digit industry candidates that offer potential for recruitment to the Region. The clusters and component industries (with Opportunities highlighted in yellow) are listed below:

Biomedical Research & Development

- Analytical Laboratory Instrument Mfg.
- Biological Product (except Diagnostic) Mfg.
- Dental Equipment and Supplies Mfg.
- Dental Laboratories
- In-Vitro Diagnostic Substance Mfg. (Oppt'y.)
- Irradiation Apparatus Mfg. (Oppt'y.)
- Medicinal and Botanical Mfg.
- Ophthalmic Goods Mfg.
- Pharmaceutical Preparation Mfg.
- Surgical and Medical Instrument Mfg.
- Surgical Appliance and Supplies Mfg.

Health Care Products & Services

- All Other Miscellaneous Ambulatory Health Care Services
- All Other Outpatient Care Centers
- Ambulance Services
- Diagnostic Imaging Centers
- Freestanding Ambulatory Surgical and Emergency Centers
- HMO Medical Centers
- Kidney Dialysis Centers
- Medical Laboratories
- Vocational Rehabilitation Services

Electronics

- Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use
- Bare Printed Circuit Board Mfg.
- Blank Magnetic and Optical Recording Media Mfg.
- Computer Storage Device Mfg. (Oppt'y.)
- Electronic Computer Mfg.
- Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
- Other Electronic Component Mfg.
- Other Measuring & Controlling Device Mfg.
- Printed Circuit Assembly (Electronic Assembly) Mfg.



Food & Beverage

- Bottled Water Mfg.
- Breakfast Cereal Mfg. (Oppt'y.)
- Breweries
- Cookie, Cracker, & Pasta Mfg.
- Distilleries (Oppt'y.)
- Dog and Cat Food Mfg.
- Dry, Condensed, and Evaporated Dairy Product Mfg. (Oppt'y.)
- Frozen Cakes, Pies, & Other Pastries Mfg.
- Frozen Fruit, Juice, and Vegetable Mfg. (Oppt'y.)
- Frozen Specialty Food Mfg.
- Ice Cream and Frozen Dessert Mfg.
- Other Animal Food Mfg.
- Soft Drink Mfg.
- Wineries

HQ & Business Services

- Consumer Lending
- Corporate, Subsidiary, and Regional Managing Offices
- Credit Card Issuing
- Direct Health and Medical Insurance Carriers
- Direct Life Insurance Carriers
- Direct Property and Casualty Insurance Carriers
- Document Preparation Services
- Offices of Bank Holding Companies
- Offices of Other Holding Companies
- Other Business Service Centers (including Copy Shops)
- Private Mail Centers
- Real Estate Credit
- Reinsurance Carriers
- Sales Financing
- Telephone Call Centers

Renewable Energy

- Biomass Electric Power Generation (Oppt'y.)
- Electric Bulk Power Transmission and Control
- Geothermal Electric Power Generation (Oppt'y.)
- Other Electric Power Generation
- Other Scientific and Technical Consulting Services
- Solar Farms

Software & Media

- All Other Publishers
- Book Publishers
- Operating systems software, computer, packaged
- Optical scanning services



- Broadband Internet service providers, wired
- Closed circuit television (CCTV) services
- Games, computer software, publishing
- **Greeting Card Publishers (Oppt'y.)**
- Periodical Publishers
- Satellite television distribution systems
- Video and audio streaming service
- Web hosting

3.b -- Fulton County's Competitive Posture

In this section, an analysis evaluates a set of specifications for a typical unit operating in New York State in each of the selected industry clusters derived from standards for national models. Metrics include scale of operations, number of production employees (where applicable), facility size, total payroll and average earnings, distribution of employment by occupations, value of shipments or revenues, and cost of materials and components (where applicable). For each of the seven identified clusters, a representative industry has been selected to serve as typical operations models. The list of industries is as follows:

Biomedical Research & Development

- In-Vitro Diagnostic Substance Mfg. (NAICS 325413)

Food & Beverage

- Frozen Specialty Food Mfg. (NAICS 311412)

Electronics

- Printed Circuit Assembly (Electronic Assembly) Mfg. (NAICS 334418)

Health Care Products & Services

- Medical Laboratories (NAICS 621511)

HQ & Business Services

- Telephone Call Centers (NAICS 561422)

Renewable Energy

- Other Scientific and Technical Consulting Services (NAICS 541690)



Software & Media

- Games, computer software, publishing (NAICS 511210)

The targeted clusters have been evaluated in terms of the County’s ability to perform with the competitive NY counties from Task 2. The comparisons are made with industry norms for a similar sized unit and shown as a payroll, utilities & fuels, debt service, cost of goods sold, annual gross profit, and annual operating profit before taxes. As a recap, the following regions were evaluated in the Task Two section:

ALBANY REGION

Albany Co.
Rensselaer Co.
Schenectady Co.

ITHACA REGION

Cortland Co.
Tomkins Co.

SARATOGA REGION

Saratoga Co.
Warren Co.

BINGHAMTON REGION

Broome Co.
Tioga Co.

POUGHKEEPSIE REGION

Dutchess Co.
Orange Co.
Ulster Co.

SYRACUSE REGION

Madison Co.
Onondaga Co.
Oswego Co.

BUFFALO REGION

Erie Co.
Niagara Co.

ROCHESTER REGION

Monroe Co.
Ontario Co.

UTICA REGION

Herkimer Co.
Oneida Co.

Operational Models and Profitability

Summary of Findings

The operational models presented in the following section provide a roadmap for creating a marketing opportunity for Fulton County and the Tryon property to prospective employers. In summary, the seven cluster representative industries could generate over \$135 million in new investment and about 500 new jobs at Tryon. The following table summarizes the data evaluated in the operational models:



Cluster	Industry	Total new Jobs	Total Investment per Employee	Annual Output per Employee	Industry Profitability (Fulton – Montgomery Co. Region)	Weighted Ranking Order
Biomedical Research & Development	In Vitro Diag. Substance Mfg.	170	\$505,300	\$368,900	10.20%	1
Electronics	Printed Circuit Assembly (Electronic Assembly) Mfg.	70	\$230,700	\$324,100	5.50%	6
Food & Beverage	Frozen Specialty Food	90	\$156,900	\$335,200	8.90%	3
Health Care Products & Services	Medical Laboratories	20	\$262,000	\$193,100	10.40%	2
HQ & Business Services	Telephone Call Centers	90	\$29,200	\$79,100	9.90%	4
Renewable Energy	Other Scientific and Technical Consulting Services	25	\$102,000	\$211,200	11.90%	7
Software & Media	Games, Computer Software publishing	40	\$42,250	\$419,500	6.40%	5
Total		505				

Cluster Prioritization

Through a weighted ranking system, the seven cluster industries in alphabetical order above have been ranked by development priority. The ranking methodology is as follows:



Ranking Category	Percent of Total Score
New Jobs	20%
Investment per Employee	10%
Output per Employee	20%
Industry Profitability	50%
Total	100%

Based on the ranking system, the clusters have been re-ordered into the following sequence, which will be revisited in the Conclusion by addition of the Workforce Impacts ranking.

1. Biomedical Research & Development
2. Health Care Products & Services
3. Food & Beverage
4. HQ & Business Services
5. Software & Media
6. Electronics
7. Renewable Energy

Operational Models

Biomedical Research & Development: **In-Vitro Diagnostic Substance Mfg.**

This U.S. industry is engaged in the manufacturing of in-vitro diagnostic substances, such as chemical, biological, or radioactive substances used for diagnostic tests that are performed in test tubes, petri dishes, machines, and other diagnostic test-type devices. Firms in the industry produce a variety of substances, solid, liquid and gel, through chemical synthesis, fermentation, or product extraction processes. The diagnostics industry is closely intertwined with cutting-edge developments in the treatment of human and animal disorders, which includes a multitude of genetic research and studies centered on high-profile diseases like cancer and AIDS.



As the national average size for a typical facility is 106 persons, and the State of New York’s is 230 persons, a nominal facility size of 170-persons is selected for as a numerically-averaged model for this model.

Industry metrics are obtained from U.S. Census Annual Census of Manufactures 2013 for NAICS 325413 – In Vitro Diagnostic Substance Manufacturing and projected for present-day values. Average output in the industry in New York is estimated at \$368,900 per employee and costs of materials and value added per employee are \$125,400 and \$299,000, respectively.

Typical In Vitro Diagnostic Substance Manufacturing Facility	
Annual Net sales	\$62,713,000
Total Employment	170 persons
Production Employment	58 persons
Average hourly Wage – Total workforce	\$33.95
Average hourly wage – Production workforce	\$19.37
Fringe benefits Percentage	30%
Total Payroll	\$15,247,000
Total Cost of Raw Materials	\$18,777,000
Total Value Added	\$43,281,000
Site Acreage	60 acres
Plant Footprint sq. ft.	242,000 sq. ft.
Employee Occupancy	1,420 sq. ft./person
Floor-Area-Ratio	0.09
Plant Construction Cost/sq. ft.	\$150
Plant Construction Cost	\$36,300,000
Estimated Equipment Cost	\$48,400,000
Land Cost	\$1,200,000
Total Investment	\$85,900,000

Employment distribution among the relevant sections of the twenty-three Bureau of Labor Statistics major occupational groups for this industry are shown as follows:



In Vitro Diagnostic Substance Manufacturing Facility Occupational Group	# of Positions	Avg. Hrly. Wage
Management	26	\$68.49
Business and Financial Operations	20	\$39.98
Computer and Mathematical	6	\$41.97
Architecture and Engineering	12	\$39.86
Life, Physical, and Social Science	24	\$31.61
Arts, Design, Entertaint., Sports, and Media	1	\$37.01
Healthcare Practitioners and Technical	1	\$34.50
Building and Grounds Cleaning & Maint.	2	\$14.82
Sales and Related	3	\$42.19
Office and Administrative Support	17	\$20.63
Installation, Maintenance, and Repair	9	\$24.38
Production	42	\$18.76
Transportation and Material Moving	7	\$16.60
Total	170	\$33.95
Production*	58	\$19.37

**Production includes Installation/Maintenance/Repair, Production, and Transportation/Material Moving occupations*

In Vitro Diagnostic Substance Mfg. – Competitive Evaluation – Base Financial Data							
Constants							
Acreage:	60 acres	Plant footprint:	242,000 sf.	Equipment Cost:	\$48,400,000	Debt LTV:	80.0%
	Cost/Acre	Land Cost	Plant Cost/SF	Plant Cost	Total Investment	Financing	Allocated (debt service)
Fulton-Montgomery Co. Region	\$20,000	\$1,200,000	\$139	\$33,638,000	\$83,238,000	\$66,590,400	\$4,580,013
Albany Region	\$60,400	\$3,624,000	\$141	\$34,122,000	\$86,146,000	\$68,916,800	\$4,740,021
Binghamton Region	\$106,420	\$6,385,200	\$142	\$34,364,000	\$89,149,200	\$71,319,360	\$4,905,266
Buffalo Region	\$36,890	\$2,213,400	\$145	\$35,090,000	\$85,703,400	\$68,562,720	\$4,716,000



Ithaca Region	\$36,880	\$2,212,800	\$136	\$32,912,000	\$83,524,800	\$66,819,840	\$4,596,000
Poughkeepsie Region	\$49,020	\$2,941,200	\$157	\$37,994,000	\$89,335,200	\$71,468,160	\$4,916,000
Rochester Region	\$35,570	\$2,134,200	\$141	\$34,122,000	\$84,656,200	\$67,724,960	\$4,658,000
Saratoga Region	\$81,610	\$4,896,600	\$130	\$31,460,000	\$84,756,600	\$67,805,280	\$4,664,000
Syracuse Region	\$36,670	\$2,200,200	\$140	\$33,880,000	\$84,480,200	\$67,584,160	\$4,648,000
Utica Region	\$23,390	\$1,403,400	\$137	\$33,154,000	\$82,957,400	\$66,365,920	\$4,565,000

In Vitro Diagnostic Substance Mfg. Competitive Evaluation – Annual Operating Profits

Constants

Annual Net sales:	100.0%					
Gen'l & Admin.:	14.9%	Less: Materials:			34.0%	
Total Operating expenses:	22.4%	Less: Sales exp.:			7.5%	
	Payroll	Utilities & Fuels	Allocated	Cost of goods sold	Annual Gross profit	Annual Operating profit
Fulton-Montgomery Co. Region	19.8%	6.3%	7.3%	67.4%	32.6%	10.2%
Albany Region	21.0%	6.3%	7.6%	68.9%	31.1%	8.7%
Binghamton Region	22.3%	6.0%	7.8%	70.1%	29.9%	7.5%
Buffalo Region	21.7%	6.3%	7.5%	69.5%	30.5%	8.1%
Ithaca Region	22.5%	6.0%	7.3%	69.8%	30.2%	7.8%
Poughkeepsie Region	22.7%	3.2%	7.8%	67.7%	32.3%	9.9%
Rochester Region	21.9%	5.2%	7.4%	68.5%	31.5%	9.1%
Saratoga Region	21.7%	6.3%	7.4%	69.4%	30.6%	8.2%
Syracuse Region	22.6%	6.3%	7.4%	70.3%	29.7%	7.3%
Utica Region	21.2%	6.3%	7.3%	68.8%	31.2%	8.8%

Food & Beverage: Frozen Specialty Food Mfg.

The US industry is primarily engaged in manufacturing frozen specialty foods (except seafood), such as frozen dinners, entrees and side dishes; frozen pizza, frozen whipped topping; and frozen waffles, pancakes and French toast. The national average size for a typical facility is 121 person, and the State of New York’s is 57 persons. A nominal facility size of 90-persons is selected for as a numerically-averaged model for this model. Average



output for NAICS 311412 – Frozen Specialty Food Manufacturing in New York is estimated at \$335,200 per employee and costs of materials and value added per employee are \$179,600 and \$156,300, respectively.

Typical Frozen Specialty Food Manufacturing Facility	
Annual Net sales	\$30,168,000
Total Employment	90
Production Employment	68
Avg. hourly Wage - Total	\$17.18
Avg. hourly wage - Production	\$15.64
Fringe benefits Percentage	33%
Total Payroll	\$4,271,600
Total Cost of Raw Materials	\$16,168,000
Total Value Added	\$14,068,000
Site Acreage	30 Acres
Plant Footprint sq. ft.	75,000 sq. ft.
Employee Occupancy/sf	830 sq. ft./person
Floor-Area-Ratio	0.06
Plant Construction Cost/sq. ft.	\$140
Plant Construction Cost	\$10,500,000
Estimated Equipment Cost	\$3,020,000
Land Cost	\$600,000
Total Investment	\$14,120,000

Employment distribution among the relevant major occupational groups for the industry are shown as follows:

Frozen Specialty Food Manufacturing Occupational Group	# of Positions	Avg. Hrly. Wage
Management	2	\$50.64
Business and Financial Operations	1	\$32.67
Architecture and Engineering	1	\$38.42
Life, Physical, and Social Science	2	\$23.60
Food Preparation and Serving Related	1	\$10.57
Building and Grounds Cleaning & Maint.	2	\$12.91
Sales and Related	1	\$35.47
Office and Administrative Support	8	\$16.65



Farming, Fishing, and Forestry	3	\$10.67
Construction and Extraction	1	\$25.98
Installation, Maintenance, and Repair	8	\$22.65
Production	45	\$14.88
Transportation and Material Moving	15	\$14.19
Total	90	\$17.18
Production*	68	\$15.64

**Production includes Installation/Maintenance/Repair, Production, and Transportation/Material Moving occupations*

Frozen Specialty Food Mfg. – Competitive Evaluation – Base Financial Data							
Constants							
Acreage:	30 acres	Plant footprint:	75,000 sf.	Equipment Cost:	\$3,020,000	Debt LTV:	80.0%
	Cost/Acre	Land Cost	Plant Cost/SF	Plant Cost	Total Investment	Financing	Allocated (debt service)
Fulton-Montgomery Co. Region	\$20,000	\$600,000	\$125	\$9,375,000	\$12,995,000	\$10,396,000	\$715,000
Albany Region	\$60,400	\$1,812,000	\$128	\$9,600,000	\$14,432,000	\$11,545,600	\$794,000
Binghamton Region	\$106,420	\$3,192,600	\$125	\$9,375,000	\$15,587,600	\$12,470,080	\$858,000
Buffalo Region	\$36,890	\$1,106,700	\$130	\$9,750,000	\$13,876,700	\$11,101,360	\$764,000
Ithaca Region	\$36,880	\$1,106,400	\$121	\$9,075,000	\$13,201,400	\$10,561,120	\$726,000
Poughkeepsie Region	\$49,020	\$1,470,600	\$142	\$10,650,000	\$15,140,600	\$12,112,480	\$833,000
Rochester Region	\$35,570	\$1,067,100	\$125	\$9,375,000	\$13,462,100	\$10,769,680	\$741,000
Saratoga Region	\$81,610	\$2,448,300	\$117	\$8,775,000	\$14,243,300	\$11,394,640	\$784,000
Syracuse Region	\$36,670	\$1,100,100	\$125	\$9,375,000	\$13,495,100	\$10,796,080	\$743,000
Utica Region	\$23,390	\$701,700	\$122	\$9,150,000	\$12,871,700	\$10,297,360	\$708,000
Frozen Specialty Food Mfg. – Competitive Evaluation – Annual Operating Profits							



Constants						
Annual Net sales:	100.0%					
Gen'l & Admin. :	5.0%	Less: Materials:	54.7%			
Total Operating expenses:	7.4%	Less: Sales exp.:	2.5%			
	Payroll	Utilities & Fuels	Allocated	Cost of goods sold	Annual Gross profit	Annual Operating profit
Fulton-Montgomery Co. Region	13.4%	13.2%	2.4%	83.6%	16.4%	8.9%
Albany Region	16.7%	13.2%	2.6%	87.2%	12.8%	5.4%
Binghamton Region	14.8%	13.1%	2.8%	85.4%	14.6%	7.2%
Buffalo Region	14.7%	13.2%	2.5%	85.1%	14.9%	7.5%
Ithaca Region	14.3%	13.1%	2.4%	84.5%	15.5%	8.1%
Poughkeepsie Region	14.7%	12.3%	2.8%	84.5%	15.5%	8.0%
Rochester Region	14.3%	12.9%	2.5%	84.3%	15.7%	8.3%
Saratoga Region	14.3%	13.2%	2.6%	84.8%	15.2%	7.8%
Syracuse Region	14.6%	13.2%	2.5%	84.9%	15.1%	7.7%
Utica Region	13.6%	13.2%	2.3%	83.8%	16.2%	8.8%

Electronics: Printed Circuit Assembly (Electronic Assembly) Mfg.

This U.S. industry is primarily engaged in loading components onto printed circuit boards or who manufacture and ship loaded printed circuit boards. Also known as printed circuit assemblies, electronics assemblies, or modules, these products are printed circuit boards that have some or all of the semiconductor and electronic components inserted or mounted and are inputs to a wide variety of electronic systems and devices.

Both the national and the New York State average size for a typical facility is 70 persons, and which is selected as a nominal size for this model. Average output for NAICS 334418 – Printed Circuit Assembly (Electronic Assembly) Mfg. in New York is estimated at is \$324,100 per employee and costs of materials and value added per employee are \$187,200 and \$96,100, respectively.



Typical Printed Circuit Assembly (Electronic Assembly) Manufacturing Facility	
Annual Net sales	\$22,687,000
Total Employment	70 persons
Production Employment	29 persons
Avg. hourly Wage - Total	\$31.06
Avg. hourly wage - Production	\$16.92
Fringe benefits Percentage	29%
Total Payroll	\$5,826,000
Total Cost of Raw Materials	\$13,101,000
Total Value Added	\$6,728,000
Site Acreage	10 acres
Plant Footprint sq. ft.	55,000 sq. ft.
Employee Occupancy/sf	790 sq. ft./person
Floor-Area-Ratio	0.15
Plant Construction Cost/sq. ft.	\$140
Plant Construction Cost	\$7,700,000
Estimated Equipment Cost	\$8,250,000
Land Cost	\$200,000
Total Investment	\$16,150,000

Employment distribution among the relevant sections of the 23 Bureau of Labor Statistics major occupational groups for the industry are shown as follows:

Printed Circuit Assembly (Electronic Assembly) Manufacturing Occupational Group	# of Positions	Avg. Hrly. Wage
Management	5	\$68.32
Business and Financial Operations	3	\$39.07
Computer and Mathematical	3	\$49.13
Architecture and Engineering	23	\$40.21
Sales and Related	1	\$45.16
Office and Administrative Support	6	\$17.86
Installation, Maintenance, and Repair	2	\$12.45
Production	26	\$17.36
Transportation and Material Moving	1	\$14.43
Total	70	\$31.06
Production*	29	\$16.92



**Production includes Installation/Maintenance/Repair, Production, and Transportation/Material Moving occupations*

Printed Circuit Assembly Mfg. – Competitive Evaluation – Base Financial Data							
Constants							
Acreage:	10 acres	Plant footprint:	55,000 sf.	Equipment Cost:	\$8,250,000	Debt LTV:	80.0%
	Cost/Acre	Land Cost	Plant Cost/SF	Plant Cost	Total Investment	Financing	Allocated (debt service)
Fulton-Montgomery Co. Region	\$20,000	\$200,000	\$127	\$6,985,000	\$15,435,000	\$12,348,000	\$849,000
Albany Region	\$60,400	\$604,000	\$129	\$7,095,000	\$15,949,000	\$12,759,200	\$878,000
Binghamton Region	\$106,420	\$1,064,200	\$130	\$7,150,000	\$16,464,200	\$13,171,360	\$906,000
Buffalo Region	\$36,890	\$368,900	\$133	\$7,315,000	\$15,933,900	\$12,747,120	\$877,000
Ithaca Region	\$36,880	\$368,800	\$124	\$6,820,000	\$15,438,800	\$12,351,040	\$849,000
Poughkeepsie Region	\$49,020	\$490,200	\$146	\$8,030,000	\$16,770,200	\$13,416,160	\$923,000
Rochester Region	\$35,570	\$355,700	\$128	\$7,040,000	\$15,645,700	\$12,516,560	\$861,000
Saratoga Region	\$81,610	\$816,100	\$126	\$6,930,000	\$15,996,100	\$12,796,880	\$880,000
Syracuse Region	\$36,670	\$366,700	\$128	\$7,040,000	\$15,656,700	\$12,525,360	\$861,000
Utica Region	\$23,390	\$233,900	\$125	\$6,875,000	\$15,358,900	\$12,287,120	\$845,000
Printed Circuit Assembly Mfg. – Competitive Evaluation – Annual Operating Profits							
Constants							
Annual Net sales	100.0%						
Gen'l & Admin.:	12.5%	Less: Materials:			35.3%		
Total Operating expenses:	20.0%	Less: Sales exp.:			7.5%		
	Payroll	Utilities & Fuels	Allocated	Cost of goods sold	Annual Gross profit	Annual Operating profit	



Fulton-Montgomery Co. Region	22.2%	4.20%	3.7%	87.9%	12.1%	5.5%
Albany Region	25.5%	4.20%	3.9%	91.3%	8.7%	2.1%
Binghamton Region	23.8%	4.19%	4.0%	89.7%	10.3%	3.7%
Buffalo Region	23.5%	4.20%	3.9%	89.3%	10.7%	4.1%
Ithaca Region	24.2%	4.19%	3.7%	89.9%	10.1%	3.5%
Poughkeepsie Region	27.3%	4.10%	4.1%	93.2%	6.8%	0.2%
Rochester Region	23.4%	4.17%	3.8%	89.1%	10.9%	4.3%
Saratoga Region	24.6%	4.20%	3.9%	90.4%	9.6%	3.0%
Syracuse Region	23.6%	4.20%	3.8%	89.4%	10.6%	4.0%
Utica Region	24.3%	4.20%	3.7%	89.9%	10.1%	3.5%

Health Care Products & Services: Medical Laboratories

This U.S. industry comprises establishments known as medical laboratories primarily engaged in providing analytic or diagnostic services, including body fluid analysis, generally to the medical profession or to the patient on referral from a health practitioner. The national average size for a typical facility is 24 persons, and the State of New York’s is 19 persons. A nominal facility size of 20 persons is selected for as a numerically-averaged model for this model. Average output for NAICS 621511 – Medical Laboratories is \$193,100 per employee. Costs of materials and value added per employee are not applicable.

Typical Medical Laboratory Facility	
Annual Net sales	\$3,862,000
Total Employment	20 persons
Avg. hourly Wage	\$30.38
Fringe benefits Percentage	35%
Total Payroll	\$1,706,000
Site Acreage	1 acre
Facility Footprint sq. ft.	11,600 sq. ft.
Employee Occupancy/sf	580 sq. ft./person
Floor-Area-Ratio	0.36
Facility Construction Cost/sq. ft.	\$300
Facility Construction Cost	\$3,480,000
Estimated Equipment Cost	\$1,740,000



Land Cost	\$20,000
Total Investment	\$5,240,000

Employment distribution among the relevant major occupational groups for the industry are shown as follows:

Medical Laboratory Occupational Group	# of Positions	Avg. Hrly. Wage
Management	2	\$63.67
Healthcare Practitioners and Technical	8	\$36.05
Healthcare Support	3	\$18.27
Sales and Related	1	\$36.29
Office and Administrative Support	6	\$16.78
Total	20	\$30.38

Medical Laboratories – Competitive Evaluation – Base Financial Data							
Constants							
Acreage:	1 acre	Facility footprint:	11,600 sf.	Equipment Cost:	\$1,740,000	Debt LTV:	80.0%
	Cost/Acre	Land Cost	Facility Cost/SF	Facility Cost	Total Investment	Financing	Allocated (debt service)
Fulton-Montgomery Co. Region	\$20,000	\$20,000	\$205	\$2,378,000	\$4,138,000	\$3,310,400	\$227,700
Albany Region	\$60,400	\$60,400	\$208	\$2,412,800	\$4,213,200	\$3,370,560	\$231,800
Binghamton Region	\$106,420	\$106,420	\$103	\$1,194,800	\$3,041,220	\$2,432,976	\$167,300
Buffalo Region	\$36,890	\$36,890	\$217	\$2,517,200	\$4,294,090	\$3,435,272	\$236,300
Ithaca Region	\$36,880	\$36,880	\$198	\$2,296,800	\$4,073,680	\$3,258,944	\$224,100
Poughkeepsie Region	\$49,020	\$49,020	\$236	\$2,737,600	\$4,526,620	\$3,621,296	\$249,100
Rochester Region	\$35,570	\$35,570	\$207	\$2,401,200	\$4,176,770	\$3,341,416	\$229,800



Saratoga Region	\$81,610	\$81,610	\$203	\$2,354,800	\$4,176,410	\$3,341,128	\$229,800
Syracuse Region	\$36,670	\$36,670	\$205	\$2,378,000	\$4,154,670	\$3,323,736	\$228,600
Utica Region	\$23,390	\$23,390	\$201	\$2,331,600	\$4,094,990	\$3,275,992	\$225,300
Medical Laboratories – Competitive Evaluation – Annual Operating Profits							
Constants							
Annual Net sales	100.0%						
Gen'l & Admin.	14.0%	Less: Materials			7.5%		
Total Operating expenses	22.5%	Less: Sales exp.			8.5%		
	Payroll	Utilities & Fuels	Allocated	Cost of goods sold	Annual Gross profit	Annual Operating profit	
Fulton-Montgomery Co. Region	35.9%	17.8%	5.9%	67.1%	32.9%	10.4%	
Albany Region	39.8%	17.9%	6.0%	71.3%	28.7%	6.2%	
Binghamton Region	38.5%	17.6%	4.3%	68.0%	32.0%	9.5%	
Buffalo Region	39.0%	17.8%	6.1%	70.4%	29.6%	7.1%	
Ithaca Region	42.4%	17.6%	5.8%	73.4%	26.6%	4.1%	
Poughkeepsie Region	43.3%	16.4%	6.5%	73.6%	26.4%	3.9%	
Rochester Region	38.1%	17.3%	6.0%	68.8%	31.2%	8.7%	
Saratoga Region	41.4%	17.8%	6.0%	72.6%	27.4%	4.9%	
Syracuse Region	41.4%	17.8%	5.9%	72.6%	27.4%	4.9%	
Utica Region	40.7%	17.8%	5.8%	71.8%	28.2%	5.7%	

HQ & Business Services: Telephone Call Centers

This U.S. industry comprises establishments primarily engaged in operating call centers that initiate or receive communications for others via telephone, facsimile, email, or other communication modes for purposes such as: (1) promoting clients' products or services, (2) taking orders for clients, (3) soliciting contributions for a client; and (4) providing information or assistance regarding a client's products or services. These establishments do not own the product or provide the services they are representing on behalf of clients. The national average size for a typical facility is 101 persons, and the State of New York's is 76 persons. A nominal facility size of 90-persons is selected for as a numerically-averaged model for this



model. Average output for NAICS 561422 – Telephone Call Centers is \$79,100 per employee and costs of materials and value added per employee are not applicable.

Typical Telephone Call Center Facility	
Annual Net sales	\$7,119,000
Total Employment	90 persons
Avg. hourly Wage - Total	\$20.36
Fringe benefits Percentage	25%
Total Payroll	\$4,765,000
Site Acreage	1.0 acres
Facility Footprint sq. ft.	13,500 sq. ft.
Employee Occupancy/sf	150 sq. ft./person
Floor-Area-Ratio	0.36
Facility Construction Cost/sq. ft.	\$160
Facility Construction Cost	\$2,210,000
Estimated F.F.& E. Cost	\$450,000
Land Cost	\$20,000
Total Investment	\$2,680,000

Employment distribution among the relevant major occupational groups for the industry are shown as follows:

Telephone Call Center Occupational Group	# of Positions	Avg. Hrly. Wage
Management	1	\$68.40
Business and Financial Operations	2	\$36.74
Computer and Mathematical	3	\$26.76
Sales and Related	30	\$19.47
Office and Administrative Support	54	\$19.01
Total	90	\$20.36



Telephone Call Centers – Competitive Evaluation – Base Financial Data							
Constants							
Acreage:	1 acre	Facility footprint:	13,500 sf.	F.F.&E. Cost:	\$450,000	Debt LTV:	80.0%
	Cost/Acre	Land Cost	Facility Cost/SF	Facility Cost	Total Investment	Financing	Allocated (debt service)
Fulton-Montgomery Co. Region	\$20,000	\$17,447	\$161	\$2,173,500	\$2,640,947	\$2,112,758	\$145,300
Albany Region	\$60,400	\$52,691	\$164	\$2,214,000	\$2,716,691	\$2,173,352	\$149,500
Binghamton Region	\$106,420	\$92,837	\$161	\$2,173,500	\$2,716,337	\$2,173,069	\$167,300
Buffalo Region	\$36,890	\$32,181	\$169	\$2,281,500	\$2,763,681	\$2,210,945	\$152,100
Ithaca Region	\$36,880	\$32,173	\$156	\$2,106,000	\$2,588,173	\$2,070,538	\$142,400
Poughkeepsie Region	\$49,020	\$42,763	\$186	\$2,511,000	\$3,003,763	\$2,403,010	\$165,300
Rochester Region	\$35,570	\$31,030	\$163	\$2,200,500	\$2,681,530	\$2,145,224	\$147,500
Saratoga Region	\$81,610	\$71,193	\$159	\$2,146,500	\$2,667,693	\$2,134,155	\$146,800
Syracuse Region	\$36,670	\$31,989	\$161	\$2,173,500	\$2,655,489	\$2,124,392	\$146,100
Utica Region	\$23,390	\$20,404	\$159	\$2,146,500	\$2,616,904	\$2,093,524	\$144,000
Telephone Call Centers – Competitive Evaluation – Annual Operating Profits							
Constants							
Annual Net sales	100.0%						
Gen'l & Admin.	15.0%	Less: Materials			N/A		
Total Operating expenses	30.0%	Less: Sales exp.			10.0%		
	Payroll	Utilities & Fuels	Allocated	Cost of goods sold	Annual Gross profit	Annual Operating profit	
Fulton-Montgomery Co. Region	54.3%	8.8%	2.0%	65.1%	34.9%	9.9%	
Albany Region	59.8%	8.8%	2.1%	70.7%	29.3%	4.3%	
Binghamton Region	56.4%	8.7%	2.4%	67.5%	32.5%	7.5%	



Buffalo Region	57.6%	8.8%	2.1%	68.5%	31.5%	6.5%
Ithaca Region	57.7%	8.7%	2.0%	68.4%	31.6%	6.6%
Poughkeepsie Region	59.6%	8.4%	2.3%	70.4%	29.6%	4.6%
Rochester Region	56.8%	8.7%	2.1%	67.5%	32.5%	7.5%
Saratoga Region	54.6%	8.8%	2.1%	65.5%	34.5%	9.5%
Syracuse Region	59.3%	8.8%	2.1%	70.1%	29.9%	4.9%
Utica Region	54.5%	8.8%	2.0%	65.3%	34.7%	9.7%

Renewable Energy: Other Scientific and Technical Consulting Services

For this industry, a numerical average of two allied industries is developed. NAICS 541690 - Other Scientific and Technical Consulting Services only produces an average National and New York State of five persons per firm. However, by examining NAICS 541712 – Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology) which averages 39 and 61 persons per firm, respectively for the US and NYS, a clearer picture emerges of what an energy R&D and consulting facility would look like. The average between both industries results in a typical facility size of about 25 persons when balancing both National and New York State figures.

Average output for NAICS 541690 – Other Scientific and Technical Consulting Services is \$211,200 per employee and costs of materials and value added per employee are not applicable.

Typical Other Scientific and Technical Consulting Services Facility	
Annual Revenue	\$5,280,000
Total Employment	25 persons
Avg. hourly Wage - Total	\$39.44
Fringe benefits Percentage	35%
Total Payroll	\$2,769,000
es	1.0 acres
Facility Footprint sq. ft.	11,250 sq. ft.
Employee Occupancy/sf	450 sq. ft./person
Floor-Area-Ratio	0.36
Facility Construction Cost/sq. ft.	\$175
Facility Construction Cost	\$1,969,000
Estimated Equipment Cost	\$563,000



Land Cost	\$20,000
Total Investment	\$2,552,000

Employment distribution among the relevant major occupational groups for the industry are shown as follows:

Other Scientific and Technical Consulting Services Occupational Group	# of Positions	Avg. Hrly. Wage
Management	3	\$70.96
Business & Financial Operations	8	\$43.64
Computer and Mathematical	3	\$49.00
Physical Sciences	1	\$35.98
Sales & Related	2	\$36.29
Office and Administrative Support	8	\$21.07
Total	25	\$39.44

Other Scientific and Technical Consulting Services – Competitive Evaluation – Base Financial Data							
Constants							
Acreage:	1 acre	Facility footprint:	11,250 s.f.	F.F.&E. Cost:	\$563,000	Debt LTV:	80.0%
	Cost/Acre	Land Cost	Facility Cost/SF	Facility Cost	Total Investment	Financing	Allocated (debt service)
Fulton-Montgomery Co. Region	\$20,000	\$20,000	\$173	\$1,942,000	\$2,525,000	\$2,020,000	\$138,900
Albany Region	\$60,400	\$60,400	\$175	\$1,972,000	\$2,595,400	\$2,076,000	\$142,800
Binghamton Region	\$106,420	\$106,420	\$177	\$1,988,000	\$2,657,420	\$2,126,000	\$146,200
Buffalo Region	\$36,890	\$36,890	\$182	\$2,044,000	\$2,643,890	\$2,115,000	\$145,500
Ithaca Region	\$36,880	\$36,880	\$169	\$1,904,000	\$2,503,880	\$2,003,000	\$137,800
Poughkeepsie Region	\$49,020	\$49,020	\$201	\$2,257,000	\$2,869,020	\$2,295,000	\$157,800



Rochester Region	\$35,570	\$35,570	\$175	\$1,974,000	\$2,572,570	\$2,058,000	\$141,500
Saratoga Region	\$81,610	\$81,610	\$167	\$1,876,000	\$2,520,610	\$2,016,000	\$138,700
Syracuse Region	\$36,670	\$36,670	\$174	\$1,960,000	\$2,559,670	\$2,048,000	\$140,900
Utica Region	\$23,390	\$23,390	\$170	\$1,912,000	\$2,498,390	\$1,999,000	\$137,500
Other Scientific and Technical Consulting Services – Competitive Evaluation							
– Annual Operating Profits							
Constants							
Annual Net sales	100.0%						
Gen'l & Admin.	10.0%	Less: Materials			N/A		
Total Operating expenses	30.0%	Less: Sales exp.			20.0%		
	Payroll	Utilities & Fuels	Allocated	Cost of goods sold	Annual Gross profit	Annual Operating profit	
Fulton-Montgomery Co. Region	40.5%	8.2%	9.4%	58.1%	41.9%	11.9%	
Albany Region	46.1%	8.2%	9.6%	63.9%	36.1%	6.1%	
Binghamton Region	47.9%	8.2%	9.9%	65.9%	34.1%	4.1%	
Buffalo Region	45.1%	8.2%	9.8%	63.1%	36.9%	6.9%	
Ithaca Region	45.7%	8.2%	9.3%	63.1%	36.9%	6.9%	
Poughkeepsie Region	48.7%	7.9%	10.6%	67.2%	32.8%	2.8%	
Rochester Region	46.8%	8.1%	9.5%	64.4%	35.6%	5.6%	
Saratoga Region	43.0%	8.2%	9.3%	60.6%	39.4%	9.4%	
Syracuse Region	46.4%	8.2%	9.5%	64.1%	35.9%	5.9%	
Utica Region	43.8%	8.2%	9.3%	61.2%	38.8%	8.8%	

Software & Media: Games, Computer Software, Publishing

This industry comprises establishments primarily engaged in computer software publishing or publishing and reproduction. Establishments in this industry carry out operations necessary for producing and distributing computer software, such as designing, providing documentation, assisting in installation, and providing support services to software purchasers. These establishments may design, develop, and publish, or publish only. The national average size for a typical facility is 48 persons, and the State of New York’s is 34



persons. A nominal facility size of 40 persons is selected for as a numerically-averaged model for this model. Average output for 511210 – Games, computer software, publishing is \$419,500 per employee and costs of materials and value added per employee are not applicable.

Typical Games, Computer software, Publishing Facility	
Annual Net sales	\$16,780,000
Total Employment	40 persons
Avg. hourly Wage - Total	\$46.45
Fringe benefits Percentage	30%
Total Payroll	\$4,992,000
Site Acreage	0.5 acre
Facility Footprint sq. ft.	8,000 sq. ft.
Employee Occupancy/sf	200 sq. ft./person
Floor-Area-Ratio	0.36
Facility Construction Cost/sq. ft.	\$180
Facility Construction Cost	\$1,440,000
Estimated F.F.& E. Cost	\$240,000
Land Cost	\$10,000
Total Investment	\$1,690,000

Employment distribution among the relevant major occupational groups for the industry are shown as follows:

Games, Computer software, Publishing Occupational Group	# of Positions	Avg. Hrly. Wage
Management	3	\$81.28
Business and Financial Operations	4	\$42.13
Computer and Mathematical	27	\$45.13
Sales and Related	5	\$41.60
Office and Administrative Support	1	\$18.62
Total	40	\$46.45



Games, Computer Software, Publishing – Competitive Evaluation – Base Financial Data							
Constants							
Acreage:	0.5 acre	Facility footprint:	8,0000 sf.	F.F.&E. Cost:	\$240,000	Debt LTV:	80.0%
	Cost/Acre	Land Cost	Facility Cost/SF	Facility Cost	Total Investment	Financing	Allocated (debt service)
Fulton-Montgomery Co. Region	\$20,000	\$10,000	\$174	\$1,392,000	\$1,642,000	\$1,313,600	\$90,300
Albany Region	\$60,400	\$30,200	\$176	\$1,408,000	\$1,678,200	\$1,342,560	\$92,300
Binghamton Region	\$106,420	\$53,210	\$174	\$1,392,000	\$1,685,210	\$1,348,168	\$92,700
Buffalo Region	\$36,890	\$18,445	\$183	\$1,464,000	\$1,722,445	\$1,377,956	\$94,800
Ithaca Region	\$36,880	\$18,440	\$169	\$1,352,000	\$1,610,440	\$1,288,352	\$88,600
Poughkeepsie Region	\$49,020	\$24,510	\$201	\$1,608,000	\$1,872,510	\$1,498,008	\$103,000
Rochester Region	\$35,570	\$17,785	\$176	\$1,408,000	\$1,665,785	\$1,332,628	\$91,700
Saratoga Region	\$81,610	\$40,805	\$172	\$1,376,000	\$1,656,805	\$1,325,444	\$91,200
Syracuse Region	\$36,670	\$18,335	\$174	\$1,392,000	\$1,650,335	\$1,320,268	\$90,800
Utica Region	\$23,390	\$11,695	\$171	\$1,368,000	\$1,619,695	\$1,295,756	\$89,100
Games, Computer Software, Publishing – Competitive Evaluation – Annual Operating Profits							
Constants							
Annual Net sales	100.0%						
Gen'l & Admin.	25.0%	Less: Materials			N/A		
Total Operating expenses	60.0%	Less: Sales exp.			35.0%		
	Payroll	Utilities & Fuels	Allocated	Cost of goods sold	Annual Gross profit	Annual Operating profit	
Fulton-Montgomery Co. Region	21.9%	8.8%	0.5%	31.2%	68.8%	8.8%	
Albany Region	25.1%	8.8%	0.6%	34.5%	65.5%	5.5%	
Binghamton Region	26.0%	8.7%	0.6%	35.3%	64.7%	4.7%	



Buffalo Region	24.1%	8.8%	0.6%	33.5%	66.5%	6.5%
Ithaca Region	25.0%	8.7%	0.5%	34.3%	65.7%	5.7%
Poughkeepsie Region	27.4%	8.4%	0.6%	36.4%	63.6%	3.6%
Rochester Region	24.2%	8.7%	0.5%	33.4%	66.6%	6.6%
Saratoga Region	26.2%	8.8%	0.5%	35.5%	64.5%	4.5%
Syracuse Region	25.3%	8.8%	0.5%	34.7%	65.3%	5.3%
Utica Region	24.5%	8.8%	0.5%	33.8%	66.2%	6.2%

3.c – Workforce Impact

Wage Structures by Quartile

In this task, pay scales for the target industries s have been identified by quartile, with entry level associated with the first quartile, ranged to arrive at senior or executive positions in the fourth quartile. Accordingly to NYS dept. of Labor Statistics, the Fulton-Montgomery County Region average hourly wage is estimated at \$22.79 for all employment sectors.

The figure has been derived from the 2014 NYS DOL weighed averaging of the Albany-Schenectady-Troy MSA, the Utica-Rome MSA, and both Fulton and Montgomery Counties and then projected for 2015. The first quartile average starting hourly pay was \$11.67, and the fourth quartile experienced level wage was \$41.68.

The following Table 3.c.1 delineates the relationship of the targeted industries to these pay levels. Targeted industries which are not present in the Region but are earmarked as “Opportunity” have been estimated for wage levels anticipated to be within the area when established. These entries are highlighted in yellow.



Table 3.c.1 - Workforce Impacts of Targeted Industries by Quartile Pay Distribution					
NAICS	2015 Fulton- Montgomery Co. Region 1st quartile Entry level	2015 Fulton- Montgomery Co. Region 2nd quartile Avg. level	2015 Fulton- Montgomery Co. Region 3rd quartile Exp'd. Level	2015 Fulton- Montgomery Co. Region 4th quartile Sr. Level	2015 Fulton- Montgomery Co. Region Avg. Hrly. Pay
<i>Fulton-Montgomery County Region</i>	\$11.67	\$19.37	\$30.20	\$41.68	\$22.79
BIOMEDICAL RESEARCH & DEVELOPMENT					
325411 - Medicinal and Botanical Mfg.	\$19.24	\$29.59	\$46.58	\$68.93	\$36.79
325412 - Pharmaceutical Preparation Mfg.	\$19.97	\$30.72	\$48.36	\$71.56	\$38.20
325413 - In-Vitro Diagnostic Substance Mfg.	\$22.88	\$35.20	\$55.40	\$81.99	\$43.77
325414 - Biological Product (except Diagnostic) Mfg.	\$22.16	\$34.09	\$53.65	\$79.39	\$42.38
334516 - Analytical Laboratory Instrument Mfg.	\$20.22	\$32.67	\$51.58	\$72.81	\$38.89
334517 - Irradiation Apparatus Mfg.	\$22.53	\$36.39	\$57.45	\$81.10	\$43.32
339112 - Surgical and Medical Instrument Mfg.	\$17.30	\$23.96	\$37.73	\$59.78	\$31.78
339113 - Surgical Appliance and Supplies Mfg.	\$17.60	\$24.38	\$38.38	\$60.82	\$32.33
339114 - Dental Equipment and Supplies Mfg.	\$15.48	\$21.44	\$33.76	\$53.49	\$28.44
339115 - Ophthalmic Goods Mfg.	\$13.57	\$18.80	\$29.60	\$46.90	\$24.93
339116 - Dental Laboratories	\$10.40	\$14.41	\$22.68	\$35.94	\$19.11
ELECTRONICS					
334111 - Electronic Computer Mfg.	\$22.30	\$36.61	\$52.42	\$69.11	\$39.39
334112 - Computer Storage Device Mfg.	\$22.77	\$37.39	\$53.54	\$70.57	\$40.23
334412 - Bare Printed Circuit Board Mfg.	\$11.06	\$18.07	\$30.93	\$44.69	\$22.86
334418 - Printed Circuit Assembly (Electronic Assembly) Mfg.	\$11.77	\$19.23	\$32.91	\$47.55	\$24.33
334419 - Other Electronic Component Mfg.	\$13.35	\$21.81	\$37.32	\$53.92	\$27.59



334512 - Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use	\$15.69	\$25.35	\$40.02	\$56.50	\$30.18
334515 - Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	\$21.82	\$35.24	\$55.64	\$78.54	\$41.95
334519 - Other Measuring & Controlling Device Mfg.	\$18.06	\$29.17	\$46.06	\$65.02	\$34.73
334613 - Blank Magnetic and Optical Recording Media Mfg.	\$20.66	\$31.32	\$54.30	\$87.05	\$42.51
FOOD & BEVERAGE					
311111 - Dog and Cat Food Mfg.	\$16.89	\$22.66	\$31.66	\$45.81	\$27.56
311119 - Other Animal Food Mfg.	\$14.05	\$18.86	\$26.34	\$38.12	\$22.93
311230 - Breakfast Cereal Mfg.	\$18.77	\$25.45	\$35.87	\$49.60	\$29.95
311411 - Frozen Fruit, Juice, and Vegetable Mfg.	\$10.56	\$14.08	\$19.05	\$26.59	\$16.62
311412 - Frozen Specialty Food Mfg.	\$14.23	\$18.97	\$25.65	\$35.82	\$22.39
311514 - Dry, Condensed, and Evaporated Dairy Product Mfg.	\$18.53	\$24.95	\$32.23	\$43.56	\$28.09
311520 - Ice Cream and Frozen Dessert Mfg.	\$14.51	\$19.53	\$25.24	\$34.11	\$21.99
311813 - Frozen Cakes, Pies, & Other Pastries Mfg.	\$10.82	\$13.98	\$20.22	\$29.20	\$17.82
311821 - Cookie, Cracker, & Pasta Mfg.	\$13.51	\$17.45	\$25.24	\$36.46	\$22.25
312111 - Soft Drink Mfg.	\$14.14	\$19.98	\$28.75	\$40.70	\$23.99
312112 - Bottled Water Mfg.	\$14.37	\$20.31	\$29.22	\$41.37	\$24.38
312120 - Breweries	\$16.90	\$23.88	\$34.36	\$48.64	\$28.67
312130 - Wineries	\$13.65	\$19.29	\$27.75	\$39.29	\$23.16
312140 - Distilleries	\$18.48	\$26.12	\$37.58	\$53.20	\$31.36
HEALTH CARE PRODUCTS & SERVICES					
621491 - HMO Medical Centers	\$13.09	\$18.56	\$28.54	\$43.17	\$24.23
621492 - Kidney Dialysis Centers	\$10.27	\$14.56	\$22.39	\$33.86	\$19.01
621493 - Freestanding Ambulatory Surgical and Emergency Centers	\$11.08	\$15.71	\$24.16	\$36.54	\$20.51
621498 - All Other Outpatient Care Centers	\$12.14	\$17.21	\$26.47	\$40.03	\$22.47
621511 - Medical Laboratories	\$14.40	\$19.60	\$29.12	\$41.27	\$25.09



621512 - Diagnostic Imaging Centers	\$14.62	\$19.89	\$29.56	\$41.88	\$25.47
621910 - Ambulance Services	\$8.99	\$11.74	\$16.69	\$24.48	\$14.45
621999 - All Other Miscellaneous Ambulatory Health Care Services	\$12.06	\$15.75	\$22.39	\$32.83	\$19.38
624310 - Vocational Rehabilitation Services	\$6.80	\$8.89	\$12.74	\$18.92	\$11.04
HQ & BUSINESS SERVICES					
522210 - Credit Card Issuing	\$10.51	\$15.12	\$24.34	\$38.75	\$20.15
522220 - Sales Financing	\$17.94	\$25.81	\$41.56	\$66.15	\$34.40
522291 - Consumer Lending	\$10.66	\$15.33	\$24.69	\$39.30	\$20.44
522292 - Real Estate Credit	\$15.83	\$22.76	\$36.66	\$58.34	\$30.34
524113 - Direct Life Insurance Carriers	\$18.83	\$27.19	\$40.37	\$56.96	\$32.63
524114 - Direct Health and Medical Insurance Carriers	\$16.46	\$23.77	\$35.31	\$49.81	\$28.53
524126 - Direct Property and Casualty Insurance Carriers	\$16.16	\$23.33	\$34.65	\$48.88	\$28.00
524130 - Reinsurance Carriers	\$35.57	\$51.36	\$76.28	\$107.62	\$61.65
551111 - Offices of Bank Holding Companies	\$14.63	\$22.91	\$35.79	\$53.74	\$28.52
551112 - Offices of Other Holding Companies	\$20.26	\$31.73	\$49.59	\$74.45	\$39.51
551114 - Corporate, Subsidiary, and Regional Managing Offices	\$21.27	\$33.31	\$52.05	\$78.14	\$41.47
561410 - Document Preparation Services	\$7.94	\$10.30	\$14.29	\$22.03	\$13.08
561422 - Telephone Call Centers	\$6.66	\$8.64	\$11.98	\$18.47	\$10.97
561431 - Private Mail Centers	\$6.69	\$8.67	\$12.04	\$18.55	\$11.02
561439 - Other Business Service Centers (including Copy Shops)	\$9.11	\$11.82	\$16.41	\$25.29	\$15.02
RENEWABLE ENERGY					
221114 - Solar Farms	\$24.16	\$32.59	\$41.40	\$51.48	\$33.71
221116 - Geothermal Electric Power Generation	\$34.66	\$46.74	\$59.38	\$73.83	\$48.34
221117 - Biomass Electric Power Generation	\$26.58	\$35.85	\$45.55	\$56.63	\$37.08
221118 - Other Electric Power Generation	\$29.53	\$39.83	\$50.59	\$62.90	\$41.19
221121 - Electric Bulk Power Transmission and Control	\$37.73	\$50.89	\$64.65	\$80.38	\$52.63



541690 - Other Scientific and Technical Consulting Services	\$15.69	\$24.94	\$39.54	\$60.54	\$31.42
SOFTWARE & MEDIA					
511120 - Periodical Publishers	\$12.37	\$18.54	\$28.90	\$44.38	\$23.92
511130 - Book Publishers	\$12.69	\$19.02	\$29.64	\$45.53	\$24.53
511191 - Greeting Card Publishers	\$9.82	\$14.72	\$22.94	\$35.24	\$18.99
511199 - All Other Publishers	\$8.78	\$13.16	\$20.50	\$31.49	\$16.97
511210 - Games, computer software, publishing	\$28.19	\$43.45	\$59.72	\$77.12	\$46.50
517110 - Broadband Internet service providers, wired	\$14.64	\$21.99	\$28.23	\$38.87	\$23.45
518210 - Web hosting	\$14.61	\$24.27	\$37.82	\$52.20	\$28.55
Percentage Exceeding Fulton-Montgomery Co. Reg. norms	72%	77%	62%	56%	63%
Sources: Bureau of Labor Statistics, US Census County Business Patterns, NYS Dept. of Labor					

Of the 71 component 6-digit industries within the seven clusters, 51 were above the \$22.79 average for the 2015 Fulton-Montgomery Co. Region (72% performance measure). Clearly, the selection of new targets are mostly well above regional mean pay levels. For the 1st quartile – Entry level category, 77% (55) industries exceeded the benchmark. A fall-off occurs in the next two quartiles, with 62% (44 industries) and 56% (40 industries), respectively. This may indicate a slight disparity for middle-income earners to excel in certain industries. However, a recovery begins to occur in the 4th quartile of Senior-level workers of 63% (45) industries, marking a strengthening of opportunities for the top-level jobholders.

By scoring each cluster by the possible number of points and the actual results for outperforming the Fulton-Montgomery Co. Region by quartile, a ranking order occurs. This analysis is helpful for establishing which clusters represent the greatest potential for workforce income advancement: Ranking of the clusters is again revisited in the Conclusion.

Cluster	Possible # of Points	Actual Points Scored	Final Score	Rank
RENEWABLE ENERGY	30	30	100.0	1
ELECTRONICS	45	42	93.3	2



BIOMEDICAL RESEARCH & DEVELOPMENT	55	48	87.3	3
HQ & BUSINESS SERVICES	75	45	60.0	4
FOOD & BEVERAGE	70	39	55.7	5
SOFTWARE & MEDIA	40	19	47.5	6
HEALTH CARE PRODUCTS & SERVICES	45	12	26.7	7

Middle Income Standards

By experience, 2nd and 3rd quartile earnings represent the capability of most workers in the U.S. to achieve middle-income standard of living. Using the Region’s average hourly earnings from Table 3.C.1, 1st, 2nd, 3rd, and 4th quartile annual salaries are: <\$24,265 (1st Q.); \$24,265 - \$40,299 (2nd Q.); \$40,300 - \$62,808 (3rd Q.); and, \$62,809-\$86,686 (4th Q.). The annual salary is calculated by Average hourly pay multiplied by 2,080 hours per year.

Assuming that a house with a mortgage is the overarching cost driver, then Region’s most commonly occurring owner’s category of \$1,000 - \$1,249 per month (Fulton County – 20.7%; Montgomery County - 26.7%) would result in a yearly housing cost range between \$12,000 and \$14,988. Secondly, if the Region’s weighted average of 21.1% housing costs/income is employed (Fulton -21.4%; Montgomery – 20.7%), then the annual middle income model for a Fulton-Montgomery Co. Region family or homeowner would range between \$60,811 and \$81,041, not in 2nd or 3rd quartile, but 3rd and 4th quartiles, as shown in the table below:

<i>Owner’s Housing costs</i>	<i>Housing as Percent of Income</i>	<i>Required Estimated Household Earnings</i>	<i>Middle Income Quartile</i>
\$12,000	21.1%	\$56,977	3
\$14,988	21.1%	\$71,164	4
\$13,494 (avg.)	21.1%	\$64,071 (avg.)	4

New targeted industries – single householders

Without development of the new targeted industries and as shown in the table above, single heads of households who would purchase a home would have to be earning within the 3rd and 4th quartiles of overall Fulton-Montgomery Co. Region’s household income. Wages for



the targeted industries shown by quartile in the preceding analysis indicate that average (2nd) and experienced (3rd) quartile levels in 38 out of 71 cases are above the Region average of \$19.37 (2nd) and \$30.20 (3rd) for the year. But, in order to return to a more normalized 2nd and 3rd quartile pattern for middle income standards, a 2nd quartile average wage level above \$64,071 would be required from the new target industries. This standard can only be met in 16 of the 71 industry components, as shown below:

	2015 Fulton- Montgomery Co. Region 2nd quartile Avg. level
2nd quartile target range >\$64,071	
Fulton-Montgomery County Region	\$40,061
325413 - In-Vitro Diagnostic Substance Mfg.	\$73,218
325414 - Biological Product (except Diagnostic) Mfg.	\$70,901
334516 - Analytical Laboratory Instrument Mfg.	\$67,955
334517 - Irradiation Apparatus Mfg.	\$75,687
334111 - Electronic Computer Mfg.	\$76,146
334112 - Computer Storage Device Mfg.	\$77,762
334515 - Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	\$73,301
334613 - Blank Magnetic and Optical Recording Media Mfg.	\$65,146
524130 - Reinsurance Carriers	\$106,834
551112 - Offices of Other Holding Companies	\$66,004
551114 - Corporate, Subsidiary, and Regional Managing Offices	\$69,275
221114 - Solar Farms	\$67,788
221116 - Geothermal Electric Power Generation	\$97,222
221117 - Biomass Electric Power Generation	\$74,576
221118 - Other Electric Power Generation	\$82,837
511210 - Games, computer software, publishing	\$90,375



As a result, single heads of houses would invariably need to be employed in high tech or white color jobs to comfortably afford to purchase a home in the Fulton-Montgomery Co. Region.

New targeted industries - Families and groups

Depending on living arrangements, families and groups of earners could meet middle income standards if a key member was employed within one of the new targeted industries. DCG Corplan will assume that at least an Experienced level (3rd quartile) individual will be the major “breadwinner”, and that at least one other earner will be contributing as much as 25% of the total household earnings.

In order to meet the middle income target of \$64,071 (average), the calculations would work as follows:

- Breadwinner + Other = Total household income
And,
- Other = 25% of Total household income
So,
- $1.25 * \text{breadwinner} = \text{Total household income}$
Therefore,
- Breadwinner = Total household income/1.25

Since the Total household income for this case will be the \$64,071 from above, the breadwinner must earn this sum divided by 1.25 which is equal to \$51,256. All target industry components that provide a 3rd quartile wage of at least \$51,256 are shown in the following table. In total, 40 industries meet the criteria, or more than half of the group. The losers in this case are the service sectors, notably Health Care Products & Services.



	<i>2015 Fulton- Montgomery Co. Region 3rd quartile Exp'd. Level</i>
3rd quartile target range >\$51,256	
Fulton-Montgomery County Region	\$50,648
BIOMEDICAL RESEARCH & DEVELOPMENT	
325411 - Medicinal and Botanical Mfg.	\$96,884
325412 - Pharmaceutical Preparation Mfg.	\$100,584
325413 - In-Vitro Diagnostic Substance Mfg.	\$115,240
325414 - Biological Product (except Diagnostic) Mfg.	\$111,593
334516 - Analytical Laboratory Instrument Mfg.	\$107,287
334517 - Irradiation Apparatus Mfg.	\$119,495
339112 - Surgical and Medical Instrument Mfg.	\$78,471
339113 - Surgical Appliance and Supplies Mfg.	\$79,828
339114 - Dental Equipment and Supplies Mfg.	\$70,214
ELECTRONICS	
334111 - Electronic Computer Mfg.	\$109,044
334112 - Computer Storage Device Mfg.	\$111,358
334412 - Bare Printed Circuit Board Mfg.	\$64,335
334418 - Printed Circuit Assembly (Electronic Assembly) Mfg.	\$68,452
334419 - Other Electronic Component Mfg.	\$77,626
334512 - Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use	\$83,245
334515 - Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	\$115,728
334519 - Other Measuring & Controlling Device Mfg.	\$95,803
334613 - Blank Magnetic and Optical Recording Media Mfg.	\$112,954
FOOD & BEVERAGE	
311111 - Dog and Cat Food Mfg.	\$65,843
311230 - Breakfast Cereal Mfg.	\$74,614
311514 - Dry, Condensed, and Evaporated Dairy Product Mfg.	\$67,038
312120 - Breweries	\$71,475



312140 - Distilleries	\$78,172
HQ & BUSINESS SERVICES	
522220 - Sales Financing	\$86,436
522292 - Real Estate Credit	\$76,242
524113 - Direct Life Insurance Carriers	\$83,979
524114 - Direct Health and Medical Insurance Carriers	\$73,437
524126 - Direct Property and Casualty Insurance Carriers	\$72,070
524130 - Reinsurance Carriers	\$158,663
551111 - Offices of Bank Holding Companies	\$74,453
551112 - Offices of Other Holding Companies	\$103,144
551114 - Corporate, Subsidiary, and Regional Managing Offices	\$108,256
RENEWABLE ENERGY	
221114 - Solar Farms	\$86,118
221116 - Geothermal Electric Power Generation	\$123,509
221117 - Biomass Electric Power Generation	\$94,741
SOFTWARE & MEDIA	
511210 - Games, computer software, publishing	\$124,208
518210 - Web hosting	\$78,663

Throughout the process of this study, economic conditions have been in flux. Prices of single family homes are witnessing a slow recovery with a noticeable upward price spike in the 3rd quarter of 2014 for Fulton County. City-data.com indicates a high of about \$110,000 for house sales for Fulton County at the end of 2014, but with very little sales volume.

While the current wage pattern in the Region may suggest some difficulty in acquisition of affordable housing, the bright side of this news is that housing prices are quite attractive with those with liquidity. This fact is welcome for a recruitment campaign for middle manager and other professional talent from outside the area. By virtue of this, the Fulton-Montgomery Co. Region can be considered as an excellent opportunity to attract the interest of prospective employers.



3.d – Existing Infrastructure Assets

In Task 1, an initial Tryon property tour was conducted. During this task, more information, engineering and site assets were evaluated. A new internal access road has been constructed that provides adequate frontage and accessibility. Reliable electric power and high band width telecommunications are the required elements of any technology park and these are found to be present at Tryon.

A review of Tryon’s marketable assets is a follows:

- 515 total acres
- 260 acres of shovel-ready sites
- New internal access road: CR 117
- CR-107 road frontage
- Quick access to I-90
- Full broadband service
- On-site electrical service: National Grid
- On-site natural gas service: National Grid
- City sewer service
- City water service
- Telecom: Frontier Communications
- All sites immediately developable
- No site remediation required
- No adverse cultural resources present
- No flood plain concerns
- Good supply of qualified labor within accessible laborshed
- Good supply of job market entrants
- Above average numbers of educated workers
- Excellent customized training program available
- Mobile workforce with access to private transportation
- Active and organized economic development program
- Incentives: START-UP New York program, IDA Benefits (PILOT, Sales + Mortgage Recording tax exemption)
- Customized training programs through Fulton-Montgomery Community College



- Hamilton Fulton Montgomery Board of Educational Cooperative Services programs in vocational and technical education

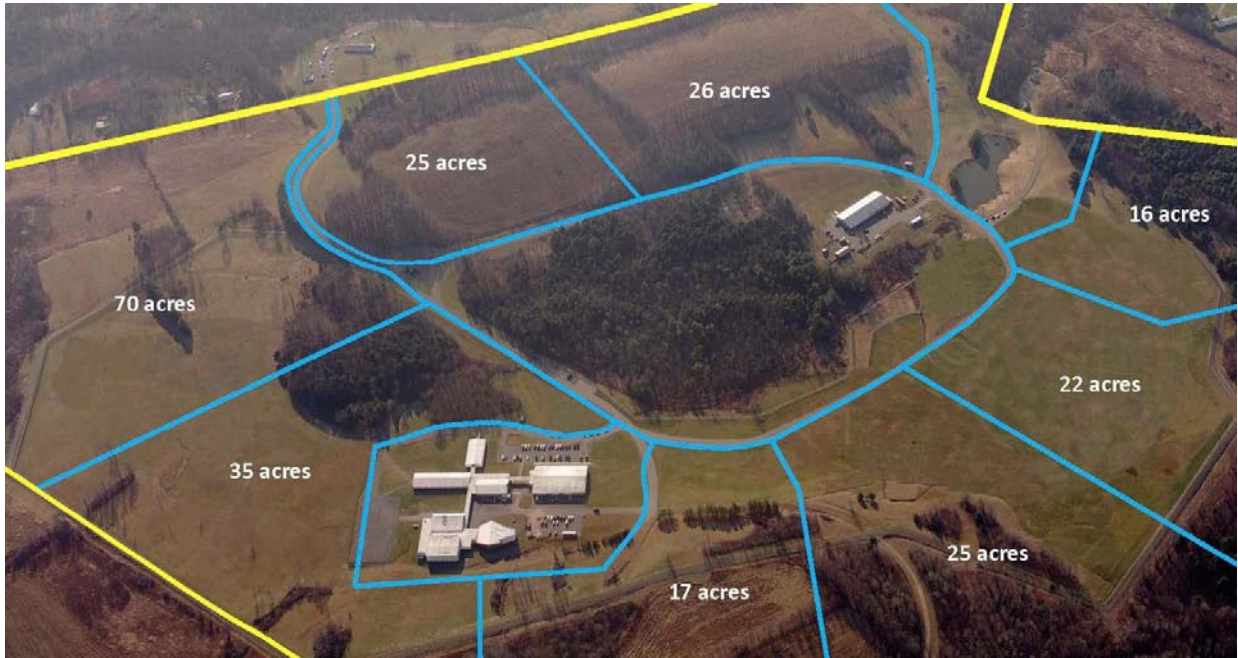
Site Development Buildout

In its present configuration, the Tryon property can be subdivided into any number of variably-sized parcels to meet the specific needs of a business. By agreement with NY State, the primary development area must be focused on job development which is essentially those lots served by the new roadway. As shown in the site photograph below, a conceptual layout shows eight potential parcels ranging from sixteen to seventy acres. Jointly, these cover 236 acres, or just under half of the overall property size.

Depending on use, the ultimate build out of these 236 acres could vary significantly. By using an average Floor-Area-Ratio (FAR) from the preceding cluster operation models, an FAR of 0.1 for industrial and 0.25 for office use would result in between 1.03 million to 3.7 million square feet of built space on these 236 acres. Employee density averages about 1,200 square feet per person for industrial use, and the national standard of 200 square feet per person is used for office occupancy.

Parcel	Acreage	Industrial SF	Office SF	Industrial Jobs	Office Jobs
A	70	305,000	1,098,000	250	3,800
B	25	109,000	392,000	90	1,400
C	26	113,000	408,000	90	1,400
D	16	70,000	251,000	60	900
E	22	96,000	345,000	80	1,200
F	25	109,000	392,000	90	1,400
G	17	74,000	267,000	60	900
H	35	152,000	549,000	130	1,900
Total	236	1,028,000	3,702,000	850	12,900





These are, of course, maximum buildout scenarios, and Tryon would not likely achieve this density. For example, a solar farm at 10 acres would employ only five persons. A 12,900 – person office park would create a large demand for sewage infrastructure that is likely not sustainable at the location. Nor, would traffic prove very attractive to the local community for possibly 10,000 or more cars every rush hour.

DCG Corplan will assume that future market demands will propel Tryon into a mixed-use Technology Park, with varied industrial, flex-type, and office buildings occupying the site. Based on this assumption, an average FAR of 0.175 could produce as much as 1.8 million square feet and 2,700 jobs based on an employee density of 700 square feet per person.

Parcel	Acreage	Mixed - Use SF.	Jobs
A	70	534,000	800
B	25	191,000	300
C	26	198,000	300
D	16	122,000	200
E	22	168,000	200



F	25	191,000	300
G	17	130,000	200
H	35	267,000	400
Total	236	1,801,000	2,700

Regional Business Training & Incubation Center

The most prominent building at Tryon is the former central administration facility. This building previously served as a recreation, learning, and gathering location when Tryon was oriented as a juvenile detention facility. With its classrooms, automotive shops, gymnasium, and auditorium, the building is a natural fit as a business training and incubator center for the Tryon Technology Park, and can also serve as offices for Park administration and rental activities.



At approximately 73,000 sq. ft., this facility has a unique aerial footprint which has a marketable use in promotion of the technology concept. With its corridor splines interconnecting the “pods” of classrooms or recreation uses, the overhead view suggests something of scientific or military nature.

3.e – Target Industry Prospectuses

In response to a request by Fulton County to focus on two specific opportunities for the Tryon Technology Park, two industry attraction prospectuses have been prepared. The first is for In Vitro Diagnostic Substances Manufacturing from the Biomedical Research & Development Cluster. The second is for Frozen Specialty Food Manufacturing from the Food & Beverage Cluster.

These marketing reports highlight the competitive advantages of a location within the Fulton-Montgomery Co. Region, and especially, the Tryon site. The new materials make full use of the current brand line “NY’s Fulton-Montgomery Region”. The prospectuses are organized as follows:



- A summary of key findings
- Introduction and discussion of the industry
- Analysis of the national value of shipments and growth prospects
- Evaluation of leading competitive states
- A discussion and analysis of typical production facility requirements
- Tabular evaluation of labor requirements and average hourly wages
- Financial review of debt service and profitability of a Tryon facility in comparison to competitive locations
- Comparisons of hourly wages for a Tryon, NY State and competitive industry locations
- Review of competitive advantages of the NY's Fulton-Montgomery Region
- Summary of the Tryon Technology Park's locational advantages including financial incentives available
- Contact information

In Vitro Diagnostic Substance Manufacturing

Key Findings

- In Vitro Diagnostic Substance Manufacturing industry shipments will reach almost \$70 billion by 2017.
- Industry shipments have increased by 50% since 1997.
- The in-vitro diagnostics is predicted to see a 4.4% compound annual growth rate between 2012 and 2018, with significant growth in molecular diagnostics for conditions such as cancer, infectious diseases, sexually transmitted diseases, genetic testing and chronic diseases.
- The US industry is highly concentrated: the top eight companies account for about 70 percent of revenue.
- According to data from the US Census Bureau, there were 241 establishments in the US involved in in-vitro diagnostic substance production in 2013, employing 25,519 persons.



- New York is the 2nd leading state for the industry with 8.1% of total employment, following California with 26%.
- The ten leading states with concentration of the industry account for nearly 80% of all employment.
- Numeric averaging of US and NY establishment size results in a 170-person typical plant size.
- Production employment represents 35% of total labor, and fringe benefits are estimated just slightly below 30% of payroll. Based on New York State mean hourly wages, total payroll is \$15.2 million, or an average wage of \$33.95 per hour. Average production wages are \$1937 per hour.
- Annual sales are estimated at \$62.7 million for a typical plant and average output per employee is calculated at \$0.369 million.
- The typical physical plant is estimated at 242,000 sq. ft. and a land coverage of 60 acres. Construction and equipment costs are approximated at \$350 per square foot and land purchase costs are \$20,000 per acre. Total investment is estimated at \$85.9 million.
- An upstate New York location such as the NY's Fulton-Montgomery Region offers the competitive advantage of total annual payroll savings (before benefits) in a range of up to \$4.0 million compared to San Francisco (most expensive competitor).
- NY's Fulton-Montgomery Region a very well-trained technical labor force and a well-developed high-tech manufacturing environment. The Region is in a very competitive position for this industry.
- The Risk Management Association (RMA) indicates a 9.5% net profit before taxes for the industry with sales of at least \$25 million; a NY's Fulton-Montgomery Region location should generate 10.2% profit.



- The Tryon Technology Park is ideally suited to the industry as a secure and tranquil location with good road access and high technology telecommunications infrastructure already in place. Start-Up NY benefits are available to qualified businesses locating at the Tryon Technology Park.

Frozen Specialty Food Manufacturing: Key Findings

- Frozen Specialty Food Manufacturing industry shipments will reach over \$23 billion by 2019.
- Industry shipments have increased by 45% since 2003.
- Frozen Specialty Food is predicted to see a 3.9% compound annual growth rate between 2013 and 2019, with significant growth in ready-to-eat meals including pizza.
- The industry leader is Nestle, followed by DiGiorno, Green Giant, Stouffer's, ConAgra Foods, Lamb Weston, Goya and White Wave.
- There were 465 establishments in the US involved in Frozen Specialty Food production in 2013, employing 56,056 persons.
- New York is ranked 15th among US states with the highest industry employment, with a 2.1% share of total job count. The leading state is California with 14%, followed by Ohio, Texas, and Kentucky.
- The ten leading states with concentration of the industry account for over 65% of all employment.
- Numeric averaging of US and NY establishment size results in a 90-person typical plant size.
- Production employment represents 76% of total labor, and fringe benefits are estimated just slightly below 33% of payroll. Based on a typical facility utilizing New York State mean hourly wages, total payroll is estimated at \$4.2 million, or an average wage of \$17.18 per hour. Average production wages are \$15.64 per hour.



- Annual sales are estimated at \$30 million for a typical plant and average output per employee is calculated at \$0.335 million.
- The typical NY State physical plant is estimated at 75,000 sq. ft. and a land coverage of 30 acres. Combined construction and equipment costs are approximated at \$180 per square foot and land purchase costs are \$20,000 per acre. Total investment is estimated at \$14.1 million.
- New York's Fulton-Montgomery Region offers the competitive advantage of total annual payroll savings (before benefits) in a range of up to \$428,000 compared to Cincinnati, OH (most expensive competitor).
- NY's Fulton-Montgomery Region has a very well-trained technical labor force, an established and responsive manufacturing environment, and a diverse agricultural background. New York State is ranked of 26th in total agricultural output, 28th in crop production, and 22nd in livestock. The Region is in a very competitive position for growth of this industry.
- The Risk Management Association (RMA) indicates an industry benchmark of 5.2% net profit before taxes for the industry with sales of at least \$25 million. A location in NY's Fulton-Montgomery Region should generate a projected 8.9% profit which exceeds profitability for all identified competition.
- The Tryon Technology Park is ideally suited to the industry as a secure and tranquil location with good road access and high technology telecommunications infrastructure already in place. Start-Up NY benefits are available to qualified businesses locating at the Tryon Technology Park.



Task 3 Conclusion

In the preceding sections, target clusters have been developed and their component 6-digit industries identified and evaluated. From two ranking perspectives, development priority and workforce impact, orders of cluster priority have been generated with differing outcomes. In this final ranking, a weight scoring of 133% for the Development Priority categories have been utilized. While an equal scoring basis might have been selected, it is DCG Corplan’s opinion that basic operational performance and economic impacts are the primary objective, with equity of pay and middle income achievements as only a slightly less critical goal.

Cluster	Development Priority Ranking	Workforce Impact Ranking	Weighted Score	Final Rank
Biomedical Research & Development	1	3	4.33	1
Food & Beverage	3	5	8.99	2
HQ & Business Services	4	4	9.32	3
Renewable Energy	7	1	10.31	6
Software & Media	5	6	12.65	7
Health Care Products & Services	2	7	9.66	4
Electronics	6	2	9.98	5

From this final rank, the marketing the new targeted clusters should be approached in the following order:

1. BIOMEDICAL RESEARCH & DEVELOPMENT
2. FOOD & BEVERAGE
3. HQ & BUSINESS SERVICES
4. HEALTH CARE PRODUCTS & SERVICES
5. ELECTRONICS
6. RENEWABLE ENERGY
7. SOFTWARE & MEDIA

