

**APPENDIX B
TARGETED INDUSTRY ANALYSIS**

TERMINOLOGY DEFINITIONS

SCREENING

- 2.1 Step 1 – County Presence**
- 2.2 Step 2 – Compatibility with Hudson County**
- 2.3 Step 3 – Compatibility with the Cyberdistrict
- 2.4 Step 4 – Strong Past Performance of Employment Growth
- 2.5 Step 5 – Potential for Future Employment Growth

3. COMPARATIVE RESULTS

This section of the report details the selection process and resulting target industry list for the Cyberdistrict in Hudson County. It is important to note that this effort is intentionally broad to ensure that all possible target markets are addressed before being selected or removed. As with any project that plans to capitalize on “high-tech” industries, it is important not to define the term “high-tech” too narrowly. Approaching an effort, such as this, with a narrow scope will most likely eliminate or overlook several industries that are not “traditional” high-tech industries, but use high-tech equipment and/or infrastructure in their processes.

For example, warehousing is typically not considered a “high-tech” industry. However, there have been several innovations in warehousing that rely upon “high-tech” infrastructure. A notable innovation in warehousing is the use of automated stock retrieval. In this instance, a warehouse is setup with extensive computer-related networks and relays that work together to have an unmanned forklift find, retrieve, and deliver certain goods to a loading dock based on a request keyed into a computer.

This is just one example where a traditionally “low-tech” industry can take advantage of a “high-tech” environment. As a result, the consultants maintained a very loose definition of high-tech, making the target industry study more inclusive rather than exclusive.

Additionally, this analysis varies slightly from previous target industry efforts done for Hudson County. Past efforts have focused on “vertical” clusters, or in other words, a grouping of varying industries that rely upon each other for the production or development of particular goods and services. This effort focuses more closely on “horizontal” clusters, or groupings of industries that perform the same function. The latter method was used because the focus of this study is for the creation of a high-tech Cyberdistrict. To this end, it is more appropriate to study industries that use and produce technology than a chain of industries, where only a few may be compatible with the goals and objectives of this effort.

1.0 TERMINOLOGY DEFINITIONS

Before getting into the screening process and the results of the analysis, it is important to understand the principles behind the efforts. At the base of this explanation, is the definition of important terminology used in the process. There are three main terms in this study that need special explanation to be understood: market sector, sub-market, and industry. This is what is meant by these terms:

Term	NAICS Equivalent	SIC Equivalent
Market Sector	3-digit (315: Apparel Manufacturing)	2-digit (23: Apparel, Finished Products from Fabrics Manufacturing)
Sub-Market	4-digit (3152: Cut and Sew Apparel Manufacturing)	3-digit (233: Women's, Juniors', and Misses' Apparel Manufacturing)
Industry	6-digit (315233: Women's and Girl's Cut and Sew Dress Manufacturing)	4-digit (2335: Women's, Juniors', and Misses' Dress Manufacturing)

Throughout this analysis, these terms will be used to describe the level of detail used in each particular step of the analysis. As seen in the previous Table, each term refers to a different, but corresponding level of detail in the currently used North American Industrial Classification System (NAICS) and its predecessor, the Standard Industry Classification (SIC) codes.

2.0 SCREENING

The consultants used five screening layers to determine which industries would make the target industry list. They are: [1] strong presence in the County; [2] compatibility with the economic development goals of the County; [3] compatibility with the Cyberdistrict concept; [4] past performance of industry growth; and [5] potential future industry growth. Each one of these steps is discussed in detail below.

2.1 Step 1: County presence

To begin the process, I looked at the existing employment base in Hudson County. The consultant used the 1999 NAICS county business pattern data from the US Census department at the 6-digit level. From there, RKG set minimum standards to be considered a “cluster”. Clusters are important because they indicate industries that have successfully inhabited an area, usually due to key locational benefits. As a result, industries that have a strong presence in Hudson County are proven to find the location, and local amenities, beneficial for business. In other words, they can be successfully attracted into the County.

Based on the employment and establishment counts in the County, sub-markets (4-digit NAICS) need to meet the minimum standard of 1,000 jobs to make the primary sub-market list. Sub-markets that had employment totals between 500-1,000 employees were placed on the secondary list. Any market sector or sub-market that does not meet these minimum standards was removed from the list. Sub-markets that fell in the secondary list were screened using higher scrutiny, since they have a much weaker impact in the local market. A table revealing the primary and secondary sub-market clusters that met the minimum criteria can be seen in the Appendix section of this chapter.

2.2 Step 2: Compatibility with Hudson County

The second step eliminated industries from the primary and secondary sub-market list that are not compatible with the economic development goals of Hudson County. To accomplish this task, the consultants referred to the Hudson County Master Plan and interviewed the Hudson County Economic Development Corporation to get the County’s criteria. The following list details the goals of the County, based on this research:

- < Matches local resources to business needs;
- < Provides training and skill improvement to the labor force;
- < Creates good-paying, local jobs itself;
- < Creates additional jobs among suppliers and support organizations;
- < Contributes to the tax base;
- < Is export-oriented, preferably with international potential;
- < Is in a stable or growing industry;
- < Is environmentally friendly; and
- < Participates with and in the community as a “good neighbor”.

While many of these criteria require subjective standards by nature, the consultants feel that they encapsulated the needs and desires of the community through this screening process. Any industry that is not capable of meeting with this set of requirements was removed from the primary and secondary sub-market cluster list. For example, an industry that is traditionally associated with high levels of pollutants would be removed from the list. The pared down list is offered the Appendix section of this chapter.

2.3 Step 3: Compatibility with the Cyberdistrict

At this point, the consultants reviewed the updated list to weed out any sub-markets that are not a good fit for a “Cyberdistrict”. As mentioned earlier, this effort is more inclusive than exclusive. As a result, the list of sub-markets that are not compatible is intentionally short, ensuring that all possible users of the Cyberdistrict are included. These sub-markets include agriculture, construction, retail sales, heavy industrial manufacturing, and personal services. The Table below lists the NAICS sub-markets that passed the first three screening efforts.

Table 2-1

Target Industry List - Following the First Three Screens

Code	Strong	Code	Moderate Sub-Markets
3231 Printing and Related Support Activities	3152	Cut and Sew Apparel Manufacturing	
4841 General Freight Trucking	4216	Electrical Goods Wholesalers	
4842 Specialized Freight Trucking	4223	Apparel, Piece Goods, and Notions	
4854 School and Employee Bus Transportation	4885	Freight Transportation Arrangement	
5111 Newspaper, Periodical, Book, and Database	4921	Couriers	
5121 Motion Picture and Video Industries	4931	Warehousing and Storage	
5133 Telecommunications	5241	Insurance Carriers	
5221 Depository Credit Intermediation	5242	Agencies, Brokerages, and Other Insurance	
5231 Securities and Commodity Contracts	5311	Lessors of Real Estate	
5239 Other Financial Investment Activities	5411	Legal Services	
5415 Computer Systems Design and Related Services	5412	Accounting, Tax Preparation, Bookkeeping,	
5416 Management, Scientific, and Technical Consulting	5511	Management of Companies and Enterprises	
6113 Colleges, Universities, and Professional Schools	5611	Office Administrative Services	
	5613	Employment Services	
	6221	General Medical and Surgical Hospitals	

Source: RKG Associates, Inc, 2002

This list is divided into two sections, strong and moderate sub-sectors. Sub-markets that are already strong in the market and have a traditional “high-tech” focus were given special consideration, and listed in the “strong” section.

2.4 Step 4: Strong past performance of employment growth

This step measures the past performance of the sub-markets, and their corresponding industries, from Table 2-1. To perform this analysis, the consultants used the 1991 and 1997 SIC county business pattern data from the U.S. Census Bureau. It is important to note at this point, that the NAICS and SIC classifications are not designed for direct comparison. However, the U.S. Census Bureau has released “SIC to NAICS” and “NAICS to SIC” conversion charts that allow for indirect, but relevant transitions between the two systems for instances such as these. The consultant deciphered which SIC industries (at the 4-digit level) coincided with which NAICS industries (at the 6-digit level). As a result, the consultant was able to measure the performance of several SIC industries and translate them into their NAICS equivalents, and then into their respective sub-markets.

The consultant measured both the absolute growth trends and the percentage growth trends for each of the fore-mentioned NAICS sub-markets. This ensured that growth in relatively small sub-markets was weighted fairly against the growth of larger sub-markets. For example, a sub-market that grew from 500 to 600 employees experienced a net growth of 100 jobs and a percentage growth of 20%. In comparison, a sub-market that grew from 2,000 jobs to 2,200 jobs would have a net growth twice the smaller sub-market (200 jobs), but only one-half the percentage growth (10%).

Table 2-2
Growth Trends of NAICS Sub-Sectors (Translated from SIC
Hudson County, NJ 1991-1997

NAICS	Description	Employment		Change	% Change
		1991	1997		
5239	Other Financial Investment Activities	3,355	11,648	8,293	247.2%
5231	Securities and Commodity Contracts Intermediation	2,828	7,538	4,711	166.6%
5111	Newspaper, Periodical, Book, and Database	1,180	3,952	2,772	234.9%
5613	Employment Services	853	2,501	1,648	193.2%
5416	Management, Scientific, and Technical Consulting	1,614	2,940	1,327	82.2%
4931	Warehousing and Storage	2,360	3,362	1,002	42.5%
5241	Insurance Carriers	762	1,607	845	110.9%
5511	Management of Companies and Enterprises	330	875	545	165.2%
5121	Motion Picture and Video Industries	326	792	465	142.6%
4854	School and Employee Bus Transportation	1,519	1,900	381	25.1%
4885	Freight Transportation Arrangement	1,154	1,518	365	31.6%
5415	Computer Systems Design and Related Services	1,303	1,463	160	12.3%
4841	General Freight Trucking	5,362	5,478	115	2.1%
4842	Specialized Freight Trucking	4,692	4,793	101	2.1%
5221	Depository Credit Intermediation	4,146	4,239	93	2.3%
4921	Couriers	3,352	3,424	72	2.1%
5611	Office Administrative Services	1,026	1,077	51	5.0%
5311	Lessors of Real Estate	1,532	1,504	-28	-1.8%
6113	Colleges, Universities, and Professional Schools	3,210	3,147	-63	-2.0%
5242	Agencies, Brokerages, and Other Insurance Related	1,128	1,033	-95	-8.4%
5133	Telecommunications	1,055	927	-128	-12.1%
4223	Apparel, Piece Goods, and Notions Wholesalers	4,767	4,634	-133	-2.8%
5411	Legal Services	4,132	3,567	-565	-13.7%
3231	Printing and Related Support Activities	2,623	1,976	-647	-24.7%
5412	Accounting, Tax Preparation, Bookkeeping, and	1,850	834	-1,016	-54.9%
6221	General Medical and Surgical Hospitals	7,712	6,517	-1,196	-15.5%
4216	Electrical Goods Wholesalers	4,133	2,349	-1,784	-43.2%
3152	Cut and Sew Apparel Manufacturing	14,739	9,384	-5,355	-36.3%

Table 2-2 details the net and percentage growth for each of the sub-markets making this portion of the analysis. The findings for net change and percentage change are consistent. The four highest ranked sub-markets for net growth are also ranked the highest in percentage growth during this time period. In fact, only two of the top nine sub-markets in net growth had percentage growth rates below 100%. In terms of decline, the six sub-markets with the largest decline between 1991 and 1997 are also the six highest ranked sub-markets of percentage loss.

In general, the information, financial & insurance, and warehousing market sectors experienced the most significant growth. The top three sub-markets (financial investing, commodity brokering, and publishing) experienced a growth in employment of almost 16,000 jobs. In contrast, the apparel manufacturing and wholesaling sub-markets combined for a net loss of almost 5,500 jobs.

2.5 Step 5: Potential for future employment growth

Last, the consultants measured the potential growth of the market sectors using State of New Jersey Department of Labor projections. The projections indicate the expected growth (or decline) by 2008, but were done at the 2-digit SIC level. Because there is less of a direct translation between these numbers and the NAICS industries, these numbers can only be used as a “loose estimate” of potential growth. However, they do give a reasonable outlook on the projected relative health of each market in the county.

As a result, this analysis identifies the top sub-markets from the above list that would be most likely to use the Cyberdistrict, based on ‘cluster theory’. The ranking was broken into four categories: [1] strong growth (over 500 new jobs by 2008); [2] moderate growth (100 to 500 new jobs); [3] stable employment between 0 and 100 new jobs over the study period); and [4] employment decline. Table 2-3 reveals the results of this analysis.

Surprisingly, some of the sub-markets that experienced an employment loss between 1991 and 1997 are expected to rebound somewhat by 2008. The most notable on this list are the electrical goods wholesalers and the hospitals, which both lost over 1,000 jobs, but are projected to grow in the near future. As already mentioned, this is not an exact analysis, but does reveal the expectations of employment trends by the State.

Table 2-3
Projected Growth Range by NAICS Sub-Sectors (Translated from SIC
Hudson County, NJ 1998-2008

NAICS Description

STRONG GROWTH (over 500 jobs)

- 4223Apparel, Piece Goods, and Notions Wholesalers
- 4854School and Employee Bus Transportation
- 4885Freight Transportation Arrangement
- 5231Securities and Commodity Contracts Intermediation and Brokerage
- 5239Other Financial Investment Activities
- 5415Computer Systems Design and Related Services
- 5416Management, Scientific, and Technical Consulting Services
- 5611Office Administrative Services
- 6221General Medical and Surgical Hospitals

MODERATE GROWTH (between 100-500 jobs)

- 3231Printing and Related Support Activities
- 4216Electrical Goods Wholesalers
- 4841General Freight Trucking
- 4842Specialized Freight Trucking
- 4921Couriers
- 4931Warehousing and Storage
- 5111Newspaper, Periodical, Book, and Database Publishers
- 5121Motion Picture and Video Industries
- 5241Insurance Carriers
- 5242Agencies, Brokerages, and Other Insurance Related Activities
- 5311Lessors of Real Estate
- 5411Legal Services
- 5613Employment Services

STABLE EMPLOYMENT (between 0-100 job growth)

- 5133Telecommunications
- 5412Accounting, Tax Preparation, Bookkeeping, and Payroll Services

EMPLOYMENT DECLINE

- 3152Cut and Sew Apparel Manufacturing
 - 5221Depository Credit Intermediation
 - 5511Management of Companies and Enterprises
 - 6113Colleges, Universities, and Professional Schools
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3.0 COMPARATIVE RESULTS

The results of this analysis produced a list of sub-markets that will provide a strong basis for target marketing and recruitment efforts. It is important to note at this time that this analysis does not suggest, in any way, to limit marketing and recruitment efforts to the list provided in this section. Rather, the consultants feel that these sub-markets are a strong starting point for business targeting and attraction. Simply put, these sub-markets, and their respective market sectors, are the best fit for the County, in terms of a Cyberdistrict, and will likely be the most interested to participate in this Cyberdistrict initiative. Table B-1 highlights the findings from the 5-step analysis detailed in the previous section of this chapter.

The prolific market sector that should be considered is Finance & Insurance (NAICS 52). This industry has become the premier growth industry in the County over the past several years, and provides the brightest outlook for future growth in the County as well. With the continuing development of Internet access to financial, investment, and banking needs, Hudson County will remain a logical choice for companies looking to be close to the financial center in Manhattan while avoiding the negative externalities of that location. As a result, Hudson County should be well positioned to attract further investment in this sector.

The Transportation & Warehousing (NAICS 48) should also play an integral role in the development of a Cyberdistrict in Hudson County. Hudson County has long been a transportation hub for Northern New Jersey, and most of the Northeast. The strong connectivity between air (Newark Airport), rail, highway, and water transportation in Hudson County makes it an ideal location for shipping and personal transit industries. Immediate access to Manhattan also makes Hudson County a well-traversed location for commuting traffic. This apparent and extensive transportation “laboratory” provides an optimal research environment for the development and use of new sector-related advances.

The Professional, Scientific, & Technical Services (NAICS 54) and Information (NAICS 51) market sectors should provide a significant, but comparatively smaller role to that of the Transportation and Finance industries. Industries associated with these sectors encompass the most straightforward link to the physical and intellectual image of a “high-technology” Cyberdistrict. Hudson County currently benefits from the presence of many sub-markets from these sectors, but has greater local and regional competition for these types of industries compared to the previous-mentioned market sectors.

In short, the data suggest that Hudson County should continue to capitalize on the strengths that have been built over the past few decades. However targeting efforts should be more expansive than just these four market sectors since they, as Table 3-1 shows, are not the only ones with sub-market clusters well positioned for a Cyberdistrict marketing and recruitment initiative in Hudson County.

Table B-1
Relative strength of Existing Industry Clusters by Economic Outlook

NAICS Description	PAST	PRESENT	FUTURE
4854 School and Employee Bus Transportation			
5231 Securities and Commodity Contracts Intermediation and			
5239 Other Financial Investment Activities			
5415 Computer Systems Design and Related Services			
5416 Management, Scientific, and Technical Consulting Services			
4841 General Freight Trucking			
4842 Specialized Freight Trucking			
5111 Newspaper, Periodical, Book, and Database Publishers			
5121 Motion Picture and Video Industries			
4885 Freight Transportation Arrangement			
5611 Office Administrative Services			
4931 Warehousing and Storage			
5613 Employment Services			
5241 Insurance Carriers			
3231 Printing and Related Support Activities			
4223 Apparel, Piece Goods, and Notions Wholesalers			
6221 General Medical and Surgical Hospitals			
4921 Couriers			
5242 Agencies, Brokerages, and Other Insurance Related			
5311 Lessors of Real Estate			
5133 Telecommunications			
4216 Electrical Goods Wholesalers			
5411 Legal Services			
5221 Depository Credit Intermediation			
6113 Colleges, Universities, and Professional Schools			
5511 Management of Companies and Enterprises			
5412 Accounting, Tax Preparation, Bookkeeping, and Payroll			
3152 Cut and Sew Apparel Manufacturing			

Source: RKG Associates, 2002

PAST; Experienced employment growth
PAST; Experienced employment decline (>100 job decline)

PRESENT; Strong fit in Cyberdistrict
PRESENT; Moderate fit in Cyberdistrict

FUTURE; Modest to Strong projected growth (100 to 500+)
FUTURE; Stable Employment (0-100 job growth)
FUTURE; Projected decline (<0 job growth)

The Appendix section contains a detailed list of the sub-markets included in Table 3-1, with their corresponding industries.





