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Target Industry Summary

MetroHartford Alliance

October 2005

OUTLINE

ONE: AE's Selection Process

TWO: Metro Hartford's Current Industries

THREE: Metro Hartford's Target Industries

Advanced Security/Defense Manufacturing

Financial Services

Biotechnology

Logistics/Distribution

Clean Energy

Health Services

METRO HARTFORD

SELECTION PROCESS

TARGET SELECTION PROCESS

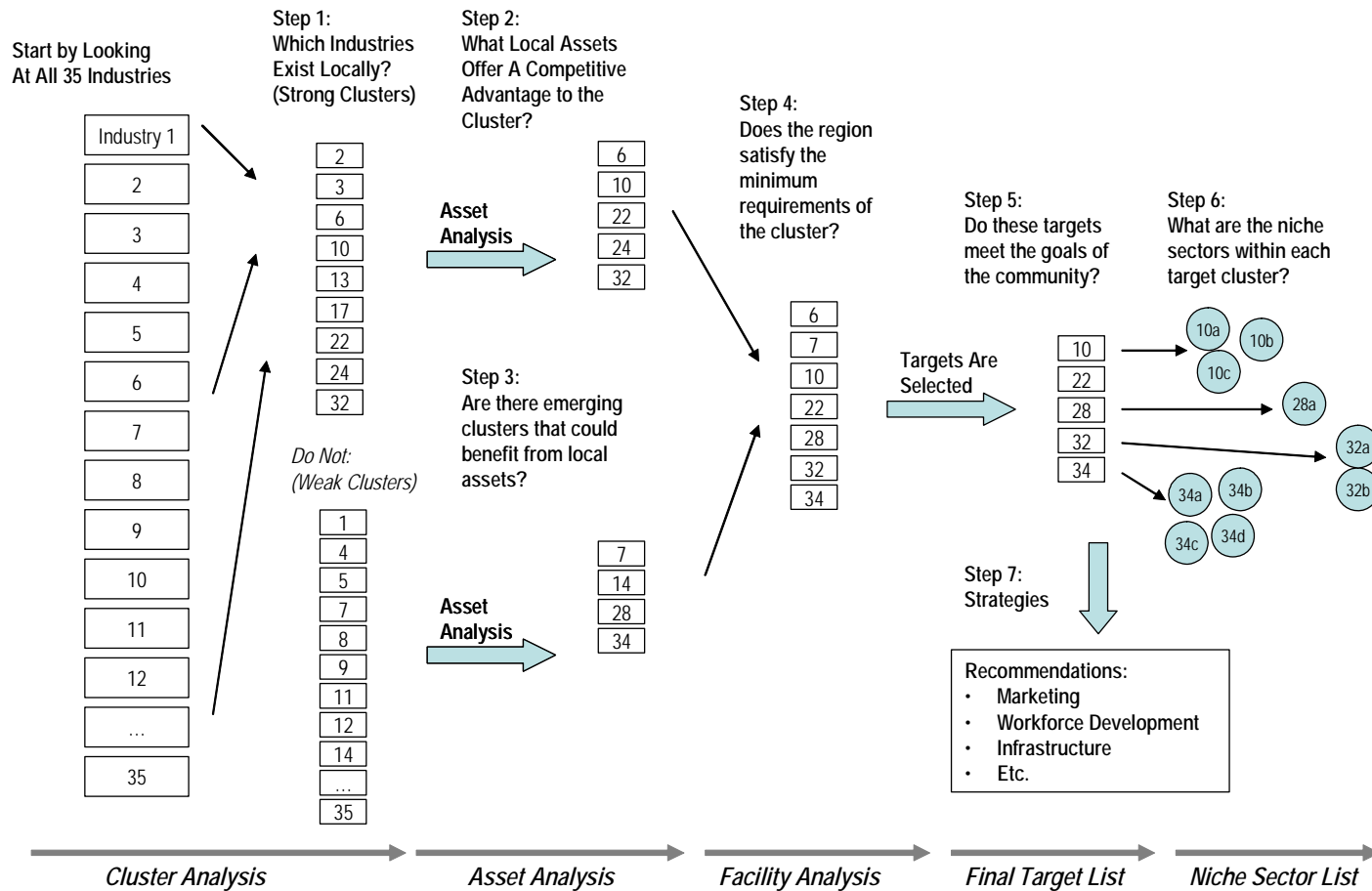
Our goal is to identify the most appropriate industries for development and recruitment in the Metro Hartford region

Key Criteria utilized during our assessment:

1. What industries currently exist locally, and are they growing?
2. Are there local assets that give specific industries (*current or emerging*) a competitive edge?
3. Does the community meet the requirements of the industry?
4. Does the industry match community goals?

TARGET SELECTION PROCESS

AngelouEconomics Target Selection Process



TARGET SELECTION PROCESS

AE uses cluster analysis to understand regional industries

- Clusters are highly integrated groups of businesses with strong horizontal and vertical linkages.
- To assess cluster strength, AE uses “location quotients” (LQ).
 - An LQ is the proportion of the cluster’s local employment share versus national employment share.
- An LQ of 1.00 indicates an equal share percentage, an LQ of 2.00 indicates a strong cluster, and an LQ of 0.50 indicates a weak cluster.

METRO HARTFORD

CURRENT INDUSTRIES

METRO HARTFORD EMPLOYMENT BASE

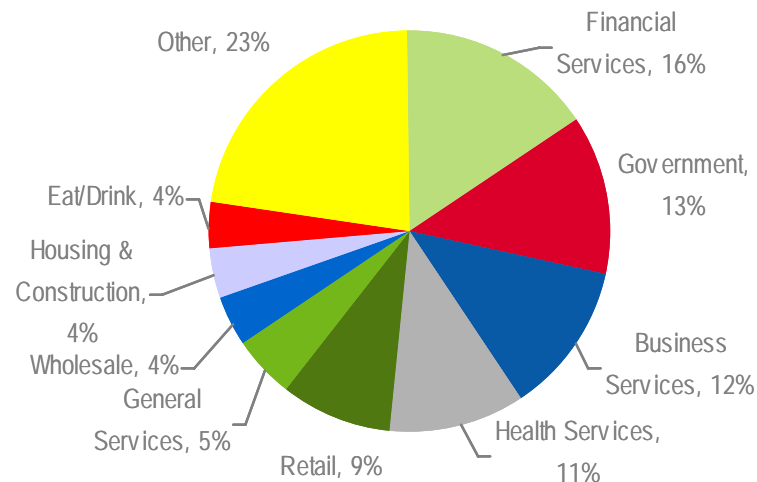
- Financial Services & Government employ the largest number of people in the region.

- Manufacturing is not shown as a separate cluster because it is a function inherent in many of the "Other" industries, including Industrial Machinery, Biotechnology, and Chemicals and Plastics.

- Although these industries have the largest employment bases, they are not necessarily the strongest clusters.

METRO HARTFORD EMPLOYMENT

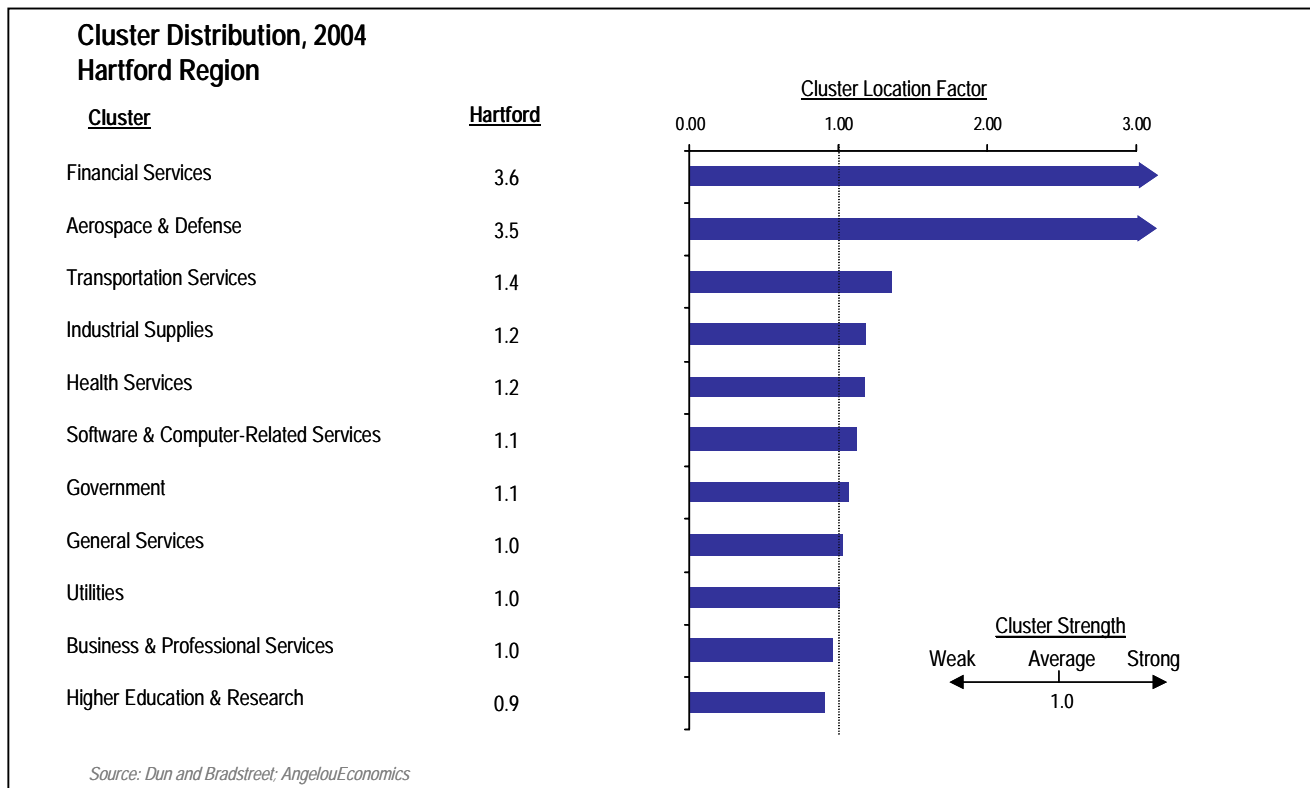
% TOTAL EMPLOYMENT BY CLUSTER, 2004



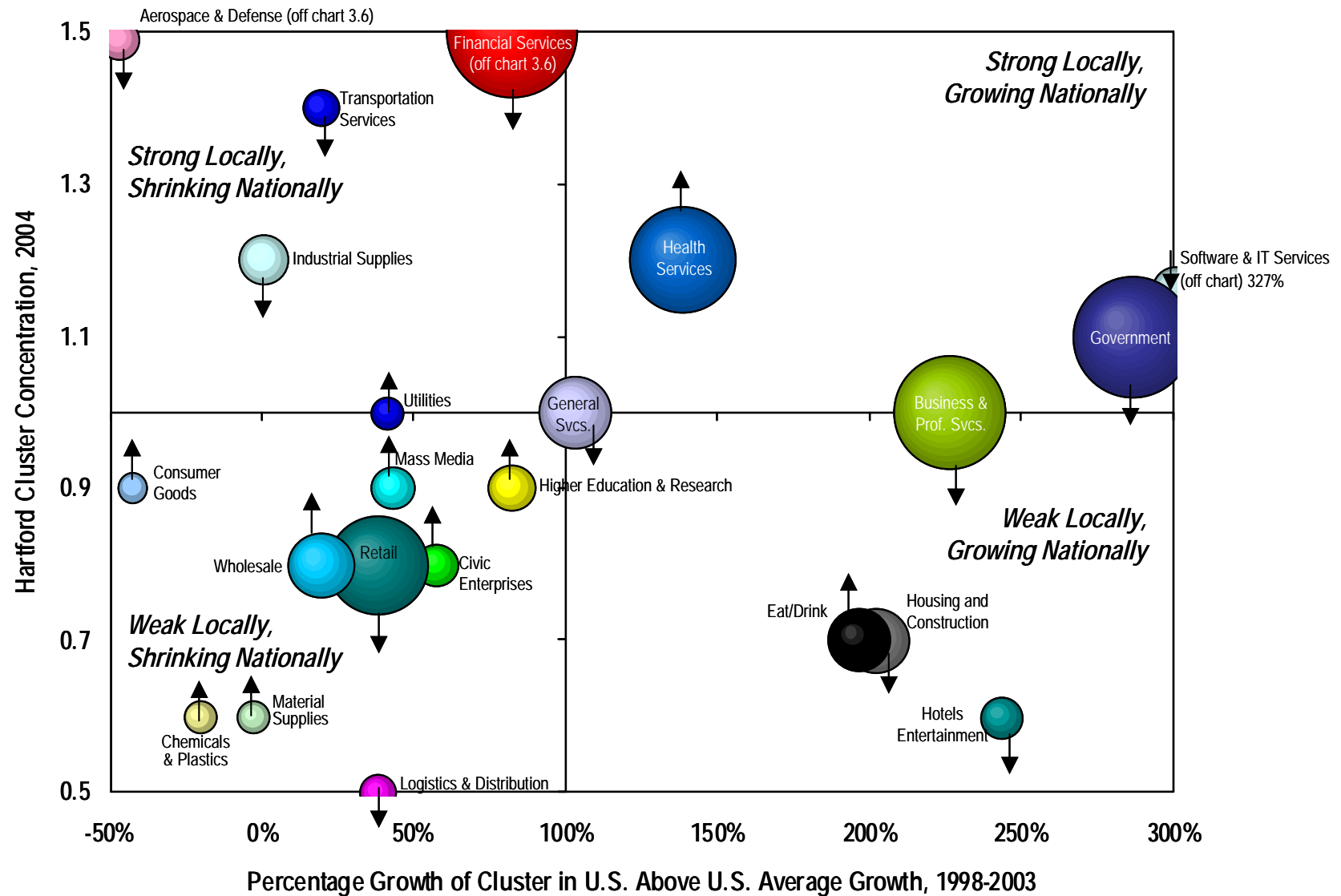
Source: Dun & Bradstreet, AngelouEconomics

METRO HARTFORD CLUSTERS

Financial Services and Aerospace & Defense are the region's strongest clusters.



METRO HARTFORD CLUSTERS



METRO HARTFORD ASSETS & LIMITATIONS

ASSETS

- Strategic location between NYC & Boston
- Easy access to major interstates
- Bradley International Airport
- High quality of life
- Well-educated workforce
- Nearby colleges and universities
- Strong corporate presence

LIMITATIONS

- High cost of doing business
- Poor image perception
- Lack of coordinated entrepreneurial support
- Lack of state incentives
- Lack of young professional workforce
- Inadequate rail access

TARGET INDUSTRY IDENTIFICATION

TARGET INDUSTRY SELECTION CRITERIA

Evaluated on:

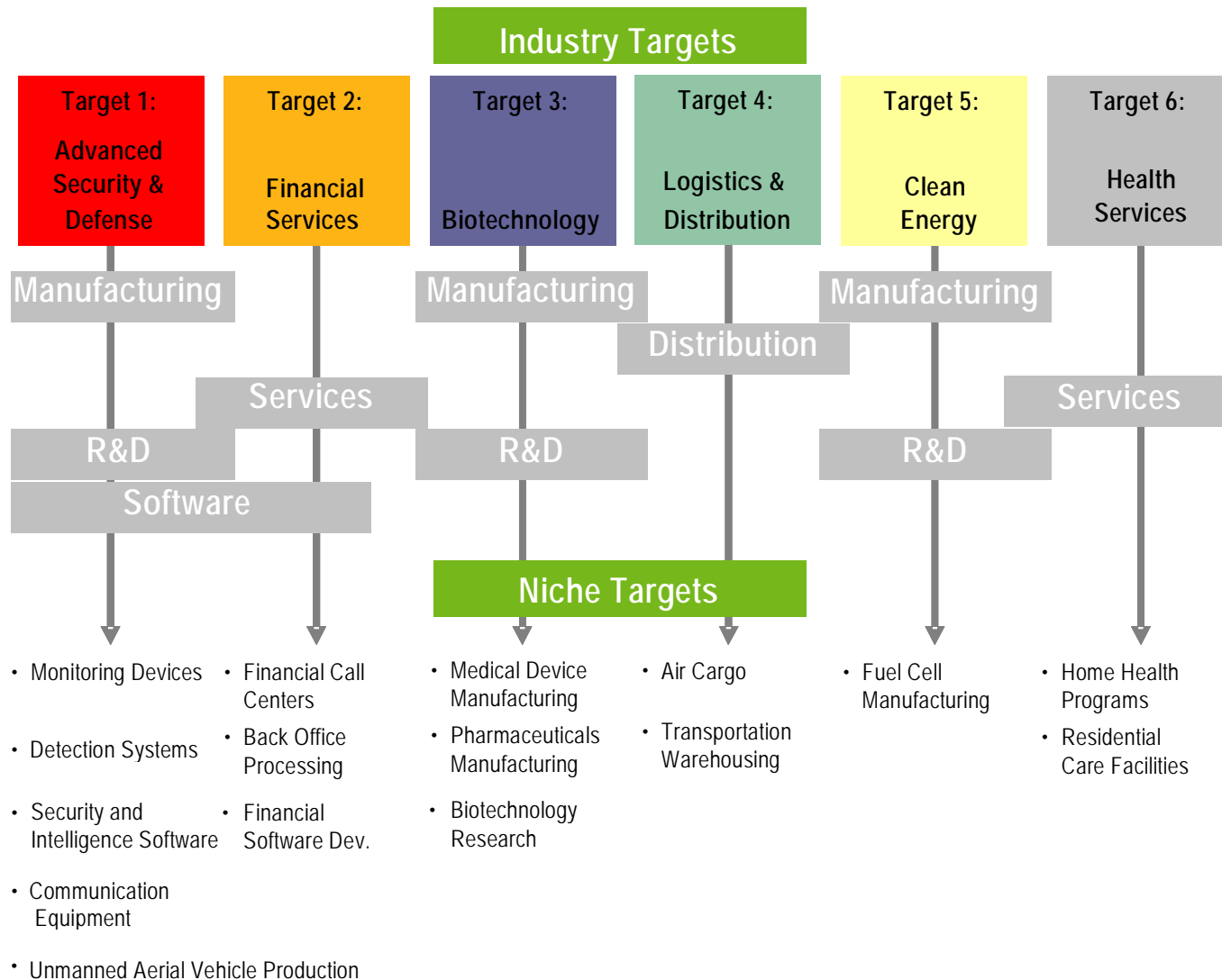
- Cost Structure
- Labor Force
- Infrastructure
- R&D

Industry	Location Quotient	Primary Industry?	Cost Structure	Labor Force	Infrastructure	R&D	Final Target?
Aerospace & Defense	3.493	Yes	X	X	X	X	Yes
Agriculture	0.550	Yes			X		
Apparel & Textiles	0.185	Yes					
Biotechnology	0.412	Yes	X			X	Yes
Business & Professional Services	0.961	Yes	X	X	X	X	
Chemicals & Plastics	0.600	Yes		X			
Civic Enterprises	0.791	No	X	X	X		
Communication Equipment	0.317	Yes			X		
Communication Services	0.343	Yes			X		
Computer Equipment	0.281	Yes			X		
Consumer Goods	0.856	Yes	X	X	X		
Eat/Drink	0.744	No	X	X	X		
Electronics	0.811	Yes			X		
Financial Services	3.556	Yes	X	X	X	X	Yes
Food Processing	0.353	Yes					
General Services	1.032	No		X	X		
Government	1.072	No	X	X	X		
Health Services	1.176	Yes	X		X	X	Yes
Higher Education & Research	0.905	Yes	X	X	X	X	
Hotels & Entertainment	0.565	Yes	X	X	X		
Housing & Construction	0.718	No	X	X	X		
Industrial Machinery	0.678	Yes		X	X		
Industrial Supplies	1.180	Yes		X	X		
Logistics & Distribution	0.505	Yes	X	X	X		Yes
Mass Media	0.882	Yes	X				
Material Supplies	0.610	Yes		X	X		
Natural Resources/Clean Energy	0.102	Yes			X	X	Yes
Retail	0.830	No	X	X	X		
Semiconductors	0.863	Yes					
Software & Computer-Related Services	1.128	Yes			X	X	
Transportation Equipment	0.466	Yes		X	X	X	
Transportation Services	1.362	No		X			
Utilities	1.005	No	X	X	X		
Wholesale	0.840	Yes	X	X	X		

METRO HARTFORD

TARGET INDUSTRIES

TARGET INDUSTRY IDENTIFICATION



METRO HARTFORD

**ADVANCED SECURITY/
DEFENSE MANUFACTURING**

ADVANCED SECURITY

Description

The U.S. security market is broad and includes market segments such as surveillance and monitoring, access control, biometrics, computer security, fire/burglar alarms, and home automation.

ADVANCED SECURITY

NAICS Definition

- 334119 Biometrics system input device
- 3355999 Electrical Equipment Manufacturing
- 541380 Testing Laboratories
- 5417 Scientific Research and Development
- 56162 Security Systems Services
- 561612 Security Patrol Services

Industry Profile

- \$23.4 billion in revenues

Wage Rates

- \$25/hr - U.S.

Location Criteria

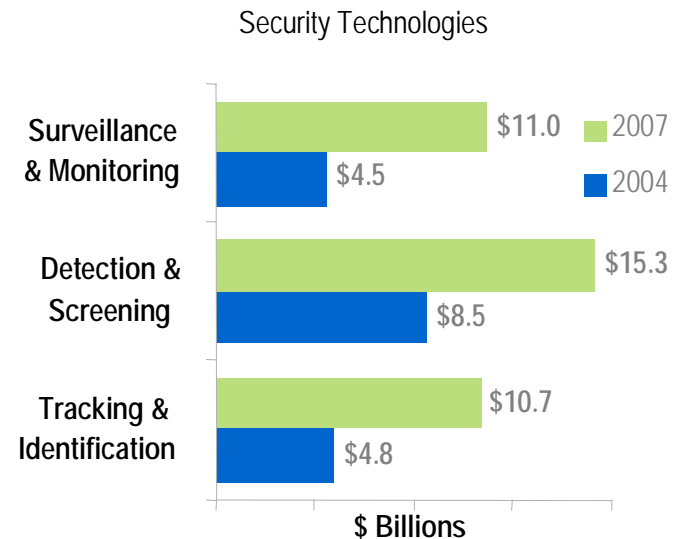
- Educated workforce
- Research institutions
- High tech cluster

ADVANCED SECURITY

Why Advanced Security?

- Rapidly growing \$35-40 billion industry
- 100% industry growth through 2007
- Large R&D component
- High wage industry

ADVANCED SECURITY, 2004-2007



Source: Morgan Keegan & Co.

DEFENSE MANUFACTURING

Description

The defense industry includes a wide-ranging group of individual industries targeting the same market, the Department of Defense (DoD) and its foreign equivalents.

Defense manufacturing includes all aspects of manufacturing, design, research and development, warehousing, and logistics related to federal defense projects.

DEFENSE MANUFACTURING

NAICS Definition

- 336 Transportation Equipment Manufacturing
- 33612 Heavy Duty Truck Manufacturing
- 336992 Military Armored Vehicle and Tank Mftg
- 332993 Ammunition Manufacturing
- 332995 Ordnance and Accessories Manufacturing

Industry Profile

- \$160 billion in revenues
- 350,000 employed - US

Wage Rates

- \$26/hr - U.S.

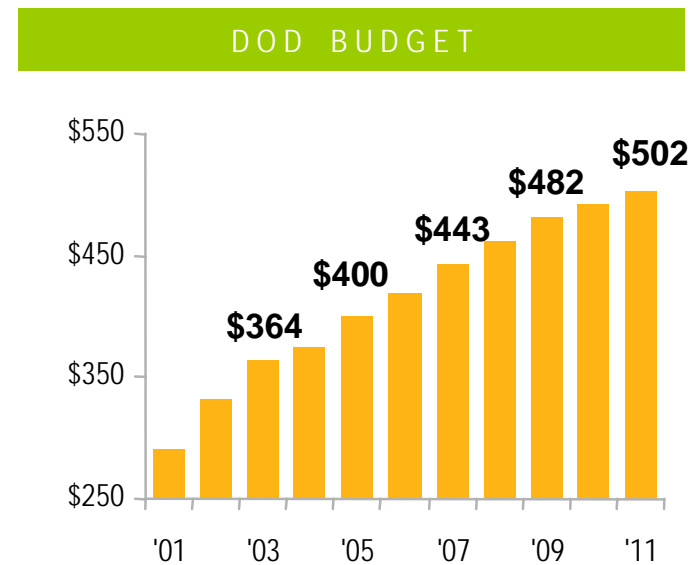
Location Criteria

- Transportation infrastructure
- Existing military facilities/operations
- Manufacturing workforce
- Proximity to good technical training institutions

DEFENSE MANUFACTURING

Why Defense Manufacturing?

- High growth & wage industry - 44% growth between 2001 and 2006 and 6% annual growth until 2011.
- The DoD spends over half its budget with outside private sector contractors - \$230 billion last year.
- Spending on R&D for manufacturing is increasing faster than the overall defense budget.



Source: DOD; AngelouEconomics

ADVANCED SECURITY/ DEFENSE MANUFACTURING

Why Metro Hartford?

- Highly educated, technical workforce that is skilled in defense & metal manufacturing
- Existing concentration of defense manufacturing companies
- Current high-tech manufacturing training programs at area schools
- Quality of life is more important than cost of living

ADVANCED SECURITY/ DEFENSE MANUFACTURING

Potential Niche - Biometrics / Monitoring Devices

Description

The term "Biometrics" has been used to refer to the emerging field of technology devoted to identification of individuals using biological traits, such as those based on retinal or iris scanning, fingerprints, or face recognition. Optical monitoring devices are electrical devices that allow an area to be remotely and automatically monitored. Like optical monitoring, advanced sensors use cutting-edge technology to monitor and account for remote disturbances automatically.

Why Target

Expanding market opportunity that relies on a highly technical workforce that Metro Hartford can provide.

ADVANCED SECURITY/ DEFENSE MANUFACTURING

Potential Niche - Security and Intelligence Software

Description

This includes producers and designers of security and intelligence software. Many companies in this area are also service providers that provide outsourced technology services for large customers.

Why Target

The market is rapidly expanding and Metro Hartford has current proficiencies in both defense products and software development.

ADVANCED SECURITY/ DEFENSE MANUFACTURING

Potential Niche - Biological/Chemical Detection Systems

Description

The effective detection of biological agents in the environment requires a multicomponent analysis system because of the complexity of the environment. In general, biological detection systems are currently in the research and early development stages. There are some commercially available devices that have limited utility and are generally high cost items.

Why Target

An attack using biological, chemical, or nuclear weapons is among the greatest fears of the intelligence community. DoD and DHS are spending enormous sums to develop advanced detection systems for population centers and incoming cargo containers.

ADVANCED SECURITY/ DEFENSE MANUFACTURING

Potential Niche - Unmanned Aerial Vehicle Production

Description

UAVs were originally developed by the DoD to kill from a distance and without fear of being maimed or killed. However, they can also be used to provide videotaped scenes to movie-makers, news reporters and the tourism industry; to search for and rescue people in perilous locations or circumstances; and to monitor or deliver mail to important installations in either highly sensitive locations or remote or uninhabitable places.

Why Target

The push toward network-centric warfare, a desire for real-time intelligence, and shifting threat paradigms have accelerated the push for increased use of unmanned autonomous and semi-autonomous platforms. Unlike aircraft production, there will be as many as 100 UAV lines in production over the next 15 years.

ADVANCED SECURITY/ DEFENSE MANUFACTURING

Potential Niche - Communication Equipment

Description

The interlinking of communications, information technologies, and sensor systems can be used to significantly improve the speed of response, precision and effectiveness of a given level of military force has been confirmed

Why Target

The DoD is currently moving forward with new communications platforms that begin at the war fighter level.

METRO HARTFORD

FINANCIAL SERVICES

FINANCIAL SERVICES

Description

The Financial Services industry is comprised of commercial banks, savings institutions, financial leasing firms, and insurance companies. Financial service providers include equipment leasing companies, stockbrokers and investment banking firms, and back-office credit operations.

FINANCIAL SERVICES

NAICS Definition

- 52 Finance and Insurance
- 522320 Financial Transactions Processing
- 518210 Data Processing
- 522210 Credit Card Issuing
- 56142 Telephone Call Centers

Industry Profile

- 8 million employed – U.S.

Wage Rates

- \$18/hr – U.S.

Location Criteria

- Educated workforce
- Quality office space
- Affordable utilities

FINANCIAL SERVICES

Why Financial Services?

- High growth, high wage industry
- Aging population brings increased demand for investment and insurance services
- Opportunities for recent graduates and young professionals
- Banks are increasingly utilizing call centers to replace information that used to be provided by tellers at a lower cost, but they are high value-add so are outsourced less frequently.

FINANCIAL SERVICES

Why Metro Hartford?

- Highly skilled workforce with a strong base of knowledge and experience in financial services
- Lower cost alternative to other major Northeast markets
- Strategic location between HQs in NYC and Boston
- Abundance of colleges and universities supply a trained workforce

FINANCIAL SERVICES

Potential Niche - Financial Services Call Center

Description

Call centers are at the center of the future strategy for financial service companies. Call centers will not only provide valuable customer service functions, they will also determine the cost structure of a financial services company. Companies that operate innovative, cost-effective call centers will gain competitive advantage in the market.

Why Target

These corporate campuses have excellent wages and long term prospects. Strategic location between corporate headquarters in high cost cities such as NYC and Boston provides them a lower cost alternative, but easy access.

FINANCIAL SERVICES

Potential Niche - Back Office Processing

Description

Back office facilities handle a variety of corporate functions including finance and accounting, application processing, and technical support.

Why Target

With many financial corporations headquartered in nearby New York City and Boston, Hartford's proximity, workforce, and cost structure position the area to attract to the back offices of these headquarters.

FINANCIAL SERVICES

Potential Niche - Financial Service Software Development

Description

Financial service operations rely on highly complex software packages to drive processes, speed, and financial integrity.

Why Target

Metro Hartford has a skilled labor force in both financial services and software development. Due to the widespread use of computers and networking technology, software development can occur nearly anywhere. Many software development firms have begun to open small-to mid-sized development offices throughout the U.S. in order to save money and find talent, which has is sometimes expensive and hard to find in larger metropolitan areas.

METRO HARTFORD

BIOTECHNOLOGY

BIOTECHNOLOGY

Description

Biotechnology refers to scientific work related to genetic engineering for humans, animals and agriculture, environmental work, genetic data mining, and firms involved in the neurosciences and genome work.

The area of biotechnology that is more closely linked with direct applications in health services is known as biomedical. Biomedical includes pharmaceutical manufacturing, medical equipment manufacturing, medical and dental laboratory services, and hospital applications.

BIOTECHNOLOGY

NAICS Definition

325411 Medicinals/Botanicals
325412 Pharmaceutical PreparationMfg
325413 In Vitro Diagnostic Substances
345414 Biological Products
54171 Life Sciences R&D

Industry Employment

- 200,000 employed – U.S.
- 1.2 Million employed (when including Pharma and Medical Devices)

Wage Rates

- \$33/hr – U.S.

Location Criteria

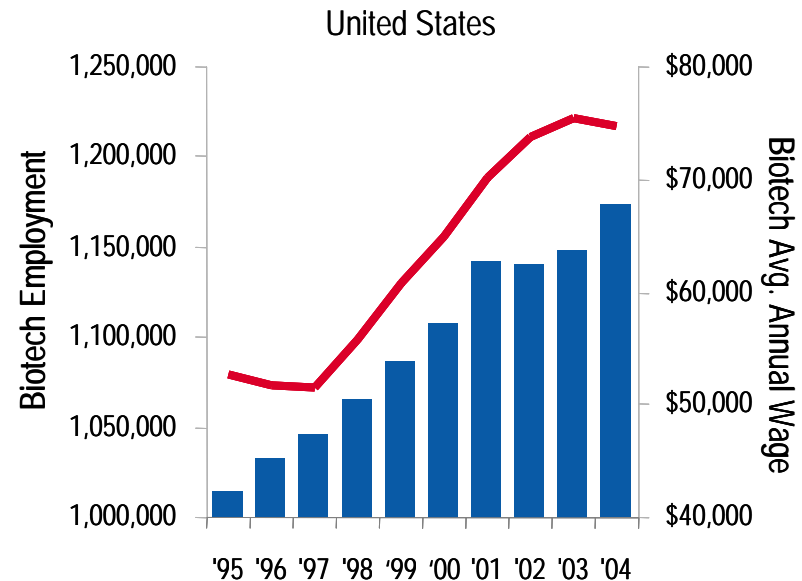
- Educated workforce
- Access to capital
- Affordable lab space
- Major research presence

BIOTECHNOLOGY

Why Biotechnology?

- Employment expected to triple by 2012
- Average annual wage = \$68,000
- An increasingly competitive target

Biotech Industry, 1995-2004



Source: AngelouEconomics;BLS

BIOTECHNOLOGY

Why Metro Hartford?

- R&D programs at area universities are focused on biomedical research
- Highly educated workforce
- Good transportation infrastructure with 2 major highways and a growing airport
- Existing regional cluster of pharmaceutical companies
- Numerous private bio-park developers are working to develop additional wet lab research space for biotech companies

BIOTECHNOLOGY

Potential Niche - Pharmaceutical Manufacturing

Description

Drug manufacturing ranging from solid dosage (tablet based medications) products produced by generic or contract manufacturers, to advanced drug therapies, sterile products, and branded products.

Why Target

Industry is increasingly concerned about operating costs and liability issues. Facility location trends indicate movement outside major metropolitan areas, but still maintaining access. Operations are also subject to intense federal scrutiny and federal inspections. While generic manufacturing has moved offshore, the risks are considered too high for many advanced drug therapies.

BIOTECHNOLOGY

Potential Niche - Medical Device Manufacturing

Description

Medical device firms design and manufacture surgical and diagnostic equipment for the health care field. Products range from CT Scan machines to operating instruments.

Why Target

As with most life science fields, medical device manufacturing is closely regulated, research intensive, and firms have comfortable operating margins. The industry can locate in higher cost locations and Metro Hartford has an existing concentration of such companies.

BIOTECHNOLOGY

Potential Niche - Biotechnology Research

Description

Biotechnology applications must be developed within an R&D environment.

Why Target

Bioscience research within the state of Connecticut totals almost \$4 billion. Eighty percent of all funding for R&D at area universities, or \$430 million, is targeted at the biosciences. This academic base offers a superb base on which to build biotech research facilities and companies.

METRO HARTFORD

LOGISTICS/DISTRIBUTION

LOGISTICS/DISTRIBUTION

Description

Logistics is the process of planning, implementing, and controlling the efficient flow of goods and services through the supply chain from producer to consumer.

Distribution includes all freight carriers (air, water, trucking, and intermodal) and warehousing. Until recently, most manufacturing firms took responsibility for the warehousing and coordination of their flow materials. More often, these services are outsourced to develop an advanced just-in-time delivery system.

LOGISTICS & DISTRIBUTION

NAICS Definition

- 484 Truck Transportation
- 482 Rail Transportation
- 4885 Freight Transportation Arrangement
- 4884 Support Activities for Road Transportation
- 4882 Support Activities for Rail Transportation
- 493 Warehousing & Storage

Industry Profile

- \$95 billion in revenues
- 640k employed – U.S.

Wage Rates

- \$11/hr – U.S.

Location Criteria

- Good access to major highway
- Affordable land
- Large nearby market for goods
- No inventory tax

LOGISTICS/DISTRIBUTION

Why Logistics/Distribution?

- Logistical coordination is a high value-added service that will differentiate companies and drive industry growth in coming years
- Large distribution centers continue to rank among the largest new economic development projects in the U.S
- The industry is moving towards high-tech solutions

LOGISTICS/DISTRIBUTION

Why Metro Hartford?

- Strategic location between major cities makes it a prime target for regional distribution and warehousing companies
- Lower operational costs, relative to the Northeast
- Fast growing Bradley International Airport - distribution hub for FedEx, UPS, and USPS
- The region is home to a wide variety of just-in-time manufacturing companies serving the aerospace, medical, and pharmaceutical industries. Easy access to major highways and airports makes Hartford an attractive distribution hub for these industries.

LOGISTICS/DISTRIBUTION

Potential Niche - Air Cargo

Description

Air cargo companies arrange for and track incoming and outgoing cargo and freight shipments in airline terminals. They expedite the movement of shipments by determining the route that shipments are to take and by preparing all necessary shipping documents.

Why Target

Current efforts at Bradley include expanding its air cargo presence. Existing base of national cargo companies makes the region attractive to complimentary companies.

LOGISTICS/DISTRIBUTION

Potential Niche - Transportation Warehousing & Logistics

Description

Trucking and warehousing firms provide full-service logistical services encompassing the entire transportation process, including inventory management, materials handling, and warehousing. Firms that offer these services are often referred to as third-party logistics providers. Logistical services manage all aspects of the movement of goods between producers and consumers, such as sorting bulk goods into customized lots, packaging and repackaging goods, inventory control and management, order entry and fulfillment, labeling, light assembly, and price marking.

Why Target

Metro Hartford's industries, including defense and biotechnology manufacturing, rely on just-in-time transportation and advances in logistical solutions.

METRO HARTFORD

CLEAN ENERGY

CLEAN ENERGY

Description

Clean energy is defined as technologies that reduce the environmental impact of energy generation. AE considers solar, geothermal, wind, clean coal, biomass, and fuel cells all to be clean energy technologies.

CLEAN ENERGY

NAICS Definition

- 22111 Electric Power Generation
- 2211199 Electric Power Generation - Solar, Wind
- 334413 Semiconductor related Manufacturing
- 3355999 Electrical Equipment Manufacturing
- 541380 Testing Laboratories
- 5417 Scientific Research and Development

Energy Industry Profile

- \$148 billion in revenues
- 575,000 employed

Clean Energy Industry Profile

- \$13 billion in revenues
- 32,000 employed

Wage Rates

- \$24/hr – U.S .

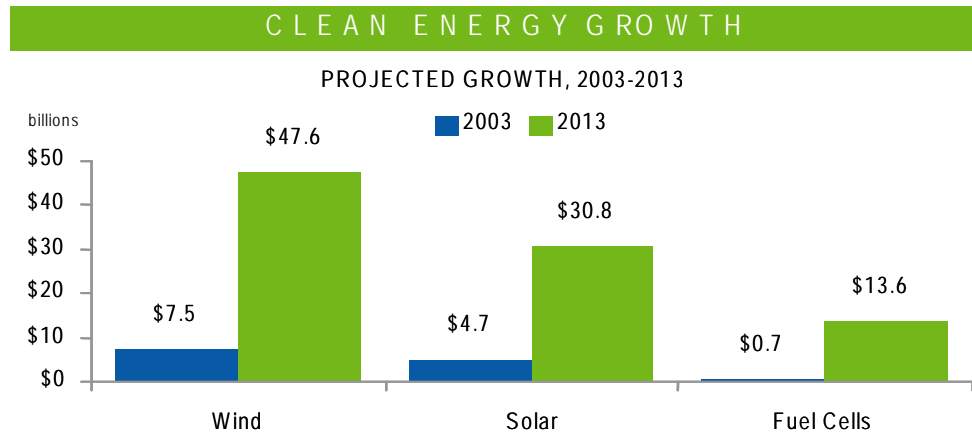
Location Criteria

- Educated workforce
- Access to capital
- Research institutions
- High tech cluster
- Temperate weather for testing

CLEAN ENERGY

Why Clean Energy?

- Energy industry undergoing rapid change
- U.S. population expansion is contributing to increased energy use
 - consumption expected to rise 17% through 2025
- Clean energy is the fastest growing segment of the energy industry – expected to grow 600% over the next decade



CLEAN ENERGY

Why Metro Hartford?

- The region has an existing base of clean energy programs to build upon with UTC Fuel Cells and the UTC Research Park at Rentschler Field
- In November 2004, the Connecticut Center for Advanced Technology received a \$21 million grant from the Air Force for the establishment of the National Center for Aerospace Leadership, a research program that will explore a number of technologies, including fuel cell technology.
- Area colleges and universities have existing research bases in clean energy, and specifically fuel cells.

CLEAN ENERGY

Potential Niche – Fuel Cell Manufacturing

Description

Fuel cells are electrochemical devices that combine hydrogen and oxygen to generate electricity, heat, and water without combustion or harmful emission. The current U.S. market for fuel cells is estimated to be over a \$700 million and is expected to grow to nearly \$14 billion by the next decade.

Why Target

As the home to one of nation's leading fuel cell companies, the Metro Hartford region is a natural target location for the rapidly growing fuel cell market.

METRO HARTFORD

HEALTH SERVICES

HEALTH SERVICES

Description

Health Services includes the traditional industry segments involving healthcare: doctor and dentist offices, assisted living, hospital, as well as specialty cosmetic enhancements and spa related services.

HEALTH SERVICES

NAICS Definition

- 62 Health Care and Social Assistance
- 6211 Office of Physicians
- 6213 Office of Other Health Practitioners
- 6214 Outpatient Care Centers
- 6216 Home Health Care Services
- 623 Nursing and Residential Facilities

Industry Profile

- \$1.3 trillion in revenues
- 10.8 million employed – U.S.

Wage Rates

- \$16/hr – U.S.

Location Criteria

- Skilled workforce
- High income community
- Quality office space

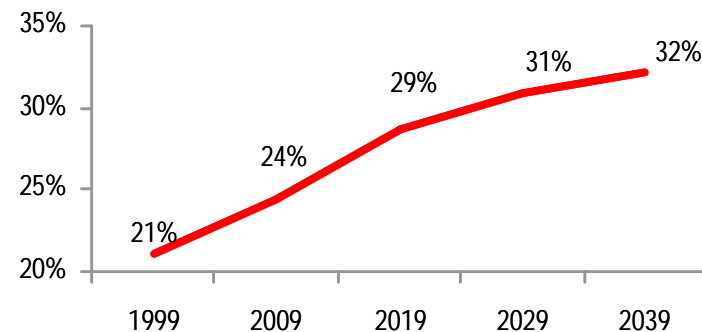
HEALTH SERVICES

Why Health Services?

- One of the fastest growing industries – expected to grow by 28% over the next decade
- More health care is needed as U.S. ages, and rising standards of living will boost demand
- Health services industry is relatively immune to market fluctuations

POPULATION TRENDS

% OF U.S. RESIDENTS 55+, 1999-2039



Source: Center for Medicare Services

HEALTH SERVICES

Why Metro Hartford?

- Excellent hospitals, medical facilities, and university medical schools
- Aging population will serve as the primary customer for industry growth
- Availability of office space
- Highly trained labor pool and room to grow technical programs at community colleges.
- High median income - industry relies heavily on fundraising and other capital sources

HEALTH SERVICES

Potential Niche – Home Health Care Programs

Description

Home health programs help elderly, convalescent, or disabled persons live in their own homes instead of in a health facility. Under the direction of nursing or medical staff, home health aides provide health-related services, such as administering oral medications.

Why Target

The BLS estimates that home health care employment will jump by 55% between 2002 and 2012. Most employees can find jobs without a college degree, either through high school or community college training programs.

HEALTH SERVICES

Potential Niche – Nursing and Residential Care Facilities

Description

Nursing care facilities provide inpatient nursing, rehabilitation, and health-related personal care to those who need continuous nursing care, but do not require hospital services. Nursing aides provide the vast majority of direct care. Other facilities, such as convalescent homes, help patients who need less assistance. Residential care facilities provide around-the-clock social and personal care to children, the elderly, and others who have limited ability to care for themselves.

Why Target

The BLS estimates that residential care employment will jump by 25% between 2002 and 2012. Most employees can find jobs without a college degree, either through high school or community college training programs.

thank you

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