

**Report:**  
I-12 CORRIDOR ECONOMIC DEVELOPMENT MARKETING PLAN



**Presented to:**  
I-12 CORRIDOR STEERING COMMITTEE

# REPORT: I-12 Corridor Economic Development Marketing Plan

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Delivered to:  
I-12 CORRIDOR STEERING COMMITTEE

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The *Economic Development Marketing Plan* will help guide marketing efforts for five parishes in Southeast Louisiana: Livingston, St. Helena, Tangipahoa, Washington, and St. Tammany. These five parishes have decided to unite as a region to market themselves to potential businesses and develop the region's economy. They have chosen one of the area's major transportation arteries – the I-12 Corridor – as a focal point to form a regional alliance to accomplish that economic goal. The I-12 Corridor comprises a portion of the interstate highway system that runs between Baton Rouge and Slidell.

This plan outlines initiatives that will help develop the regionally collaborative mechanisms needed to effectively attract businesses. It also outlines marketing strategies to help the region effectively promote itself, as well as target industries on which the region should focus its attraction efforts and resources.

### THE BEGINNING OF AN EXCITING FUTURE FOR THE I-12 CORRIDOR

The five parishes of the I-12 Corridor have much to offer. From an excellent business climate to a wonderful quality of life, competitive wages, a workforce with a variety of valuable skills, plenty of affordable land, and excellent transportation infrastructure, the region presents a variety of features that would give businesses many competitive advantages.

Despite these and other advantages, the image of the five-parish region is so closely linked to that of New Orleans that many people and businesses view the I-12 Corridor region as indistinguishable from the city itself. Moreover, particularly in the case of business decision-makers, the image that comes to mind when viewing this area is one of a market still negatively impacted in the wake of Hurricane Katrina. This means that businesses may not consider the parishes of the I-12 Corridor as a location option even if the area meets the site needs of the business. **The challenge, then, is for the I-12 Corridor to change its image in the minds of business leaders and find effective ways to market the region to them.**

The strategies presented in this Economic Development Marketing Plan will help the I-12 Corridor to market itself effectively and to begin to change its image post-Katrina. This plan provides:

- Three broad recommendations to improve the overall “regional product” and help the five parishes build the cooperative relationship necessary to make the plan's marketing strategies effective.
- Focused target industries where company needs meet regional assets, creating the opportunity for enhanced growth.
- Specific marketing strategies that will help the region make the best use of its new brand identity and marketing website, as well as reach the target industries in the most effective manner possible.

Even with the assets that are present in the region today, there are always additional steps to take to improve its overall prospects and make its marketing efforts successful. Three overarching tasks the region can undertake to make itself more competitive follow.

### Strategy I:

#### DEVELOP A FORMALIZED REGIONAL APPROACH TO MARKETING THE I-12 CORRIDOR BY SIGNING AND IMPLEMENTING A COLLECTIVE MARKETING COMPACT

The economic development organizations and other community leaders in the I-12 Corridor have taken an important step forward in recognizing that they are stronger marketing themselves together than competing individually in the marketplace. The region's leaders can take this partnership a step further by developing a formal regional marketing compact. A compact is a public document that details the terms by which each of the organizations involved in the agreement will be accountable for the success of an economic development marketing effort.

A good example of such a compact is one established by the Metropolitan Forum, a partnership of organizations in the St. Louis, Missouri area including the East West Gateway Coordinating Council, FOCUS St. Louis, and the St. Louis Regional Chamber and Growth Association (RCGA). The three organizations came together in the belief that they needed to address longstanding and complex regional issues more effectively and that a wholly new, regional approach was required.

The Metropolitan Forum was formed by the signing of a memorandum of understanding by all involved parties. This commitment showed the community that the leaders were ready to support a regional approach to economic development. The compact required the participants to meet at least four times a year to discuss and gauge progress, maintain representation from a variety of organizations in the region, concentrate on initiatives with a significant, region-wide impact; and share responsibilities and costs for implementing those initiatives. For specific information on the St. Louis compact, please see the case study on St. Louis in Appendix 2.

In the case of the I-12 Corridor, these discussions can take place simultaneously with the meetings required to review and update marketing website data. The sessions are an opportunity for the participants in the compact to discuss marketing effort progress, celebrate successes, and renew commitment to the compact into the next quarter. This not only ensures that participating organizations remain accountable to one another for success of the marketing effort, but also generates enthusiasm for the successes the region has achieved in improving its economic health.

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**Strategy II:**

**CONTINUE PUBLIC POLICY EFFORTS TO IMPROVE THE STATE'S BUSINESS CLIMATE**

While the parishes of the I-12 Corridor generally have a favorable business climate, some state and local issues create significant challenges in attracting new businesses. These include high business and sales tax rates, workers' compensation rates, insurance rates (primarily due to insurance company response to damage done by Hurricanes Katrina and Rita), and the generally negative image of the state in the national mind due to corruption scandals and post-Katrina infrastructural assets. These problems all produce high hurdles that the I-12 Corridor must overcome to become competitive for new business.

The I-12 Corridor parishes have excellent political representation at the state and federal levels. Economic development and community leaders in the I-12 parishes should work with those delegations to promote tax, insurance, and legal reform. While these changes will not come overnight, the region should work to transform these challenges into assets. An improved business climate only improves the I-12 Corridor's ability to market itself, attract businesses, and retain existing jobs.

**Strategy III:**

**CONTINUE PUBLIC POLICY EFFORTS TO IMPROVE LOUISIANA'S EDUCATION SYSTEM**

The parishes of the I-12 Corridor have many good public school systems; in fact, some of the best schools in the state are within this region. While not all school systems in the five parishes can make that claim, they have all shown improvement in recent years. However, the general state of public schools in the State of Louisiana does not fare quite as well. It is estimated that 37 percent of all high school students in the state drop out before graduation. The national image of public schools in Louisiana creates a significant obstacle in attraction and retention efforts.

Public school performance is one of the key factors that businesses and site selectors review when considering potential business locations, and low performance often eliminates communities from consideration. Businesses want to know that there is a solid educational system in place at all levels and that the workforce in a region is not only skilled but has a firm grasp of basic knowledge.

As with business climate, this issue is not one that the parishes of the I-12 Corridor will be able to remedy on its own. Leaders must use their relationships with the region's state legislative delegation and the new gubernatorial administration to begin making changes in the statewide system governing Louisiana education. This is another long-term goal, but one that can pay off handsomely not only for the I-12 Corridor, but for the entire state.

This section of the report strategically analyzes the regional economy and identifies appropriate target industries that will drive the continued growth and prosperity of the region for years to come.

The inherent value of identifying target industries for the I-12 Corridor is isolating the type of organizations that have the strongest history in the community, those that illustrate the region's competitive advantage, and types of companies that will best improve the economy of the parishes.

### REGIONAL ECONOMIC OVERVIEW

This section of the report examines the regional economy of the five-parish region to determine the most appropriate industries to target for regional retention, expansion, and attraction efforts. Utilizing proven cluster based methodologies combined with AE's site selector's perspective, we are able to effectively identify those industries most suitable for targeting in order to grow a sustainable regional economy.

Historically, the parishes of the immediate "North Shore" constituted the hinterlands of Baton Rouge and New Orleans. They were known for the restorative power of their water and air and served as havens for the affluent. The economies of these areas were largely undeveloped, being highly dependent on seasonal tourism and crop production. Further north, modern-day Washington, St. Helena, and northern Tangipahoa parishes were traditionally rural and agrarian, relying on the dairy, strawberry, and timber industries for their economic sustenance. Over time, the growth of metropolitan neighbors to the South and West led to the gradual suburbanization of the North Shore and the development of a services-based economy dominated by government, civic enterprises, retail, and construction. As it developed the necessary infrastructure, the five-parish region also became the location of choice for select manufacturers in food processing, metals, paper production, and similar industries.

A regional economic reorganization is taking place in the aftermath of Hurricane Katrina. Given the public policy and quality of life challenges across the South Shore parishes, families and economic activity have begun to move to the North Shore in greater numbers. Service-oriented economic functions across all industries have relocated to be closer to workforces along the North Shore including regional energy headquarters, large service-oriented industries, and distribution centers receiving goods from the regional ports. The result has been a veritable economic boom affecting the entire five-parish region, which in turn has driven further development of supportive economic activities like retail, government, general services, restaurants, housing and construction, and health care. The increase in economic activity has boosted sales tax receipts, spurred rapid housing development, and increased traffic congestion in many parts of the I-12 Corridor parishes. The regional relocation of economic activity, particularly the moves of major energy companies from the Southshore to the North Shore, has strained relations.

In the meantime, the situation faced by the five-parish region's partners to the south has varied. The economic success of the River Parishes has continued to grow with the announced expansions of several large petrochemicals plants, continued operations of plants in the food processing industry, and a generally stable economic base of refineries and petrochemical plants.

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The South Shore Parishes however, including St. Bernard, Plaquemines, Orleans, and Jefferson, were most affected by Hurricane Katrina and by the economic relocations within the region. St. Bernard suffered the loss of most of its housing stock and remains the worst hit of the parishes. Orleans and Jefferson parishes, both hard hit by flooding, lost much of their population base, perhaps permanently, and the inability for businesses to resume work for months has resulted in many leaving for higher ground, often to the North Shore. The South Shore, however, remains the manufacturing, international trade, and cultural hub of the region. Large infrastructure assets such as port docks, shipyards, and the NASA Michoud Assembly Facility are not easily removed. They continue to anchor the economy of the region by distributing goods and manufactured products and serve the regional and national economies.

The regional integration of individual economies has proven to be steady in the face of the storm because businesses have been able to maintain a presence in the region while moving out of the South Shore. While this presents additional problems for the already ravished South Shore, it would be much more economically painful if businesses simply left the region for other cities. Similarly, while the five-parish region is benefiting from the economic shifts within the regional economy, it is nevertheless dependent on the cultural assets, ports, major employers, and brand identity of the City of New Orleans and the South Shore to continue attracting and retaining business. **The five-parish region is inextricably bound to the South Shore and Baton Rouge. By recognizing the complementary nature of these economies, each area can more effectively work together to function as an integrated economy.**

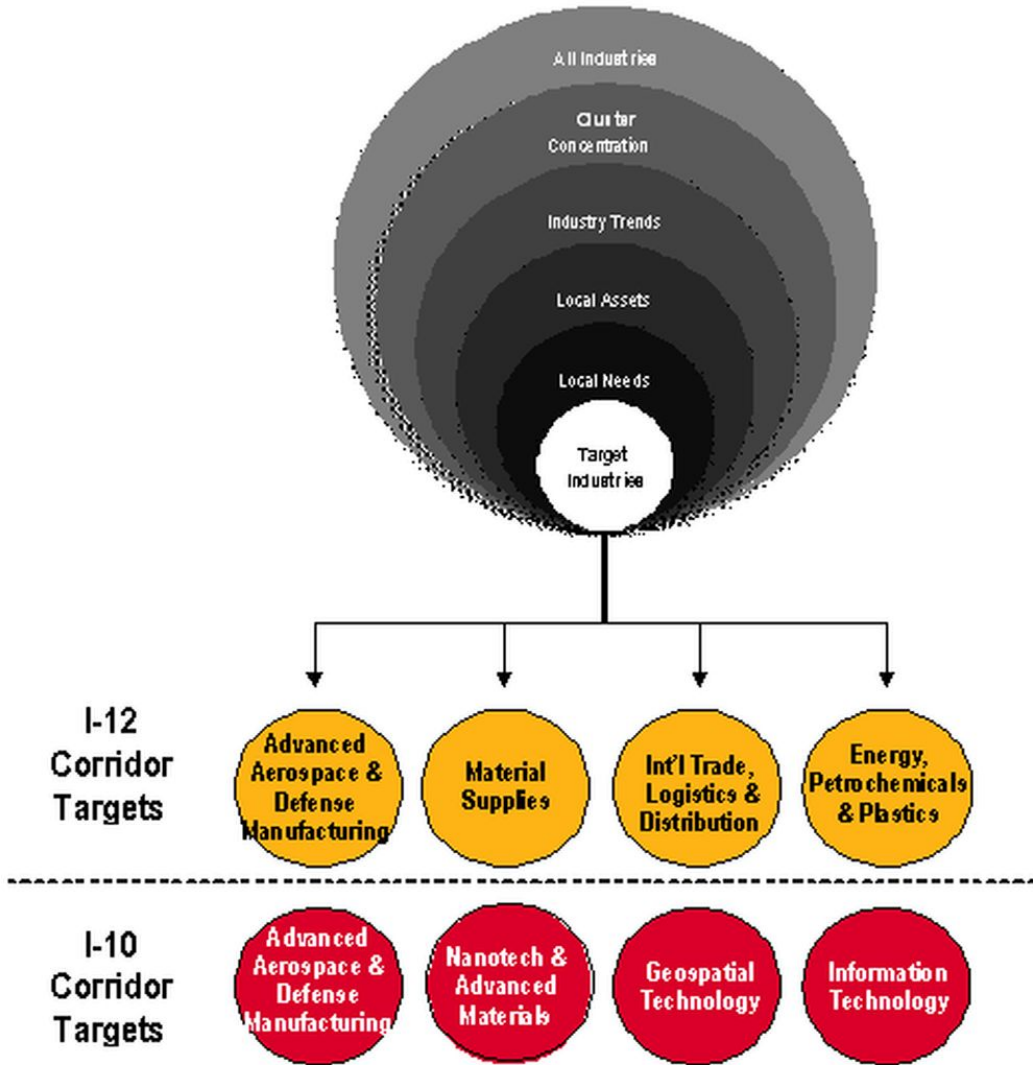
## DATA SOURCES

AngelouEconomics used a variety of sources to collect the quantitative and qualitative information used in our analysis. To begin, the consulting team collected numerous studies and plans developed for the five-parish I-12 Corridor region regarding various industries and economic development efforts. AngelouEconomics also gathered qualitative data through focus groups, community tours, and other community fieldwork. Where possible, AngelouEconomics has noted particularly large discrepancies within data that could influence industry selection decisions or the characterization of the region's industries. AngelouEconomics has made every effort to mitigate these factors in order to ensure the highest degree of data reliability possible given the state of data in this industry. Quantitative data was collected from national, state, and local sources including the U.S. Bureau of Labor Statistics, Economy.com, DecisionData Resources, and ESRI.

## TARGET INDUSTRY PROCESS

At the conclusion of the targeting process, four industries and one technology cluster emerged as the most viable targets for the five-parish region. **These industries provide the best opportunities for focused recruitment and retention efforts, synergies with other regional efforts, and a self-sustaining engine for economic growth.** Consult Appendix 1 for a description of the complete target industry selection process.

**ANGELOUECONOMICS' I-12 / 10 CLUSTER SELECTION PROCESS**



## RECOMMENDED TARGET INDUSTRIES

The final targets are:

### I-12 CORRIDOR

- Advanced Aerospace and Defense Manufacturing
- Material Supplies
- International Trade, Logistics, and Distribution
- Energy, Petrochemicals, and Plastics Equipment and Services

I-10 CORRIDOR (see page 27 for overview of these industries and explanation for their inclusion)

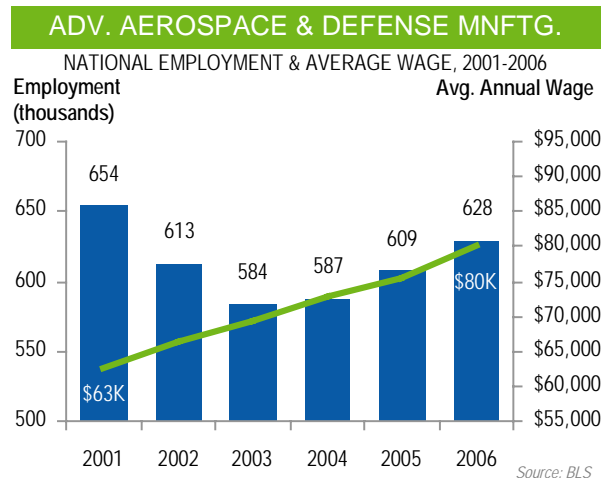
- Integrated Technology Cluster
  - Advanced Aerospace and Defense Manufacturing
  - Geospatial Technology
  - Nanotechnology and Advanced Materials
  - Information Technology

The following outlines national and regional trends that support the selection of these target industries.

## Target: Advanced Aerospace and Defense Manufacturing

### INDUSTRY DEFINITION

The advanced aerospace and defense manufacturing industry, narrowly defined, is a high-tech industry focused on the design, manufacture, and assembly of civilian and military aircraft, space vehicles, and missiles. The industry is geared toward the continued advancement of technology and its application toward the creation of superior products for aviation, space exploration, and defense. Aerospace instrument manufacturing provides large portions of the industrial employment across the industry. Additionally, aircraft suppliers provide parts and machinery for aircraft assembly and maintenance including engines, interior components, avionics, and aircraft hardware. Suppliers are important for both the assembly and maintenance of aircraft. Defense manufacturing is a large niche industry focused on the production of naval ships for U.S. armed forces. The industry's customers include the military, commercial airlines, and general aviation.



The advanced aerospace and defense manufacturing industry relies heavily on the U.S. government for continued work. Federal expenditures comprise a majority of all aerospace sales. The Department of Defense is by far the largest customer with NASA a distant second. Companies in this industry provide traditional manufacturing and assembly jobs, require highly skilled technical workforces, and produce unique, high value-added products.

### NATIONAL GROWTH TRENDS

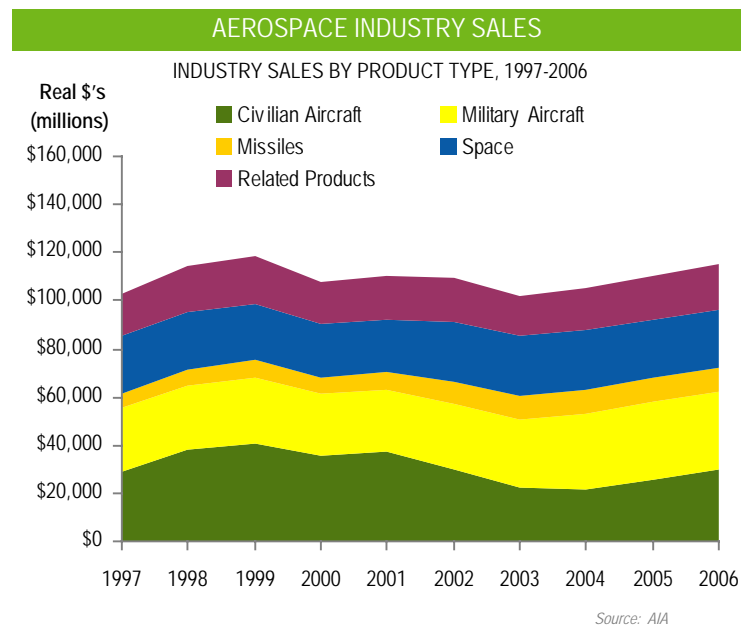
Historically, manufacturing has been a primary driver of economic development in America. Propelled by the prospect of high-paying jobs and the subsequent spin-off of jobs to suppliers and services, cities across the country competed fiercely with one another to attract manufacturing firms.

In recent years, however, advances in technology and the removal of global trade barriers have unleashed the twin forces of increased domestic productivity and foreign competition. As a result, while U.S. manufacturing output has consistently increased in value over the last half-century, the number of manufacturing jobs has steadily declined. In the past five years alone, the U.S. has lost nearly three million manufacturing jobs. In the advanced manufacturing sector, more than 160,000 jobs have been lost since 2000. Increased productivity, however, has helped fuel significant wage increases in the field. Since 2001, average wages in Advanced Aerospace and Defense Manufacturing have risen by 23%. The simultaneous rise in wages and decline in employment have only increased the competition for jobs in this industry.

The current challenges facing the domestic industrial market do not signal the end of U.S. manufacturing. Instead, American manufacturing is undergoing a profound transformation as the industry adapts to the current realities of the global marketplace.

Specifically, domestic manufacturers are increasingly relying on massive investments in research and development to maintain their competitive advantage against foreign companies.

As the country's economy becomes increasingly knowledge-based, formerly clear divisions between industries have been replaced by mutually reinforcing interconnections. Pure production can no longer be divorced from pure research; manufacturing firms currently fund 60% of private sector research and development each year. Although industrial clusters are presented separately for organizational purposes, it is important to remember that many of the highlighted industries provide vital, reciprocal support to one another.



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As the U.S. government replaces aircraft destroyed or damaged in its wars in Iraq and Afghanistan, defense-oriented aviation firms will seek to expand. The government is the largest customer segment of the aviation and aerospace industry (about 60% of all sales), and increased sales to the Pentagon offset declines in the commercial aircraft market after September 11, 2001. Commercial aviation employment growth is now being driven by Boeing's and Airbus's new aircraft and increasing demand for advanced aircraft in the Asian markets.

Overall, aerospace industry employment fell every year from 1998 to 2003, but has been expanding since, adding nearly 45,000 jobs through 2006. It has been estimated by the Aerospace Industries Association that since 2004, three of every four manufacturing jobs created in the U.S. have been in the aerospace industry.

Despite the fluctuations in employment over the past decade, average wages for the advanced aerospace and defense industry as a whole have seen significant growth. In the last several years, wages have grown by more than 25%, from about \$63,000 per year in 2001 to nearly \$80,000 per year in 2006.

### LOCATION DECISION CRITERIA

The advanced aerospace and defense manufacturing industry depends largely on the availability of highly skilled and educated workforces. For smaller supplier firms and contractors, the presence of a large manufacturer or a NASA facility may be required. For large manufacturing plants, substantial incentive packages may be required for attraction. Additional location criteria include large, cheap tracts of land, access to transportation infrastructure, and low-cost utilities. The top six decision criteria for this industry include:

- **Educated Workforce:** Engineers (aerospace, materials, electrical), technicians, electronics techs, precision metal-workers
- **Significant NASA/Large Defense Manufacturer Presence:** Availability of contracts, etc.
- **Cheap/re-usable land:** Often in search of free or easily reusable land with hangars (decommissioned bases)
- **Incentives:** Workforce training, defense communities' incentives, free land, long-term tax breaks, etc.
- **Access to multi-modal transportation:** Airport runways, road, port, and potentially rail access required
- **Utilities:** Must have low-cost electricity, natural gas, water

### Structural Assets

While the site selection criteria of companies in this industry vary according to the product or parts being manufactured, several standard structural requirements apply across companies. Companies in this industry are typically medium to large-scale operations requiring a sizable tract of land. Proximity to a large, international airport is desirable, but small regional airports will still allow for flight service. A land buffer or a limit to residential growth nearby helps prevent public complaints of noise that could threaten future operations. Facilities range in size from less than 100,000 square feet to the millions. Any facility will require access to electricity, natural gas, water, and wastewater. Regions with low electric rates can often lure power-hungry manufacturers away from areas with higher electric rates. An excellent transportation system including interstate and either airport or port access, and potentially rail access, is also required.

### Costs of Doing Business

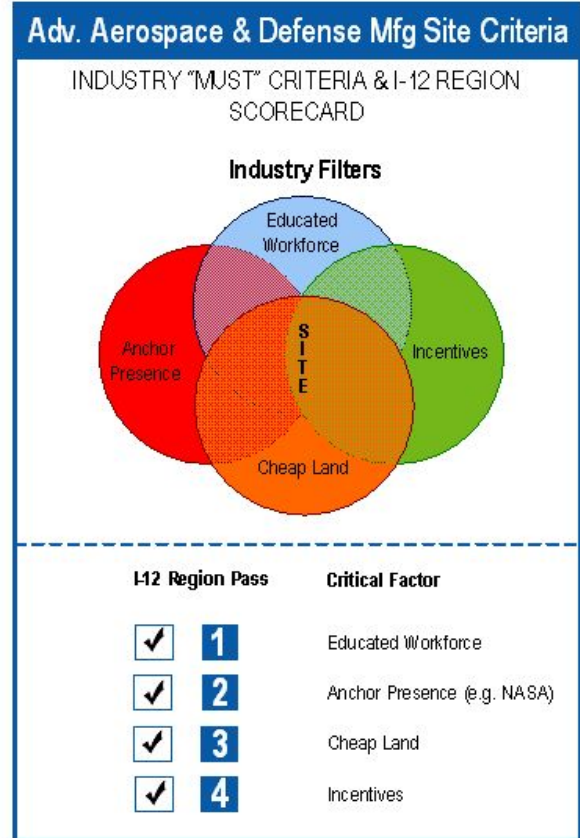
Companies within these industries are frequently large users of electricity and natural gas and pay large amounts of property taxes. Any location decision will be heavily influenced by some combination of tax rates, utility costs, and prevailing wage rates. Although each industry has different cost structures and subsequent site selection priorities, taxes are a predominant factor in the site selection process for manufacturers. Due to the number and diversity of employees, these operations are fiercely sought after and command large amounts of incentives for attraction purposes and may solicit continued help for retention purposes. Increasingly, parts manufacturing operations are being located overseas, and components are shipped to the U.S. for assembly.

### Economic Conditions

Primary economic conditions include the presence of large end-user facilities, including NASA facilities or aerospace assembly plants. A sizeable aerospace industry cluster benefits from end-producer demand and a local pool of skilled workers. Major relocations often occur so a company can be closer to customers or positioned in a high growth area with the right image and demographics for its business.

### Workforce

Manufacturers relying on low-skilled labor often operate in rural areas where they can find affordable workers and generous incentives. Manufacturers requiring large amounts of skilled workers often experience difficulty attracting and retaining qualified talent. Many of these jobs require formal education and specialized skills and experience. While not all skilled positions require a bachelor's degree, many of the positions require at least a technical degree. Skilled machinists are required to make parts that are not mass-produced. An aircraft manufacturing facility will desire proximity to both a four-year engineering university, as well as a good technical college. Companies have to compete for talent and are willing to pay higher wages for these workers. Local workforce development groups play an important role in helping companies find and develop the skilled workers they require. Availability of a skilled workforce is often the number one site selection criterion.



### I-12 CORRIDOR ASSETS

1. **Presence of NASA** – The close proximity of Stennis Space Center and the Michoud Assembly Facility are tremendous assets with enormous potential to create jobs in advanced aerospace and defense manufacturing for the five-parish region. NASA has committed to making both facilities integral parts of its new Ares I and Ares V programs, thereby ensuring significant ongoing federal expenditures and contracts. As Stennis and Michoud continue to drive demand and provide the knowledge infrastructure for new technologies, the I-12 Corridor Region stands poised to capture aerospace and defense related production operations.

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2. **Access to inexpensive land** – The five-parish region enjoys an abundant supply of relatively inexpensive acreage that will appeal to larger aerospace and defense production companies. The Tangipahoa certified Megasite offers the prospect of a large shovel-ready tract at an affordable price. Planned infrastructural projects such as the Zachary Taylor Parkway will open substantial tracts of inexpensive land for development.
  3. **Taxes and Incentives** – The state of Louisiana boasts some of the lowest property tax rates in the country, providing a significant discount to aerospace manufacturers with high capital investment. Additionally, state incentive programs such as Industrial Tax Exemption and Tax Equalization ensure the tax competitiveness of the five Parishes versus other regions. Louisiana's Industry Assistance program offers aerospace contractors the prospect of significant tax breaks for utilization of Louisiana suppliers, thus creating opportunity to bring additional suppliers into the five-parish region.

## NICHE SECTORS

### Space Vehicle Propulsion Manufacturing

Stennis Space Center is the epicenter of NASA launch testing and is thus a hotbed for the research, design, and manufacture of cutting edge propulsion technologies. Michoud is focused on the external fuel tank for the current Space Shuttle program, while future efforts are focused on external tank assemblies for the Orion space program. Large contractors are currently located onsite at Michoud, and NASA's master plan calls for the attraction of suppliers and subcontractors to the area from current out-of-state locations. These circumstances present significant opportunity to recruit operations engaged in space vehicle propulsion related manufacturing.

### Aerospace Component Manufacturing

Aerospace component manufacturing provides many opportunities to leverage the unique research and development assets of Stennis and Michoud. Aerospace components can be as large as wing assemblies or as small as electronic instrumentation. Developing aerospace component manufacturing requires an excellent workforce, and growth areas include outsourced subassemblies from major airplane manufacturers and small corporate jet manufacturers.

## Target: Material Supplies

### INDUSTRY DEFINITION

The material supplies industry consists of producers of wood, paper, concrete, and fabricated metal products and other suppliers of the building materials and consumer goods industries. Companies in this sector manufacture a wide range of products – from plywood panels, to steel pipe, to tools, to wallpaper – and distribute them to wholesalers and retail home and hardware stores or sell directly to contractors. Also included in this industry are sawmills, lumber companies, and others that provide the raw materials that go into the manufacture of finished products.

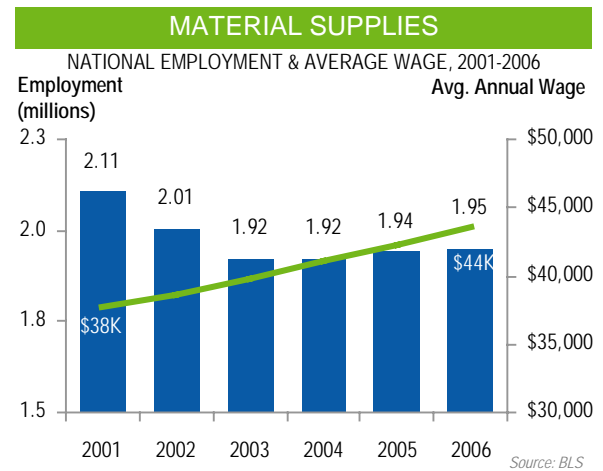
### NATIONAL GROWTH TRENDS

The material supplies industry is highly correlated with fluctuations in the residential real estate market. New home starts as well as renovation activity strongly affect orders and sales volume of structural building elements and other construction products. Recent trends toward increased housing renovations and conversions, coupled with strong residential housing growth over the past few years, have helped sustain the material supplies industry. Construction spending in 2005 alone reached \$755 billion – or 9.6% of the overall national economy – a reflection of the demand for manufactured building components and supplies.

The current housing downturn and slowdown in construction activity presents cause for concern for material supplies manufacturers. However, barring long-term stagnation, a huge impact is not anticipated.

Most material suppliers maintain operations separate from regional distributors and retail outlets, though some larger homebuilders have enough scale to integrate manufacturing functions within their own operations. Low-margin commodity products such as lumber and plywood panels comprise a large proportion of total production volumes as they generate the highest sales among product categories. The production of oriented strand board (OSB), glulam, i-joists, and other engineered wood products has enjoyed strong growth since 1999, although softwood plywood output has declined. U.S. domestic shipments of cement reached \$13 billion in 2005, while the current domestic aluminum market totals over \$39 billion in products and exports.

Some 50,000 material supplies-related companies operate in the U.S., with annual sales approaching \$250 billion. Employment industry-wide declined from 2001 to 2003 but has since leveled out and experienced modest growth. Wages have grown moderately since 2001, reaching \$44,000 on average by 2006.



## LOCATION DECISION CRITERIA

For the material supplies industry, location decision criteria are driven largely by proximity to sources of demand, access to cheap available labor, and the capacity to transport finished product efficiently and effectively. The top five location decision criteria are:

- **Product Demand:** A strong residential construction market drives demand for material supplies
- **Affordable Workforce:** Competitive wages and salaries
- **Cheap Land:** Large, inexpensive greenfield tracts
- **Transportation Infrastructure:** Un-congested roads and highways, access to customers
- **Incentives:** Free land, long-term tax breaks, jobs tax credits, etc.

### Structural Assets

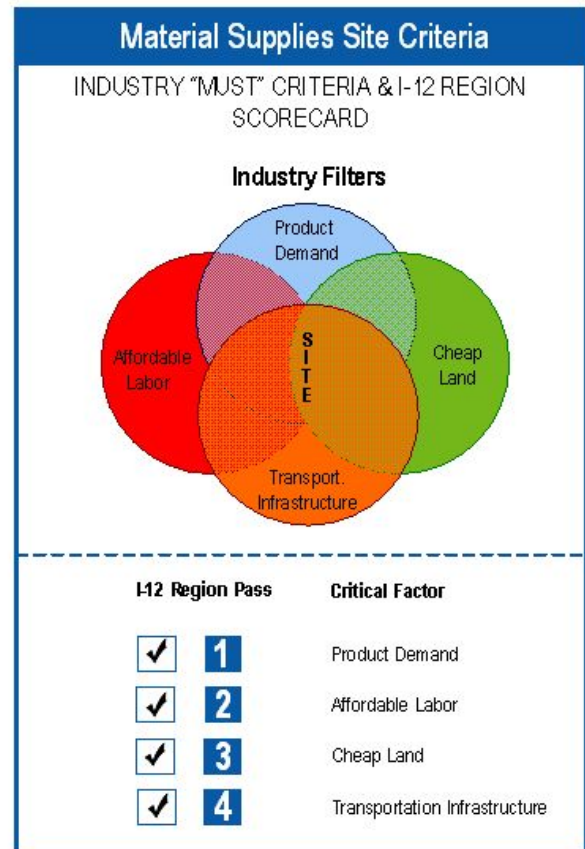
Structural assets vital to material supplies firms include utilities, highways, airports, telecommunications, and site availability. Large tracts of available land, excellent transportation infrastructure, plentiful water, below-capacity wastewater systems, reasonable environmental regulations, and access to rail spurs are all potential requirements of material suppliers. The availability of timber resources such as forests is an added attraction for suppliers of wood products.

### Costs of Doing Business

In addition to labor costs, material supplies manufacturers pay close attention to overall cost of doing business in a specific locale; tax environments and the cost of capital can significantly lower already thin profit margins. Taxes are a predominant factor in the site selection process for manufacturers. Due to high sales volume, material suppliers typically pay particular attention to low sales tax rates. In recent years, states without a sales tax have proven particularly successful in attracting high-profile consumer goods projects. However, manufacturers whose business requires massive capital investments and large tracts of land will also be concerned with the presence of low property taxes.

### Economic Conditions

Relocations and expansions often occur so a company can be closer to customers or positioned in a high growth area with the right demographics for its business. Material supplies companies prefer locations where they can be close to existing markets and customers, including markets with strong residential and commercial construction bases, high population growth, and high demand for consumer goods and supplies. This proximity allows less lead-time for orders and creates general operating advantages related to horizontal integration.

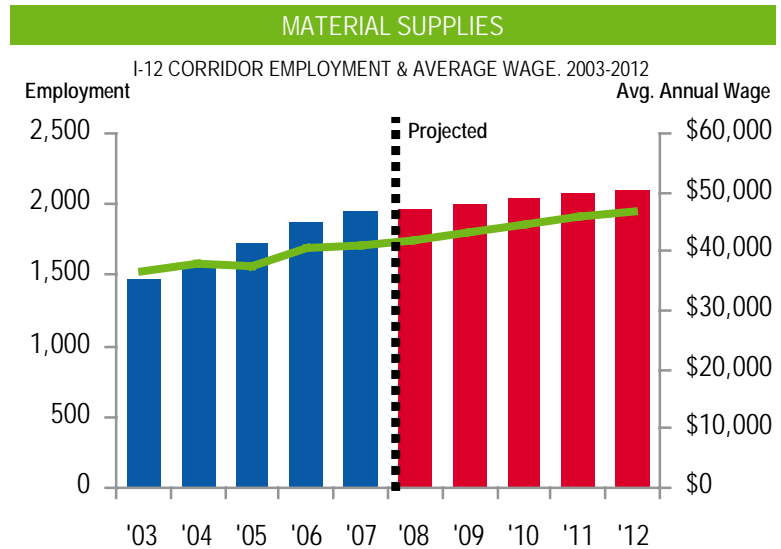


## Workforce

Workforce needs vary among specific types of companies. Manufacturers relying on low-skilled labor often operate in rural areas where they can find affordable workers and generous incentives. Manufacturers requiring large amounts of skilled workers often experience difficulty attracting and retaining qualified talent. Many of these jobs require formal education and specialized skills and experience. Companies have to compete for talent and are willing to pay higher wages for these workers. Local workforce development groups play an important role in helping companies find and develop the skilled workers they require.

## I-12 CORRIDOR ASSETS

Employment in the regional material supplies industry has grown by approximately one-third since 2003 and is expected to see moderate growth over the next five years. Most existing employment in the I-12 Corridor Region is concentrated in cement and concrete, wood, and paper products. Average area wages are respectable and will continue to see steady growth in the future.



Source: Economy.com, Bureau of Labor Statistics QCEW

### 1. Population and Housing

**Growth** – The five-parish region supports a robust residential and commercial construction industry, thereby creating high demand for building materials and supplies such as plywood, trusses, and other niche products. The Region is also well positioned between the booming suburbs of Baton Rouge to the West and the recovery-driven construction activities of New Orleans and Gulfport/Biloxi to the South and East. The expansive port system and immediate interstate access create opportunities for export to other, more distant markets.

**2. Affordable Labor** – The five-parish region – particularly Washington Parish, St. Helena, and northern Tangipahoa – exhibit wage levels that are competitive both in the state of Louisiana and nationally. Material supplies executives and site selectors seeking a low-cost operating environment will be drawn to the impressively low wage data and labor cost burden found in the Region.

**3. Access to inexpensive land** – Even with a considerable portion of land in the region subject to wetland conditions and a small number of landowners holding onto disproportionate shares of land, the I-12 Corridor is possessed of vast amounts of untapped, inexpensive tracts of potential appeal to larger material supplies operations. The Zachary Taylor Parkway and other planned road projects will open new land in the northern parishes for development, thus allowing for the convergence of cheap land, labor, and low property taxes.

## NICHE SECTOR

### Engineered Wood Products

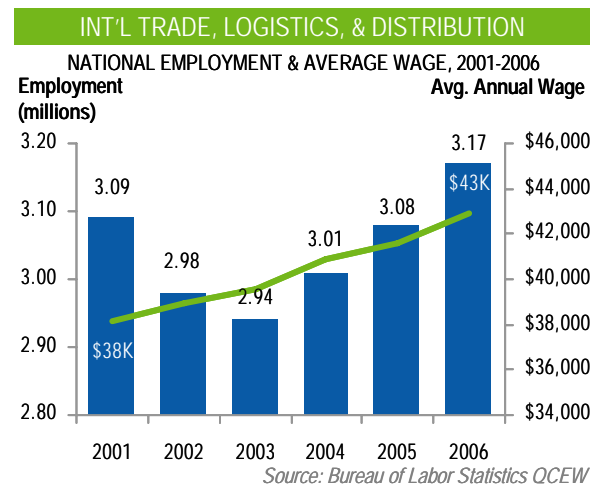
Engineered wood products include hardwood veneer and plywood, trusses, reconstituted wood products such as OSB and particleboard, fabricated/laminated structural members, and other wood products used primarily in construction. Many products within this market segment have seen production values increase substantially in recent years on the strength of the U.S. housing market, making it a growth niche for the future. The I-12 Corridor Region's existing base of truss, plywood, and cabinet manufacturing paired with strong regional and national demand make engineered wood products a potent niche target.

## Target: International Trade, Logistics, and Distribution

### INDUSTRY DEFINITION

International trade is defined by transporting commodities and finished goods between countries including both exporting commodities and goods from the U.S., as well as importing commodities and goods from around the world. 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. Now these services are often outsourced to develop advanced just-in-time delivery systems. The integration of international trade, logistics, and distribution into one continuous and extensive supply chain driven by global free trade has put this industry at the forefront of economic growth.

The maturation of the industry has produced two distinct and complementary fields. Trade and distribution will continue to be serviced by "low-tech" suppliers, including actual transportation of goods by ship, train, airplane, and truck, though growth rates for international trade will continue to remain high. In the U.S. international trade will increasingly drive investment, with ports across the Gulf of Mexico benefiting greatly from the Panama Canal expansion expected to be complete by 2014. Logistical coordination, on the other hand, is a high value-added service that will drive industry growth in coming years. Technical workers dominate employment in this field. It is composed of advanced just-in-time distribution and logistics networks, goods movement coordination, and the electronic devices involved, often called "track and trace." Federal Express pioneered the service side of distribution, and more established companies have been racing to catch up including the United States Postal Service and various international shipping lines.



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## NATIONAL GROWTH TRENDS

The national economic slowdown in 2001 resulted in fewer goods being shipped throughout the country and produced a sharp decline in demand for distribution services through 2003. Although industry revenues and profits fell considerably during this period, growth returned in 2004 and has continued ever since. Growth has been driven largely by increased imports from overseas, particularly from China and other Asian countries. National distribution and logistics employment declined by 150,000 from 2000 to 2003, but 2004 through 2006 saw an aggressive period of growth in which 230,000 jobs were added. As U.S. retailers continue to increase imports from China and other global manufacturing and commodity centers, the distribution and logistics industry is expected to experience continued growth.

As virtually every product sold in America moves through trade, logistics, and distribution channels, the industry is responsible for transporting a third of the nation's GDP. Increasingly, most goods are warehoused and shipped from their point of production or near the final destination. International trade underpins economic growth globally, and the U.S. increasingly relies on Chinese imports for finished products.

As noted by a May 2007 report from the Port of New Orleans, U.S. imports from North Asia (including China and Japan) grew by more than 108% from 1997 to 2007. The movement of these goods, a \$300 billion industry, is increasingly coordinated by high-tech means such as global positioning satellites, real-time internet tracking, and just-in-time inventory systems. New opportunities for capturing containerized traffic will depend on large infrastructure investments to match the expanded capacity for trade through the Panama Canal once a third, larger set of locks is completed in 2014. The Panama Canal expansion will open Gulf of Mexico ports to substantial new sources of trade with Asia, as shipping companies look to avoid long delays and labor problems at West Coast ports.

Despite the industry's recent recovery, international trade, logistics and distribution faces potential long-term hurdles. Infrastructure required to meet the needs of containerized shipping will require significant investments in public and private port facilities, rail capacity, highway improvements, and multi-modal transportation yards to keep pace with the increasing volumes of trade. In addition, traditional domestic high-volume users of logistics and distribution are declining in importance relative to the U.S. economy. Manufacturing, which uses almost a quarter of all transportation services, increased its valued output by a mere 8.8% between 1999 and 2004. During this same period, the national GDP increased by 26.4%. As the U.S. becomes more service-oriented, these structural trends are expected to continue. Sustaining a successful local distribution sector will be highly dependent on the overall health of local manufacturing, the accessibility to nearby markets, and the vibrancy of local ports.

## LOCATION DECISION CRITERIA

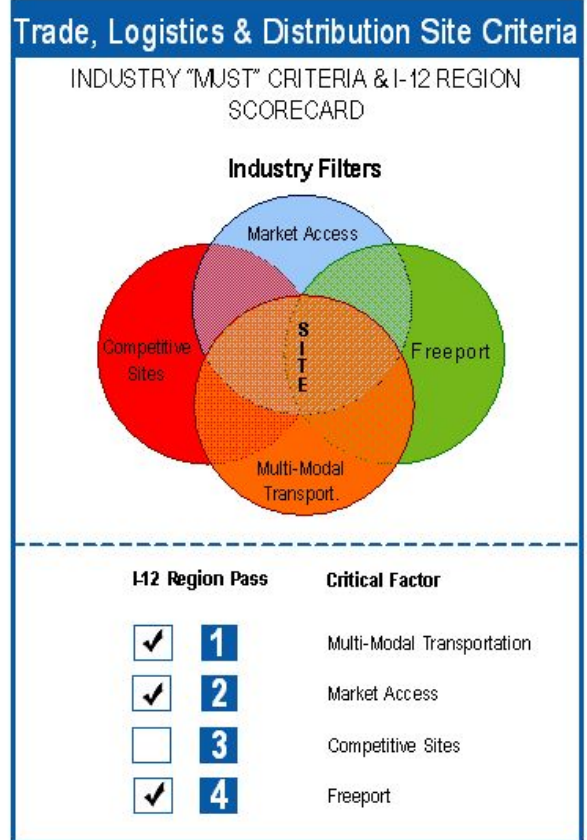
The international trade, logistics, and distribution industry depends largely on the transportation infrastructure of any particular location. Containerized port facilities, intermodal transfer yards, excellent highway, rail, and airport access, along with cheap access to industrial land, access to large regional and national markets, and a lack of inventory taxes are essential to international trade, logistics, and distribution firms. The top five decision criteria for this industry include:

- **Access to multi-modal transportation:** Access to rail, interstates, ports, and airports is essential
- **Market access:** Must be within a relatively short distance of a large market
- **Low inventory taxes:** Must not tax inventory heavily

- **Available sites:** Must provide available greenfield sites with transportation access
- **Low utility costs:** Must provide low electricity and natural gas prices

### Structural Assets

Transportation infrastructure is extremely important to international trade, logistics, and distribution firms. Companies require well-maintained, un-congested roads, and close, if not on-site, port and rail access. Containerized port facilities further support this industry, with containerized freight continuing to experience dramatic growth. Overnight carrier hub proximity and airport access are viewed favorably. Affordable land for large distribution centers is another key criterion for distribution center locations, which have increasingly located in rural areas to avoid high costs for land and building construction. As industries increasingly shift to just-in-time manufacturing, more distribution operations and international trade and logistics companies will be required within close proximity to service regional manufacturing operations and large metropolitan markets.



### Costs of Doing Business

Advanced international trade, logistics, and distribution companies invest primarily in warehouses, trucks, equipment, and IT infrastructure. Inventory taxes are avoided at all costs, and many distributors look for special incentives such as reduced taxes on fuels. Areas with low taxes, competitive wages, affordable utilities, and available land are ideal. These large operations require massive land tracts at low prices and generally make minimal building improvements. Recent expansions have received tax abatements, tax credits, infrastructure improvements, and industrial revenue bonds.

### Research and Development

Local research institutions do not significantly affect the location of international trade, logistics, and distribution firms. Although companies utilize inventory tracking and logistics software, the development of these technologies is not location sensitive. Of course, areas with significant investments in educational programs for the international trade, logistics, and distribution industry will gain from their production of a quality workforce.

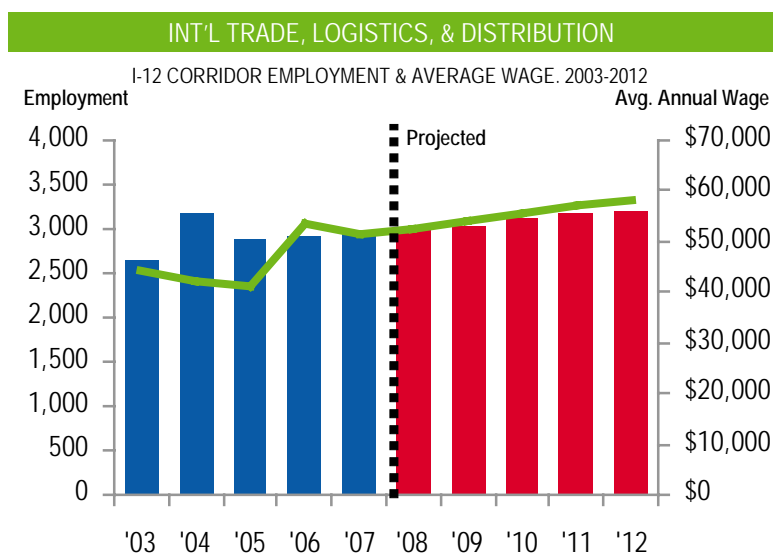
### Economic Conditions

International trade, logistics, and distribution firms continually seek out locations close to their end customers, avoiding ports where unions are prevalent and continuing to seek out easy access to large regional and national markets. Regional economic growth is important as well. Logistics and distribution companies' revenue comes largely from area firms and regional consumer needs, with the exception of large national distribution centers focused on major ports. International trade companies must be able to serve a large, growing market. In either case, companies desire a growing regional economy that expands their potential client base. Large companies

typically locate near mid-size to large metros with a strong containerized port and an airport with U.S. Customs freight facilities.

### Workforce

International trade, logistics, and distribution firms need a blue-collar workforce; manufacturing workers have proven to be excellent fits for the industry. Relatively few employees in this industry require a bachelor's degree, though international trade and finance require many employees that are more educated. Recruitment for this industry should prove to be relatively easy as the highest growth occupations are labor-intensive.



Source: Economy.com, Bureau of Labor Statistics QCEW

### I-12 CORRIDOR ASSETS

I-12 Corridor employment in international trade, logistics, and distribution has grown by nearly 150% since 1998 and has experienced an overall positive trend since 2003, though employment levels have yet to regain the peak attained in 2004. Average wages in the region spiked to over \$50,000 in 2006 before dipping slightly in 2007 and are projected to ascend steadily in the coming years.

The I-12 Corridor Region possesses the following key assets that will support the recruitment of the international trade, logistics and distribution industry:

1. **Market Access** – The five-parish region has very strong access to Southeastern, Midwestern, and Southwestern population centers, with over 75 million Americans located within a 600-mile radius. The area is easily accessible to several large domestic markets – both consumer and industrial – and has access to international markets via Louisiana's extensive port system.
2. **Transportation Infrastructure** – The I-10 and I-12 Corridor Region benefits from a robust, highly diversified transportation infrastructure that serves to differentiate it from other regions. Major interstates I-12 and I-55 intersect in Hammond, I-12 intersects I-59 in Slidell, and I-10 connects the I-12 to both U.S. coasts, creating a transportation nexus with access in all directions. In addition, two airports are located within St. Tammany Parish; three airports provide local/regional air service, while international access is available via New Orleans International. The region also benefits from its proximity, not only to the historically high volume ports of Grammercy and New Orleans, but from the presence of Port Manchac located within the region itself. The combination of solid transportation access and geographic proximity to a large proportion of America's population makes the Region a potentially compelling area for logistics and distribution firms.
3. **Freeport** – The presence of an inventory tax within a community can seriously hinder the development of a vibrant logistics and distribution industrial sector. However, tax credits can mitigate this potential deterrent

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to a significant degree. Fortunately, the availability of full tax credits on inventory tax in Louisiana helps the I-12 Region maintain its viability as a location for this industry.

## NICHE TARGETS

### Logistics and Supply Chain

Logistics and supply chain companies plan, implement, and control supply chains for other companies from the purchasing of raw materials through the delivery of finished products. Many former transportation companies, such as FedEx and UPS have transitioned to become global logistics and supply chain companies, providing seamless access to information about a company's products anywhere along its supply chain. With a growing technology infrastructure, headquarters presence, and white-collar workforce complemented by excellent transportation and market access, the five-parish region is primed to capture expanding or relocating logistics and supply chain companies.

### Retail Distribution

Retail distribution centers utilize advanced technology to manage the flow of materials in the retail supply chain. Using high-speed conveyors, laser scanners, computerized databases, and other technologies, the industry seeks to create efficiencies via just-in-time inventories and "shelf-ready" goods. The retail industry is increasingly shifting toward the use of such centers and away from traditional warehousing inventories. Distribution centers are relatively large facilities and tend to locate either on the fringes of major metropolitan areas or adjoining suburbs. The five-parish region's robust retail growth, success in recruiting distribution operations such as Wal-Mart, and proximity to large consumer markets are tremendous assets in targeting the retail distribution niche sector.

## Target: Energy, Petrochemicals, and Plastics Equipment and Services

### INDUSTRY DEFINITION

The energy, petrochemicals, and plastics industry is a large, vertically integrated industry focused on producing oil and natural gas; transporting these energy sources to refineries and petrochemicals plants; refining them into various chemicals, fuels, and plastics, and selling those final products to consumers and manufacturers. The energy, petrochemicals, and plastics industry is split into four closely related but distinct industries: oil and natural gas production; petrochemicals and plastics production; pipeline transportation; and energy, petrochemicals, and plastics machinery manufacturing. The energy industry focuses on exploration of potential oil and natural gas-bearing areas across the globe and utilizes innovative and extremely high-tech methods to discover, produce, and transport oil, natural gas, and coal deposits to power the transportation and electricity needs of the world and to provide basic feedstocks for petrochemicals and plastics.

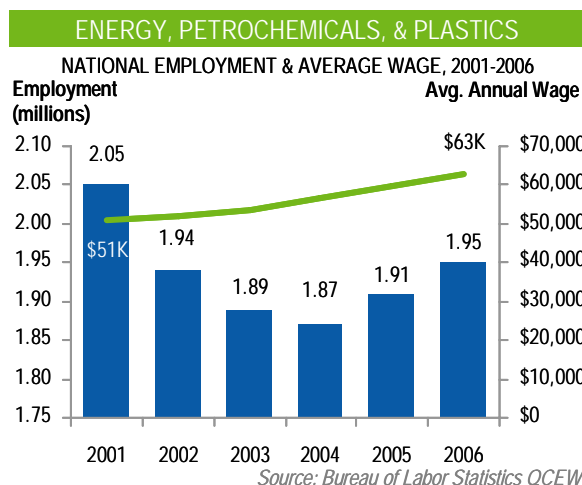
The petrochemicals and plastics industry is composed of petroleum refineries and petrochemical plants which produce gasoline, chemical feedstocks for finished products, and a variety of chemicals, products, and services for virtually every manufacturing industry in the world. In addition, the industry includes plastic resin manufacturers, which are closely tied to petrochemicals manufacturers, and plastics product manufacturers who utilize plastics to create common consumer products. Companies in the energy, petrochemical, and plastics industry are involved in the production, blending, and distribution of the chemical building blocks of everyday products. Much of the petrochemical and plastics business lies in producing commodity plastics and chemical

products, which are shipped in pellet or liquid forms. The petrochemicals and plastics industry is highly tied to and integrated with the energy industry. Louisiana is among the nation's leading producers of oil and natural gas, refined products, chemicals, and plastics.

The energy, petrochemicals, and plastics equipment industry manufactures the machinery and equipment necessary to extract and produce these energy sources. These operations produce oil and gas field derricks, drilling equipment, gas well machinery, and drilling rigs, among other products. Also included in this sector of the industry are original equipment manufacturers (OEMs) supplying machinery manufacturers with components used in their value added production processes. The energy services arm of the industry includes contractors, geophysical surveying and mapping, and other purveyors of engineering and technical services, as well as management and headquarters functions.

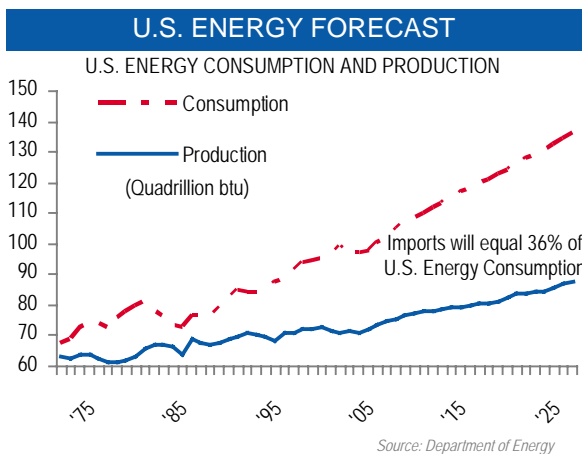
### NATIONAL GROWTH TRENDS

The energy, petrochemicals, and plastics industry is undergoing a series of transformations as both geopolitical and industrial trends affect the way in which energy companies operate and what core competencies they will choose to pursue in the future. Although recent discoveries of reserves in the Gulf will have a positive impact on the industry, companies still face many uncertainties and challenges. Emerging problems of energy security include competition with nationalized energy companies, reductions in regional oil and gas stocks, global climate change and the potential for carbon controls, and the rapid growth of China and India. These issues also increase the international scope of the industry and its need for technical prowess and a talented workforce. These challenges are also driving the trends toward industry consolidation, as larger companies have greater capital availability for more challenging and long-term growth opportunities and are better able to diversify their assets to protect against long term instability and uncertainty.



### Reserve Replacement and Exploitation

The problem of replacing reserves and exploiting known pockets of oil and gas continues to be the primary challenge of the energy industry, from the large vertically-integrated firms to mid-sized and small operators, including both oilfield services companies and engineering firms. As consumption of oil and natural gas continues to demand larger and more robust energy production, energy companies must continually seek new sources of oil as they deplete reserves of known oil in the ground. Many companies face difficulties replacing reserves, even those outside of the United States. The Energy Information Agency, part of the U.S. Department of Energy, notes that in 2004, just 12% of oil reserves were replaced,



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meaning that for every 100 barrels of oil pumped out of the ground, only 12 new barrels were discovered to replace them. For U.S. operations, the news was even worse – only 64-65% of oil reserves were replaced in 2003 and 2004. Natural gas operators face better news, though U.S. offshore operators replaced only 19% of reserves in 2003 and 28% in 2004. To counteract these problems, more technically challenging and expensive methods of recovering oil must be employed including enhanced oil recovery (EOR) through water or CO<sub>2</sub> flooding of oil fields to force oil out of the ground. In addition, due to challenges from countries seeking energy security and nationalization of natural resources, Western energy companies find increased competition and barriers to entry in promising new areas for exploration across the globe.

### Energy Security, Supplies, and Nationalization

One of the most important trends facing energy companies is the need for developed and growing developing countries to protect their economies from oil shocks due to overwhelming dependence on foreign sources of oil and increasingly natural gas. Several interlocking trends are at play here. In the United States, oil and natural gas production peaked in 1973 and has declined by a third since then, forcing increased reliance on energy imports to sustain transportation and electricity production and to provide feedstocks to the petrochemical and plastics industries. Today, the United States imports two-thirds of its crude oil and petroleum products from overseas. In addition, the supply of natural gas in North America can no longer feed the growing demand for electricity production, heating, and petrochemical refining, but unlike oil, natural gas is difficult to transport across seas, giving the United States the highest natural gas prices in the world. Natural gas imports require liquefied natural gas (LNG) terminals, which are expensive to construct and present serious terrorist targets. Several of these LNG terminals are proposed along the Louisiana Gulf Coast.

Compounding the problem for major energy industry players is the increasing trend of nationalizing mineral assets, such as Venezuela's recent insistence on rewriting contracts with major oil companies to make the state oil company, Petroleos de Venezuela S.A. (PDVSA), the majority stakeholder in all joint operations with Western oil companies. In addition, national oil companies such as China's National Offshore Operating Company (CNOOC) and India's Oil and Natural Gas Company (ONGC) are expanding their reach overseas and extracting resources in countries that have a history of human rights violations or political instabilities where Western companies are not welcome. While vertically integrated companies face restrictions on their ability to enter such markets, oilfield services and engineering companies have strong growth prospects in helping national oil companies increase efficiencies and adopt advanced technologies.

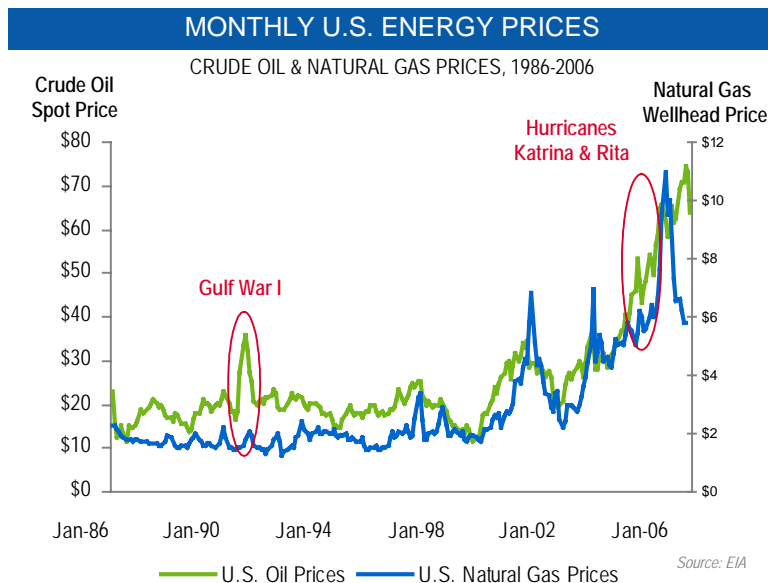
This global search for oil and natural gas presents energy companies like ExxonMobil, Shell, Chevron, and ConocoPhillips with several challenges in searching for assets. Those challenges include working in countries facing political instability, searching for oil in deep water offshore, or dealing with a combination of these challenges. The challenges drive costs higher, creating greater dependence on politically unstable or unsavory countries and requiring greater technical expertise and diplomacy to produce oil and natural gas.

Natural gas prices are one of the primary drivers of the petrochemical and plastics industry, not only due to natural gas' primary role as a feedstock for the petrochemical industry, but also because of the large quantities of natural gas used to power the refineries and chemical and plastics plants necessary for production. Because natural gas has typically been difficult to transport overseas, petrochemical and plastics production complexes have historically been located relatively close to large quantities of natural gas. The Texas and Louisiana Gulf Coast, as a national petrochemical and plastics leader, has long had a competitive advantage in being close to a large supply of this "stranded" natural gas. From the 1980s to 2000, the ability of Gulf Coast petrochemical and plastics producers to access cheap natural gas provided sufficient margins in production to maintain market share and build capacity for petrochemicals. In recent years, however, natural gas prices have climbed due to

increased use in power plants, continued consumption for residential uses, and the peaking of the North American natural gas fields, leaving the United States with the highest natural gas prices in the world.

To gain competitive advantages in this difficult marketplace, the U.S. petrochemicals and plastics industry has moved away from the commoditization of petrochemicals and plastics. Instead, the industry has increasingly turned to innovative new processes to wring waste from their systems and to new, proprietary chemicals and plastics with specific, high-end products in mind. One growth area is in bioplastics, which uses cornstarch or soy products to produce new, biodegradable plastics from natural feedstocks, both reducing the reliance on expensive natural gas and increasing the environmental properties of the materials. In addition to these structural issues, long term growth

potential for the U.S. market has dropped from 4-5% growth annually to 1-2% growth annually due to the rapid loss of manufacturing to cheaper overseas locations. Petrochemical capacity should grow about 0.5% per year over the next three years, and increased demand is expected to be met by imports of basic chemical feedstocks.



### Global Climate Change

While energy companies face uncertainty in replacing their reserves due to depletion of their primary fields and difficulty in gaining or maintaining access to new sources of oil in Venezuela, Western Africa, Russia, and the Middle East, they face another potential challenge in regulatory changes seeking to control the release of global warming gases, including carbon dioxide and methane. Under plausible scenarios anticipated by Shell and other major oil companies, in the near future energy companies will face one of two challenges. They might face a carbon tax, which would place a cost on releasing CO<sub>2</sub> into the atmosphere, or a cap and trade system, in which an upper limit on the amount of global warming gases would be established, and companies would trade permits to reduce the economy-wide production of global warming gases to an amount at or below the cap.

The uncertainty surrounding these regulations prevents energy companies from making long-term investments that would aid them in meeting a cap on carbon emissions or at least would not handicap them against the competing companies within the energy industry. In the face of such uncertainty, some energy companies are pushing for regulation to clarify their basis for investment, while others are diversifying their investments across technological improvements in accessing oil and natural gas in technically difficult areas, renewable energy technologies, and traditional oil and natural gas plays.

### Rapid Growth of China and India

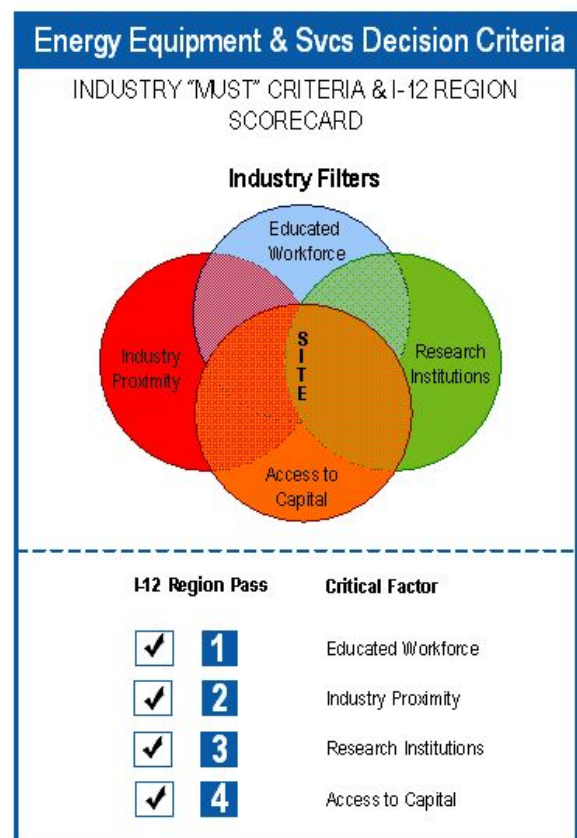
Though oil and natural gas prices have come down from their historic highs in the aftermath of Hurricane Katrina, the oil and natural gas supply remains tight across the globe. While demand growth in America has flattened and even turned negative in 2006, and Europe's energy consumption is growing at small rates, the emerging economies of the world are increasingly demanding and consuming large amounts of oil. From 2000 to 2004, Middle East energy consumption grew 18%, Asian energy consumption grew 12%, and Africa's energy consumption grew 11%, compared to 5% growth in North America and 3% growth in Europe and South America. Growth in Asian energy consumption accounted for roughly half of the increased oil consumption across the world from 2000 to 2004. China's energy consumption has grown an astounding 33% in 4 years, India's consumption has grown 15%, and Asia as a whole has grown by 12%.

Driving concerns in the industry will center on meeting rapidly growing demand in developing countries, especially China and India. Health, safety, and environmental concerns will affect both workforce development and technology development. Importantly, low-cost natural gas will continue to favor petrochemical and increasingly plastics producers in the Middle East and Asia. Over the medium term, creation of several liquefied natural gas (LNG) terminals along the Gulf Coast combined with cheaper natural gas imports from overseas may provide some relief to petrochemical and plastics production companies. Meeting the rapidly growing energy, chemicals, and plastics demands of the emerging economies, with less developed infrastructure, murkier legal regulations, and more challenging competition from national oil companies and uncertain economic conditions will present a major test for the major western energy companies.

### LOCATION DECISION CRITERIA

The most important criteria for energy, petrochemicals, and plastics equipment and services companies are:

- **Educated Workforce:** Engineers, technicians, skilled workers, etc.
- **Proximity to Oil and Gas:** Must be located close to significant oil and gas resources including refineries
- **Research Institutions:** Research into enhanced oil recovery, computing power, etc.
- **Access to Significant Capital:** Energy projects are extremely capital intensive; having support of financial and legal services versed in energy
- **Low natural disaster risk:** Must be protected from flooding, provide buffer from non-compatible activities



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### Structural Assets

Required structural assets for the energy, petrochemicals, and plastics equipment and services industry include large blocks of contiguous office space to support engineering firms, oilfield services firms, and data analysis and operations of large oil companies, large tracts of land to support manufacturing operations, access to transcontinental and transnational pipeline and port infrastructure; excellent highway access for employees; and excellent technical infrastructure. Air transportation to international oil centers, including cities across Africa, the Middle East, and Asia, will aid attraction of the energy, petrochemicals, and plastics industry.

### Cost of Doing Business

Energy companies, in addition to utilizing enormous amounts of capital, are increasingly driven by their technical expertise, proficiency in international legal agreements, and their ability to employ local populations in energy production. Any location decision on the part of machinery manufacturers will be heavily influenced by the presence of an affordable labor supply, while both manufacturers and services firms will depend on proximity to existing energy infrastructure to capitalize on agglomeration effects.

### Research and Development

R&D activity in the energy industry abounds, and the Department of Energy focuses major efforts on expanding enhanced oil recovery (EOR) opportunities for declining U.S. fields, advanced drilling methods and equipment, new and more efficient methods of burning natural gas for electricity, and in clean coal technologies to capture and geologically store CO<sub>2</sub>. Research funded by the U.S. government makes up a small percentage of overall R&D in the oil and gas industries. Rather, private companies continually search for more effective, efficient ways to produce oil and natural gas in increasingly fragile natural environments and continuously research new plastics and composite materials for marketing. Many energy companies, with large amounts of capital seeking high returns, have started venture capital arms to invest in new energy technologies. Overall, however, energy companies invest much less of their profits into R&D, using only 1% of revenues for R&D, compared to 4.5% of revenues for industrial equipment companies.

### Economic Conditions

The energy, petrochemicals, and plastics industry is very reliant on the overall economic climate of the nation and increasingly on the macroeconomic trends worldwide. Local economic conditions play little role in expanding or relocating energy industries, except where competition for industrial materials and workers prevents energy companies from being cost competitive.

### Workforce

Energy companies are increasingly driven by their ability to attract the best technical expertise and developing and retaining the most technologically advanced, international workforce available. Aging workforces are a growing problem for energy companies, as highly experienced engineers, skilled technicians, mechanics, and other key personnel reach retirement age without a ready supply of replacement workers. International competition for employees is a growing aspect of workforce recruitment for energy companies, with quality of life in base cities playing a large role in recruitment and retention.

## I-12 CORRIDOR ASSETS

1. **Proximity to Energy Industry** – With close proximity to one of the largest energy and petrochemicals epicenters in the U.S., the I-12 Corridor enjoys a location advantage not replicable in most regions. Louisiana is home to a huge, integrated energy, petrochemicals, and plastics industry. Louisiana is fourth in crude oil production in the nation, second in petrochemicals production, and second in refined oil products.

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In an industry dependent on physical proximity, integration, and clustering, the five-parish region enjoys a unique opportunity to capitalize on growth in services and equipment needs.

2. **Educated Workforce** – While the five-parish region as a whole is challenged by issues of attracting and retaining young talent, the southern parts of the Region maintain a technically savvy workforce capable of satisfying the needs of energy services and headquarters operations. In St. Tammany, 31% of the population possesses a bachelor's degree or higher, and the parish boasts high concentrations of geologists and other scientific occupations as well.
3. **Research Institutions** – Southeastern Louisiana has a strong network of colleges and research institutes that provide an attractive innovation infrastructure for energy companies dependent on continued technological advances. Nearly \$500 million in research is carried out at LSU, Tulane, and other regional institutes on an annual basis.

## NICHE SECTORS

### Oil and Gas Machinery and Equipment

Oil and gas machinery and equipment manufacturing provides a growing niche sector for the energy industry. Increasingly, energy companies explore large areas from a single well, introducing horizontal drilling techniques which require specialized drilling equipment, drill bits, and other tools and technical and technological equipment. Drilling rigs are also in demand, and companies which manufacture these rigs can capitalize on the tremendous amounts of money chasing new energy sources. Production of offshore oil rigs, huge multi-million dollar products, can capitalize on logistics and distribution strengths and access to offshore exploration and drilling areas around the world.

### Oilfield Services

Oilfield and engineering services will continue to support exploration and production of oil in increasingly challenging areas. Oilfield services companies monitor information during the well drilling process for energy producing companies, provide the correct drilling muds to ease the drilling process, and often handle the project management and information solutions for drilling companies. Engineering services companies provide planning and technical expertise in helping energy companies exploit sources of oil, including non-traditional sources such as oil and tar sands in Alberta and extremely heavy oil found in Venezuela. Oilfield services companies will continue to grow, and their focus on high technology solutions to problems will continue to pay dividends as the difficulty of producing gas and oil grows.

### Energy Headquarters

While not an "industry," corporate headquarters have been an explicit target of economic developers for decades. The corporate headquarters of energy firms are an administrative division of a multi-location company that contains a large number of decision-makers and top managers. The five-parish region's quality of life, variety of housing options, and success in recruiting Chevron indicate high potential for the recruitment of additional headquarters functions in the energy industry.

The target industries being proposed for the I-12 Corridor cannot be fully justified without taking the impact of the I-10 Corridor into account. The I-10 Corridor described in this report refers to the portion of Interstate 10 that is along the southeastern portion of the Florida Parishes entering southwestern Mississippi.

Many references to the I-12 Corridor assets articulate those that are not directly or instantly affiliated with the “North Shore” or Interstate 12 – those attributes that define the representation of the five parishes and their collective economic development efforts. This does not discount the fact that the I-10 and I-12 Corridors are linked in the regional landscape and that those “I-10 Corridor assets,” such as two NASA facilities and the National Center for Advanced Manufacturing, are not a part of the holistic marketing advantages the region has to offer.

This section is a summary of the I-10 Corridor Target Industry findings that have been described in Figure 1 (page 7) and are more thoroughly detailed in a report presented to the I-10 Steering Committee entitled, I-10 Corridor Economic Development Marketing Plan, dated November 2007.

### ABOUT THE I-10 CORRIDOR

The I-10 Corridor, focused along the southeastern portion of the Florida Parishes, as well as southwestern Mississippi, is the technology hub for the region. This area is home to two of the most important NASA installations in the country for both current and future missions, a substantial federal city that spends billions on some of the government’s most mission critical operations, an emerging group of investors and developers focused on technology transfer and commercialization, and a network of public, private, and university partners dedicated to fostering economic development via joint ventures and collaboration.

The North Shore Parishes area has long been the residential location of choice for many of the regions scientists, geologists, and technical workforce; today, with a burgeoning economy, unique quality of life, construction of high-end housing, and high tech infrastructure development, the area is an increasingly attractive environment for technology companies themselves. The individual industries represented by the Integrated Technology Cluster have significant application to many of the industries identified as targets for the I-12 Corridor, thereby creating further opportunity to fill important regional technology gaps, foster innovation, and ultimately generate greater economic development. In the following pages, we provide a brief description of each of the Integrated Cluster Technology industries. Full target industry profiles can be found in the companion text, Technology Corridor Market Research Report.

## I-10 Target: Advanced Aerospace and Defense Manufacturing, Research, and Technology

The Advanced Aerospace and Defense Manufacturing industry is a target industry for the I-12 Corridor just as it is for the I-10 Technology Corridor. The aerospace research and technology industry stays on the vanguard of technology development for the creation of new and improved aerospace products. The industry is largely comprised of scientists, aerospace engineers, and other professionals who research, design, and test the newest vehicles and products for eventual commercial use. Areas of specialization include structural design, navigation and control, instrumentation, and guidance.

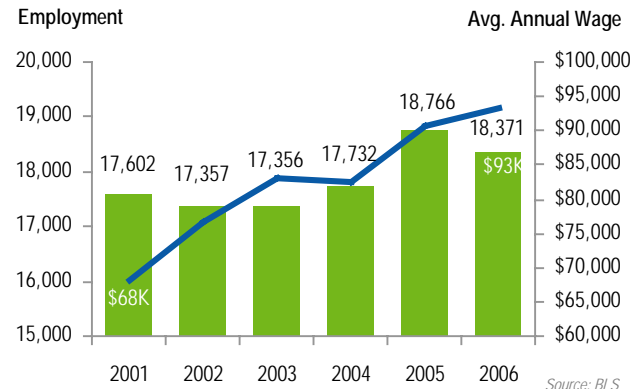
The University of New Orleans plans to create an Advanced Technology Research Park, along I-10 in Slidell, focused on leveraging technologies developed at nearby Michoud and Stennis Space Center. This 100-acre tract would be part of a \$250 million public-private mixed-use campus and lifestyle center. The center would provide the physical infrastructure necessary for aerospace research and other small technology companies to succeed in the I-10 Corridor Region.

## I-10 Target: Geospatial Technology

Geospatial technology is a high-growth industry that applies advanced technologies toward mapping of the earth's features. There are **three major segments** to this industry. **Geographic Information Systems (GIS)** assist in creating and displaying spatially referenced information; **Global Positioning Systems (GPS)** allow for the transmittal of instantaneous location information to handheld and other devices using a network of satellites; and **Remote Sensing** permits the collection of data or other information using devices that are not in physical contact with the object of study. The demand for reliable, advanced geographic information has fueled growth in the industry, the market, which was estimated at \$5 billion in 2002 and projected to grow 600% by 2005. The U.S. market alone is expected to grow over \$21 billion in revenue over the next several years.

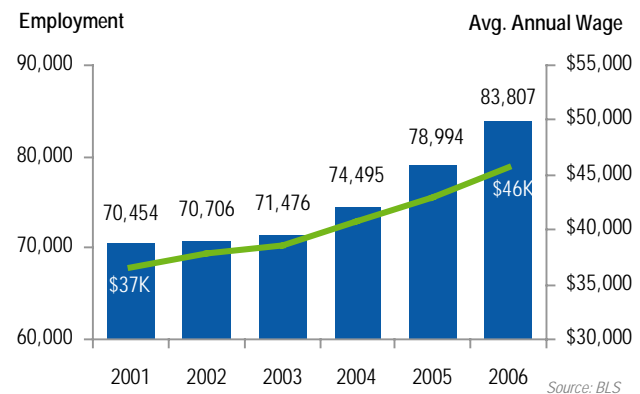
### FEDERAL SPACE RESEARCH & TECHNOLOGY

TOTAL FEDERAL EMPLOYMENT & AVERAGE WAGE, 2001-2006



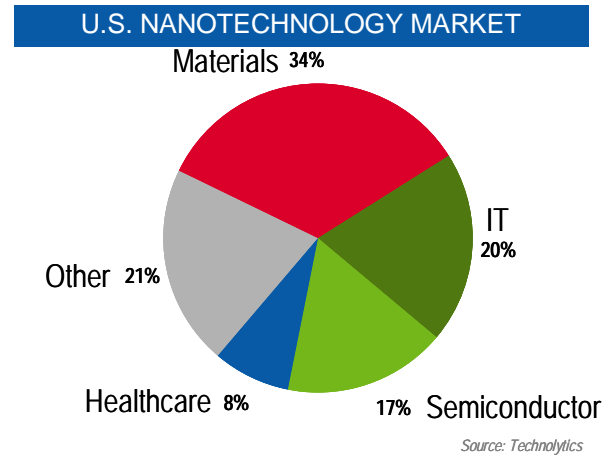
### SURVEYING & MAPPING

NATIONAL EMPLOYMENT & AVERAGE WAGE, 2001-2006



## I-10 Target: Nanotechnology and Advanced Materials

Nanotechnology involves the manipulation of matter at the scale of 1-100 nanometers (nm). Materials produced at the atomic level often show promise in the areas of optics, magnetism, and thermal dynamics. Nanotechnology is not simply about producing miniaturized materials, but rather exploiting the novel properties inherent at a miniaturized scale. Although nanotechnology remains in its infancy, it has the potential to profoundly affect such diverse fields as energy, electronics, medicine, and agriculture. Because of the broad applications, the field may ultimately prove as important as electricity or the Internet. The diversity of applications combined with an ever-expanding global reach drives continued market demand for this growing industry.

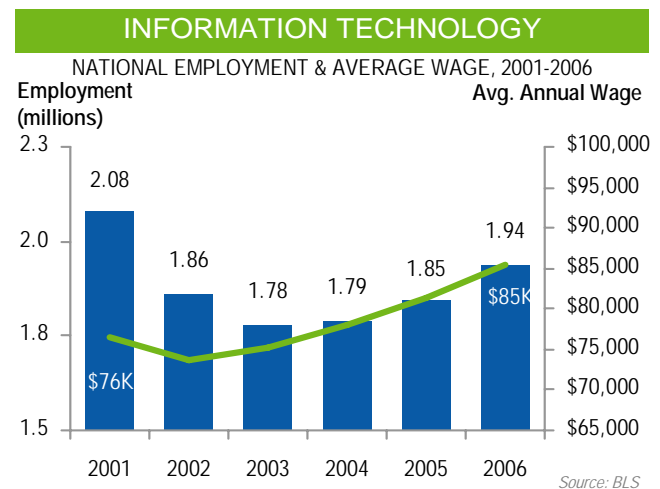


Louisiana's energy and NASA industries offer many opportunities for crossover with innovative nanotechnology research and products. Research into nanocomposites has the potential to create extremely hard, durable, resilient materials for use in drilling and other oil and gas field equipment.

The University of New Orleans Advanced Materials Research Institute is a tremendous asset for the development of nanotechnology in the region. The Institute fosters collaborative research with corporate laboratories with the goal of making discoveries that can be translated into commercial applications in nanosensors, nanodevices, and other areas. The National Center for Advanced Manufacturing, a partnership between NASA, the state of Louisiana, and the University of New Orleans, brings together the research capacity of seven area universities focused on the use of advanced composite materials in aerospace structures. With nanotechnology dependent industries such as aerospace, shipbuilding, and energy anchoring significant portions of the regional and state economies, many opportunities exist to leverage regional assets for the creation of a nanotechnology cluster.

## I-10 Target: Information Technology

The information technology (IT) industry, broadly defined, comprises programming services, prepackaged software, data processing, information retrieval services, web and Internet related firms, and computer systems design. Information technology firms now have worldwide revenues in excess of \$200 billion, with approximately half of sales coming from software applications. Major areas of growth include data security and



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business intelligence software. While the relatively low start-up costs associated with software firms lead to a preponderance of smaller companies, the industry is rapidly maturing, and many analysts forecast an era of consolidation ahead.

The information technology industry suffered through a relatively precipitous drop in employment following the tech-bust but has rebounded of late, adding more than 150,000 employees since 2003. Industry wages remain some of the highest among all industries, reaching \$85,000 in 2006.

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