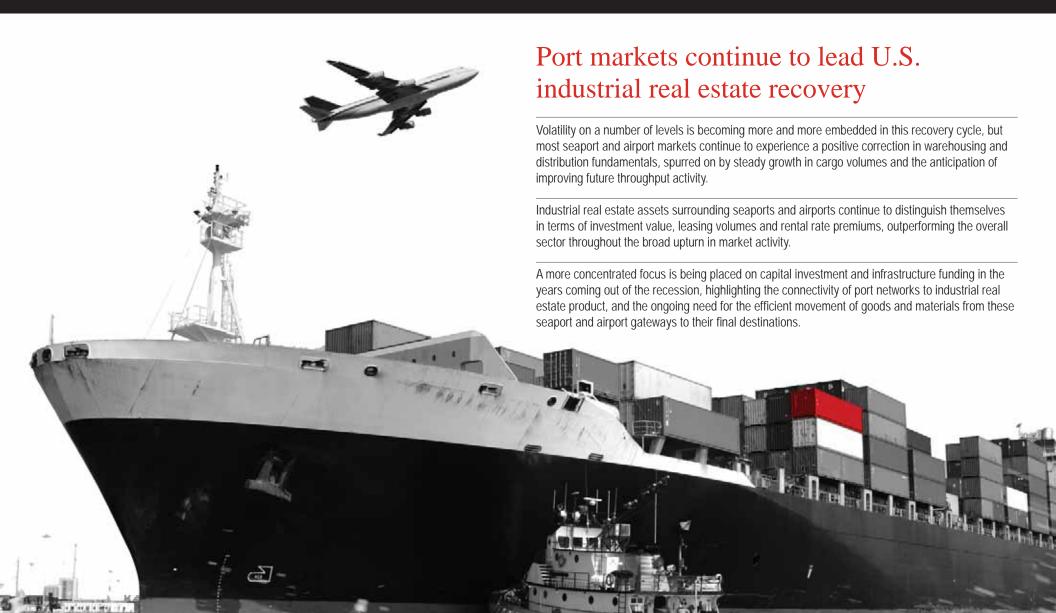


Real value in a changing world

# PAGI Outlook

Port, Airport and Global Infrastructure

United States . Summer 2011



Even in a global environment that seems increasingly fraught with risk and uncertainty, capital has continued to pour into ports around the world. Taken individually, each investment represents a salvo in the heated battle for market share. Collectively, capital investment in seaports is laying the foundation for the continued boom in global trade.



# In this report

The **Jones Lang LaSalle Port, Airport and Global Infrastructure Outlook** provides a distinctive analysis of seaport- and airport-centric industrial space in gateway U.S. real estate markets. Observing the influence of global economic drivers, including trade and cargo flows, socioeconomic and political factors, as well as port capacity and infrastructure investment, it provides both a macro overview of current trends impacting the domestic sector in addition to detailed information on major seaports and airports. This report explores warehouse property fundamentals in a 15-mile radius from seaports, given a minimum building size of 50,000 square feet. Airport markets are comprised of a three-mile radius and a minimum size of 20,000 square feet.

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# Port, Airport & Global Infrastructure services

Transportation hubs evolve and grow as fast as the world turns. Emerging populations and shifting patterns in the global movement of goods and cargo have accelerated new trends in logistics, technology, transportation and security. Plus, the demand for worldwide shipping environmental sustainability will only continue to grow. All of which magnifies the importance of real estate to international distribution channels, and dictates that yesterday's approaches won't solve tomorrow's challenges.

Our experienced team of aviation and maritime real estate experts draw upon deep, real-time knowledge of the trends, challenges and opportunities surrounding seaport and airport infrastructure and their connectivity to the real estate equation. Working alongside the firm's integrated service lines, our Port, Airport and Global Infrastructure practice brings leadership, strategic relationships and service excellence to port and airport interests worldwide.

# Industrial and logistics services

From manufacturing plants to distribution centers, industrial real estate is at the backbone of the global economy. Today's financial and competitive pressures demand that industrial property—whether leased or owned—deliver maximum flexibility and efficiency. Our logistics and industrial professionals understand the current business environment and offer innovative, profitable strategies for supply chain optimization, site selection, sales, leasing, acquisition, financing, construction, project management, and property and facility management.

Our experts know all the issues that impact industrial real estate decisions and apply proven best practices to address such challenges as skyrocketing energy, transportation, and labor costs; heightened security needs; environmental requirements; and profound changes in global supply chains. Because of our depth of in-house talent, we can quickly assemble the right team. Regardless of the size and scope of the assignment, you'll have a single point of contact who manages all service delivery and is responsible for producing the measurable results that are agreed to up front.

- The global economy remains on fragile footing: rising oil and commodity prices, supply chain disruptions and geo-political strife have created challenges for more robust economic growth, but signs of improvement are emerging. Consumer spending is on the rise and hiring will likely continue at a slow but steady pace, ultimately boosting trade activity.
- Trade activity is still on the upswing: trade drives demand for warehouse space near seaports and airports. Industrial real estate markets in close proximity to sea and airports are recovering more quickly from the impacts of the recession than other peer markets, continuing the 'coast inward' resurgence that has characterized the period after the economic downturn.
- **Preparing for the future:** speed is no longer the only burden of successful movement of goods. Ongoing efficiency improvements in shipping technology, including upgrades to intermodal facilities, increased cold storage capacity, double-stack capable rail lines, and larger container ships and airplanes all will speed up transit times and reduce costs, especially fuel costs. The Panama Canal expansion is driving port and infrastructure-related improvements along both the Gulf and East Coasts as these ports fight to establish future market share once the new set of locks open.
- The growing importance of P3s: In a growing number of U.S. port and airport markets, public private partnerships (P3s) are being considered, if not already formed, to develop, build, maintain and operate both the real estate and operational assets.
- **Seaport markets continue to outperform:** again advancing ahead of the general industrial market, which has just eclipsed a 10.0 percent vacancy rate in mid-2011, major seaport-related industrial real estate experienced a 50 basis point decline in vacancy over the last year to reach 8.5 percent, but still remains elevated even above 2009 levels. With continued TEU growth, which is expected into 2012, it is anticipated that further gains will be made in overall occupancy.
- Rising energy costs swing into intermodal's favor: as population density increases, along with rising energy costs and vehicles on the road, the importance of alternative transportation for goods will be paramount. As such, intermodal transportation has a bright and prosperous future ahead. State and local governments would benefit greatly from contributions and investment, along with private capital, especially in the long term.
- Global economic growth is also resulting in greater air cargo movement: volumes are approaching levels last seen in 2007, prior to the start of the recession. Although cargo carriers were focused on downsizing and consolidating operations in 2009 and 2010, these efforts have largely been completed, and the industry appears to be in growth mode once again. As a result, demand for industrial real estate near major U.S. airports is beginning to pick up, and market fundamentals should continue to stabilize through the remainder of 2011, with stronger demand expected in 2012.
- Introducing the Jones Lang LaSalle Airport Index: as we have done in years past for the top seaports in the United States, in 2011 we have created an index to gauge the performance of industrial real estate markets around the nation's top cargo airports. The Jones Lang LaSalle Airport Index, which can be found on page 35, provides a quantitative measure of airports based upon a series of 10 parameters that pertain to air cargo and the industrial real estate market which support trade activity at the airport.
- **Airport market maturity:** A deeper analysis of the two sub-scores that comprise the final airport index score for each airport reveals that the 12 airports we surveyed are a disparate collection of markets. When plotted on a graph, the variance in their 'Air Cargo' and 'Real Estate' scores induces the airports to cluster into three discrete groups which we have labeled 'Mature, Evolutionary and Ascending.' The unique properties of each group, along with the driving factors that caused airports to fall into them, are discussed on page 42.



\$316.1 billion

- the total monthly volume of U.S. international goods trade (imports plus exports) recorded in May 2011, just shy of the all-time high recorded in July 2008

Nearly

1/10

of all U.S. seaborne foreign trade occurs with just a single trading partner – China.

Global real GDP growth is forecasted to average

3.6%

annually through 2013

U.S. exports of goods and services increased by

16.7%

in 2010 to \$1,837.6 billion since 2009, the second highest level recorded

# After a solid rebound in 2010, the global economy helped drive increased port-related leasing activity into 2011 – but can momentum be sustained into next year?

Having suffered the storms of the Great Recession, seaport- and airport-related industrial real estate markets began their recovery in 2010, but the complexities of a global recovery are still casting long shadows over the sustainability of economic growth. Natural disasters, geo-political strife and marginally effective economic policies, among myriad other factors like high energy prices, have recently left near-term confidence around the world stunted, and downside risks to further growth increasing. The cycle of restocking is over, and manufacturing momentum has recently slowed. Additionally, several of the emerging countries that led the economic turnabout are now experiencing slower output amidst rising commodity prices, while advanced economies have remained soft.

Over the short term, this uncertainty could likely mean increased volatility and some marginal slowing of fundamental growth for industrial real estate. However, whatever transient shocks may be sustained in the next 6-12 months are not anticipated to offset long-range optimism in the port-centric industrial asset class. Exports, a key objective of the Obama administration, have grown at nearly three times the rate of import growth in the United States. Export-related trade, while still outweighed considerably by import volumes, does not however have as significant an impact on warehouse demand as does inbound containerized goods.

Despite a number of threats like a waning inventory cycle and consumer apprehension, cargo volumes have thoroughly sprung back in 2010 and are sustaining a considerable pace of growth into 2011. This resiliency bodes well for warehouse and distribution space demand in port markets, especially in anticipation of a peak import season coming later in the year. Moreover, the long-term, aggressive capital investment plans in infrastructure have not abated as competition for market share continues to heat up in advance of the opening of the third set of locks at the Panama Canal.

With progressively increasing leasing volumes in and around seaport and airport markets, the excess vacancy that was placed in the sector has slowly been wrung out. These gateway logistics markets led a 'coast inward' recovery, and continue to outperform general industrial space throughout the country as a whole. The concentrated sphere of improvement around seaports and airports should also act as an indicator for the rest of the industrial warehouse and distribution market in the United States as a whole. As demand rises in direct vicinity to these major distribution hubs, there will inevitably be a spillover effect, as well as demand for alternative types of space, including office, flex/R&D and manufacturing, especially as operations and business confidence continues to slowly progress domestically.

# Global economic recovery has proven to be full of fits and starts in 2011

A return of robust international economic growth has been held back by a multitude of variables, many having an indirect impact on trade. Higher commodity prices, along with supply chain interruptions and fiscal or debt problems mounting around the world, have softened some of the optimism that had charged the latter part of 2010. True, sustainable economic growth remains on fragile footing, not yet having gained any traction, and a new oft-used description is a "soft patch." Offsetting some dour leading indicators are others showing improvement, and while the interplay of these variables can create a sense of volatility in the global economy, they can also lead to increased inertia over the short term.

Benefits and risks to port markets							
	Positives	Negatives					
Likely	Improving global economic scenario	Rising oil prices					
Lincoly	Efficiency gains in shipping (Panama Canal, intermodal)	Rising commodity prices					
	(	Persistent economic uncertainty					
Unlikely	Rapid fall in the domestic unemployment rate	Natural disasters on the scale of Japan that disrupt global trade					
Stantony	Surge in consumer confidence and spending	Double dip recession					

Most economic forecasts for the United States call for a resumption in slow but steady growth in variables like consumer spending, which was undercut in the first half of 2011 by rising fuel prices, and gradual gains in employment. Manufacturing, which in May recorded its largest monthly decline since 1984, bounced back at midyear. However, the housing market has not yet become a trigger for more substantial economic improvement, as prices are still falling and keeping buyers holding out for a bottom.

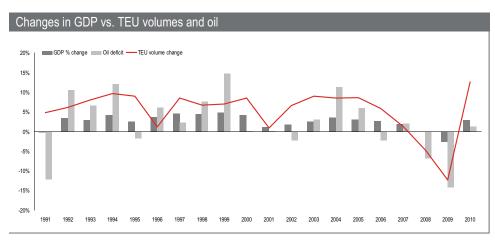


Debt crises have exploded into fears of major government financial default and a 'contagion effect,' and as a result, increasing interest rates are putting additional pressures on struggling economies like Greece, Portugal, Ireland and Spain that are already suffering from self-imposed austerity measures. While many Eurozone markets struggled with the resolution of sovereign debt problems, others like Germany remained relatively more stable, but rising inflation has brought on heightened concern in most markets that have already stretched monetary policies throughout the recession. While slower global economic growth and monetary tightening could cause inflation pressures to peak in the short term, growth could reemerge later in the year as uncertainty eases and more debt-related issues are resolved.

The March earthquake and tsunami in Japan disrupted output and impinged on supply chains with cascading effect around the world. While this event caused the Asia-Pacific region to lose some of its momentum, it was but one natural disaster that altered global production, distribution and consumption patterns. Supply networks are already being restored and production is beginning to return, signaling that its burden may have been short-lived. Outside of these events, the Chinese economy began to cool, prompting an interest rate increase. China and other emerging markets economies are characterized as softening by economists globally. China's CPI inflation was at an average above 6 percent year-over-year and its real estate bubble is further increasing uncertainty. Accordingly, policymakers of the developing world are trying hard to relax their economies by raising interest rates and bank reserve requirements, requiring lenders to tighten underwriting standards. While a surge in headline CPI inflation in the United States has now dissipated slightly behind lower gasoline and food prices, it is still a concern, even if distant, especially as wage rates are not moving in tandem.

Oil prices dipped during the recession and then surged earlier this year. As international trade grows, the demand for oil is expected to again rise, and if the scarcity persists, prices will again be pushed up. In June of this year, when the International Energy Agency announced the release of 60 million barrel release of stocks over a period of 30 days, oil prices plunged. As compared to previous emergency releases of oil prices during Hurricane Katrina in 2005 and Iraq's invasion of Kuwait in 1990–91, this release was not effectively triggered by genuine oil supply shortage, but instead was carried out to cool down rapidly overheating oil prices and to help warm a lethargic U.S. economy. However, many predict that at least part of this pricing pullback will be recaptured before the end of the year, with prices again surpassing the \$100 per barrel mark (West Texas Intermediate).

As per the U.S. Department of Transportation, port traffic is expected to double or triple by 2030. To cope up with this increase in volumes, ports are now competing to attract a bigger market share



Source: Bureau of Economic Analysis, American Association of Port Authorities, Jones Lang LaSalle Research

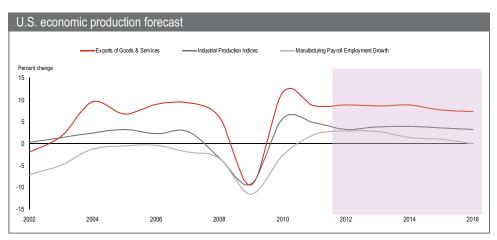
of traded goods and throughput capacity by investing heavily in infrastructure. For the economic engine of the nation to continue to function, competitive transportation systems will continue to be a critical component. These challenges of rising oil prices, complex global trade variables and unpredictable natural disasters have increased both the awareness of and the emphasis on a strong and well-connected domestic and global transportation network.

### The outlook for the United States could be telling abroad

A sub-par outlook for economic growth in the midst of rising inflationary pressures is keeping a sobering damper over the short run in forward momentum in the United States. While any gains the domestic economy has made in its continued emergence from recession over the past two years, and any expectations for near-term progress are both flat or moderate in nature – many economists point to at least somewhat of an overall upward trajectory. Gross domestic product is expected to increase at a modest annual rate for the remainder of the year. More indicators will need to fall in line with sustained growth before the general economy can show the benefits. Improvement in labor markets and employment will need to occur for more sufficient growth in consumer confidence and spending. Productivity has been increasing, and corporate profits as well as business capital spending have experienced a boost, but companies have not yet converted these into consistent level or stronger payroll hiring.

Exports in the United States have benefited from a relatively weaker, price-competitive U.S. dollar coming out of the global economic downturn, and are expected to continue to contribute toward

GDP growth in the remainder of the year and beyond. Additionally, export gains have also exposed more of an 'income effect' of higher foreign demand for U.S. goods and materials, especially those like paper or paperboard, logs or lumber, raw cotton or fabrics and animal feed. In July, the Export-Import Bank announced that exports had been growing at an annualized rate of 16.6 percent over 2009, just above the pace required to double exports by 2014, a key initiative of the Obama administration's National Export Initiative. This is allowing our major port networks to invest in retrofitting existing infrastructure and set new standards for what the container and intermodal industries will look like in the future.



Source: IHS Global Insight, Jones Lang LaSalle Research

The manufacturing sector had been expanding again after a brief slowdown, some part of which was caused by the supply chain disruption in Japan. However, as the global economy continues to struggle, U.S. manufacturing could moderate and flatten. More endemic of slow- or no-growth following a period of inventory restocking, manufacturers continue to be cautiously optimistic, but rising commodity prices could likewise lead to a retrenching of industrial production, especially if prices cannot be passed through to consumers.

# Transportation trends and their impact on port markets

Production levels, transportation costs and shipping time-to-market continue to be both balanced and mitigated by a combination of air and sea cargo shipping, especially for trans-Pacific freight. This is driving economies of scale, not only in the air and ocean vessels carrying goods and materials, but also in the infrastructure within and surrounding seaports and airports. Demand

for larger container vessels (approximately 18,000 TEUs in capacity), larger cargo airplanes and double-stacked rail cars will increase efficiency and lower costs.

At the national level, several proposals have been in play to help fund transportation spending, including the Obama administration's National Infrastructure Bank a proposal by President Obama to create a to fund transportation projects could bring up to \$5 billion per year in loans, grants or other means. In the wake of diminishing returns from other stimulus policies, the U.S. Department of Transportation recently announced a further round of TIGER III (Transportation Investment Generating Economic Recovery) infrastructure incentives totaling \$527 million, in addition to the \$2.1 billion released in the first two stages of the program.

# Smooth sailing or clear skies for port markets?

While exports have grown in the United States, containerized imports have been relatively more steady, aided by a return of inventory-to-sales ratios to low but operable levels. As retailers position themselves for the holiday season, port markets are expected to experience a peak shipping season increase in volumes that could help sustain their improving real estate fundamentals through the second half of the year and prevent any corrections in the progress made thus far. There are continued risks to this outlook, however, the most prominent of which will be oil prices and, if as predicted, the magnitude of increasing fuel costs erodes business and supply chain profit margins. Any uptick in consumer demand, especially if spurred by more healthy and sustained employment figures, could mean stronger trade volumes and could consequently drive up demand further for port-related industrial property.



# The growing importance of public private partnerships in the United States

Public Private Partnerships (P3s), having been an oft-used model for the funding and improvement of maritime and aviation systems in international markets, are now beginning to emerge here in the United States. Challenges in securing federal and state funding for new port infrastructure, and concerns about the level of public debt, have created the opportunity for private investment and operating interests to help create the next generation of port and airport infrastructure.

In a growing number of U.S. port and airport markets, P3s are being considered, if not already formed, to develop, build, maintain and operate both the real estate and operational assets. This is drawing on traditional industrial development and investment firms who have historically limited their focus to the areas "outside the gate." In some cases, fully privatized consortiums are engaged in port projects to relieve the pressure from the local port authority and to allow public financing to be allocated to other uses.

On the airport side, these can include on-tarmac facilities such as air cargo buildings, maintenance hangars, air freight facilities, fixed base operations, and ground service handling



CTSI, a private Philippines-based terminal operator opened its first U.S. terminal in 2010 under a 25-year P3 agreement, bringing private capital and management for the first time to the Port of Portland.

installations. On the maritime side, container terminal expansion projects, breakbulk operations, bunkering installations, and automobile prep systems are all candidates for P3 or outright privatization.

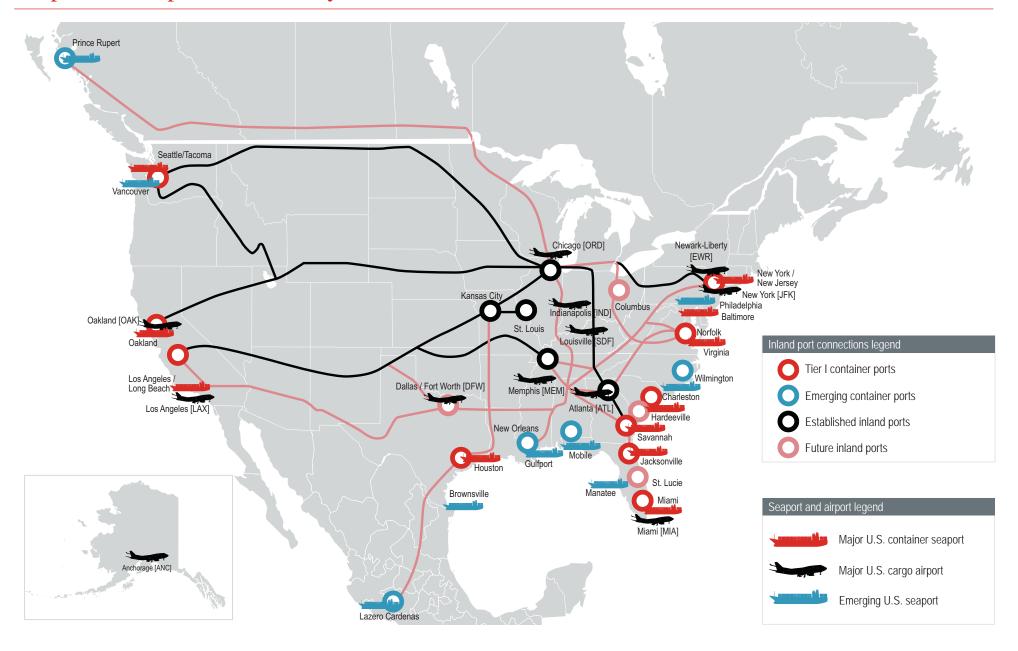
Private sector consortiums in the maritime and aviation arena typically involve three core partners: developer, operator and financing partner. These projects require patient money and long-term vision, as port concessions often involve durations of 30-50 years, and require tremendous up-front capital. Nevertheless, with an awareness today as to the importance and connectivity of port systems to traditional industrial product, P3 and private port opportunities are becoming increasingly viewed as a desirable addition to the investment portfolio.

Specialized funds are now being created throughout the United States and foreign markets, dedicated to financing and developing or otherwise improving maritime- and aviationrelated infrastructure. Among the reasons given for the attractiveness of P3's or private port development to these new infrastructure funds are the following:

- Long-term leases, low risk assets
- Visible & predictable earnings
- Complementary to inland portfolio assets
- Large scale projects with high barriers to entry
- Performance not tied to common financial instruments
- Tax-exempt bond financing and other attractive development incentives available
- Opportunity to create & leverage value
- Strong community support with meaningful direct and indirect employment
- Tangible exit strategy

With the expansion of the Panama Canal on schedule to open in mid-2014, and significant improvements still needed at East Coast ports eager to capture new market share, we expect to see port authorities and private interests increasingly turning to one another, with P3s becoming a more common development model in the years to come. Likewise, with most U.S. airports owned and operated in some form by local municipalities, the opportunity for collaboration between airport authorities and specialized development interests is surely to become a win-win for all concerned.

# Seaport and airport connectivity



# Seaports

Container ship deliveries are expected to reach

# 1.55 million TEUs

in 2012, exceeding the previous record of 1.52 million TEUs set in 2007

99%

of overseas trade by weight is carried on ocean-going vessels

360

commercial ports are operational in the United States with approximately 3,200 cargo and passenger handling facilities

International container traffic will more than

double

by 2020

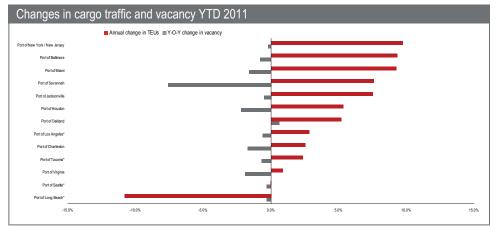
# Seaports

### The battle for market share continues

Even in a global environment that seems increasingly fraught with risk and uncertainty, capital has continued to pour into ports around the world. Taken individually, each investment represents a salvo in the heated battle for market share. Collectively, capital investment in seaports is laying the foundation for the continued boom in global trade. There will be winners and losers, but the ports will at least be fighting for slices of an expanding pie.

Rising oil prices, natural disasters and piracy only serve to delay, not deter, steady growth because worldwide trends driving trade are widespread and self-reinforcing. Consumers in in developing markets continue to demand more quantity, quality and variety. Containerization of exports keeps gaining ground, allowing unique goods to reach new markets. And both seaports and steamship lines are expanding capacity for refrigerated goods like pharmaceuticals and produce.

Rail freight operators are continuing to invest in intermodal facilities and double-stack capable lines to improve the reach and speed the flow of goods from East and West Coast ports to the hinterland. Double-stack lines plus near- or on-dock intermodal capacity means goods can move all the way from ports like Los Angeles or Norfolk to inland distribution hubs like Chicago and Kansas City without a shred of rubber meeting the road.

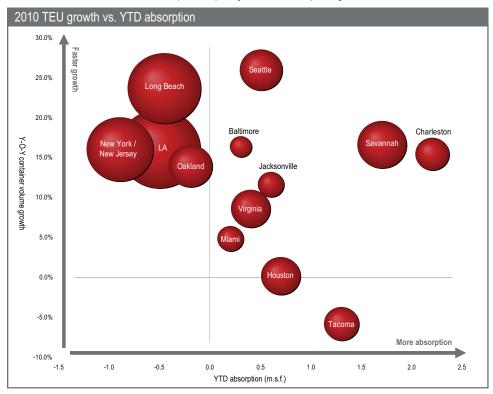


Source: American Association of Port Authorities, Jones Lang LaSalle Research

In 2010 ports across the country posted huge year-over-year gains in container volume. That trend has slowed but not stopped in 2011.

# Investing in the long-term future

Seaport stakeholders are also investing to increase road capacity and ease the movement of goods by truck to and from terminals. Miami, for example, is investing over half a billion dollars through a public/private partnership to dig a tunnel under its downtown and divert truck traffic from congested surface streets. For another example, construction crews in Savannah will extend a highway directly to the gates of its container terminal also in an attempt to divert truck traffic and speed transit of goods inland. These port cities are not alone in investing in their landside capacity, recognizing that the collapse in trade in 2009 was only a temporary reprieve from rapidly expanding trade volume that threatened to surpass capacity and ratchet up congestion.



Source: Jones Lang LaSalle Research

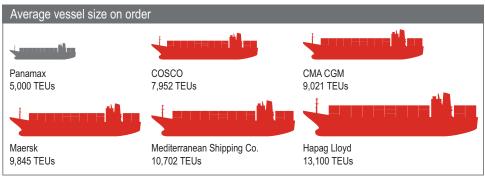
While the global financial crisis and recession has left economies in the developed world moribund, seaborne trade has still bounced back sharply and resumed its growth path. In the United States,

international throughput at ports bounced back 8.6 percent in 2010. Compare that to anemic GDP growth of 2.9 percent and it becomes clear that there is more life to trade than underlying economic growth alone can nourish. Taking a deeper look, exports from seaports leapt upward by 15.5 percent while import cargo rose only by a mere 4.5 percent.

Despite a still wide trade deficit, exports have been a continuing source of strength for business at seaports and look to stay that way going forward. And it is not just outbound volume that increases from exports. Manufacturing firms frequently use the same ports to bring in raw materials and components as to export final goods to international markets. This two-way relationship has buoyed markets around export-oriented ports and will continue to be a large determining factor in which ports are able to grow and gain market share.

### The rising tide of big ships

The shipping industry is rapidly moving to field larger ships capable of carrying up to 18,000 TEUs. Maersk has ordered 20 Triple-E class ships of this size and will initially deploy them on Asia/Europe circuits. These ships are expected to lower the firm's cost by 20.0-30.0 percent, and represent efficiency gains even over already large ships with capacity for 13,000 containers according to the Journal of Commerce. The Triple E class also breaks new ground because they will be slower, not faster, than previous generations of ships and were designed with energy efficiency and emissions in mind.



Source: Alphaliner, Jones Lang LaSalle Research

Maersk is not alone. Of the top 20 carriers, order books for 15 have an average vessel size with capacity for at least 8,000 TEUs. None of these carriers currently has an average fleet capacity greater than 5,000 TEUs (Panamax). Mediterranean Shipping Company is already operating 23 ships that hold at least 10,000 TEUs and has as aggressive an order book for large ships as any

other large carrier. Hapag-Lloyd, Hyundai Merchant Marine and United Arab Shipping Company all notably have an average order size of 13,000 TEUs.

# The impact of the Panama Canal

While the expansion of the Panama Canal is certainly driving large ship orders, it is only to a limited extent. In truth, the wave has been crashing on U.S. shores for some time already. Though the Panama Canal expansion was not approved until the end of 2006, U.S. port calls by post-Panamax container ships had already begun their rise of 156.0 percent, accounting for 24.0 percent of all calls in 2009 according to the U.S. Department of Transportation. Ships like the Triple E Class are too big to fit even through the widened Panama Canal under any circumstances.



The big ship strategy places the spotlight squarely on terminal operators and local governments to put infrastructure in place. So far, a lot of attention has been paid to depth of shipping channels. Channels at most of the large ports in the U.S. will need dredging in order to accommodate ships of the new-Panamax specification. But deep water is only a necessary condition, it is not sufficient. When deciding which ports to call on, ocean carriers will weigh dockside and landside infrastructure such as rail intermodal, cranes in place, road infrastructure, limited port congestion, sufficient labor

and other factors. The ports that stand to win the vigorous market share battle will be those that take the most holistic approach to moving goods in and out as quickly and efficiently as possible.

# Why slow steaming is here to stay

Slow steaming reentered the playbook of steamship lines as the price of oil took off between 2007 and 2008, allowing the carriers to realize substantial gains in fuel economy. Even when the cost of fuel collapsed in the wake of the global recession, carriers continued slow steaming in order to mitigate the large oversupply of container ship capacity. Today, fuel prices have once again risen to historically high levels while carriers have expanded capacity and resumed new orders. And while the price of oil will certainly fluctuate in the future, slow steaming is here to stay because it provides carriers tangible benefits in capacity management, fuel efficiency and sustainability.

Maersk, the largest carrier in the world by capacity, takes the practice to the extreme by engaging in "super-slow steaming," cruising its ships at about 12 knots (14 mph) and attributing up to 30.0 percent savings in fuel and carbon emissions to the tactic. Aside from saving money and managing capacity, Maersk is hedging against a future than includes a carbon tax or stricter regulations on emissions. With sustainability concerns on the rise for shippers in all industries and a massive wave of new capacity on order at shipyards, Maersk's strategy looks shrewd.

Slow steaming means a slower supply chain with more goods in transit. Importers have two choices: hold more inventories or rely more on forecasting methods. The good news is that slow steaming actually helps to increase the reliability of carriers by giving them flexibility to speed up their ships and recover from delays. Whichever choice importers make, it is clear that slow steaming must be accounted for.

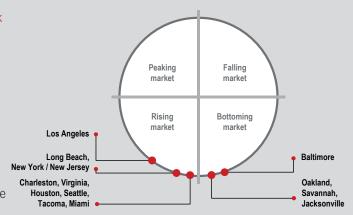
# Seaport real estate continues to outperform

Seaport real estate will continue to outperform despite weak GDP and consumer spending growth; the outlook for seaport industrial markets is good. In the last year, millions of square feet of industrial space have been absorbed in markets surrounding the busiest ports. This has brought vacancy in these markets down by an average of 1.4 percentage points. Without a spate of new construction, these rates are set to fall even farther as markets like Savannah and Houston continue to soak up excess inventory and return to equilibrium. The markets that will likely perform the strongest in coming years are those with a strong manufacturing base. Manufacturing drives two-way traffic through ports in the form of parts and finished goods; and, in fact, access to a capable and efficient seaport is often a prime factor in site selection decisions.

In 2010, volumes at the major seaports bounced back strongly from depressed 2009 levels and the growth trend has continued into 2011. International trade is at an all-time high and will continue to expand, translating into ever-increasing demand for warehouse space near seaports. Other factors like slow steaming, the wider Panama Canal and free-trade agreements also serve to further increase trade and the demand for warehouse space. On top of these trends, seaport and rail operators are investing in the infrastructure needed to move goods from ship to shore and inland. These factors expect volume to continue increasing and are laying the foundation for just that. As long as supply stays within the confines of market demand, port markets should be strong and even outperform industrial markets in total over the years to come.

### Seaport property clock

The Jones Lang LaSalle seaport property clock shows relative positions of seaport-adjacent industrial markets in their real estate cycle. Markets generally move clockwise around the clock, with markets on the left side of the clock generally



landlord-favorable and markets on the right side of the clock generally tenant-favorable. The relative positions are assessed on the basis of several real estate indicators including mismatch between expected demand and supply and recent movement of rentals. A market leading the cycle might suggest that it is expected to trip to the next quadrant earlier than other cities; however, rapidly changing demand and supply conditions might accelerate positions for particular markets within a short time.

The seaport clock shows that most of the top-tier port markets are experiencing rising occupancy levels and rents. The heaviest volume ports such as Los Angeles, Long Beach and New York/New Jersey are in very densely built up areas, as are many others. The density leads to unavoidable space constraints that have prevented the overbuilding seen in markets like Savannah and Houston. As a result, these constrained markets have tightened up very guickly in response to the bounce-back in seaborne trade, while the less constrained markets have lagged.

# Select top U.S. seaports and property market indicators

	2010 Volumes (TEUs) ▼	2010 Annual change	2011 YTD (TEUs) As of June 2011	Y-O-Y TEU change 2011	Immediate market size (m.s.f.)	Current vacancy	2010 net absorption (m.s.f.)	YTD 2011 net absorption (m.s.f)	Average asking rents (NNN)	Terminal operators and comments
Port of Los Angeles*	7,831,902	16.1%	3,767,227	2.8%	140.9	6.2%	0.4	-0.5	\$6.28	APM Terminals; California United Terminals; Eagle Marine Services; Port of Los Angeles; Seaside Transportation Services LLC; TraPac, Inc.; West Basin Container Terminal LLC (2); Yusen Terminals Inc.
Port of Long Beach*	6,263,499	23.6%	2,492,611	-10.8%	208.7	6.1%	-0.8	-0.5	\$5.99	International Transportation Service, Inc.; Long Beach Container Terminal Inc.; Pacific Maritime Services; SSA Terminals; SSAT Long Beach, LLC; Total Terminals International
Port of New York / New Jersey**	5,292,020	16.0%	1,762,028	9.7%	364.2	7.6%	-0.1	-0.9	\$5.33	American Stevedoring Inc.; Maher Terminals LLC; New York Container Terminal; Global Terminal & Container Services LLC; Port of NewYork/New Jersey
Port of Savannah	2,825,185	16.6%	1,472,370	7.6%	32.0	23.6%	0.9	1.7	\$3.51	Georgia Ports Authority
Port of Oakland	2,330,214	13.9%	1,141,737	5.2%	105.0	8.9%	-0.9	-0.2	\$6.36	APM Terminals; TransBay Container Terminal Co.; TransPacific Container Service Corp; Seaside Transportation Services; Total Terminals, Inc. LLC; SSA Terminals, Inc.; Eagle Marine Services
Port of Houston	1,812,268	0.1%	953,349	5.3%	49.8	9.1%	0.4	0.7	\$4.27	Port of Houston Authority
Port of Virginia	1,895,018	8.6%	943,908	0.9%	68.8	9.4%	0.4	0.4	\$4.20	Virginia International Terminals; APM Terminals
Port of Seattle*	2,139,577	25.9%	1,007,138	0.0%	103.3	7.2%	0.0	0.5	\$5.29	Eagle Marine Services; SSA Terminals; Total Terminals International; Port of Seattle; Northland Services
Port of Tacoma*	1,455,466	-5.8%	720,181	2.3%	109.1	8.6%	-0.6	1.3	\$4.66	APM Terminals; Husky Terminal & Stevedoring; Olympic Container Terminal; Pierce County Terminal; Totem Ocean Trailer Express; Washington United Terminals
Port of Charleston**	1,363,785	15.4%	571327.75	2.6%	30.6	10.5%	-0.4	2.2	\$3.87	South Carolina State Ports Authority
Port of Miami	847,249	4.8%	457,189	9.2%	100.7	10.0%	1.5	0.2	\$6.17	Seaboard Marine; South Florida Container Terminal; Port of Miami Terminal Operating Company
Port of Jacksonville	857,374	11.6%	426,958	7.5%	64.2	13.3%	-0.3	0.6	\$3.32	Jaxport; Ceres Terminals Inc.; Costal Maritime; Marine Terminal Corp; SSA Marine (SSA Cooper LLC); APM; Global Stevedoring / ICS Logistics; TraPac Marine Terminal
Port of Baltimore	610,922	16.3%	198,146	9.3%	95.7	10.2%	1.2	0.3	\$4.35	Balterm; Mid-Atlantic Terminal; Ports America; Maryland International Terminals, Inc.

<sup>\*</sup> Immediate markets overlap and are not mutually exclusive \*\*Data only available through May Source: American Association of Port Authorities, individual ports and Jones Lang LaSalle Research

# The Jones Lang LaSalle Seaport Index

The JLL Port Index has been developed to provide the reader a benchmark of U.S. port markets from the perspective of the real estate stakeholder. A defined set of measurable indicators have been used in addition to key performance metrics of the ports themselves.

Along with TEU volumes and port growth rates, the JLL U.S. Port Index takes into consideration factors such as land value-to-lease rate ratio and local vacancy rates. Other items in the rating process include planned infrastructure investment, labor costs and the availability of on-dock or near-dock service by Class I railroads. Each port is given 30 points as base start, and then the seven aforementioned criteria are ranked on a scale from 1-10, for a total possible score of 100 points.

The various criteria are assigned different weights based on their total value add to port efficiency and profitability. The heaviest weighted criteria are total TEU volume, TEU growth rates and vacancy. These three key factors cut to the essence of successful ports and their surrounding markets and can only be indirectly controlled. The only factor that can be directly controlled by a port is its planned infrastructure investment, though it carries far less weight than the three factors previously mentioned.

The JLL Port Index can be viewed as a market indicator of overall desirability of any given port to industrial development and investment interests, as well as for decision makers in the site selection process itself.









- The Port of Los Angeles is the top ranked seaport in the United States in terms of container volume. When combined with the neighboring Port of Long Beach, the second ranked seaport in the United States, the twin ports of the city of Los Angeles are ranked amongst the top five port complexes in the world and serve as the nation's trade gateway to Asia.
- The port has earmarked over \$1 billion to be spent on capital improvements over the next five years. This includes a \$370 million project to deepen the port's main channel allowing for 53-foot deep access. Other improvements include a \$274 million project to improve terminals operated by TraPac and China Shipping, as well as multiple initiatives to improve rail and roadway access.
- Rents in the port-centric submarket of the South Bay appear to have stabilized after declining throughout 2010. This submarket still commands a premium over others in the greater Los Angeles area and appears poised to enter a recovery and growth period starting in late 2011.
- Despite having the highest container volumes of any seaport in the nation, high growth rates, and a geographical advantage, the Port of Los Angeles is aggressively developing new trade through programs such as LA Advantage, regional market conferences for specific east Asian nations, and offering business counseling services related to ocean cargo and risk mitigation.

Los Angeles seaport dashboard								
Vacancy		Average	asking rents	2010 Co	2010 Container volume			
Current %	Rank	p.s.f. NNN	Rank	TEUs	Rank			
6.2%	11	\$6.28	2	7,831,902	1			







- Commercial activity at the Port of Long Beach, along with the neighboring Port of Los Angeles, drives employment
  in the region and demand for the 1.6 billion square feet of industrial property found within the greater Los Angeles
  area. After registering a 19.3 percent increase in container volumes in 2010, the twin ports have seen growth
  continue in 2011, albeit at a slower rate of 6.6 percent.
- The Port of Long Beach launched a \$950 million project in late 2010 to replace the aging Gerald Desmond
  Bridge, a critical component of the port's transportation network. Numerous other projects are currently planned
  or underway to modernize aging terminals, build new maintenance and repair facilities and dredge Long Beach
  Harbor to improve navigation in and around the port.
- With trade volumes improving at the neighboring ports, five logistics firms have signed leases in the South Bay for 200,000 square feet or greater during the first half of 2011.
- The Green Port Policy launched by the Port of Long Beach in 2005, which includes initiatives such as the Clean
  Truck Program and new green administrative buildings at the port, has earned the port the EPA's Pacific Southwest
  Region Environmental Achievement Award in 2010.







- Although leasing activity in the port submarket has been slow during the first half of 2011 a significant lease was executed for over 436,000 square feet of space helping to reduce the submarket's high vacancy rate.
- Activity in the oil and gas related businesses is increasing due in part to the ongoing development of the Eagle Ford
  Shale deposits in south Texas coupled with the award of drilling contracts for some of the offshore sites affected by
  the drilling moratorium. Increased activity offshore should have a positive impact on the port region later in the year.
- The Port of Houston received an 8,400-TEU ship to demonstrate its ability to accept large vessels. However, in
  order to receive this ship, it could only carry 3,000-TEUs in order to navigate the 40-foot draft at the new Bayport
  Container Terminal.
- The Port of Houston is exploring the feasibility of refurbishing the Bayport Container Terminal and dredging the
  terminal to accommodate ships that draw no more than 45 feet. In addition, upgrades will be required to cranes,
  entrance roads, rail and site equipment.

Long Beach seaport dashboard							
Vacancy		Average	e asking rents	2010 Co	2010 Container volume		
Current %	Rank	p.s.f. NNN	Rank	TEUs	Rank		
6.2%	12	\$5.99	4	6,263,499	2		

Houston seaport dashboard								
Vacancy		Average	asking rents	2010 Co	2010 Container volume			
Current %	Rank	p.s.f. NNN	Rank	TEUs	Rank			
9.1%	7	\$4.27	8	1,812,268	8			







- Loaded container traffic for the first quarter of 2011 was up 12 percent over the same period last year, balanced between both imports and exports. Overall, cargo volumes were up 16 percent in 2010, but are still below their 2007 prerecession peak.
- Port Newark has funding in place and should complete its harbor deepening project on time, but it will not be able to fix the low air draft of the Bayonne Bridge before the new Panama Canal locks are ready. The Port Authority has budgeted \$1 billion to raise the bridge's height, and authorized an additional \$25 million in May to expedite planning, architectural and engineering services. As another improvement anticipated to double cargo traffic over the next decade, it also began work on a \$600 million ship-to-rail container facility in Jersey City, called ExpressRail Port Jersey. It will bring the port region's annual rail capacity to 1 million containers, up from 400,000, also increasing the overall efficiency of port access and reducing exhaust emissions from large diesel trucks.
- Port Newark Container Terminal extended its lease through 2050, a 20-year extension that will provide \$500 million in private capital investment to upgrade the existing facility and secure a long-term strategic commitment with Mediterranean Shipping Company, which is expected to increase cargo volumes from 400,000 containers to 1.1 million by 2030.
- Furniture, food & beverage and apparel companies remain the most active tenants in the port market, especially those involved in importing. Significant 2011 transactions completed thus far include: Wakefern Food Corporation for 1,064,515 square feet and Vintage Foods for 122,000 square feet.







- Norfolk Southern completed the new Heartland Corridor, a \$320 million project that links the Port of Virginia with the Midwest. The new route reduces the trip from Hampton Roads to Chicago by nearly two days and allows for double-stacked containers.
- CSX announced plans to connect the port to their National Gateway project which will allow for double-stack service and is scheduled for completion in 2014. Total project costs for National Gateway are estimated at \$850 million with state and federal partners investing more than \$280 million.
- The Virginia Port Authority began construction of the foundations for a network of dikes that will support the Craney Island Terminal, a multiphase project with an estimated cost of \$2.2 billion. The marine terminal will be built over the next 20-25 years and, upon completion, will be the most modern facility of its kind in the United States, adding capacity of at least 2.5 million TEU.
- On the heels of a 20-year master lease of the APM Terminal in Portsmouth by the Virginia Port Authority, two new container cranes arrived bringing the total of post-Panamax cranes at the terminal to eight. The APM Terminal is the most technologically advanced marine terminal in the Americas, increasing the Virginia Port Authority's terminal capacity by approximately 1 million TEUs.

New York / New Jersey seaport dashboard							
Vacancy		Average	e asking rents	2010 Co	2010 Container volume		
Current %	Rank	p.s.f. NNN	Rank	TEUs	Rank		
7.6%	10	\$5.33	5	5,292,020	3		

Virginia seaport dashboard							
Vacancy		Average	asking rents	2010 Container volume			
Current %	Rank	p.s.f. NNN	Rank	TEUs	Rank		
9.4%	6	\$4.20	9	1,895,018	7		







- Driven by strong growth in exports, Savannah's port facilities are moving record amounts of cargo each month.
   However, import volume remains below prerecession highs. Weak consumer spending at home is keeping import growth at bay.
- Automotive exports are growing quickly. With manufacturers in the South continuing to expand production lines, this
  industry is a key driver of exports and imports through Savannah.
- Historically, the majority of imports have come from northeast Asian countries like China, Japan and Korea, but growth in this trade lane has been muted. Instead, imports from Southeast Asia, India and Europe have disproportionately contributed to growth in volume at the port.
- The Georgia Ports Authority recently ordered more yard equipment and four new super post-Panamax cranes.
- Deepening of the Savannah River navigational channel has passed the environmental impact study phase and
  has the recommendation of the Army Corps of Engineers. But while the plan has been approved, environmental
  concerns and uncertain funding make the timing of dredging operations unclear.
- Vacancy is elevated and the market is overbuilt, but the good news is that momentum is carrying the market back
  to equilibrium. In the last year, over 2 million square feet have been absorbed. Also buoying hopes, Gulfstream
  recently announced an expansion and operations have started at Mitsubishi Power Systems. Both firms are
  bringing new business to the port and new jobs to the economy.

Savannah seaport dashboard							
Vacancy		Average	e asking rents	2010 Co	2010 Container volume		
Current %	Rank	p.s.f. NNN	Rank	TEUs	Rank		
23.6%	1	\$3.51	11	2,825,185	5		







- The expanded Seagirt Marine Terminal is projected to be delivered in August 2012 and will feature a 50-foot berth, extended wharf and four cranes. The upgrades will enhance the port's attractiveness to the next generation of supersized cargo ships associated with the Panama Canal expansion.
- CONSOL Energy announced plans to expand capacity at its Baltimore Terminal by 2 million tons, to 16 million tons
  per year. Continued growth of their coal export business, specifically to China for steelmaking, drove CONSOL to
  invest \$10 million to upgrade its rail infrastructure with an anticipated completion date in the third quarter of 2012.
   Additional studies have already commenced on possibly expanding the terminal beyond 16 million tons per year.
- The Maryland Department of Transportation and CSX are working to relocate CSX's existing intermodal facility
  at the Seagirt Marine Terminal to a location south of the Howard Street Tunnel, whose height restrictions prohibit
  double-stack trains. The relocation would allow CSX to continue servicing the port in Baltimore and integrate
  operations into the National Gateway Project.

Baltimore seaport dashboard								
Vacancy		Average	asking rents	2010 Co	2010 Container volume			
Current %	Rank	p.s.f. NNN	Rank	TEUs	Rank			
10.2%	4	\$4.35	7	610,922	12			







- Container volumes through both the Ports of Seattle and Tacoma are up in 2011 over the same period in 2010. Seattle's container traffic is up by 6.2 percent at 656,045 TEUs. Tacoma's container traffic is up by 7.9 percent at 465,100 TEUs. The two ports compete closely with one another and a drop in volume at one often leads to a corresponding rise at the other. The collective container volume of both ports rose substantially in 2010 by more than 14.8 percent. If the trend displayed through the first four months of 2011 continues, the two ports combined could end the year just 5.1 percent below their recent peak volume of 2006, well off the lows displayed in 2009 when combined container volume was nearly 23 percent below the 2006 peak.
- · For 2010, the Port of Seattle broke its all time cargo volume record with over 2.1 million TEUs. The prior record was set in 2005 with 2.08 million TEUs. There were several factors in achieving this milestone including strong exports, increases in the sizes of ships making calls and the addition of Maersk which had transferred operations from Tacoma to Seattle in 2009.
- The Port of Tacoma is nearing completion of a \$24.5 million berth extension project at Washington United Terminals. The project was begun in December 2009 and included dredging along the existing berth, construction of 600 feet of new wharf to support 100-foot gauge cranes and the installation of two 273-foot high "super post-Panamax" cranes. The new cranes are among the world's largest and can serve ships up to 24 containers wide, a 33 percent increase over the existing cranes which can serve ships up to 18 containers wide.









- Total container volume at the port has yet to recover from deep losses sustained during the recent global recession but the short-term trend is up. Strong momentum is likely to meet resistance soon, but there are bright spots in TBC and Gildan Active Wear's new distribution centers.
- Thanks to BMW's rapid growth in Greer, SC, the Columbus Street Terminal now almost exclusively handles roll-on/ roll-off cargo. Also growing in the region, Boeing will drive more two-way traffic through the port when operations commence at its new 787 Dreamliner assembly line (barring an adverse decision from the National Labor Relations Board).
- Preliminary demolition and site preparation have been completed at the Navy Base Terminal and a containment wall has been constructed. However, CSX, Norfolk Southern and the South Carolina State Port Authority still need to find a creative rail solution that will placate North Charleston.
- The harbor deepening project is still in the study phase pushing any completion date to 2018, well after the scheduled opening of the wider Panama Canal. Post-Panamax ships already dock at the port despite being required to wait for high tide to enter the harbor.
- While over 20 million square feet of speculative space is "in development" near the port, little has broken ground. Without new development, vacancy should continue disappearing over the next 12 to 24 months and rents should steadily rise in the manufacturing and bulk distribution sectors.

Charleston seaport dashboard							
Vacancy		Average	e asking rents	2010 Co	2010 Container volume		
Current %	Rank	p.s.f. NNN	Rank	TEUs	Rank		
10.5%	3	\$3.87	10	1,363,785	9		



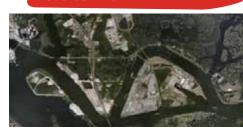




- Port of Miami, known as Cargo Gateway to Latin America, is a crucial economic driver for South Florida and provides a critical link between the Caribbean and Latin America.
- New Victory Bridge Service: In late 2010 Port of Miami introduced a weekly service connecting Northern Europe to the U.S. East Coast and Mexico. This service contributes close to 35,000 TEUs to cargo traffic annually.
- Seaboard Marine, which is the largest cargo carrier at the Port of Miami in August 2010 initiated a bi-weekly roll-on/ roll-off (Ro/Ro) service from Miami to Equador, Peru and Chile, that has opened gates of a growing outbound trade.
- Construction on Port of Miami Tunnel project will be completed by May 2014, and will provide trucks direct interstate
  access between Port of Miami and I-395, allowing the port to maintain truck movements at twice today's capacity.
  The project is a private public partnership between Florida Department of Transportation, Miami Dade County,
  the City of Miami and the private consortium organization, Miami Access Tunnel.
- Under the TIGER II program, the U.S. Department of Transportation awarded a \$23 million grant to the Port of
  Miami for restoring its rail connection between the port and the Florida East Coast Railway yard in Hialeah. The
  facility at Hialeah is situated approximately 12 miles from the port of Miami and north of Miami International Airport.
- The Port of Miami is one of three ports on the East Coast with approval from Congress to dredge its cargo channel to
  -50 feet. The dredge is expected to be completed by 2014 with an estimated cost of \$150 million. In March 2011 the
  governor of Florida, Rick Scott asked the Department of Transportation to allocate \$70 million for the dredge.

Miami seaport dashboard							
Vacancy		Average	e asking rents	2010 Container volume			
Current %	Rank	p.s.f. NNN	Rank	TEUs	Rank		
10.0%	5	\$6.17	3	847,249	11		







- Based on stable revenues, controlled operating expenses and an expanding diversity of trade lanes and cargoes, the port of Jacksonville was recently awarded Fitch's 'A' bond rating.
- Jacksonville is ranked as the nation's 13th largest port in terms of container trade volume and recently surpassed both the Port of Miami and Port Everglades to become the largest in the state of Florida. Following the Port Authority of New York and New Jersey, Jacksonville is now the nation's second largest for the import and export of automobiles.
- The Foreign Trade Zone board approved the port's plans to reorganize its zone number 64. This will give the Port
  Authority more flexibility to attract businesses to the area by expanding the area in which it can offer foreign trade
  zone benefits. The measure will extend the service area of the zone 575 acres beyond Duval County's borders. FDi
  Magazine recently ranked FTZ number 64 the third best port zone in the world.
- Plans continue for the \$300 million development of the Hanjin Container Terminal. The Korean shipping company
  signed a 30-year lease agreement in 2008, calling for the construction of a 90-acre facility in North Jacksonville. The
  terminal will be designed to handle more than 800,000 TEUs, is expected to be open for business in 2016 and will
  be a key hub for Hanjin's East Coast port activity. The lease also contains an option for further expansion.

Jacksonville seaport dashboard								
Vacancy		Average	asking rents	2010 C	2010 Container volume			
Current %	Rank	p.s.f. NNN	Rank	TEUs	Rank			
13.3%	2	\$3.32	12	857,374	10			

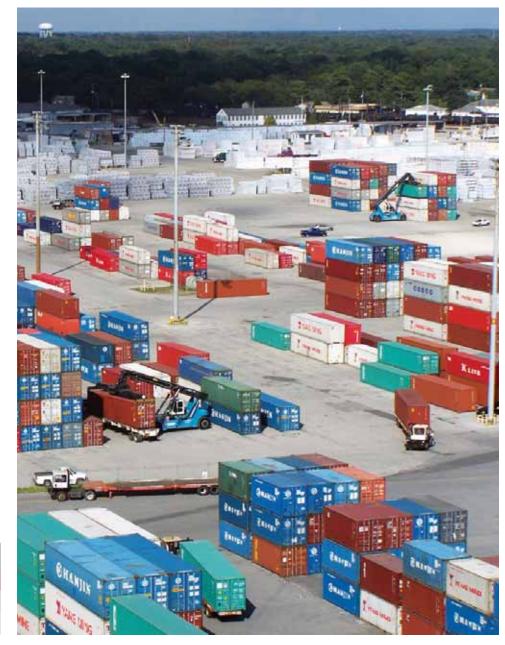






- Port of Oakland is the fifth busiest container port in the United States, handling over 2.33 Million TEUs during 2010. During the first half of 2011, the port experienced a 6.9 percent increase in both imports and exports, setting pace to outperform last year's levels.
- Continuing to address the challenges of global competition with other premiere ports, Oakland has undertaken a number of projects to enhance its ability to service larger container ships, including a dredging project recently completed in 2009, deepening the canal from 42 to 50 feet. In May of 2011, the port secured \$18 million in federal funding for operations and maintenance from the Army Corps of Engineers, and project that is vital to the port's competitiveness.
- The Army Base redevelopment project is still in developmental stages. Port officials expect the project will add an additional 2 million SF of industrial product, along with additional intermodal and trans-loading capabilities. With the particulars of the deal still under negotiations, officials expect completion of the project, and the residual benefits, several years down the road.
- Increased activity around the port has kept vacancy rates below market average, fluctuating between 7-8 percent vacant within a five-mile radius of the port center. Several large transactions and renewals, including Exel Inc 192,680 SF renewal and OneSource Distributors 100,800 SF lease, demonstrate the added premium on leased space. Industrial space on port property is 100 percent occupied, demonstrating a premium for space directly surrounding its terminals. The additional inventory will undoubtedly be in high demand by logistics and distribution operations looking to minimize drayage costs to and from the port.

Oakland se	eaport dashboard	t					
Vacancy		Average	e asking rents	2010 Cc	2010 Container volume		
Current %	Rank	p.s.f. NNN	Rank	TEUs	Rank		
8.9%	8	\$6.36	1	2,330,214	6		



# **Emerging seaports**

In 2010 cargo volumes for emerging ports increased to over 2 million TEUs from 1.6 million TEUs during 2009. This is a 27 percent year-over-year (YoY) increase in TEU cargo volume, and represents a significant increase across the board when compared to established ports. Emerging ports have experienced tremendous growth during the past decade and have seen cargo volumes increase 314 percent since 2000. The Panama Canal expansion is set to be completed in 2014 and ports along the East and Gulf Coasts of the United States are positioning themselves to take advantage of the increased container traffic that will occur once the expansion is completed. Ports are deepening channels and improving infrastructure as they vie for future market share. As companies seek to diversify their port strategies to mitigate the risk of supply chain disruptions caused by natural disasters, terrorism and labor disruptions, they are expanding their options to alternative ports which has helped to further fuel growth at emerging ports.

# Mexico

# Port of Lazaro Cardenas



2010 volume 796,001 TEUs 36% YoY growth

- Located on the Pacific Coast of Mexico, Lazaro Cardenas is the deepest port in Latin America and has navigation
  channels of 55 and 60 feet that can handle ships with capacities of up to 12,500 TEUs.
- Lazaro Cardenas cargo volumes increased 36 percent to 796,000 TEUs in 2010, up from 585,449 TEUs in 2009.
   The Port has had over a 500 percent growth during the past five years and in 2010 automotive traffic increased 68 percent to 5,109 vehicles.
- Kansas City Southern provides rail service to the port. Daily intermodal rail service is provided to San Luis Potosi, Laredo, Pantaco, Salinas Victoria and Veracruz.
- Expansion plans for Lazaro Cardenas include a new \$400 million 308-acre container terminal that will be built next
  to the Cayacal Island Container Terminal. The terminal is expected to be completed during 2011 and will have
  4,675 feet of quay and a depth of 54 feet. The expansion plans are expected to increase TEU throughput at Lazaro
  Cardenas to 2 million TEUs.

# Canada

# Port of Prince Rupert, British Columbia



2010 volume

343,366 TEUs

29% YoY growth

- The Prince Rupert Port is located in northern British Columbia, Canada and borders Alaska. It is the deepest natural
  harbor in North America, the closest North American port to Shanghai, and is deemed the safest port on the West
  Coast given wind, wave and ice conditions. Prince Rupert is 36 hours closer to Shanghai than Vancouver and is 68
  hours closer than Los Angeles. In addition, it has the most efficient land-sea connection to Chicago. In May of 2011
  Prince Rupert had total TEUs of 29,480.5 and 2011 YTD it has 117,405.8 TEUs.
- The container terminal is the first dedicated intermodal container terminal in North America and has the capacity
  to haul 500,000 TEUs annually. The terminal was built in 2007 and is operated by Maher Terminals on a 30-year
  contract.
- The container yard currently has a capacity of 9,000 TEUs and 72 Reefer plugs. The intermodal yard has 20,000 feet of trackage, which is equivalent to 400 TEUs. The container terminal currently has three 1,800-ton super post-Panamax cranes with a 22 container wide reach, 17 reach stackers, 27 multitrailer systems, and 50 single chasses.
- The terminal is serviced onsite by CN Rail and has the capacity to connect to virtually any location in Canada, the
  U.S., and Mexico. There are currently seven working tracks and six storage tracks, amounting to 17,000 feet
  of track.
- The Prince Rupert Port Authority has a vision to drastically quadruple capacity to 2 million TEUs. It would lengthen
  the wharf, with a minimum 59 ft depth, and would extend the dock area to 139 acres from its current 59.4 acres.
  More importantly, it would increase the number of post-Panamax cranes to eight. This facility would have an on-site
  capacity of 28,560 TEUs stacked five containers high.

# **United States** [Gulf Coast]

# Port of Gulfport



2010 volume 229,740 TEUs

- The Port of Gulfport is a deepwater seaport strategically positioned on the Gulf of Mexico. Located just 16 miles from shipping lanes and five miles from the intracostal waterway, ships can be in international waters within one hour of sailing from the Harbor at Gulfport.
- The rebuild at the Mississippi State Port Authority (MSPA) is anticipated to generate annual revenue of \$10 billion in added personal income and \$1.6 billion in direct revenue to the local economy. The rebuild at Gulfport is anticipated to create 6,500 direct jobs, 8,400 induced jobs and 1,700 indirect jobs.
- The Port of Gulfport is a bulk, break-bulk and container seaport that encompasses 204 acres, has nearly 6,000 feet of berthing space and averages over 2 million tons of cargo a year. Shipping over 229,740 TEUs in 2010, the port increased shipping nearly 16 percent as compared to 2009.
- The Port of Gulfport has gained a solid reputation as the second largest importer of green fruit in the United States and as the nation's third busiest container port on the Gulf Coast.
- The intermodal movement of cargo at the Port of Gulfport is accommodated on-port in the form of vessel-to-vessel, vessel-to-rail, and/or vessel-to-truck transfer. The Port of Gulfport has direct access to Highway 49 and is only 10 minutes from Interstate 10, allowing trucks to easily distribute products to 75 percent of the U.S. market within 24 hours.

# Port of Mobile



2010 volume 146,761 TEUs

- The Port of Mobile, located in Mobile, Alabama, is the only deep-water port in the state. It is the largest break-bulk forest products port in the United States. The Alabama State Port Authority's McDuffie Terminal is the second largest coal terminal in the United States and largest import coal terminal.
- Since 2000, the Port Authority has undergone nearly \$500 million in capital improvements and expansion projects to serve containerized, bulk and break-bulk commodities. Improvements include a new rail ferry terminal, new warehousing, a new container terminal and expansions at McDuffie Terminal.
- The Alabama State Port Authority owns and operates the public terminals at the Port of Mobile. The public terminals handle containerized, bulk, break-bulk, roll-on/roll-off and heavy lift cargoes. The port is also home to private bulk terminal operators. The container, general cargo and bulk facilities have immediate access to two interstate systems and five Class I railroads.
- The Port of Mobile has public, deep-water terminals with direct access to 1,500 miles of inland and intracoastal waterways serving the Great Lakes and the Ohio and Tennessee River valleys.
- The Port of Mobile has an estimated statewide economic impact approaching \$8 billion annually. The Port has a direct and indirect tax impact which exceeds \$260 million, and provides 66,617 direct and indirect jobs to the region.

# Port Manatee



2010 volume 23,776 TEUs 7% YoY growth

- Port Manatee is located on the Gulf of Mexico at the entrance to Tampa Bay. Port Manatee is one of Florida's
  largest ports and is the closest U.S. deep-water seaport to the Panama Canal. This booming Gulf Coast gateway of
  international trade offers unique and distinct advantages superior intermodal connectivity, competitive rates and a
  prime location with nearly 5,000 acres of surrounding greenspace for future development.
- Port Manatee has more than 1 million square feet of public warehouse and office space, featuring 202,000 square feet of refrigerated space, including 30,000 square feet of freezer space. The Port offers nearly 1.5 miles of berthing for ships.
- The port and its partners move approximately 9 million tons of containerized, break-bulk, bulk and project cargo
  each year including fresh produce, forestry products, petroleum products, citrus juice products, fertilizer, steel,
  aluminum, automobiles, cement, aggregate and more. Port Manatee is Fresh Del Monte Produce's second largest
  U.S. port facility and is also the Southeast's leading forestry products importer.
- As a leading economic engine, Port Manatee adds more than \$2.3 billion dollars annually in regional economic impact and supports more than 24,000 jobs. Eight million Floridians live within two hours of Port Manatee.

# Port of Brownsville



2010 volume

6,125 TEUs 4% YoY growth

- The Port of Brownsville is the southernmost port in Texas and the western terminus of the Gulf Intracoastal
  Waterway System. The port is a man-made basin that is three miles north of the Rio Grande and the Mexican
  border and seven miles from the rail and highway border crossing. The port is connected to the Gulf of Mexico by a
  17 mile long ship canal. The Port of Brownsville recently celebrated its 75th anniversary.
- The Port of Brownsville is the Grantee and Operator of Foreign Trade Zone No. 62 which is one of the largest FTZs
  in the United States and plays an important role in the movement of goods between the United States and Mexico.
- Theport is a major center for intermodal transportation and industrial development, and has over 40,000 acres
  of land, 12 cargo docks, 4 oil docks, 1 liquid cargo dock, 650,000 square feet of covered storage, and 2.3 million
  square feet of open storage. The port currently has over \$90 million invested in infrastructure projects in and around
  the Port of Brownsville.
- The Port of Brownsville works closely with its partner Port Manatee, Florida, and after a four-month process, received the Marine Highway Designation by the U.S. Department of Transportation. The Marine Highway Designation is a boon for commerce and safety. It also helps to reduce the number of trucks on the congested U.S. highway system.
- One feature that is unique to the Port of Brownsville is the overweight corridor which helps manufacturing plants keep costs low. Trucks in Mexico are permitted to be loaded over 1.5 times greater than regulations allow within the United States, which helps to reduce the number of trips and therefore overall expenses.

# United States [East Coast]

# Port of Philadelphia



2010 volume 276,106 TEUs

- A combination of a recovering national economy and a variety of new business relationships fueled further growth at the Port of Philadelphia. TEU throughput had significant gains, and increased 24 percent in 2010 to 276,106 TEUs. This development marks the Port of Philadelphia's fourth consecutive year of growth of 20 percent or more. Metric tonnage also increase 17 percent during 2010.
- In 2010 Hyundai Motor Company consolidated operations from Newark and Baltimore and made the Packer Avenue Marine Terminal its preferred U.S. East Coast port of entry. Automobile business at the Packer Marine Terminal went from being virtually non existent in 2009 to moving just under 69,000 units in 2010. Also in 2010, Sea Star Line established a major Puerto Rican service in Philadelphia, and M-real returned to Philadelphia with its high-quality paper cargoes.
- In the spring of 2011, the 667,000 square foot Philadelphia Regional Produce Market was completed and is home to the largest freezer unit in the world. The completion of the Regional Produce Market will ensure that the Port of Philadelphia retains its strong hold as the No.1 perishables port in the United States.
- The Delaware River Channel Deepening Project is currently underway with the goal of deepening the Delaware River's 104-mile main shipping channel from 40 to 45 feet. The project is expected to take five years and cost \$277 million.
- A concession agreement was signed in November of 2010 between the Philadelphia Regional Port Authority and the successful bidding team of Delaware River Stevedores and Hyundai Merchant Marine Corporation for the construction of Southport. The agreement calls for the construction of a two-berth, 120-acre new marine terminal to be completed by 2020. The Southport project is projected to create thousands of new jobs and inject more than \$350 million in new business revenue into the Philadelphia regional economy each year.

# Port of Wilmington



2010 volume

265.074 TEUs

- The Port of Wilmington, NC, is located on the U.S. East Coast and is the closest port to major points along the I-85 Corridor, which includes Charlotte, Greensboro and Raleigh-Durham.
- The port has a 42-foot access channel and is located in a designated Foreign Trade Zone. The FTZ encompasses nearly 1 million square feet of covered storage, over 100 acres of paved open storage and offers terminal facilities that serve container, bulk and break-bulk operations.
- CSX Intermodal's National Gateway Project connects the Port of Wilmington to the rail intermodal transportation network. Major highway infrastructure improvements connect the port to important growth markets and distribution centers. The Port Authority's Distribution Services staff is working closely with the NC Department of Commerce on an aggressive program to site several major distribution centers in the immediate vicinity of the port.
- There is currently a major container terminal expansion project underway at the Port of Wilmington that includes four post-Panamax container cranes and modern container handling equipment.

# **United States** [West Coast]

# Port of Vancouver

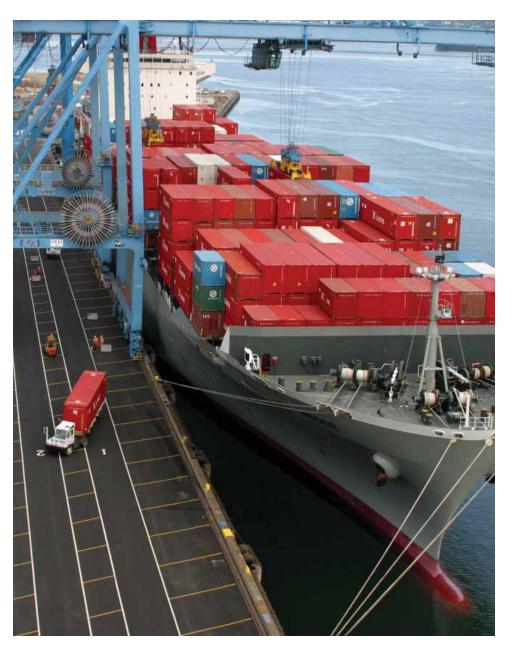


### 2010 volume

### 1,486 TEUs

### 49% YoY growth

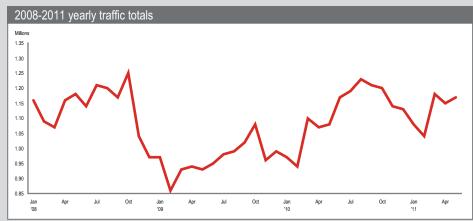
- The Port of Vancouver was established in 1912 and encompasses a geographic area of 111 square miles and a population of more than 300,000. The port is located at the natural transportation hub of the Pacific Northwest on the Columbia/Snake River system, and is an ideal transfer point for cargoes moving to and from the Pacific Rim and beyond. Annually, the port handles more than 500 ocean-going vessels, as well as river barges, with a total cargo volume exceeding 5 million metric tons.
- The port is adjacent to Interstate 5, which is the main north/south West Coast motor freight artery between Canada and Mexico. Interstate 84, which is a major east/west connector, is just 12 miles from the port. The port is connected to both Interstate 5 and Interstate 84 though State Roads 501 and 14, which provide easy truck access.
- · The port also has direct unit train and carload service from the BNSF Railway and Union Pacific's north/south and east/west mainline corridors. The Port of Vancouver currently owns and maintains over 25 miles of existing track. In addition, more than 40 miles of new track is planned with the completion of the port's West Vancouver Freight Access rail expansion project.
- The port currently has approximately 300 acres dedicated to industrial use that provide 2 million square feet of buildings, land and facilities for 55 tenants who support 1,084 employees. The port's industrial holdings account for 9 percent of the Vancouver area industrial inventory.



# Intermodal traffic picks up steam

International intermodal shipping has seen an upsurge in import traffic throughout the world, and this volume has had a significant impact on port markets within the United States. The intermodal model has become increasingly popular as fuel costs continue to rise and trucking faces both capacity and driver shortages, prompting shippers to seek out the most cost effective means of transporting containerized cargo around the county. Additionally, major investment in doublestacked routes, rail yards, facilities and infrastructure by Class I railroad carriers over the last several years have all helped contribute to the growing success of intermodal.

Having suffered a low point in 2009, intermodal freight rail traffic has undergone a major increase over the last two years alone, surging 25.8 percent since May of 2009. A return to growth in 2010 is expected to continue throughout 2011 and into upcoming years, especially as spring and summer months provide a boost in container volumes year-after-year. Additionally, retailers and wholesalers are continuing to monitor inventory levels and freight rates. Supply chain experts are also optimistic that any uptick in demand from consumers will translate into higher intermodal volumes, given the cost effectiveness of it as a mode of transport and preferences for green or sustainable shipping.



Source: IANA Intermodal Market Trends and Statistics

Intermodal loadings in 2011 have recently seen a general increase of between 8-9 percent over last year's levels, while the total amount of loadings in 2010 was similar to those of 2005. From 2002 on, there were increases each year in loadings until the recession hit, and recovery only occurred last year. As economic recovery has slowly taken root in the last 12-18 months, intermodal traffic has continued to strengthen within the borders of the United States, especially given that capacity has now started to tighten. Intermodal transport can be the release that freight cargo needs.

Significant investments have been made by the railroads to upgrade the current track systems, and many have also purchased new locomotives and rail cars to help with traffic increases.

In addition to widely recognized projects like CenterPoint Properties' project in Elwood, Illinois, and the Dallas Logistics Hub, the development of new intermodal facilities around the country are also beginning to heat up again. Sites such as RidgePort Logistic centers in Wilmington, Illinois, have the ability to construct 14 million square feet of warehouse and distribution product on roughly 1,500 acres of land. Florida East Coast Railway plans on developing an intermodal container transfer facility (ICTF) in conjunction with Port Everglades. Located on the future NAFTA Highway is CenterPoint's CIC - Houston project, a state of the art inland port facility connected to the Port of Lazaro Cardenas in Mexico and providing full intermodal capabilities, as well as 7.5 million square feet of Class A warehouse and distribution product on full build-out. The state of Texas has over 2,200 acres of land available for development, with one tract located in Fort Worth Area and two others in South Dallas. Kansas City has also seen a significant investment by companies such as The Allen Group and CenterPoint Properties. Lastly, railroad companies such as CSX have invested in Winter Park, Florida, and also have planned a facility in Pennsylvania.

Although both the East and West Coasts have a very large share of the overall port throughput activity, the major gateway markets like Los Angeles / Long Beach and New York / New Jersey also have limited capacity, and as such we anticipate the need for additional intermodal facilities throughout the country will continue to grow in coming years, especially as rail carriers invest more funds. While addressing long haul container transport, further investment is needed in not only intermodal rail, but in other modes as well. For the efficient transfer of containers from ship to off- or near-dock rail, further drayage costs are involved. Only through increased investment in America's infrastructure, including tunnel systems, highways, bridges and freight rail, will true cost containment be achieved for both shippers and carriers alike.





# **Airports**

Global economic growth is driving increased trade activity, resulting in greater cargo movement through the nation's airports. Air cargo volumes are approaching levels last seen in 2007, prior to the start of the recession. Although cargo carriers were focused on downsizing and consolidating operations in 2009 and 2010, these efforts have largely been completed, and the industry appears to be in growth mode once again.

Higher fuel costs continue to plague airline operations, but planned and ongoing improvement projects should ease some of these rising costs in the longer term. The development of larger aircraft that can handle greater cargo volumes, as well as terminal improvements at many major airports, are positive signs for the air cargo industry that will in the long run improve efficiency of operations and reduce costs.

# Backfilling of airport-centric warehouse and distribution space

As a result of increased trade, demand for industrial real estate near major U.S. airports is beginning to pick up, and market fundamentals should continue to stabilize through the remainder of 2011, with stronger demand expected in 2012. Cargo volumes through the nation's airports increased by 11.0 percent in 2010 to 28.2 million metric tons. Air cargo volumes are approaching peak 2007 levels, when 30.4 million metric tons were shipped.

Little new industrial product has been delivered since the downturn began causing extra cargo moving through airports to backfill space that was underutilized during the recession. Some airport industrial markets have not seen construction activity in several years, particularly markets such as Los Angeles and New York, where geographic constrictions prevent new development, resulting in fairly steady market conditions throughout the downturn, and little fluctuation in the vacancy rate.

On the other hand, airport markets where development was more active in recent years, whether because of fewer geographic constraints or reduced barriers to entry, are gaining momentum more slowly. Dallas-Fort Worth and Miami are two examples; construction activity picked up in the years leading up to the recession, only to contribute to higher vacancy during the downturn. The high vacancy rates near these airports are due to overbuilding. However, Dallas-Fort Worth and Miami also recorded strong annual increases in cargo activity in 2010, of 12.1 percent and 17.9 percent, respectively, so as cargo activity continues to increase in these markets, absorption of the excess space should continue.

# Global economic growth drives rise in air freight volumes

Air cargo volumes improved dramatically from 2009 lows and are approaching levels last seen in 2007, prior to the start of the recession. Innovations in airplane construction and terminal improvements to accommodate larger aircraft will contribute to increasing cargo volumes through major airports as economic recovery continues. China continued to gain market share in 2010, competing with the United States as the foremost cargo mover among the top 20 cargo airports.

# World Port Rankings - 2010 Air Cargo Volume

Rank	Airport	Call sign	Country	Metric tons	% change
1	Hong Kong	HKG	China	4,168,394	23.2%
2	Memphis	MEM	USA	3,916,811	5.9%
3	Shanghai	PVG	China	3,227,914	27.1%
4	Incheon	ICN	South Korea	2,684,500	16.1%
5	Anchorage*	ANC	USA	2,646,695	36.6%
6	Paris	CDG	France	2,399,067	16.8%
7	Frankfurt	FRA	Germany	2,275,106	20.5%
8	Dubai	DXB	UAE	2,270,498	17.8%
9	Tokyo	NRT	Japan	2,167,843	17.1%
10	Louisville	SDF	USA	2,166,656	11.2%
11	Singapore	SIN	Singapore	1,841,004	10.9%
12	Miami	MIA	USA	1,835,797	17.9%
13	Taipei	TPE	Taiwan	1,767,075	30.1%
14	Los Angeles	LAX	USA	1,747,629	15.8%
15	London	LHR	United Kingdom	1,551,405	15.0%
16	Beijing	PEK	China	1,549,126	5.0%
17	Amsterdam	AMS	The Netherlands	1,538,135	16.8%
18	Chicago	ORD	USA	1,376,552	31.4%
19	New York, NY	JFK	USA	1,344,126	17.5%
20	Bangkok	BKK	Thailand	1,310,146	25.4%

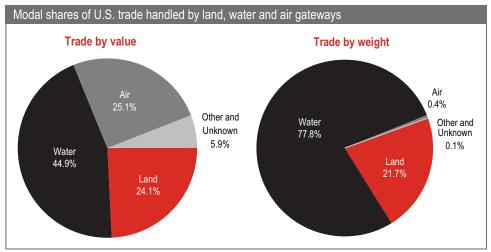
Source: Airports Council International; some 2010 data are preliminary.

\* ANC data includes transit freight.

### Airport development trends

Significant improvements to major airports are either planned or already underway. Terminal improvements and expansions are ongoing at a handful of major airports, including Oakland International, Dallas-Fort Worth International and Miami International. Terminal improvement projects are in the planning stages at several major airports, including Newark-Liberty, Los Angeles International and Chicago O'Hare. In addition to terminal improvements, a runway extension and improvement project is underway at Atlanta-Hartsfield.

Terminal improvements will allow for increased passenger capacity. Because most of the cargo that moves through airports is carried in the bellies of passenger aircraft, it is important for major airports to invest in capital improvement projects in order to foster traveler demand at those airports. Furthermore, runway extensions and improvements will lead to increased cargo volumes as the airports will be able to support larger and heavier aircraft, and thus a greater volume of cargo.



Source: US Department of Transportation 2010

# As with waterbound container vessels, cargo airplanes continue to grow in size

Boeing is developing their largest airplane to date, the 747-8, which will be able to accommodate up to 467 passengers in three classes and bear a maximum take-off weight of 975,000 pounds. More than 100 orders have already been placed as of mid-2011, with the first deliveries expected by year-end. The Airbus A380 is comparable in size, with capacity for 525 passengers in three classes, and has been in service since late 2007. Continued airport and aircraft developments will drive cargo volume growth as major airports are able to upgrade their runways and terminals to accommodate these larger aircraft.

In addition to the aforementioned developments, airports are increasingly partnering with logistics firms to improve shipping efficiency. This will be especially important for airports located in established distribution markets, such as Indianapolis International which is in close proximity to major e-commerce distributors such as Amazon.com. All of these improvement projects will not only lead to greater cargo volumes, but will effectively drive demand for industrial space in close proximity to major airports over the longer term.

### National initiatives

The Federal Aviation Administration is implementing its NextGen program through continuous rollouts over the next several years. The program's goal is to shift air traffic operations from ground-based traffic control to a satellite-based system. The upgrade will include improvements to the way traffic is routed throughout the country, real-time weather updates, and an integrated data collection system with a main goal of improving efficiency and safety. This transition will lead to greater efficiency of cargo operations, as there should be fewer delays, reduced fuel costs and a diminished carbon footprint from aviation operations. This will be especially important in light of higher fuel costs, which is a significant expenditure for airlines.

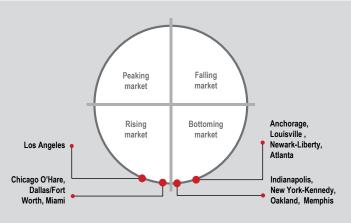
# An optimistic outlook for airport industrial property

Ongoing economic recovery and increased trade activity will drive cargo volume growth, which in turn will drive demand for industrial real estate near major airports. The various terminal and runway improvement projects planned or underway will support increased cargo volumes through the longer term, and translate into sustained demand for warehouse and distribution space near the major airports. Warehouse space in closer proximity to major airports should be in especially high demand given rising fuel costs. Industrial real estate markets near major airports are beginning to stabilize or show improvement as cargo volumes have increased significantly in the past year. This trend will likely continue through the remainder of 2011, with stronger recovery emerging in 2012.



# Airport property clock

The Jones Lang LaSalle airport property clock shows relative positions of airport-adjacent industrial markets in their real estate cycle. Markets generally move clockwise around the clock, with markets on the left side of the clock



generally landlord-favorable and markets on the right side of the clock generally tenantfavorable. The relative positions are assessed on the basis of several real estate indicators including mismatch between expected demand and supply and recent movement of rentals. A market leading the cycle might suggest that it is expected to trip to the next quadrant earlier than other cities; however, rapidly changing demand and supply conditions might accelerate positions for particular markets within a short time.

Currently, all airport markets are at the bottom of the property clock, indicating that a recovery is underway or about to begin in those markets. Los Angeles leads all airport markets due to its combination of rental rate recovery and receding vacancy. While rental rates have made some positive traction in Chicago, Dallas-Fort Worth and Miami, these airports continue to be plagued by high vacancy levels that prevent the market from turning strongly in the favor of landlords.

The remaining eight markets on the airport property clock are characterized by various combinations of factors that are diminishing the leverage that tenants currently possess. Although rental rates are beginning to stabilize in these markets, they have not recovered substantially. Although vacancy rates vary significantly, as do the sizes of these markets, none of these airports have seen market conditions move strongly in the favor of landlords.

Going forward, as trade volumes continue to improve, increasing demand should push all 12 airport markets firmly into the rising market quadrant of the property clock. The pace of recovery will, however, be dictated as much by local market supply/demand dynamics as they will be by a global economic recovery.



# Select top U.S. airports and property market indicators

	Call sign	2010 North American market share	2010 cargo volume (metric tons)	Y-O-Y cargo volume growth	12 months ending February 2011	Immediate market size (m.s.f.)	Current vacancy	2010 net absorption (m.s.f.)	YTD 2011 net absorption (m.s.f.)	Average asking rents (NNN)	Comments
Memphis	MEM	13.9%	3,916,811	5.9%	3,905,259	26.1	15.1%	-0.3	0.3	\$1.96	The main FedEx Express global "SuperHub"; also servces as hub for Delta Airlines
Anchorage	ANC	9.4%	2,646,695	36.6%	2,612,032	17.1	4.4%	0.0	0.0	\$11.15	Major hubs for FedEx Express and UPS; also Alaska Airlines second largest hub, after Seattle
Louisville	SDF	7.7%	2,166,656	11.2%	2,166,608	30.5	9.7%	-0.1	0.3	\$2.87	Worldwide air hub for UPS; also home to two airlines' maintenance complexes
Miami	MIA	6.5%	1,835,797	17.9%	1,847,811	37.7	9.9%	-0.8	0.6	\$5.83	Regional hub for American Airlines; largest gateway between U.S. and Latin America; handled most international cargo in the U.S. in 2009
Los Angeles	LAX	6.2%	1,747,629	15.8%	1,837,157	19.3	3.8%	-0.1	0.1	\$10.89	Major hub for United Airlines; focus city for American Airlines, Southwest and Virgin; also international gateway for Delta Airlines; 2 million sqf of cargo facilities
Chicago O'Hare	ORD	4.9%	1,376,552	31.4%	1,433,423	53.5	14.2%	0.6	0.2	\$5.31	Main hub for United Airlines; redevelopment of airfield will entail replacement of primary cargo hub
New York- Kennedy	JFK	4.8%	1,344,126	17.5%	1,361,371	5.9	3.4%	0.0	0.0	\$12.31	Base of operations for Jet Blue Airways; international gateway hub for American Airlines and Delta Airlines; nearly 100 cargo operators
Indianapolis	IND	3.6%	1,012,589	7.2%	939,782	17.9	9.7%	0.6	1.2	\$2.98	Hub for FedEx Express and focus city for AirTran Airways; long-range master plan calls for fourth runway
Newark-Liberty	EWR	3.0%	855,594	9.8%	860,764	43.0	7.5%	0.9	0.0	\$4.93	FedEx's third largest cargo hub with 2 million sqf in operations; regional hub for Continental Airlines
Atlanta	ATL	2.3%	659,129	17.1%	665,867	25.6	15.2%	-2.0	-0.1	\$2.92	Primary hub for AirTran Airways and Delta Airlines; Delta hub is the world's largest airline hub
Dallas/Fort Worth	DFW	2.3%	645,426	12.1%	613,129	8.4	12.1%	0.3	0.2	\$3.72	Primary and largest hub for American Airlines and primary hub for American Eagle; Asia and Europe cargo account for 75% of cargo traffic
Oakland	OAK	1.8%	510,947	4.0%	513,203	29.0	6.7%	-0.3	0.2	\$5.01	Major hub for FedEx and UPS, as well as Ameriflight. Terminal 1 is undergoing a \$200 million expansion and renovation

Source: Airports Council International, individual airports and Jones Lang LaSalle Research

# The Jones Lang LaSalle Airport Index



Similar to our Seaport Index, the Jones Lang LaSalle Airport Index has been developed to provide a quantitative assessment of myriad factors that are relevant to real estate stakeholders. The 2011 Airport Index assesses a score to all 12 airports across the nation that have recorded 500 million metric tons of cargo volume in the preceding year. The airports are judged across a series of 10 parameters that pertain

to air cargo and the industrial real estate market which supports trade activity at the airport. Amongst the factors considered are air cargo volumes, air cargo growth, runway length, operational airlines (passenger and cargo), total aircraft movements, population served, industrial market vacancy, industrial market size and the rent premium that airport-adjacent industrial properties command.

To tabulate a final score, each airport is given a base score of 30 points to start. Next each airport is rated on a scale of 1 to 10 on each of the 12 aforementioned parameters. The various criteria are assigned different weights based on their total contribution to the movement of cargo through the airport and their impact on the surrounding industrial real estate markets.

It is important to keep in mind that the resulting Jones Lang LaSalle Airport Index Score 2011 for each airport is more than a reflection of the trade activity at a given airport. Similarly, it is not merely a barometer of the overall industrial real estate market in the city which an airport is found. Rather it is a specific quantitative assessment for real estate stakeholders of the interplay of the health of the cargo trade at local airports and the vitality of the surrounding industrial real estate markets.







- Los Angeles International Airport (LAX) is the city's major international cargo airport serving a metropolitan area of nearly 18 million people. More than 1.8 million tons of cargo was handled at LAX in 2010, representing a 15.8% Y-O-Y growth, with nearly a third originating or destined for the Asia-Pacific region. International air cargo represented half of all air cargo handled at LAX in 2010. Aircraft movement rose by 5.7 percent in 2010 driven in part by increased passenger traffic which grew by 4.5 percent.
- LAX has the broadest range of air carriers of any U.S. airport, along with hundreds of freight forwarders and customs house brokers to expedite cargo. A number of carriers including United Airlines, Virgin Atlantic Airways and Asiana Airlines have opened new cargo facilities immediately adjacent to the airport. These compliment cargo facilities operated by Qantas, Singapore Airlines and the Imperial Cargo Complex which serves numerous domestic and international carriers.
- Under the LAX Master Plan, multiyear projects totaling over \$2.7 billion are underway including the construction of the new Bradley West terminal and a new aircraft taxilane for improved efficiency and safety. 2010 saw the completion of similar infrastructure projects at LAX totaling over \$852 million.
- LAX has 2.1 million square feet developed for cargo on 194 acres. Overall, 4 million square feet of industrial space has been developed for cargo use in the immediate vicinity of the airport. Demand for industrial buildings in the space-constrained region surrounding LAX is increasing and has resulted in vacancy falling by 120 basis points below last year's level. The area remains one of the most expensive airport-adjacent micro-markets in the country.

Los Angeles airport dashboard								
Vacancy		Average	e asking rents	2010	2010 Tonnage			
Current %	Rank	p.s.f. NNN	Rank	Metric tons	Rank			
3.8%	2	\$10.89	3	1,747,629	5			







- One of the world's leading international air cargo centers, JFK covers 4,930 acres with more than 30 miles of roadway and over 4 million square feet of warehouse and office space.
- The Port Authority has invested about \$6.1 billion in the airport. The group that manages New York's airports is
  studying proposals to expand them after a warning that failure to keep up with increasing air travel demand could
  hurt the region's economy. Faced with opposition on environmental grounds, officials have determined that a failure
  to invest in expansion could cost the region \$16 billion in business sales, and 125,000 jobs per year by 2030.
- Cargo traffic increased steadily throughout the first half of 2011, experiencing the highest levels since 2002.
   International cargo led the recovery, sparked by the Asian Pacific region, where growth reached 30 percent. The top-ranked transatlantic region grew 27 percent while domestic cargo grew by 5 percent.
- Plans established last year to demolish terminal 6 are still underway. The demolition will allow Jet Blue to begin
  planning for the expansion of international operations at terminal 5. As JFK's number two passenger carrier, Jet
  Blue's expansion would allow for a greater stake in freight transport internationally.







- Trucking and freight companies are the most active in the area surrounding the airport. As we start to move further
  out, manufacturing companies, along with food companies, are starting to move into the submarket.
- The O'Hare Modernization Program (OMP) has just announced a \$1.17 billion agreement between the City of Chicago and American and United Airlines that will allow the program to move forward on the construction of the next phase.
- Several large lease transactions over the last couple of quarters within the O'Hare submarket: Ceva Logistics (231,629 square feet), Hegele Logistics, LLC (207,721), Grane Transportation (175,000 square feet) and AlfaLaval (137,704 square feet).
- It is not anticipated that any new speculative development will occur in the O'Hare submarket within the next several
  years, primarily due to the excess amount of available space currently saturating the market.
- One of the largest user sales in the airport submarket over the last several quarters was MSI Stone's purchase of a 212,371-square-foot facility at 1441 Jarvis Avenue in Elk Grove Village from ProLogis for \$25.30 per square foot.

New York Kennedy airport dashboard							
V	acancy	Average	asking rents	2010 Tonnage			
Current %	Rank	p.s.f. NNN	Rank	Metric tons	Rank		
3.4%	1	\$12.31	1	1,344,126	7		

Chicago O'Hare airport dashboard							
٧	acancy/	Average	asking rents	2010	2010 Tonnage		
Current %	Rank	p.s.f. NNN	Rank	Metric tons	Rank		
14.2%	10	\$5.31	5	1,376,552	6		







- MIA is responsible for handling 83 percent of all air imports and 81 percent of all exports originating from the Latin American and the Caribbean region. Some of the top commodities distributed from MIA are perishable products, hi-tech commodities, telecommunications equipment, textiles, pharmaceuticals and industrial machinery.
- MIA's market share in terms of dollar value for air trade in 2010 was 96 percent of total air imports and exports from the State of Florida. 69 percent of total U.S. imports of perishable products come through MIA annually.
- The airport has 17 existing warehouses covering close to 2.7 million square feet of space. MIA's newly constructed warehouses provide airside-to-landside access of planes for easy flow of multimodal movement of cargo to and from the airport. MIA is offering an incentive program titled ASIP3 to encourage new freighter services to establish base and provide services from Miami.
- For international visitors Miami is the second top destination in the USA. During 2010, passengers travelling from MIA totaled 35.7 million with 18.8 million domestic and 16.9 million international visitors. MIA is Florida's busiest airport handling close to 70 percent of Florida's international traffic.







- The independently owned, multi-tenanted Lynxs Alaska CargoPort, which lost its major tenant in Delta Cargo (formerly Northwest Airlines Cargo) last year, has backfilled the void with three new lease agreements with DHL Express, Atlas Air and Polar Air Cargo Worldwide, Inc. These deals help validate operations at the decade-old cargo facility and confirm Anchorage as one of the world's most important technical stops and cargo transfer points.
- Uncertainty has kept a damper on a dramatic real estate recovery, and despite relatively tight vacancy protecting it from sharp ebbs and flows in fundamentals, the market is expected to remain somewhat soft through much of 2011.
- Based on performance, value, facilities and regulatory operations, Air Cargo World magazine ranked Anchorage with one of the top three highest scores for airports that process 1 million or more tons of cargo annually in North America in their 2011 annual Air Cargo Excellence Survey.
- According to the Alaska Journal of Commerce, after having restarted its third crude oil refinery processing unit last year and then shuttering it again, Flint Hills Resources announced that it will not restart the unit again this year. This will force air carriers operating through Anchorage's international airport to become increasingly more dependent on jet fuel imported through the Port of Anchorage. Additionally, an airline consortium responsible for bulk fuel storage facilities at the airport is now planning to build new tanks and the Alaska Industrial Development and Export Authority, a state agency, has plans with fuel importers to build additional fuel storage capacity at the port.

Miami airpor	t dashboard					
Vacancy		Average	e asking rents	2010	2010 Tonnage	
Current %	Rank	p.s.f. NNN	Rank	Metric tons	Rank	
9.9%	8	\$5.83	4	1,835,797	4	

Anchorage	airport dashboa	ard				
Vacancy		Average	e asking rents	2010 Tonnage		
Current %	Rank	p.s.f. NNN	Rank	Metric tons	Rank	
4.4%	3	\$11.15	2	2,646,695	2	







- Memphis is America's Aerotropolis due to the accessibility to the "Four Rs" of Runway, Roads, Rail, and River. Memphis is home to the busiest cargo airport in North America since 1992, I-40 is the third busiest trucking corridor in the United States and one of three major interstates in Memphis, has five Class I railroads (BNSF, CSX, UP, CN, and NS) and the Port of Memphis is the fourth largest inland port in the United States.
- · Most of the industrial market immediately surrounding Memphis International Airport is comprised of dated and somewhat obsolete product. Consequently, newer development over the last 20 years has occurred to the south and also to the east of the airport in our Southeast and Desoto County submarkets.
- Recently, deals in and around the extended airport area include substantial transactions like Cummins for 371,233 square feet, Nike taking Nike 400,000 square feet, Newegg for 414,960 square feet and PFSweb at 434,900 square feet. Over and above these, Ford renewed for 769,436 square feet CEVA Logistics tied down 1,271,750 square feet, half of which was a renewal and half comprised of new leases.
- Of Memphis' five Class I railroads, BNSF has recently completed a \$200 million expansion of its Memphis facility, Norfolk Southern recently broke ground on a new \$129 million facility, and CN renovated its Memphis rail yard with a capital investment of \$100 million, making it the second largest CN facility of its kind in the United States. This increased rail capacity, along with corporations seeking logistics cost savings and occupancy cost savings, should bode well for Memphis' economic recovery.





- Newark-Liberty Airport is ranked 9th domestically and 23rd internationally in total cargo tonnage volume in 2010. It was a 9.8 percent increase in tonnage from total of 2009. The Airport employees 24,000 people and contribute \$18.5 billion in economic activity to the New York/New Jersey Metropolitan Region.
- After merger of United and Continental Airlines, Newark-Liberty airport become a major northeast hub for the combined career, and became the third largest hub for United Airlines, after Houston's George Bush Intercontinental airport and Chicago's O'Hare International Airport.
- The industrial market in the airport which is adjacent to the Port of Newark/Elizabeth is becoming scarce in available space as well as developable land. The vacancy rate hit 6.9 percent at the first guarter of 2011. Several proposed developments are underway within the submarket; however, the larger scale developments are moving out of this submarket in search of large available parcels proximity to the airport.
- Investor interest in the submarket's proximity to the airport, which is also directly adjacent to the Port Authority's seaport network, has been significantly visible. Large acquisitions by REITs and institutions are now returning to the market as the overall economy is becoming more stable.
- Several new construction projects have broken ground thus far this year, notably within those submarkets situated only a few miles surrounding the airport.

Memphis ai	Memphis airport dashboard								
Vacancy		Average	e asking rents	2010	2010 Tonnage				
Current %	Rank	p.s.f. NNN	Rank	Metric tons	Rank				
15.1%	11	\$1.96	12	3,916,811	1				

Newark-Liberty airport dashboard								
	acancy Average asking rents		2010 Tonnage					
Current %	Rank	p.s.f. NNN	Rank	Metric tons	Rank			
7.5%	5	\$4.93	7	855,594	9			







- Hartsfield-Jackson Atlanta International Airport is the busiest airport in the world for passengers. It is home base for Delta Airlines, and with the purchase of AirTran Airways by Southwest Airlines, the airport is an emerging hub for that carrier as well.
- Construction of the new, \$1.4 billion, Maynard H. Jackson International Terminal is scheduled to be completed in the spring of 2012. When operational, the terminal will help improve efficiency across the airport, benefitting passenger and cargo carriers alike.
- Air cargo volume, after steadily declining from 2004-2009, rose for an uninterrupted 17-month stretch through March 2011 before posting slight year-over-year drops in April and May.
- Two new international cargo carriers have commenced operations at Hartsfield in the last year. Cargoitalia now flies twice weekly between Milan and Atlanta and Asiana provides round trip service to Seoul with 747 aircraft four times a week. In a net plus for the Atlanta industrial real estate market, these carriers should improve demand for freight forwarders and other users of industrial space in the airport submarket and provide new avenues to reach international customers for businesses across the Southeast.
- Construction crews have recently begun phase I of the airport's plan to extend the longest runway by 500 feet. The \$45.5 million project will allow the heaviest planes, such as 747s and 777s, to take off with more fuel and reach further distances during the hottest months of summer.





- The DFW Airport market has traditionally outperformed the other submarkets of the Metroplex due to a combination of the activity at the airport and the submarket's central location. Preliminary numbers for the first half of 2011 indicate that the submarket is the second highest performing submarket from a net absorption perspective.
- Currently there are six large blocks of space available for lease, which is average with other submarkets of the Metroplex. Rates, however, are consistently the highest among the Dallas/Fort Worth submarkets. Current average asking rates are \$3.67 per square foot, moderately above the metro average of \$3.56 per square foot.
- The submarket has traditionally had a high level of construction but this is expected to change as land has become scarce and future development has largely shifted to the adjacent Northwest Dallas submarket.
- Many of the largest industrial landlords in the country hold significant positions around the airport, each with over half a million square feet or more, including: Duke Realty, AMB/Prologis, Hines, TIAA-CREF, ING Clarion, Primera, Cabot, Dividend Capital and RREEF.

Atlanta airpo	ort dashboard					
Vacancy		Average	e asking rents	2010 Tonnage		
Current %	Rank	p.s.f. NNN	Rank	Metric tons	Rank	
15.2%	12	\$2.92	10	659,129	10	

Dallas / Fort Worth airport dashboard							
Vacancy		Average	Average asking rents		2010 Tonnage		
Current %	Rank	p.s.f. NNN	Rank	Metric tons	Rank		
12.1%	9	\$3.72	8	645,426	11		







- UPS completed a second expansion of 1.2 million square feet in April of 2010 to the Worldport Hub at Louisville International Airport. The total footprint of the Worldport hub is now at 5.2 million square feet.
- Ford Motor Company is undergoing a \$600 million dollar renovation of the Louisville Assembly Plant near the airport
  on Fern Valley Road to accommodate the new generation Ford Escape. The project is expected to be completed
  by the end of 2011 and will add 1,800 employees.
- While Ford has made a significant impact on the Louisville market, suppliers also followed suit and have made investments within the market over the last year or so.
- The Louisville market continues to be in the top 10 in the world for air cargo volumes, as well as being the third largest in the United States behind Anchorage and Memphis.
- Only one large lease transaction was completed over the last few quarters near the airport. Jacobson Warehouse took down 284,000 square feet. Current requirements of modern warehouse typically do not fit within the Louisville airport market because of its stock of dated buildings, but areas immediately proximate to the airport have seen an increase in new construction, thus making the way for future growth.







- E-commerce fulfillment operations have recently driven the real estate markets near the Indianapolis International Airport. The proximity to FedEx and the state's position relative to sales tax are among the largest attractions.
- · Amazon.com recently leased 900,000 square feet in the second quarter for their third distribution facility.
- Additionally, there are another 1.6 million square feet in active, e-commerce related requirements focused on the airport submarket.
- Investment sale activity is heating up around the airport with 1.8 million square feet sold or under contract in the first half of 2011.
- With a limited supply of vacant space and increasing tenant demand, build-to-suit and even speculative
  construction seems viable. Holladay, ProLogis, Browning, Duke, Opus, Verus and Republic all have airport area
  sites that can accommodate large scale distribution centers.

Louisville air	port dashboar	d				
Vacancy		Average	Average asking rents		2010 Tonnage	
Current %	Rank	p.s.f. NNN	Rank	Metric tons	Rank	
9.7%	6	\$2.87	11	2,166,656	3	

Indianapolis airport dashboard							
Vacancy		Average	Average asking rents		2010 Tonnage		
Current %	Rank	p.s.f. NNN	Rank	Metric tons	Rank		
9.7%	6	\$2.98	9	1,012,589	8		





- · As one of two international airports servicing the Bay Area, Oakland International Airport has positioned itself as a prominent player for domestic and international freight transportation in the region and the nation. In 2010, Oakland International ranked in the top 12 nationwide for total cargo shipped, moving over 510,947 metric tons.
- The close proximity of Oakland's sea- and airports are a great convenience to logistics operations with high priced and time sensitive cargo. Oakland has the advantage of being a central Bay Area location, with easy access to sophisticated logistics operations and millions of passengers. Realizing the potential for future demand, port officials have investigated alternatives for enhancing capacity and service capabilities to both cargo and passenger travel.
- Terminal One is currently undergoing a \$200 million expansion and renovation, providing a necessary face lift that will attract additional travelers, as well as improve behind the scenes infrastructure to expand its servicing capabilities. Additional capacity will inevitably drive demand for warehouse space in proximity to the airport.
- The Port of Oakland has entered into negotiations with Prologis/AMB to develop up to 2 million additional square feet of warehouse space surrounding the seaport. This additional inventory will satiate growing demand for both the sea- and airports, and allow new businesses from the Central Valley to take advantage of Oakland's premiere distribution hub.
- As it looks for additional opportunities to hedge its appeal as an international hub for transportation and commerce, officials hope to see the airport grow in popularity as additional routes become available. A project in coordination with BART is planned for completion in 2014, connecting the terminal buildings with both BART and Amtrak at the Coliseum station, allowing convenience for additional travelers going to and from the airport's terminals.

Oakland airport dashboard							
Vacancy		Average	Average asking rents		2010 Tonnage		
Current %	Rank	p.s.f. NNN	Rank	Metric tons	Rank		
6.7%	4	\$5.01	8	510,947	12		



A closer inspection of any given Airport Index Score reveals that it is comprised of two discrete subscores: air cargo and real estate. These subscores, when plotted on a graph, illustrate that our 12 airport markets tend to cluster into three distinct groups, each with a varying degree of maturity.

### Mature

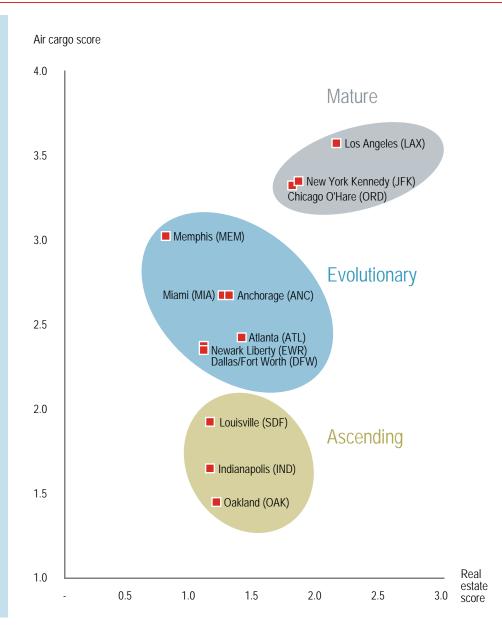
Mature airport markets are those that possess a blend of a high Air Cargo and Industrial Real Estate scores. These airport markets are characterized by robust air cargo volumes, established infrastructure and healthy real estate markets. Mature airport markets may score the highest in a few parameters used for calculation, as was the case with JFK which scored tops in population served, runway length and rent premium paid for airport-adjacent industrial property. Other airports, such as top-rated LAX, did not rank #1 in any single parameter considered but consistently scored higher than most of their peers across all parameters.

# **Evolutionary**

Evolutionary airport markets possess a mid-level Air Cargo and/or Industrial Real Estate score. These airport markets, which vary considerably in their characteristics, are in the process of evolving from lesser-established lower tier markets to more mature top tier destinations. Some airport markets, such as MEM and ANC, score amongst the top of the group in terms of Air Cargo due to their #1 and #2 rankings, respectively, in 2010 air cargo volumes. Others, such as EWR, are considered Evolutionary airport markets due to a well-established real estate market adjacent to the airport. Regardless of the combination of traits that allowed these airport markets to be included in our mid tier group, each has the potential to further evolve through a combination of infrastructure development, increases in air cargo volumes and aircraft movements, and the improving vitality of their respective real estate markets.

# Ascending

Ascending airport markets are those that possess relatively low-level Air Cargo scores and mid-level Industrial Real Estate scores. SDF, as surprise member of this group, scored low on Air Cargo despite high 2010 air cargo volumes due to the paucity of operational airlines and aircraft movement. IND, which is serviced by a surprisingly high number of passenger and cargo airlines, had a relatively lower Air Cargo score due to relatively low aircraft movement and cargo traffic growth. While Ascending airport markets may trail their peers in our survey, it is important to realize that they are still members of the top 12 airport markets in the nation. To ascend into the Evolutionary group, each airport market must chart its own flight plan to raise its Air Cargo score by improving cargo traffic, building better infrastructure or increasing the movement of aircraft through its airport.





Air cargo volumes are approaching levels last seen in 2007, prior to the start of the recession. Although cargo carriers were focused on downsizing and consolidating operations in 2009 and 2010, these efforts have largely been completed, and the industry appears to be in growth mode once again.

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