

Strategic Market
Analysis:
Port Trade Forecast,
Potential Opportunities
& Risks

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#### **Market Analysis Outline**



#### Focus of research and analyses:

- Analysis objective
- Current port volumes, key commodities and top customers
- Competitive ports' performance U.S. and Mexico
- Economic outlook US, Mexico and Texas
- Waterborne trade volume forecast
- Prospects for announced/planned new commodities
- Mexican cross-border trade conversion opportunities for the port?
- Evaluation of alternative port businesses examples for cruise and containers
- Conclusions
- Go-forward marketing strategies



## What does a Market Analysis contribute?



The Marketing Plan's goal is to provide a concise set of objectives that leads the Port of Brownsville in the direction of growing its market share among U.S. Gulf Coast ports over the next five years by enhancing business with current stakeholders and identifying and developing new market and client opportunities.

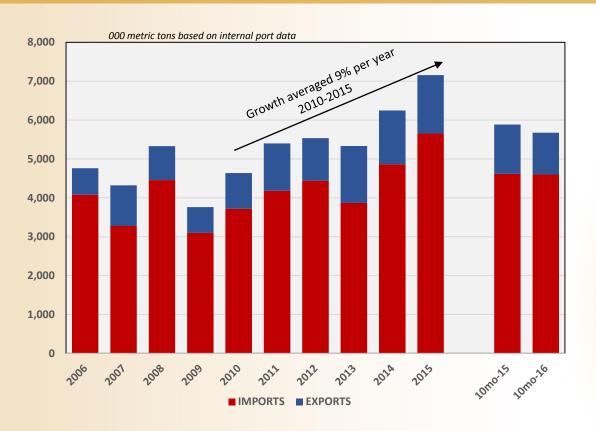
How the "Market Analysis" provides the foundation to achieving this goal:

- By conducting a market audit through interviews with Port staff, and a select number of beneficial cargo owners. Inputs and ideas from these interviews will assist in determining market focus areas.
- By identifying, verifying, analyzing and forecasting market opportunities for the next 1-3-5 years. The forecast focuses on current customer activities, recommended new market opportunities and the likely competitive port impacts and reactions.



## **Port Volume Growth Consistently Strong**





- The growth in foreign trades at POB has been slightly stronger than domestic/coastwise business; Mexican economy a plus especially for commodities tied to the country's expanding auto production
- 10-mo. totals for '16 vs. '15 show volume off -3% reflecting lower demand for commodities tied to reduced oil & gas exploration and decreased South Texas infrastructure/construction spending.



## Port's Customer Base is Highly Concentrated

- PORT DE BROWNSVILLE
- Top 3 clients account for 86% of waterborne trade: PMI, Ternium, Vulcan
- While being "top-heavy" is risky from a client perspective, each of these 3 customers trade in different commodities which contributes to the Port's portfolio diversity
- Cargo diversity has kept volume downturns to a minimum: imports were off in '13 due to less inbound steel but stronger gasoline trade offset some of the loss
- Export downturns occurred in '12 & '14 owing to the price sensitivity/currency impact on steel scrap and changing coastal demand for Mexican naphtha

#### IMPORTS/Inbound

5-Year Growth Rates '10-'15

9%
31%
23%
11%
11%
8%
7%
7%
-1%

#### **EXPORTS/Outbound**

5-Year Growth Rates '10-'15

Total Exports	10%
Petroleum Products	7%
Naphtha & Solvents	17%
Chemicals and Related Products	42%
Iron & Steel Scrap	-15%



## **Key Maritime Use Customers in 2016**



Top 15 Cargo Owners/Traders at Brownsville	Metric Tons	%	Key Commodity	Issues/Opportunities
PEMEX/PMI	2,960,949	52.2%	Petrol. products	MX petrol deregulation will drive inbound fuel supplies
TERNIUM DE MEXICO	1,563,844	27.6%	Steel	MX auto production on the rise but port competition from Altamira
VULCAN CONSTRUCTION MATERIALS	347,135	6.1%	Limestone	Growth depends on infrastructure spending in south Texas
SHELL	108,432	1.9%	Lube oil & greases	Largest marketer of lubricants in MX
MARUBENI-ITACHU	59,979	1.1%	Steel	Trader for various steel processors in MX
CEMEX	50,379	0.9%	Sand	Cemex forecasting TX market growth of 5% through '18, and good MX demand
GT COMMODITIES, LLC	47,342	0.8%	Aluminum	MX-bound, competition from Altamira and US cross-border
NATIONAL MATERIAL DE MEXICO	44,471	0.8%	Steel	Large buyer of Korean steel for processing plant in Monterrey
VALERO REFINING & MARKETING CO.	43,190	0.8%	Asphalt	Terminal services with TransMontaigne for imports & exports
IQUISA NORESTE	38,440	0.7%	Salt	Significant cross-border imports for Monterrey chlorine plant
MUSKET CORP.	35,539	0.6%	Petrol. products	Trader for Biosphere Fuels, questionable future of US Renewal Fuel Standard
VESTAS WIND SYSTEMS A/S	30,016	0.5%	Wind Comp.	'17 projects likely to go forward; thereafter US energy policy unknown
MINERALES Y CARBONES	28,269	0.5%	Metallurgical coke	US coke breeze used in MX electric arc furnace steel making
MEDTRADE	27,281	0.5%	Steel	Turkish steel, '16 US dumping duties may push more to MX
UNITED STATES STEEL	23,458	0.4%	Steel	JV with Feralloy Mexico & Mitsui, 3 facilities serving auto & appliance manuf.
Others	266,151	4.7%		
TOTAL	5,674,875	100%		

Source: POB internal data for January-October, 2016

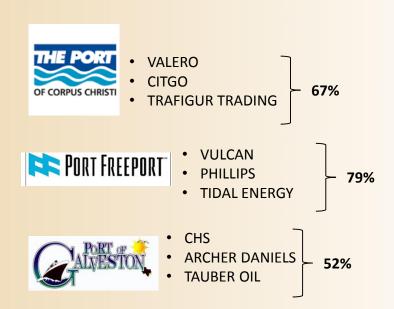


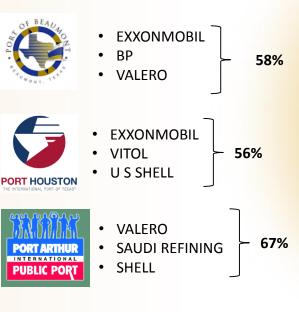


## Competitive Ports: more clients, less diversity



 Client base at competing Texas ports (non-container) is generally more spread out. Examples: "Top-3" clients at Corpus Christi and Port Arthur control 67% of volume. Only Texas City and Freeport are nearly as concentrated as Brownsville (based on PIERS stats for international trades only, excluding domestic cargo)





VALERO MARATHON

TRAFIGURA TRADING

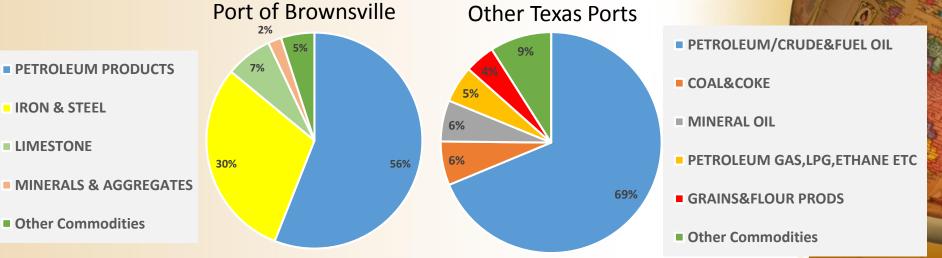


72%

## Port's Customer Base is Highly Concentrated



- Dependence on petroleum products (56% of waterborne trade);
   steel (30%) and limestone (7%) provide diversity for Brownsville but presents year-to-year volatility
- Issue for most competing Texas ports is the dependence on petroleum/crude. A broader customer base does not provide a hedge when most are trading in the same commodities!

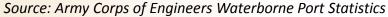


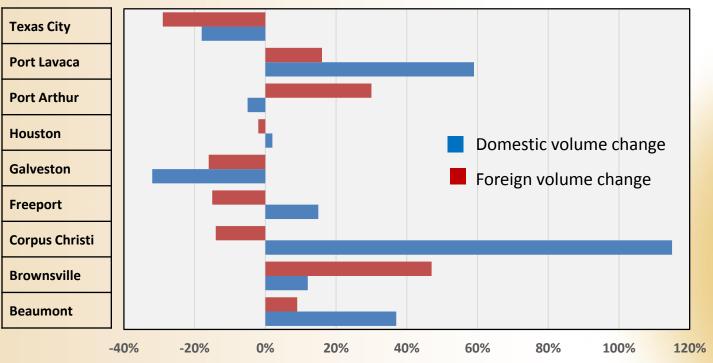
Source: POB internal data, PIERS non-container international volumes for other ports



## Texas Ports' Non-Container Growth, 2011-2015







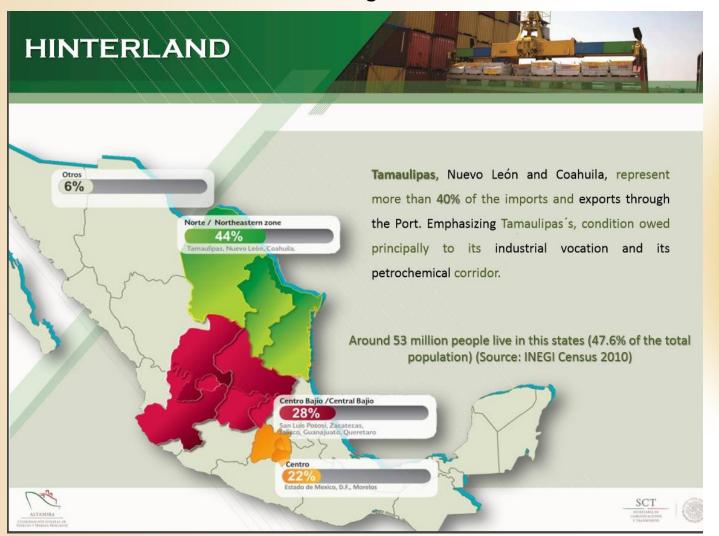
- Only 3 ports experienced growth in both domestic & international trade including Brownsville
- Biggest setback in foreign cargo for Texas City & Corpus Christi related to cutback in imports of crude oil; Corpus Christi shifted oil trade to coastal exports for other refineries
- Brownsville's foreign trade gain led by +200% increase in imported steel



# Port of Altamira: key competitor



Quite clear that Altamira targets the same market as POB





### Port of Altamira: competitor but constrained



- Altamira handled 1.24 million tons of steel in 1<sup>st</sup> 8 months of 2016, about 6% less than POB's volume. Likely reaching capacity especially if the port handles more pipe for Valley Crossing project
- Competitive for steel going into Monterrey mills but the port also handles local-destined steel (example: U.S. shipments by ArcelorMittal and Outokumpu from Mobile account for 26% of Altamira's total imported steel)
- Dedicated steel terminal ("IPA", Inmobiliaria Portuaria de Altamira SA de CV) is approximately 50 acres with rail on site for 40 cars.
- Altamira's steel volume increased
   30% in 2015 but has remained flat in
   2016 (through August).
- Altamira's vessel unloading/rail loading productivity is reportedly lower than POB. Additional issues with security/theft.

#### Port Altamira Non-container Imports

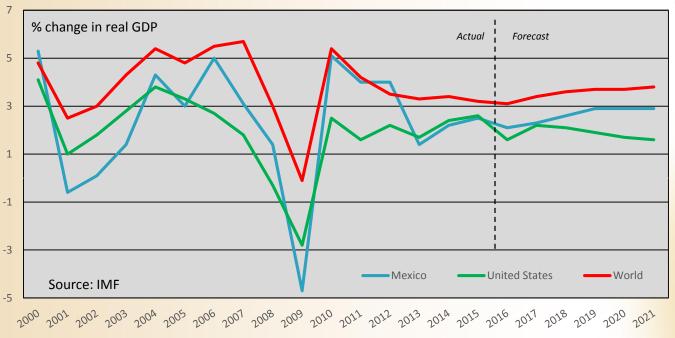
HS code	Harmonized Description	US\$ million	Metric tons (million)
84	Mechanical machinery & parts	2,146	0.06
29	Organic chemicals	1,172	3.85
85	Electrical machinery & parts	972	3.5
72	Steel	663	1.09
87	Vehicles	537	0.03
39	Plastics & Resins	303	0.11
27	Mineral fuels & waxes	215	1.49
73	Articles of steel	148	0.07
38	Chemicals, non-organic	114	0.38
41	Hides, skins, leather & products	109	0.04
	Other commodities	1,850	1.83
	Total	8,230	12.45

Source: Datamyne, January-July 2016



#### **IMF Economic Forecasts: US and Mexico**





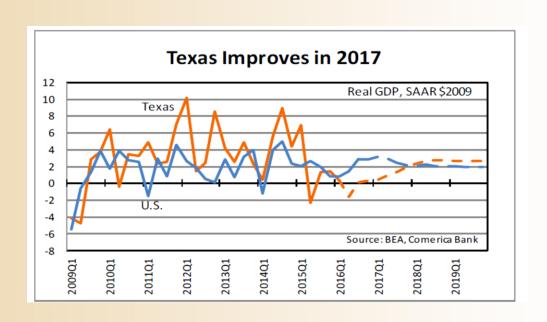
#### Trump Impact: (J. P. Morgan Chase analysis)

- A divided government for the past four years did not prevent the economy from growing.
   Real GDP growth averaged 2.25%
- With the Republican sweep, the U.S. government is likely to play a more active role in the
  economy, and we believe it will likely be pro-growth (tax reform & infrastructure
  spending), at least in the near term. Our working assumption is that his policies might lift
  GDP growth by 20-40 basis points beginning in late 2017.
- Trump's trade and immigration policies may be seen as negative for growth within specific countries. However, there is considerable uncertainty for how and if he will be able to execute his campaign policies.



#### The Texas Economic Outlook: On the Rise





- State GDP projected to expand 0.5% in '17 after just 0.1% stagnation in '16
- More improvement in '18 and '19 with steady gains approaching 3% annually

"Fortunately for Texas, the state economy is fueled by more than just oil. Job growth over the last two years has been remarkably resilient, with just two months, March 2015 and March 2016, showing net job losses."

Comercia Bank, Nov. '16

"Texas Economic Outlook: Takes a Licking But Keeps on Ticking", "Despite ongoing weakness, Texas still growing - Texas job growth likely to be about 1.5 percent this year and 1.7 percent next year. Biggest risk to the forecast is a sharp decline in oil prices."

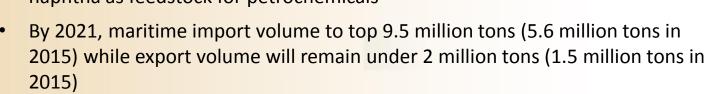
Dallas Fed. Reserve, Nov. '16

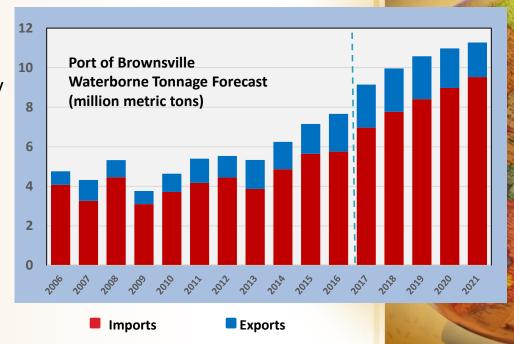


#### **Port of Brownsville Marine Trade Forecast**



- Overall maritime cargo growth averaging 8% per year through 2021, which is slightly slower than the annual increase of 9% experienced 2010-2015
- Import gains will be strong, averaging 9% but export prospects are mixed holding down outbound volume growth to just 2% to 3%
- Upside: (1) gasoline imports (inbound by barge/ship) destined to Mexico by landbridge/pipeline. Mexico's decision to advance petroleum deregulation is already adding to trade with import volume up 12% through October; (2) aggregate demand should be strong with infrastructure spending and could gain more when projects (Space X, LNG) break ground
- Downside: naphtha coastal exports forecast to decrease 40% between 2015 and 2021. Abundant natural gas replacing naphtha as feedstock for petrochemicals



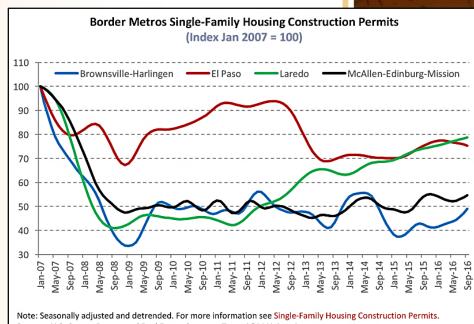




### **Construction-related Imports Forecast to Grow**



- Border counties/cities construction activity has recovered slower than major metro areas in Texas
- Using the same measure (2007=100), the housing permit index for Dallas was 99 (Sept.); Houston at 71 and San Antonio at 57
- With Texas economy improving faster than US average, border counties/cities are projected to advance construction activity at a more rapid pace in 2017-2018
- Companies like Vulcan expect strong regional growth in infrastructure and housing spending, which will draw in more material demand for aggregates, sand, stone, etc.



Sources: U.S. Census Bureau and Real Estate Center at Texas A&M University

- Aggregate imports are port-localized. Example: Vulcan is the #1 US importer and uses 12 ports in the Gulf including 5 in Texas (over a million tons at **Houston & Corpus Christi)**
- POB imports of aggregates is forecast to grow at an annual rate of 3.2% and aluminum at 18%. After a nearly -50% drop in aggregate imports in 2016, volume is projected to top surpass 2015 peak of 733,000 tons by 2019

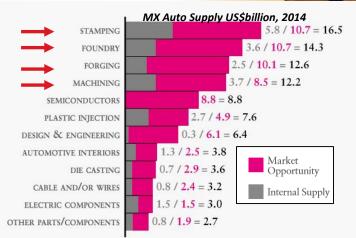


### **Importance of Mexican Auto Industry**



- The automotive industry accounts for 18% of Mexico's manufacturing sector and 3% of its national GDP (21 manufacturing sites in 14 states in '15)
- IHS Global Insight projects Mexican auto production will grow at an annual average rate of 7.1 percent through the next decade, and will be the 6<sup>th</sup> largest global producer by 2020
- In addition to their existing operations in Mexico, the top 3 U.S. auto makers expect to shift annual production of 600,000 compact and midsize cars currently made in the U.S. to Mexico by 2019
- US auto parts sales to Mexico have grown from \$17.5 billion in 2010 to \$30 billion in 2015. 53% of all auto parts imports into Mexico were from the US





## **Materials Opportunity not restricted to Autos**





Commodity opportunity: GM consumes +6 million tons of steel annually and companies like Caterpillar & John Deere use +1 million tons



#### **Mexican Steel Manufacturing**





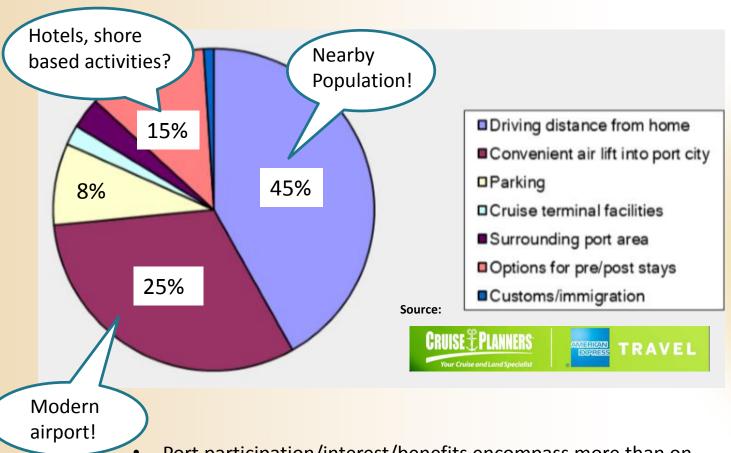
- Opportunity for raw material transport
- Most steel producers maintain warehouse/distribution centers at the border (example: Deacero in Laredo)



#### **Alternative Business Cases: Cruise**



Key decision factors for choosing cruise home port do not favor Brownsville



- Port participation/interest/benefits encompass more than onterminal service revenues/ROI
- Economic impact to community is a strong consideration
- Cost of terminal construction, added Customs, berth use are often prohibitive



# Houston Cruise Terminal Lesson: Build it and they may not come



#### From a Hofstra University cruise market study:

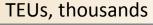
- For most customers, a cruise involves two travel segments, the
  first being air travel to the hub port (with a return trip) and the
  second is the cruise itself. It is therefore important that the hub
  port is serviced by a well-connected airport, with significant airlift
  capacity and which represents in itself a touristic destination. This
  is the case for Miami, Fort Lauderdale and San Juan.
- Drive-to convenience option: More "close to home" ports (also called "drive to ports") also increase the likelihood of cruising, the reason why cruise lines will call ports along the American Gulf Coast and Eastern Seaboard such as New York, Tampa, Galveston, Baltimore and New Orleans.

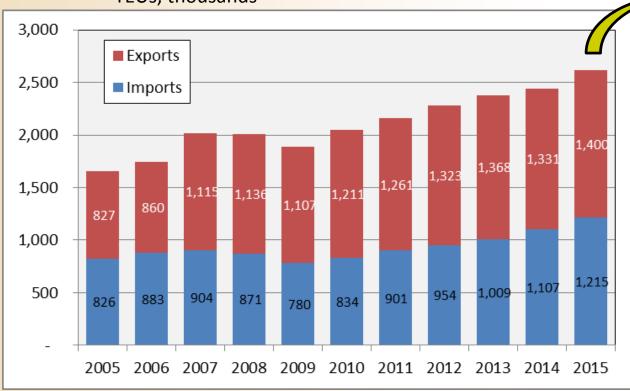
Take-away: POB S.W.O.T position not as favorable for cruise investment due to smaller local population, lack of land-based tourism and limited air service.



## **US Gulf Coast Container Port Performance**







2016: flat volumes & limited revenue gains

- Since 2010, overall loaded container growth has averaged 5% yearly
- Imports have been the "engine" with annual gains averaging 8%, export gains are under 3%
- Nearly all the '15 volume gain was concentrated at Houston
- No surprise Asia trades are boosting Gulf Coast container port performance



# **Container Opportunity for Brownsville**



- STRENGTHS: Brownsville location with significant land, less congested road border crossing and supportive local rail option.
- WEAKNESSES: Established warehousing/transload businesses (many family owned/operated) in Laredo. "Discretionary" cargo is not anchored by local "captive" cargo in the Brownsville area that would attract direct container services
- OPPORTUNITIES: Ability to tie land+road+rail with unique maritime transport option working with the Port of Houston and other Gulf ports as a feeder destination for barges. Boom in plastics/resins exports from new/expanded Gulf coast polyethylene plants may provide the impetus (volume & overweight road restrictions on containers)
- THREATS: Container carrier financials are dire, inhibiting interest in new ventures/investments



# **Key Issues for All Container Ports**

- PORT TO THE STATE OF THE STATE
- Ship economies of scale are occurring much faster than ports' abilities to expand and modernize AND the carriers are building bigger alliances
- Ports spending (& borrowing!) more than ever ... BUT can they continue to tap into traditional financing, such as bonds, taxing authority and subsidies?

According to the AAPA, "in the next five years public ports and their private partners expect to invest \$9 billion in port infrastructure"

Examples: Virginia \$750 mn. in upgraded equipment & build terminal phase II, Philadelphia \$300 mn. to refurbish wharf, remove on-dock wharehouses, buy cranes, North Carolina \$200 mn. for turning basin and berth upgrade

- In a word, ports need greater VELOCITY for cargo moving through their facilities which requires investment in:
  - More & larger cranes
  - Longer & deeper berths
  - Increased terminal footprints (port-side & inland)
  - Better logistics: improved rail & road access
  - Automation

Partnerships are critical to success — with stakeholders, government, economic development players & private investors

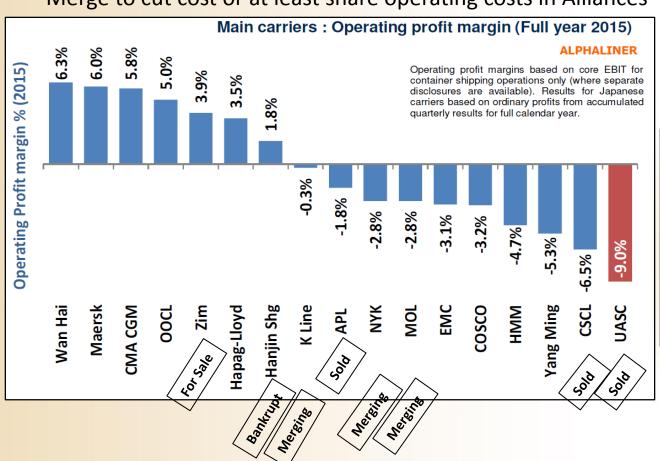
Hanjin (# 7 worldwide), bankruptcy left 3,000 creditors owed \$800 million & forced carriers to form fewer but larger alliances

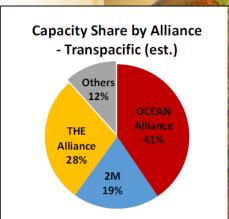


# **Key Issues for Container Carriers**



#### Merge to cut cost or at least share operating costs in Alliances





"With 13 of the top 20 container lines reporting combined losses of \$2.5 billion in the first half 2016 alone, industry losses will likely range from \$8 billion to \$10 billion for the full year".

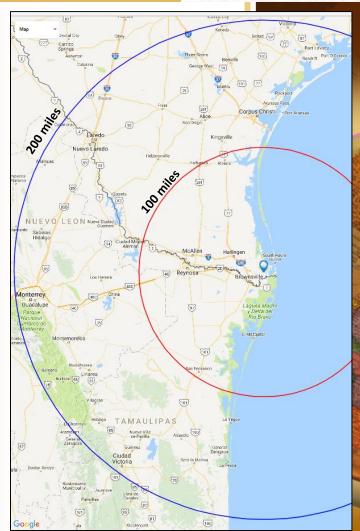
American Shipper magazine, august 2016



# Houston Barge Opportunity for Brownsville BR



- Houston trucking to the Brownsville area is about 350 miles one-way. With hours-of-service restrictions, this is a difficult roundtrip.
- Statistics (PIERS & Datamyne) show the annual volume of Houston discharged TEUs (twenty foot equivalent container units) inbound to the Brownsville area is about 7-8,000 (staying in the U.S.).
- Another 2-3,000 TEU is shown for containers crossing the border (Brownsville/Hidalgo).
- This +/- 10,000 TEU compares to approx. 50,000 TEU going to Laredo warehouses or crossing the border
- Research required to determine the transport logistics (transload in Houston, transload at a border warehouse, intact container into Mexico).
- 2-way volume for a weekly barge is likely to need 200 boxes which is not available yet based on available statistics.
- Future opportunity: booming polyethylene resin exports from New Orleans, Houston & Corpus Christi

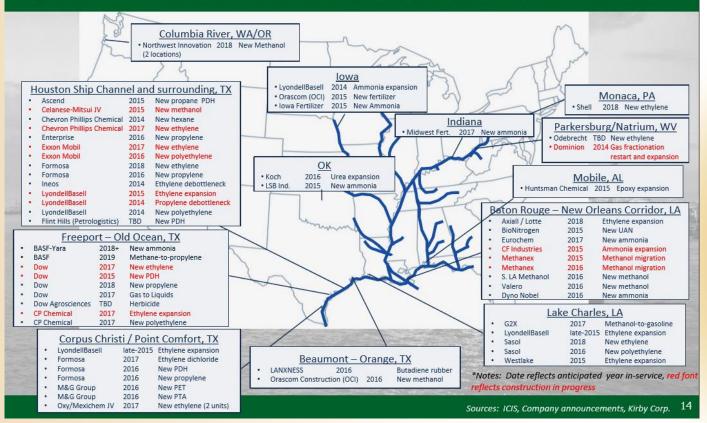




## Plastic/Resin Exports to Grow Substantially



#### \$100+ Billion of Planned U.S. Petrochemical Investments\*



- Houston projected to export 400,000 added TEU to all destinations in 5 years
- Nuevo Leon has about 350 plastics fabricators (Nat. Assoc. MX Plastics Prod.) and the country is a net importer of PE resins
- Overweight container-on-barge opportunity should be explored



## **Analysis conclusions**



- Brownsville S.W.O.T. points to success of core competencies: available land, proximity to Mexico, FTZ, bulk & breakbulk commodity clients that put assets in place
- Existing customers growth expectations are positive and market conditions match that optimism. Port marine volume is likely to expand by +4 million tons within 5 years.
- Twin opportunities: Mexico's importance to the Port will increase and a stronger Texas economy presents its own growth prospects
- A watchful eye on new trades/commodities & customers is always smart but should be cautiously evaluated as to the impact on the Port's successful partnerships in dry bulk, liquids and breakbulk markets.



# **Suggested Marketing Strategies**



- Primary research ("boots on the ground") in Houston, border cities and MX) with tenants, carriers and the cargo owners (great example: the Savannah model ... do I know who makes the freight logistics decisions?)
- Outreach to prospects ... if Brownsville works for company X in business Y ... what other companies make good partners?
- Explore container barge opportunity ExxonMobil, Shintech,
   Chevron Phillips, and others, know best what their customers in MX will need but are just now learning how best to transport it!
- Market planning needs to be aligned with port operation/infrastructure focus to be able to handle projected volume growth and new commodities
- Think out-of-the-box for ideas on using vast port property as "incubator" for bringing in new business. Strengthen partnership with economic development agencies.

