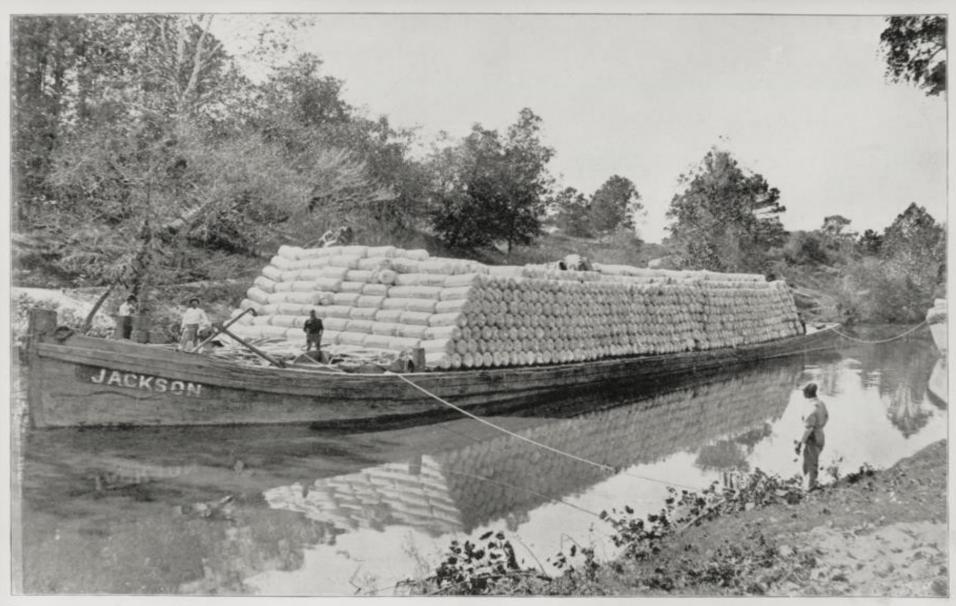


Intermodal Tank Container Association

November 8, 2018



Dargest Cargo. This is a scene on Buffalo Bayou. The barge was loaded October 30, 1899, from Houston Converting Plant, with 5,300 Lowery bales of cotton, weighing 1,285,861 pounds. Loaded on Steamship Catania. This is the largest cargo of cotton ever loaded on Buffalo Bayou. See steamship, page 11.



Port as... Economic Engine

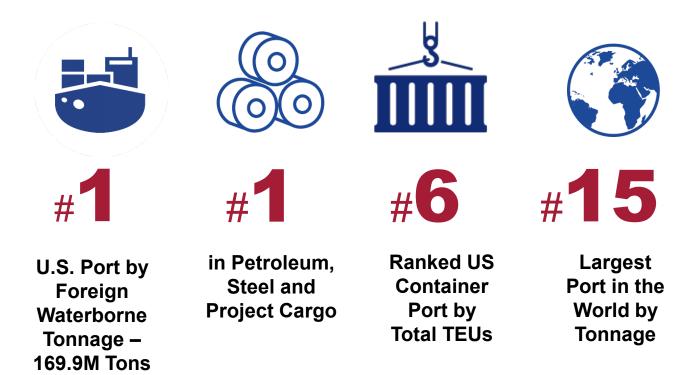




MAIN STREET VIADUCT AND SHIP CHANNEL, HOUSTON, TEXAS.

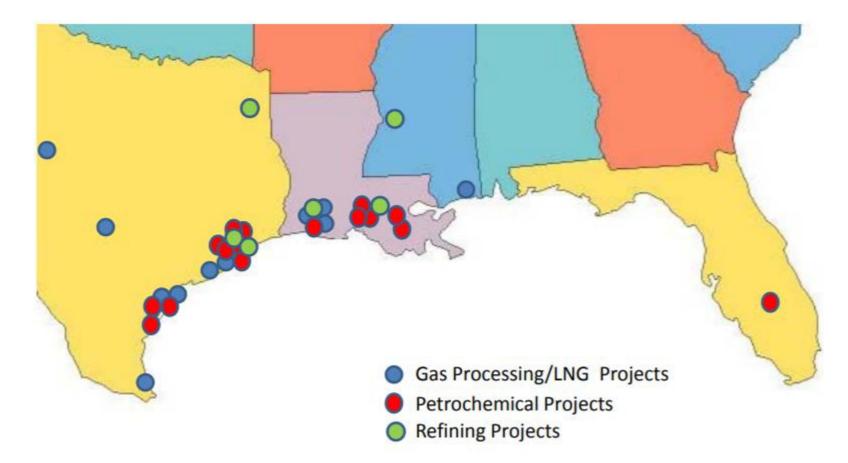


MAJOR GATEWAY



Manufacturing Driving Exports

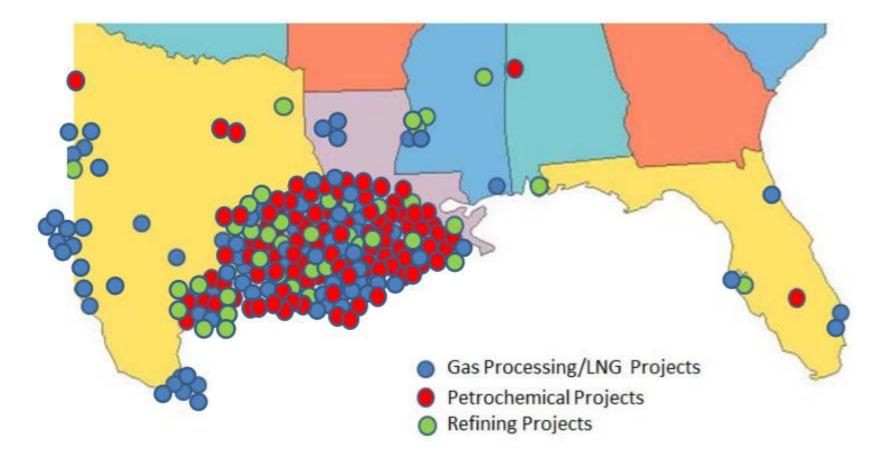
New Petrochemical Project Announcements –2012



Source: Lee Nichols, Hydrocarbon Processing Magazine, Energy Construction Form 3/16



New Project Announcements – Through Q1-2016



Source: Lee Nichols, Hydrocarbon Processing Magazine, Energy Construction Form 3/16

AND IN RECENT NEWS.....

Deepened Houston channel allows heavier resin loading

Joseph Bonney, Senior Editor | Jun 30, 2017 10:19AM EDT

Nearly 12 big-box distributors shopping for warehouse space in Houston

By <u>Dylan Baddour</u> Published 10:45 am, Monday, July 17, 2017



Larges

t touts ??



Port Houston... Behind the Scenes

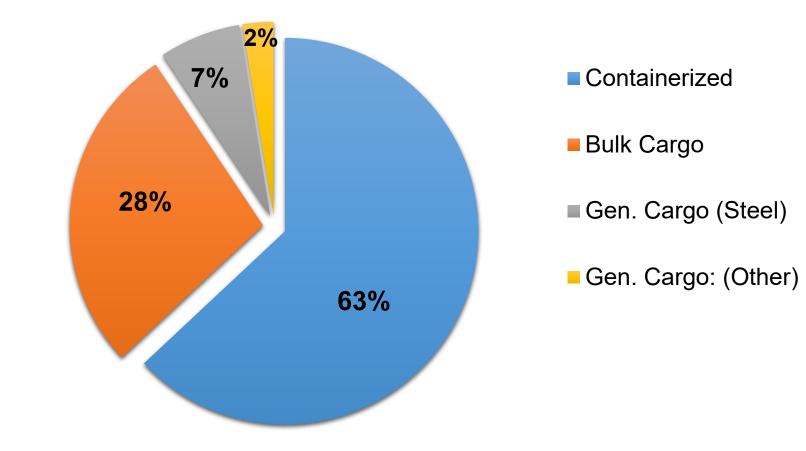




Port of Houston Authority



Cargo Sectors – 2017





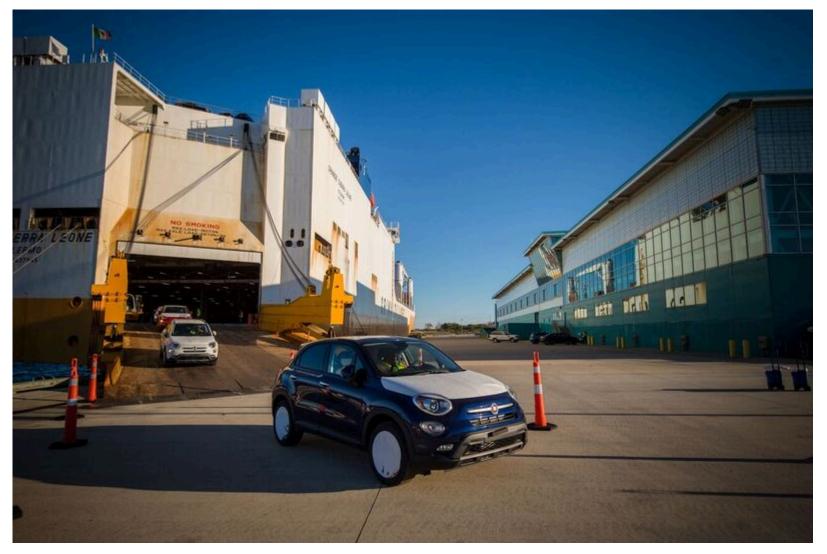
Breakbulk/ General Cargo





Bayport Automobile Terminal





Container Outlook

Petrochemicals / Resin Export
Import of Consumer Goods
Population Growth

Panama Canal Expansion



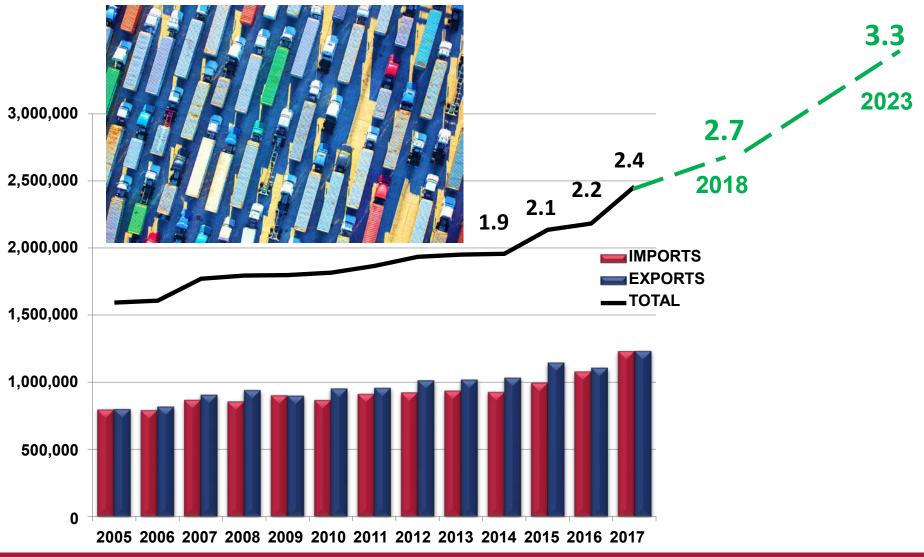


Tank Containers





<u>Consistent</u>, <u>Balanced</u> and <u>Diverse</u> Container Growth



PORT HOUSTON

Note: Totals include empty containers Source: PHA Accounting, PHA Market Development

CURRENT MAJOR CONTAINER TRADE LANES THROUGH HOUSTON



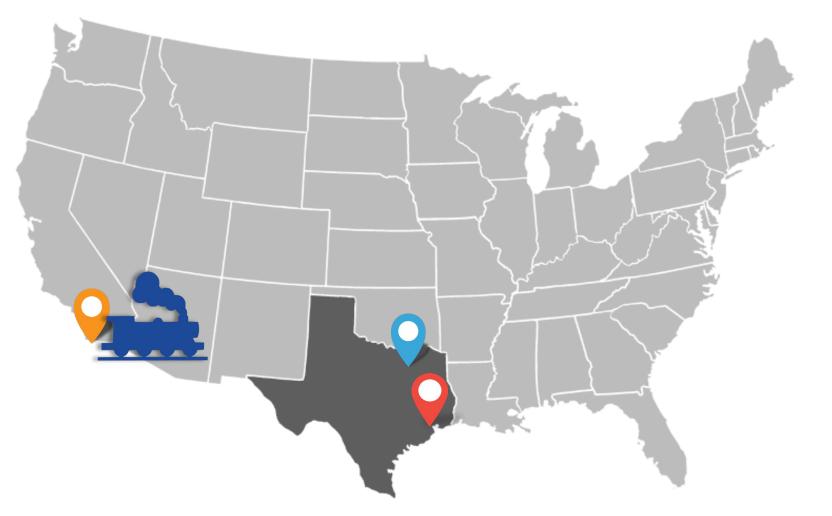
EUROPE & MEDITERRANEAN

EAST ASIA

EAST COAST SOUTH AMERICA

TRADITIONAL TRADE FROM ASIA





MAJOR SHIFT IN EAST ASIA TRADE ROUTE





Panama Canal = Greater Shipping Efficiency

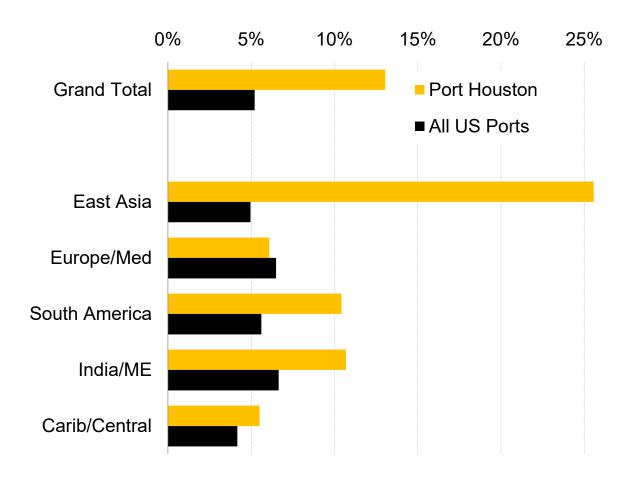




LONG RUN PERFORMANCE

Graph: Import Growth by Region 2013-2017

Port Houston vs. All US Container Ports. CAGR of PIERS Loaded TEUs





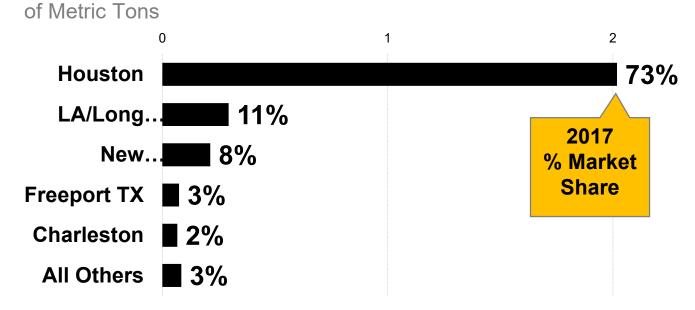
COMMENTS:

- Over five years, Port Houston has grown 2.5x faster than US average ports
- Asia has been driving our growth by far – this level of growth is driven by changing logistics preferences of shippers, not just fundamentals
- Strong performance on all others lanes, except mature Euro/Med trade



U.S. PE EXPORT ACTIVITY CONCENTRATED IN SELECT PORTS

Graph: US Waterborne PE Export by Port, Units: Millions











Port Houston Priorities



Funding

- Port Facilities Capital Program
- Ship Channel
- Resilience
- Freight Mobility
- Port of the Future

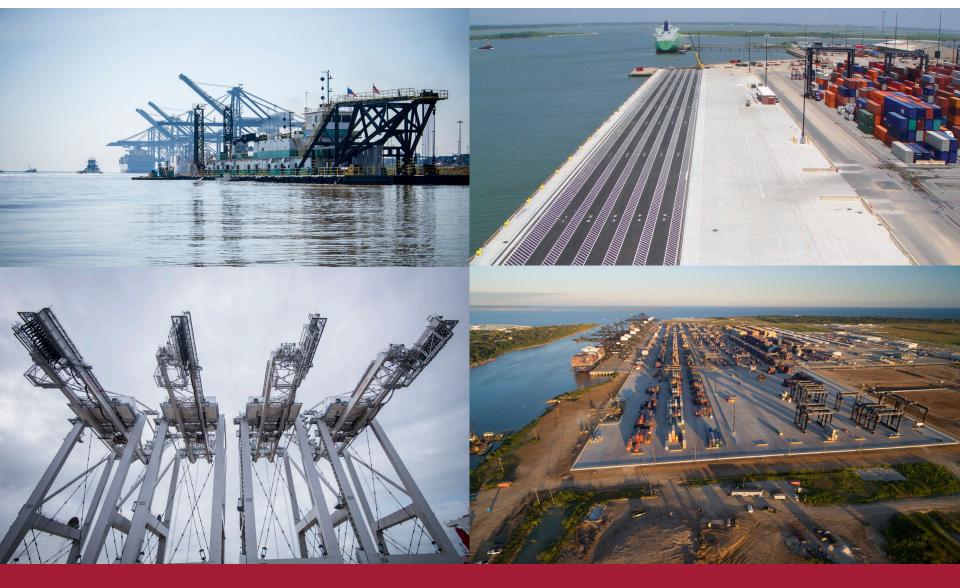
Mission / Vision





Priority: Infrastructure





Barbours Cut Container Terminal



	Current	At Built-Out
Acres (ha)	235 acres (95 ha)	235 acres (95 ha)
Berths	6	6
Waterfront ft (m)	6,000 ft (1,830 m)	6,000 ft (1,830 m)
Terminal Capacity	1.2 M teu	2.5 M teu
Equipment (cranes)	5 PP, 3 P, 7 Neopanamax	18 Neopanamax





PHA Capital Investment 2017-2021

CY Reconstruction – \$88 Million Wharf Rehabilitation – \$71 Million 6 Wharf STS Cranes – \$78 Million Terminal Infrastructure – \$32 Million 8 RTG's – \$15 Million

10-year Capital Investment – \$577 Million

Bayport Container Terminal



and the state of the	Current	At Built-Out	
Acres (ha)	225 acres (71 ha)	376 acres <i>(152 ha)</i>	
Berth	3	7	
Waterfront ft (m)	3,330 ft (1,015 m)	7,000 ft (2,130 m)	
Terminal Capacity	1.6 M teu	2.3 M teu	
Equipment (cranes)	9 Neopanamax	21 Neopanamax	

PHA Capital Investment 2017-2021 50% complete today CY 6 Construction – \$92 Million Wharf 2 Construction – \$81 Million 18 RTG's – \$46 Million 3 Wharf STS Cranes – \$36 Million Next 10-year Completion – \$600 Million

Priority: Houston Ship Channel 🍃



- Channel Funding
- Preparing for the Future



Still...Busiest U.S. Waterway





FEDERAL CHANNEL NAVIGATION STUDY

146

10

225



IMPROVE ALL REACHES:

Wider channels, including:

- Bayport and BCT
- Bend Easings
- Deeper Drafts Upstream
- Upper Bay Anchorage

The Houston Ship Channel

45

610

For this study effort, the ship channel has been divided into six segments:

Bay Reach
 Bayport Channel
 Barbours Cut Channel
 Boggy Bayou to Sims Bayou
 Sims Bayou to I-610 Bridge
 I-610 Bridge to Turning Basin

288



Priority: Resilience

Houston 🔿

Austin

San Antonio 🖲

TEXAS

Corpus Christi



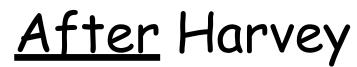
LUUUHHIMH

Gulf of Mexico







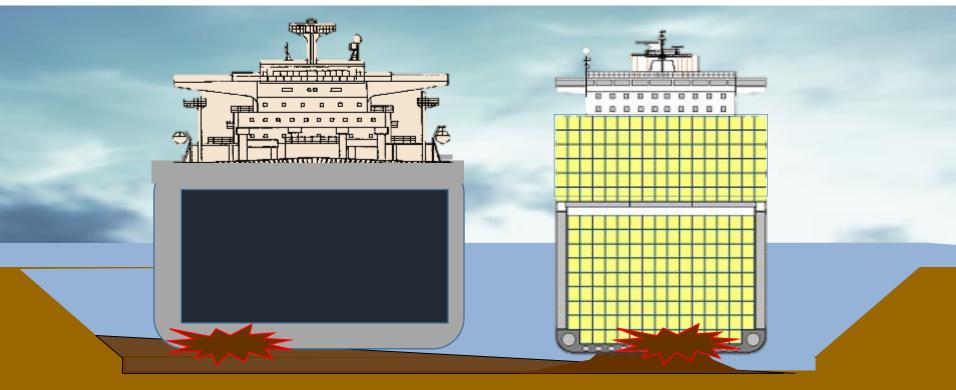






Channel Challenges-Consistent Depth





Depth is critical to commerce:

- Each foot of shoaling can cost the economy \$281 million per year
- 3 feet of draft restriction can cost a container ship \$1M in lost revenue for each ship call

FREIGHT INITIATIVES

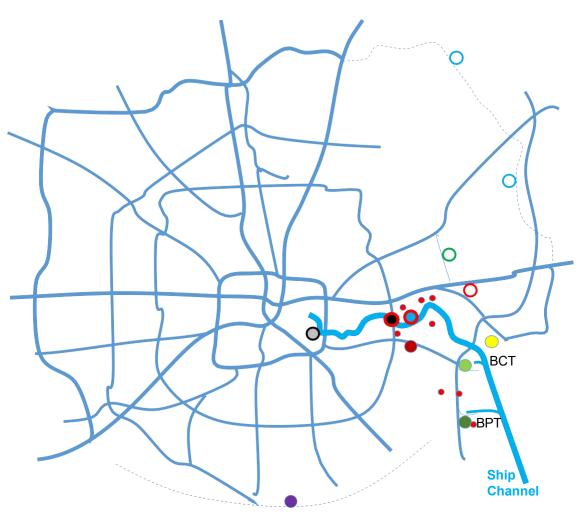




- Use ALL modes of transportation
- Avoid congestion
- Increase safety
- Better use of current transportation network

Priority: Freight Mobility





Example Current & Potential Area Projects

- 99 Sections H & I
- Crosby-Lynchburg Improvements
- SH 330 Connectivity
- Peninsula Road Expansion
- RR Double-track at Broadway
- BW-8 Bridge Expansion
- SH 225 Expansion& Connectors
- o Container Barges
- BCT Blvd to 146 connectors
- Bayport Port Road and RR Spur
- I-69 / 99S bypass
- Other road and rail improvements
 Inland distribution (not shown)

Priority: Port of the Future

- From...
- Physical Gateway
- Waterside Cargo
- Diesel
- Capital Infrastructure
- Customer Service
- Digital Info
- Public OR Private
- Community Support
- Operator / Landlord

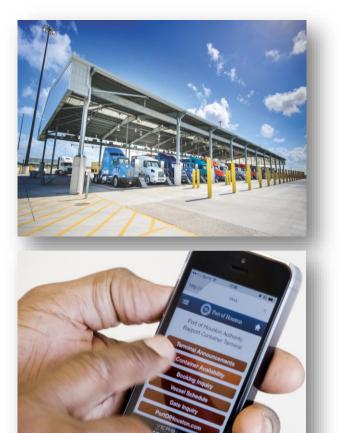
То...

- Digital Value Creation
- Inland Delivery
- Hybrid / Electric
- Innovation
- Integrated Operations
- Big data analytics
- And: P3
- Cluster & Jobs Incubation
- Integrated Enterprise









INVESTMENTS TO INCREASE EFFICIENCIES

- More than 40,000 Interchanges per week
- High productivity on vessel operations
- OCR Technology at Truck Gates
- Mobile app for truck drivers
- Systems for customer visibility

HOUSTON—THE "IRREPLACEABLE" PORT



- The assets developed over the past century are not moving anywhere
- Houston's energy, security, and inland infrastructure makes it one-of-a-kind
- Houston is the top exporting port in the US, and is growing
- Houston's channels, roads, and rail are vital to the regional and national economy, and must be protected and preserved

- Colliers International, U.S. Port Assessment, 2012



THANK YOU

Roger Guenther

Executive Director Port Houston

Questions? 713.670.2400 kday@poha.com

www.PortHouston.com

111 East Loop North Houston, TX 77029

