COMPREHENSIVE DEVELOPMENT PLAN

LOUISIANA BOARD OF INTERNATIONAL COMMERCE

PREPARED FOR

LED | LOUISIANA ECONOMIC DEVELOPMENT

By Ed Bee at Taimerica Management Company

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PREFACE

On behalf of the members of the Louisiana Board of International Commerce (LABIC), I'm pleased to present the second Comprehensive Development Plan for International Commerce in Louisiana. LABIC was created legislatively in 2012 to advance the state's international commerce initiatives and enhance the state's trade-based economy in collaboration with Louisiana Economic Development's Office of International Commerce (OIC). In 2013, LABIC completed the first 10-year roadmap for the continued advancement and attraction of international commerce in Louisiana. This document is the second iteration of that master plan, and like the first, it combines objective research about performance and best practices in neighboring states with a vision statement incorporating input from stakeholders throughout the state.

The report is deep and detailed. Among the high-level points of emphasis:

- Louisiana should build on the individual strengths and natural advantages of our ports, which are among our state's most valuable economic assets.
- Louisiana should continue to operate under an open investment policy, conditioned upon what is lawfully permissible, supported by open Investment letters from each successive administration.
- Louisiana should continue to invest in the proposed container facility to manage the export and import of containers on the Lower-Mississippi River. The Louisiana International Terminal project in Violet represents the culmination of four years of collaborative work by LED, the Port of New Orleans and others. For all the reasons publicly stated to date – flood protection; rail and road access with plans for additional improvements; proximity to distribution routes; and confirmed commitment of hundreds of millions of private sector investment -- this is a critical and potentially transformative project.

I know that I speak for the entire board and our partners at LED when I say that the No. 1 takeaway from this report should be that a bright and prosperous future for international commerce in Louisiana is completely within reach. Thank you to the Legislature and the many stakeholders who recognize the importance of foreign trade and business development to Louisiana's economic well-being. Your continued support and commitment to economic progress can make the vision contained on these pages a reality.

Respectfully,
Gregory Rusovich
Chairman, Louisiana Board
of International Commerce

INTRODUCTION

The Louisiana Board of International Commerce (LABIC) is required by LA Rev Stat § 51:3135 to develop a "comprehensive strategy addressing all matters of international commerce and trade for the state of Louisiana". This report contains a summary of Taimerica's findings and recommendations and provides a formal Comprehensive Plan of International Commerce for LABIC.

The last comprehensive assessment of Louisiana's competitive position in international trade and FDI was completed in 2013. Louisiana's performance in international trade and FDI since the completion of that study was evaluated before updating the factual basis for a new comprehensive plan. Taimerica finds that:

1. The identified target industries from 2013 provided significant export-led job growth in a statewide economy that was otherwise static.
2. The FDI countries and industries identified in the 2013 strategy provided significant new investment and jobs in a statewide economy that was otherwise static.

In short, the strategy developed in 2013 provided tangible and measurable benefits to the citizens of Louisiana.

Taimerica collected primary and secondary data to ascertain the state's competitive position and future opportunities for international development as of 2023. The data in this report come from several primary and secondary sources, including:

- A literature review and a best practice review of trade and FDI promotion in 47 states.
- A review of megatrends in the global economy.
- Interviews with exporters, traders, and FDI experts.
- Examinations of statistical data on import and export trade in Louisiana and competitor states and on foreign direct investment (FDI) in Louisiana and other states.

These findings were presented and discussed with members of LABIC during workshops in April and June 2023. They are encapsulated in the next section of this report to give the reader an overview of the research that shaped the recommended Comprehensive Plan.

Several issues pertinent to the LABIC Comprehensive Plan came out of the April workshop. The first issue is that Louisiana needs to increase its ratio of container imports to container exports to attract additional steamship service. A successful strategy is to attract additional import distribution centers, such as the Wal-Mart center recently located in the Mobile region. Another strategy for increasing container imports is to capture a larger market share in the North-South container routes to South and Central America.

In the June workshop, board members of LABIC identified elements of a vision for trade and FDI using the nominal group technique. Board members subsequently identified barriers or issues that Louisiana must overcome to achieve the state's vision for trade and FDI. The issues were ranked by board members as a means of setting priorities for the Comprehensive Plan.

The final section of this report, which incorporates the board discussions in the June workshops, presents a Comprehensive Plan for LABIC for the next decade. The Comprehensive Plan begins with a statement of the vision for global trade and FDI in Louisiana in the year 2033. The six barriers to the vision identified in the workshop were recast as goals that LABIC and economic development stakeholders in Louisiana must achieve to realize their collective vision for the Louisiana economy.

Four of the goals that are outside the statutory mandate of LABIC were combined into a single advocacy goal. Strategic actions for attaining the goals are embedded into the discussion of each of the strategic goals in the Comprehensive Plan.

LITERATURE REVIEW

Taimerica reviewed academic and internet literature in international development to identify studies conducted after the completion of the 2013 report that examined effective foreign direct investment and trade development programs. We supplemented the literature review with Louisiana stakeholder interviews and Artificial Intelligence chats with ChatGPT to determine how other maritime states set priorities for statewide port investments.

The literature review identified five studies of particular significance to the LABIC Comprehensive Plan that bear additional emphasis in this report.

Texas A&M Port Financing Study (2021)
www.policy.tti.tamu.edu/finance/2021-survey-of-state-funding-practices-for-coastal-port-infrastructure/
This study summarizes how 11 Gulf and Atlantic states, including Louisiana, Texas and Florida, fund port infrastructure. The report provides detailed, state-by-state information about channel improvements, direct state funding to port authorities, and indirect funding and incentive programs designed to stimulate port development. Florida has the most active and structured program for state port investments.

Florida Seaport Mission Plan (2023)
https://flaports.org/wp-content/uploads/FSTED-SEAPORT-MISSION-PLAN-2022_E-BOOK.pdf
The Florida Seaport Transportation and Economic Development Council (FSTED) produces an annual Seaport Mission Plan to guide state-level investments in 16 ports and related intermodal facilities. The Florida system is deemed the best practice among maritime states. The Council has a mission of enhancing trade, promoting cargo flows, increasing cruise passenger movements, increasing port revenues, and providing economic benefits to the state.

Florida ports are mandated by statute to prepare comprehensive plans to guide development and expansion. Plans must be regularly updated and be consistent with the comprehensive plans of local governments in which they operate. Plans must also forecast needs and identify five-year capital seaport improvements.

The FSTED has six goals:

1. Develop world-class cargo and cruise facilities to enhance Florida's global competitiveness.
2. Build system-wide, seamless intermodal facilities to move port goods and passengers efficiently and cost-effectively.
3. Capitalize on increased north-south trade and the Panama Canal expansion to capture more direct all-water service and feeder calls.
4. Strengthen and diversity strategic seaport funding to ensure vital and timely improvements.

5. Advocate continued statewide economic development that includes investment in major economic engines–Florida seaports.

6. Support security measures that balance compliance with an efficient flow of seaport commerce.

Maritime professionals we interviewed during this study indicated that the Florida system is effective at setting priorities for statewide investments in ports and intermodal facilities connected to international commerce. The system has been operating successfully for over 30 years, suggesting that it provides a level of stable and consistent funding for trade infrastructure in Florida that was expressed as a vision element by members of the LA Board of International Commerce.

Texas Mission Plan 2023-25 (2022)

ftp.dot.state.tx.us/pub/txdot-info/mrt/mission-plan-2024-2025.pdf

For every biennial session of the Texas legislature, the Port Authority Advisory Committee (PAAC) develops a report in collaboration with the Maritime Division of the Texas Department of Transportation detailing the funding needs of Texas's port system. Members of the PAAC are directors of Texas ports selected by the Texas Transportation Commission to represent the upper coast, lower coast and Port of Houston. Two of the nine members are appointed by the Lieutenant Governor and Speaker of the House of Representatives. These two appointments are drawn from the business community rather than from port management.

The mission of the PAAC is to "elevate port issues as a vital component of the Texas transportation system and advise the Texas Transportation Commission and TxDOT on matters relating to maritime transportation." Goals of the PAAC are to:

- Identify high-priority and strategic port projects and make recommendations to the department for investment.
- Incorporate maritime interests in TxDOT planning activities and documents.
- Promote Texas ports for economic development opportunities.
- Identify federal, state, or other funding opportunities for maritime investment.

Taimerica considers the Texas Mission Plan the best practice for communicating port funding needs to legislative leaders. The document provides a typology of the specialties among Texas ports; explains the connections between port channels, port facilities and inland connectivity; and quantifies the economic benefits of the recommended port projects. Benefit categories consist of economic impact, operational impact, enhanced connectivity, improvements in safety and security, and secondary benefits such as air quality improvements. The report includes insightful metrics and data visualizations, i.e., an estimate of the historic leverage of private investment stimulated by public funding, which showed that in the past decade, over 98% of Texas ports and navigation district investments were leveraged through private port funding sources vs 2% from public port system investments through local, state, and federal funds; and a storyboard and maps that connect Texas ports with inland industries in Texas, such as timber, resins, vehicle parts, cotton and LNG.

Leading Maritime Cities of the World (2022)

www.menon.no/wp-content/uploads/Maritime-cities-2022_13-oppdatert.pdf

This title is misleading: the report defines a city as the geographic territory within 200 km of the city center; so the New Orleans ranking includes all of Louisiana on the Lower Mississippi River, Baton Rouge, Morgan City, New Iberia and Houma. "New Orleans" is one of the fifty leading maritime cities ranked by this Norwegian company. The data for the study, produced every three years, consists of a series of global databases maintained by Clarksons, Bureau Van Dijk and other sources, supplemented by a survey of 285 maritime experts from 28 countries. The rankings consist of five categories: shipping; finance and law; maritime technology; ports and logistics; and attractiveness and competitiveness.

The report categorizes New Orleans, San Francisco, Naples and Liverpool as areas with a waning influence in the maritime business "due to decreasing demand for traditional port services amid fierce competition" (Merck 2013). These declining cities are contrasted with Singapore: "The operators of the Singapore maritime cluster successfully maintained their cluster's relevancy by modernizing their capacity to accommodate increasingly larger ships and high cargo volumes and to offer complex, highly specialized logistical services, while catering to specialized needs for maritime finance, insurance, bunkering and other value-added services (Jakobsen et al. 2017). Local government entities and maritime associations have greatly contributed to that effect by adopting and implementing pro-business policy measures, as well as continuously seeking input and feedback from industry actors, for Singapore to remain an attractive location for maritime business establishments (Osman et al. 2021)."

The comparison provides a template for reversing Louisiana's waning influence in maritime commerce.

The Future of London's Maritime Services Cluster: A Call for Action (2004).

www.fisheradvisory.com/library.

Fisher Associates completed this report in 2004 for the Corporation of London to identify policy measures that could help London reverse its declining ranking among the world's maritime capitals. Although the report is nearly 20 years old, London has since become one of the world's leading maritime cities, and this report remains relevant as a template for the range of services beyond cargo handling that should factor into any comprehensive play for international commerce. Among the services examined in the report are:

- Shipping
  - Charterers
  - Ship owners, operators and managers
  - Shipbrokers
  - Liner agencies

- Intermediate services
  - Marine insurance
  - Legal services
  - Banking and accountancy
  - Technical consultancy and surveying
- Maritime governance and regulation
- Support services
- Industry associations

The lessons for Louisiana from London's Maritime Services Cluster study are that economic development leaders in the state should envision the maritime industry not merely as services for handling maritime cargoes, but more broadly as a cluster of interrelated trade services that provide most of the job opportunities for the citizens of the state.

FINDINGS

The initial findings of Taimerica's assessment were presented at length in board workshops in April and June 2023. The April assessment examined the performance of the Louisiana economy in FDI and trade development since 2013. The June assessment identified the current industrial specializations in the Louisiana economy, explored the state's FDI and trade development strengths and weaknesses, and developed a list of target industry recommendations for 2023-2033.

The target industry recommendations are built around an economic principle established by economist Adam Smith in 1776: The wealth of nations arises from specialization and trade. States that develop FDI and trade targets around their industrial specializations are much more likely to succeed in attaining prosperity than states that focus their development resources around trendy industries thriving in other states.

In this section of the report, Taimerica enumerates key findings from the background research used to formulate the LABIC Comprehensive Plan. The material is organized chronologically: past performance in FDI and trade, current specializations in the economy and trade/FDI program strengths and weaknesses; future opportunities shaped by global megatrends and the list of identified target industries for 2023-2033.

Past Performance of the Louisiana Economy (2013-present)

Assessment of the 2013 strategy

- The identified target industries from 2013 provided significant export-led job growth in a statewide economy that was otherwise static.
- The FDI countries and industries identified in the 2013 strategy provided significant new investment and jobs in a statewide economy that was otherwise static.

LA Trade Trends since 2013

- The Louisiana economy is export driven, having twice the national concentration of export shipments as a percent of GRP (Gross Regional Product). Louisiana ranks fourth nationally in exports as a percent of GRP.
- Both components of aggregate trade (exports + imports) in Louisiana peaked in 2018, which parallels peak state GRP. State GRP has dropped by 8.5% since 2018, due in part to the combined effects of COVID and hurricanes.
- Louisiana has experienced a substantial drop in import trade since 2013, due principally to a drop in imported crude oil. Crude oil imports, however, have been replaced by increases in domestic crude production, and offset by a substantial jump in exports of refined products and fossil fuels.
- Organic chemicals and fertilizer exports more than doubled during the decade.

- Louisiana has witnessed a reversal of agricultural exports since 2013. Bulk shipments, which comprise most of the cargo on a tonnage basis, shifted to West Coast ports between 2003-13. Louisiana shipments of agriculture exports rebounded after 2013, having surged by 20 million metric tons per year.
- Exports of wood products from Louisiana are a trend not identified in 2013. Wood products exports have surged from 200,000 tons per year to 1.9 million tons in 2022. These exports were driven by FDI from Europe and Canada in the Louisiana wood products industry.
- The 11 target industries identified in the 2013 strategy have twice the export concentration relative to those of the overall Louisiana economy. The target industries represent 8 percent of Louisiana GRP but 13% of Louisiana exports as of 2022.
- The 11 target industries generated significant new jobs with high average wages. The overall job growth in Louisiana from these targets, with spinoff jobs included, was 22,000 total jobs.

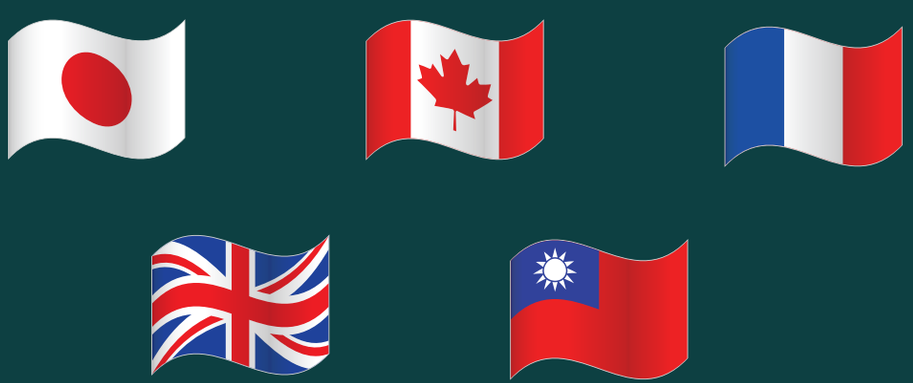
LA Maritime Cluster trends since 2013

- Maritime transportation in Louisiana, one of the state's largest economic drivers, shrank by 16,500 total jobs between 2013-22. Louisiana is one of the few maritime states with an imbalance of imports to exports, which raises the cost of exporting by container.
- Louisiana has seen a significant growth in export vessel trade with Asia, Europe and Latin America since 2013. Container trade with Europe, South America and Central America has been stable since 2013.

Foreign Direct Investment in LA since 2013

- FDI capex in Louisiana has grown substantially since 2013, to a point that Louisiana has the highest concentration of FDI capex of any state since 2017. Louisiana performed better than Florida and Georgia since 2003 on foreign direct investment but trails Alabama.

FDI IN LOUISIANA SINCE 2013 HAS COME LARGELY FROM JAPAN, CANADA, FRANCE, UK AND TAIWAN



“FDI IN LOUISIANA SINCE 2013 HAS BEEN CONCENTRATED IN CHEMICALS, PLASTICS, METALS, RENEWABLE ENERGY AND WOOD PRODUCTS. CHEMICALS AND PLASTICS WERE TWO OF THE FOCUS INDUSTRIES FOR FDI PROMOTION IDENTIFIED IN THE 2013 PLAN.”

- Louisiana has a lower concentration of FDI jobs than the nation or other Southern states. The reason for the divergence is that most FDI employment in the U.S. stems from a single industry: auto assembly. Despite past promotion efforts, Louisiana has not witnessed the successes in automotive FDI attraction that Georgia, Alabama, Mississippi and Tennessee have achieved.
- FDI in Louisiana since 2013 has come largely from Japan, Canada, France, UK and Taiwan.
- FDI in Louisiana since 2013 has been concentrated in chemicals, plastics, metals, renewable energy and wood products. Chemicals and plastics were two of the focus industries for FDI promotion identified in the 2013 plan.
- FDI investments in wood pellets and sawmills generated the unexpected surge in wood product exports. More than $600 million of Canadian FDI in sawmills (the first major investments in the last 20 years) account for the surprising growth.

Current Louisiana Economy

Specializations in the Louisiana Economy

Nine industries drive the vast majority of economic activity in Louisiana:

- Wood Products
- Heavy/Industrial Construction
- Energy Production
- Process Industries
- Food Products
- Oil & Gas Equipment
- Shipbuilding
- Global and Maritime Trade Services
- Gambling Industries

These specializations are the primary place to look for target industries. The vitality of all but one of these nine industry clusters is tied to global trade and foreign direct investment. For additional context, see Table 1 on page 41.

Strength and Weakness Assessment of Louisiana FDI & Trade

It is difficult to generalize the locational strengths of a statewide economy, since it consists of a series of individual labor markets within a large geographic area. Economic drivers in Lake Charles, for instance, are far different than economic drivers in Monroe, Shreveport or Alexandria. The economic drivers in a statewide economy consist of a variety of industries with different comparative advantages.

Taimerica identified eight locational advantages in Louisiana that are noteworthy due to their uniqueness. They are:

1. Louisiana lies at the crossroads of the Gulf Intracoastal Waterway (GIWW), a competitive advantage for coastwise barge shipments along the Gulf of Mexico.
2. Louisiana has a number of deep-water ports along the Lower Mississippi River. Louisiana ports are ideally suited for intermodal exchange of ocean shipments.
3. The Henry Hub, where natural gas prices are set and contracts are delivered, is located in Louisiana. The convergence of industrial product pipelines is a unique advantage.
4. Louisiana has a large standing inventory of southern yellow pine. This species has technical advantages for preservation against rot and decay that are unique.
5. Louisiana has a large concentration in energy production; hence it has price and delivery advantages for industries requiring substantial amounts of process energy.
6. Louisiana has an abundance of salt dome geology, which is a competitive advantage for carbon capture and storage. The Louisiana geology will provide a cost and operational advantage to Louisiana industries involved in steel, refining, and petrochemicals production.
7. Louisiana has an established network of hydrogen pipelines for low-cost distribution of energy stored in hydrogen fuels. The International Energy Agency in Paris has identified the Gulf Coast of the U.S. as one of the global regions most likely to develop a hydrogen fuels production industry.
8. Louisiana has airports with long runways and vacant land that can accommodate aircraft maintenance and repair operations (MRO).

The same issues arise when generalizing the locational weaknesses of Louisiana. Some of the weaknesses, such as the lack of a local industrial market (in contrast to Houston, Los Angeles, or New York/New Jersey) are difficult to change in the next decade. Four stand out for strategic actions in the LABIC Comprehensive Plan:

1. Prepared sites with a focus on import distribution centers.
2. Available hangar capacity for aviation MRO operations.
3. Inventory of deep-water terminal sites on maintained ship channels.
4. Municipal water and wastewater capacity.

Future Opportunities for Louisiana in FDI and Trade

Megatrends shaping Louisiana Trade and FDI over the next decade

Four global megatrends that are significant and predicable from research published as of early 2023, will shape future exports and FDI in Louisiana:

- The decarbonization of global energy markets. Major investigations by the International Energy Agency indicate that Gulf Coast refineries and oil and gas production companies will continue to see growing markets even with the reduction of the carbon footprint in U.S. transportation and industrial production. The IEA forecasts that U.S. natural gas production will grow nationally by 3 percent during the next decade while U.S. crude oil production and trade will grow by 8 percent. While the U.S. demand for transportation fuels will remain static or decline due to the growth in electric vehicle sales, Gulf Coast refineries will continue to see growth in exports of refined products. Louisiana's oil and gas economy and refining/petrochemical industries will benefit from the growth in export shipments.

- Increasing U.S. dominance of global LNG exports: The permitted LNG terminals under construction in Louisiana as of Spring 2023 will expand export capacity in this new industry by 50-300% in the next decade. Louisiana should realize up to a 136 million metric ton expansion of LNG export shipments between 2023 and 2033.

- Increasing U.S. refined product exports: The U.S. Energy Information Administration, in parallel with the IEA, expects that refined product exports from the U.S. will increase to 6.25 million barrels per day in 2050, which would represent a 50% growth in shipments. U.S. refineries are forecast to operate at 90% of capacity through 2050. Louisiana is likely to continue to experience the growth in refined products exports that began around 2013.

- Decreasing export shipments to China. Export trade with China during the decade has been approximately 16 to 33 million metric tons per year, representing 15 to 20% of all Louisiana exports. LNG and mineral fuel shipments and oilseed and grains are the predominate commodities that would be affected by a decrease. While this portends a significant impact on Louisiana exports, it is likely that some, if not all, of these shipments might be replaced by increased exports to other countries. This is a common shift in global commodity markets.

Target Industries for FDI and trade development in Louisiana over the next decade

Taimerica used the analysis of future industrial opportunities and assessment of statewide strengths and weaknesses to develop a list of 11 target industries for the next decade. The industries on the list match the locational strengths of the state based on their existing concentrations. (A concentration of employment in an industry is a measure of its degree of specialization.)

- Process industries: Three of the targets are carryovers from the 2013 list because third party reviewers have concluded they are likely to expand in the next decade. Those industries are:
  - Basic chemicals and refined products
  - Resins and synthetic rubber
  - Fertilizers

- Three other targets are tied to the existing base of process industries in Louisiana either through supplier or customer relationships. These industries are emerging now because of the regulatory requirements to reduce carbon emissions in process industries (a mandate that is supported by the chemical process industry in Louisiana). The three emerging industries in this cluster are:
  - Hydrogen production. Hydrogen is a zero emissions industrial fuel.
  - Ammonia production. Ammonia has been used in the past as a source of nitrogen fertilizer and as a chemical feedstock in petrochemical production. Ammonia is now the most frequently used chemical amine for carbon capture from flue gases emitted from the generation of electrical power. This is an entirely new market for ammonia.
  - E-fuel production. E-fuels are fuels for long-range freight transportation that are created by combining the byproduct of carbon capture with other feedstocks. Because the carbon in e-fuels is captured from electric power generation, it delivers a carbon neutral fuel for long-range freight transportation, a market that is unlikely to adapt to electric propulsion due to range limitations.
- Wood products industries. The recent investment of more than $650 million of Canadian FDI in sawmills will drive additional opportunities for export of Louisiana wood products.
- Oil and gas equipment. This industry is likely to revive its export growth as offshore oil and gas production revives from the depressed levels of production witnessed by Louisiana companies since 2014.
- Global and maritime trade services. The decline in economic activity in this cluster since 2013 will reverse as import levels increase over the decade. The cluster offers opportunities to generate additional jobs and economic activities in Louisiana if the industry broadens from cargo handling into value-added services such as marine insurance and warehousing. Global regions such as London, Singapore, Hong Kong and Bergen have developed formal strategies to expand their maritime clusters into a broader array of trade services. See Figure 1 on page 43 for examples of the maritime services beyond cargo handling. With a formal strategy, Louisiana can expect to capitalize on such opportunities.
- Rare earth minerals processing. The batteries for electric vehicles require a substantial amount of rare earth minerals and vital metals such as copper. Daniel Yergin of S&P Global estimates that copper mining will need to quadruple over the next decade to meet the increased demand from electric vehicles. Louisiana has recently seen FDI investments in rare earth minerals production along the Mississippi River. Albemarle is beginning to harvest lithium from deep wells in the Smackover formation in Arkansas and North Louisiana. This is a target industry that is suited for Louisiana because of its resource base and its bulk transportation from location on the Mississippi River and tributaries.

- Offshore wind production. This is a focus industry in the infrastructure act passed in 2022. The Department of Energy expects offshore wind to grow from less than 1 gigawatt today to 30 gigawatts in 2035. The U.S. wind energy industry sources its equipment from global suppliers, which import them as project cargos captured by Gulf Coast ports. Louisiana has opportunities to handle these imports but also has the industrial capacity to fabricate the structures needed to house offshore wind turbines.

Best Practices Scan

- Members of the State International Development Organization (SIDO) consist of international trade and FDI executives from most state development organizations. SIDO produces a biannual survey of development organizations. The survey from 47 state organizations in 2021 indicates that The International Division of LED is in the norm in terms of budget, staffing and the range of programs. Taimerica looked specifically at programs in Virginia, Michigan and Utah to compare Louisiana programs with the three other best practices states identified by SIDO. Taimerica found that programs in other states were similar in scope but larger in scale, due to the larger size of the other states.

- The tax credits offered to Louisiana for shipments through Louisiana ports are typical of those offered in other Gulf and Atlantic states. Neither the container nor break-bulk cargo credits have ever been used since their introduction in 2010. This was typical of the credits offered in other states, except for the rebate of the federal harbor maintenance fee in Massachusetts. These tax credit programs are not motivating changes in cargo routing.

- Louisiana has not developed an effective program for identifying priority port projects by public ports in Louisiana. Florida has the best program for allocating state port investments based on statewide priorities. The Florida Seaport Transportation & Economic Development Council (FSTED) has successfully set priorities for port resources in Florida since the mid-1990s.

COMPREHENSIVE PLAN FOR LABIC 2023-2033

During the June workshops, LABIC board members provided vision elements for the future of Louisiana's international programs using a nominal group technique, which ensures full participation by all workshop participants. At the end of the workshop, participants were asked to rank the five most important elements of their ideal vision for Louisiana.

The vision elements identified by LABIC board members were combined into a vision statement by the consultant. The purpose of the vision statement is to define the destination for the comprehensive plan. In other words: What are the outcomes in Louisiana's international trade and FDI programs when the vision is achieved?

VISION STATEMENT FOR THE LOUISIANA BOARD OF INTERNATIONAL COMMERCE

Louisiana enjoys a robust economy in 2033, seeded by a decade of FDI investments in molecule processing industries, wood products, aircraft MRO, and low-carbon energy products and equipment. Maritime trade services have grown and broadened from cargo handling into an extended range of trade and logistics services. A larger share of Louisiana companies and industries are actively engaged in export markets with new high value-added services and products. Louisiana has recaptured its legacy as the nation's Latin trade gateway.

The economic transformation in Louisiana hinges on a political recognition of the importance of efficient and consistent regulatory policies, and stable and predictable infrastructure funding by state and local governments. A stable and predictable business climate has lowered the risks and increased the rewards of corporate investments in Louisiana, both domestic and foreign.

Louisiana has a robust surface transportation system that anticipates, rather than lags, the needs of investors and citizens. The state has an improved quality of life equal to those in other states. Workers in Louisiana are trained for jobs in Louisiana industry and employers find ample skill sets to meet their growing employment demand.

Legislative leaders are fully informed about the importance of FDI and global trade for the state's prosperity. State leaders put statewide interests ahead of parochial local interests in state investment decisions. The level of state funding for maritime development now matches the capital requirements needed to fully achieve new global trade opportunities.

Public ports in Louisiana have developed specialties that preclude cannibalization of cargo of other Louisiana ports. Port leaders respond quickly to new opportunities that have been triggered by changes in global market forces. This in turn results in a modern, cost-efficient logistics system that rewards shippers for moving cargo through Louisiana facilities.

Legislative leaders allocate state infrastructure investments in projects that provide the best economic returns to the state, rather than projects that have the most political influence. State investment in maritime projects is allocated by LABIC and its stakeholders using a rigorous evaluation process that incorporates statewide and port-level comprehensive plans. The evaluation process demands that maritime projects clearly articulate economic impacts and demonstrate their ability to enhance economic competitiveness, mobility and connectivity, and operational efficiency in the logistics chain.

LED has a strong global outreach that is targeted to the state's competitiveness in FDI and trade. It has a network of offices in Latin America, Asia, and Europe that aid in both FDI attraction and trade development. Incentives and programs offered by LED are effective at motivating shippers to increase movements of import and export commerce through Louisiana ports and waterways.

GOALS FOR ATTAINING THE FDI AND TRADE VISION IN THE LABIC COMPREHENSIVE PLAN

A vision statement defines the destination for a Comprehensive Plan. Goals and strategies steer LABIC toward the destination. In the June workshops, board members identified barriers that must be overcome and issues that must be addressed if Louisiana is to achieve the state's vision for trade and FDI. The identified issues were rank ordered by board members as a means of setting priorities for the Comprehensive Plan. Six issues were voted as the most important barriers to achieving the vision during the next decade. Consultants transformed the identified issues into goals and strategies for the LABIC Comprehensive Plan:

1. Louisiana public ports have consistent funding that fully supports maritime development opportunities and port transportation connectivity.
2. Louisiana has robust and stable funding for the infrastructure investments needed to support trade and FDI within the following realms:
    a. Public water and sewer capacity
    b. Highway and intermodal connectivity
    c. Prepared industrial and warehouse sites
    d. Port terminals and interconnections with other transportation modes
3. Louisiana offers a quality of life that is comparable or superior to those in leading maritime states.
4. LABIC has a stable and consistent system for prioritizing state investments in maritime projects that enjoys widespread political, administrative and public support within Louisiana.
5. Louisiana has a consistent and predictable regulatory environment and business climate.
6. LED maintains an efficient and effective program for trade and FDI investment.

ADVOCACY GOALS FOR LABIC

While all six of the goals are critical to attainment of the vision, four (Goals 1, 2,3 and 5) are outside of the statutory mandate of LABIC. These four goals are combined into a single "Advocacy Goal" in this Comprehensive Plan. LABIC can influence political actors in Louisiana to enact reforms needed to achieve these goals, but cannot lead the initiatives.

The Advocacy goals are presented in this Comprehensive Plan as a single combined goal (Goal C), which follows the two strategic goals (Goals A and B).

STRATEGIC GOALS FOR LABIC

The discussion which follows for attaining LABIC Strategic Goals is presented in the following format:

- Restatement of the goal.
- Background about the specific issues to address and actors to involve in attaining the goal.
- Strategic actions LABIC can take to attain the goal.

Goal A: LABIC has a stable and consistent system for prioritizing state investments in maritime projects that enjoys widespread political, administrative and public support within Louisiana.

Background & Discussion

LABIC has a statutory mandate to develop the system of statewide port prioritization identified in Goal A. The stable and well-respected organization developed in Florida (FSTED) to prioritize state budget resources for seaports provides a template for LABIC. (A description of the FSTED operation is available on the Florida Ports Council website at https://flaports.org/about/florida-seaport-transportation-and-economic-development-program/.) Achievement of this goal, however, will require statutory changes to the LABIC law. LABIC also will need to develop a consensus among political and maritime leaders to respect a unified list of prioritized port projects rather than locally sponsored projects.

Primary Actors

SB 214 enacted after the completion of the 2023 legislative session adds port development to the mission of LED under the direction of a Commissioner of Port Development. SB 74, also enacted at the conclusion of the 2023 session, creates an advisory commission for ports on the Lower Mississippi River between East Baton Rouge Parish and Plaquemines Parish. That body is charged with preparing 1-, 5-, and 10-year maritime port mission plans that are presented to the speaker of the House and the president of the Senate. Existing law in Louisiana (§ 51:3135) requires the Board of International Commerce to develop a Comprehensive Plan for International Commerce, including state investments in ports.

The LABIC board, appointed by the Governor, is in place. The board of the Advisory Committee created in SB 214 is specified in the legislation; it can be formed without any action from the Governor. Likewise, the board of the Southeast Louisiana Port Authority Advisory Commission formed in SB 74 is created by statute and serves in perpetuity.

These new statutes provide conflicting guidance on which entity in Louisiana is in charge of port prioritization and, unfortunately, each is now formed and ready to act. LABIC needs to shape the consolidation of these organizations through the research gathered for the Comprehensive Plan.

Strategic Actions by LABIC

- Because public ports in Louisiana are separate and independent government entities, LED and LABIC lack a statewide inventory of current port facilities and capabilities. The situation in Louisiana is further complicated by the large number of privately operated terminals on publicly maintained channels. Moreover, inland connectivity and privately owned warehouses outside of port facilities are important components of Louisiana's infrastructure for development of trade and FDI investment. The funding and facility gap between current port capacities and future trade opportunities in Louisiana cannot be quantified until an inventory of statewide port assets is assembled. States with an effective system for port project prioritization (such as Florida Seaport Transportation and Economic Development Council) assemble the state-level inventory and quantify the funding gap by aggregating the data in the comprehensive plans of individual ports. Florida statutes mandate that individual ports produce comprehensive plans that provide the data for quantifying the funding and facility gaps in state ports. Neither SB 74 nor SB 214 passed during the 2023 session mandates that individual ports produce comprehensive plans with these features. The first step in producing a statewide inventory and gap analysis is to enact a statutory requirement that individual ports that request state funding have a recent comprehensive plan that identifies the project as a means of closing a gap in statewide port capacity. The project should also have a recent engineering estimate for the costs for land acquisition and construction of onsite facilities, costs for intermodal connectivity, and gap in offsite capacities such as warehouse and distribution facilities.

- LABIC should tender its approved Comprehensive Plan to the Secretary of Louisiana Economic Development with recommendations to adopt best practices in statewide prioritization of port and multimodal projects (template: Florida Seaport Economic Development Authority) with recommendation of best practices in communicating port projects to the legislature (template: Port Authority Advisory Committee and Maritime Division of Texas Department of Transportation).

- The Chair of LABIC should appoint a subcommittee of members to work with the Secretary of LED and the newly formed Port Authority Advisory Committee and the Southeast Louisiana Port Advisory Committee to develop a consensus method and process for collecting and prioritizing port and multimodal projects in Louisiana.

- LABIC and the Louisiana Ports Association should work jointly to develop an organizational structure similar to the FSTED in Florida, where port directors select their representatives for the project prioritization panel.
- LABIC should draw up annual lists of priority maritime projects, including intermodal connections, and submit the list to the state legislature for approval.
- LED should allocate funding to update the LABIC Comprehensive Plan every three years.

Goal B: LED maintains an efficient and effective program for trade and FDI investment.

Background & Discussion

The attainment of Goal B is completely within the statutory mandate of LABIC. It is, in fact, the goal over which LABIC has the most direct control. The attainment of Goal B is critical to the economic development of Louisiana.

The recommendations in this report for Goal B are built around Louisiana's current and future opportunities for specialization and global trade. Consultants investigated megatrends in the global economy, and current specializations in the Louisiana economy, before developing a list of future opportunities for specialization (a list of 12 target industries presented in the June workshop). The target industries on the list have all received outside validation either from past success in Louisiana or from third parties like the U.S. Energy Information Administration, the International Energy Agency, or recognized consultants within the particular target (MROs in aerospace for instance). Details about the target recommendations, contained in the handouts for the April and June workshops, will not be reproduced here.

Some of our recommended actions in Goal B, such as actions to stimulate development of import distribution center sites, are designed to address weaknesses identified in the target industry investigation. Other recommendations are related to ideas for updating the marketing and recruitment strategies for the individual targets.

Many of the recommendations that came out of the 2012 workshops were repeated in the 2023 workshops, namely:

- Louisiana needs an umbrella entity that chooses port development projects based on their impact on the state's international competitiveness. The LABIC created by SB 723 in 2012 responds to this recommendation.
- Louisiana needs to invest more of its state budget in ports and inland transportation infrastructure. Both state highways and port facilities are critical transportation infrastructure for attracting new cargoes.
- Louisiana needs to develop a formal state strategy for international business development. This is being implemented through the current LABIC.

- The sitting governor needs to lead international investment missions. The governor can open doors for state businesses that subordinates cannot open. Her or his presence on missions provides more business interest from companies in host countries since these cultures assign a higher status to political leaders than to business leaders.
- Louisiana needs a more robust and formal network for communicating its international plan, strategy and activities between international stakeholders and Louisiana agencies.

Primary Actors

The Louisiana Economic Development Office of International Commerce (OIC) is the primary actor for attainment of Goal B. Other divisions of LED are important actors in their attainment since they work jointly with the OIC on site development and business recruitment.

Strategic Actions by LABIC

Strategies that address locational weaknesses in Louisiana for the target industries are discussed first. Recommendations on marketing and promotion strategies follow.

Recommendations to Address Locational Weaknesses

- LABIC should identify actions that could be taken to expand the supply of deep-water sites in Louisiana, particularly on the Lower Mississippi River. Three core ideas to pursue (far from an exhaustive list) are as follows:
  - Investigate whether the seasonality of shipments could be harnessed to expand annual capacity of current terminals. Could bulk terminals be designed to accommodate new cargoes in off-seasons? A template for the investigation of seasonal capacity was being presented in July at the World Conference on Transport Research. (Bruce Lambert and James Merten. 2023. “The Development of a Seasonal Event Matrix, A Case Study for the Mobile County Maritime Sector” World Conference on Transport Research, Montreal 17-21 July 2023).
  - Investigate whether some consolidated terminal, such as the Baytown Project on the Houston Ship Channel, could be built on the Lower Mississippi River.
  - Investigate whether the growth in rare earth processing warrants the construction of a solid bulk import terminal. Details about the opportunity for rare earth minerals processing in Louisiana are discussed in the Marketing and Promotion recommendations.
- LABIC should work with the Business Intelligence Division of LED to develop a strategy for identifying and developing sites for import distribution centers. The initiative should start with an investigation of the quantity and quality of developed real estate needed to support the new Violet container terminal in St. Bernard Parish. The investigation should also collect a database of import distribution centers on the Gulf and South Atlantic ports to quantify the site sizes and characteristics that are required to meet the market demand of retail customers of the new terminal. The investigation should also examine the financial requirements and current financing gaps that limit private investor interest in developing such properties.

- LABIC should evaluate the location and mission of its overseas representatives to reflect changes in the global economy since 2012. LABIC should retain representatives that focus on north/south trade flows rather than solely on Foreign Direct Investment. The priority locations for the N/S offices are in countries that have the largest volume of import commerce into the United States. Latin America container imports into the U.S. in 2022 were 40.7 million metric tons from South America and 19.4 million metric tons from Mexico and Central America. The largest markets, rank ordered by size, are:
  - Brazil (16.9 million metric tons)
  - Colombia (7.4 million metric tons)
  - The West Coast countries of Chile, Ecuador and Peru (14.0 million metric tons)

Brazil is clearly the largest opportunity followed by the West Coast of South America. The West Coast of South America has inherent trade advantages for Louisiana ports since ships transiting the Panama Canal are closer to Louisiana ports than to Florida or South Atlantic ports.

- LABIC should work with the Business Intelligence Division of LED to develop an incentive for constructing hangar facilities needed by aviation Maintenance and Repair Operations (MROs) to expand operations in Louisiana. The MRO market is growing rapidly. MROs are an excellent target industry for Louisiana since they offer high paying and stable jobs to citizens who have A&P licenses. The challenge facing communities that target MRO operations is that decisions on opening new locations typically hinge on available hangar space and ramp space at MRO capable airports. MRO revenue is typically gained through long-term contracts with airlines. MROs who gain new contracts cannot wait years for hangars and ramps to be constructed prior to beginning operations.

Recommendations for Marketing and Promotion to Target Industries

A significant portion of the current Louisiana economy is driven by process industries that produce chemical products and polymers from organic feedstocks and by energy industries that mine and transform petroleum and natural gas into transportation and industrial fuels. Support industries that fabricate marine vessels and capital equipment for the processing and energy industries are part of this cluster. These two industrial clusters account for nearly 400,000 jobs within the state's economy in 2022, nearly a fifth of total jobs in the state. Organic and inorganic chemistry are the primary technologies driving the development of these clusters.

Both of Louisiana's primary clusters are witnessing dramatic transformations in their manufacturing processes and technologies. Both are transforming into low-carbon industries built around discoveries in organic and inorganic chemistry. They employ the same human capital and have the same customers, but they are consuming more capital in the task of reducing their carbon footprints.

Louisiana maintains the locational attributes that provide its competitive advantages for production in processing and energy but the metamorphosis in technologies spawns more opportunities for economic and employment growth within the state. These clusters are not the same industries that generated a burst of economic activity in Louisiana following World War II. They in fact are new and emerging industries with the same customers and scientific cores but with new products and byproducts. The transformation in the energy industry is a prime example. Traditional energy industries in Louisiana transformed imported raw materials into industrial and transportation fuels largely for domestic consumption. The New Energy industries process domestic raw materials into fuels and industrial molecules for overseas customers using process energy derived from zero-carbon sources.

In this report, we will use the terms "New Process Industries" and "New Energy Industries" to identify those targets that are moving to carbon-neutral or zero-carbon products. Many of the target industries for the next decade identified in this report fit within these two categories, which we use to group the emerging opportunities in the New Processing Industries cluster and the New Energy cluster.

New Process Industries (NPI)

- We recommend that LABIC and LED continue their past marketing and promotion efforts to process industries and oil and gas equipment. The growth of trade and employment in Louisiana's process industries over the last decade is strong evidence for the effectiveness of the strategy. While oil and gas equipment has performed poorly in the last decade due to the curtailment of offshore exploration and production, recent industry forecasts suggest that offshore oil and gas production will revive in the next decade, even with an expansion in electric vehicles and alternative power production. OPEC is forecasting a 10% expansion from current production. Exxon-Mobil expects production in 2050 to remain above 70 million barrels per day, even with current policies to reduce carbon emissions. Shell recently revised its forecast of 2050 production to 90% of current demand ("Big Oil Mulls a Slippery Future," Wall Street Journal, June 29, 2023). All of these upward revisions suggest that the market for oil and gas equipment, one of Louisiana's primary economic drivers, will revive in the next decade.

- Wood products are an important industrial cluster in Louisiana. The industry has been revitalized over the last decade as foreign investors have built new sawmills and wood pellet mills. These investments are a platform for expanding export shipments of wood products through Louisiana ports. Southern Yellow Pine has a significant market advantages because it is a species of wood that can be cheaply treated against moisture rot and decay. Pellets are an export cargo that has significant cost advantages in the EU because it is exempt from the carbon taxes levied on fossil fuels. The fastest-growing niche in wood products, however, is "mass timber construction." Mass timber construction consists of engineered wood products that are used in high rise buildings. The market has exploded in the last decade as EU companies in Sweden and Austria have introduced products that meet high-rise building

fire codes. The product also has the advantage of carbon neutrality. Wood buildings have a much lower carbon footprint than steel or concrete structures. Wal-Mart, for instance, is building its new Arkansas headquarters from mass timber for this particular reason. Mass timber construction, if connected to the maritime logistics chain in Louisiana, could also have a competitive advantage in export markets. Companies in Austria and Sweden are at the forefront of the industry. While these companies are interested in the U.S. market, they face barriers to domestic production. Their products need to be re-engineered for Southern tree species. New adhesives and coatings specific to these species are needed. Louisiana could seize a competitive advantage in this emerging market if they tied industry recruitment with programs to solve the technical challenges facing the transition to domestic production. Trade missions specific to this industry, led by the Governor of Louisiana, could provide a strong marketing signal to EU companies about Louisiana's competitiveness for investments in mass timber construction.

- Rare earth minerals processing is an emerging opportunity for Louisiana. The IEA estimated in 2021 "that mineral demand for EVs and battery storage could grow 30 times by 2040" (Wall Street Journal July 1, 2023). The market for rare earth is expected to grow from $5.6 billion in 2023 to $14.6 billion in 2033 (www.environmentalleader.com). This growth is driven by the transition to EVs in transportation and to the proliferation of renewable sources of electricity. Rare earths are also embedded in electronic devices such as computers and smartphones. Louisiana has captured a significant volume of the announced rare earth projects in the U.S. during the last two years. Louisiana's locational advantages include deep-water channels to accommodate solid bulk transportation of raw materials, barge transportation for inland transportation of solid bulk materials, low costs of energy for mineral processing, and proximity to EV plants under construction in the southeast U.S. LABIC should work with other divisions of LED to formulate a formal strategy for the development of rare earth processing in Louisiana. The strategy should look at actions that Louisiana could implement to support R&D innovation in the industry as well as the value-added opportunities beyond mineral processing (example: neodymium to magnets to electric motors).

New Energy Industries (NEI)

- Hydrogen and carbon capture and storage are emerging industries generated by the drive to reduce carbon emissions in chemical processing. A presentation by the Center for Houston's Future at the American Hydrogen Forum in March 2023 provided a forecast of future U.S. hydrogen production through 2033. This forecast indicates that 70% of hydrogen production in the U.S. will be used as industrial fuels or exported from the Gulf Coast in the form of ammonia. Deepwater terminal locations are going to be critical to the site location decisions for hydrogen hubs. LED already has an existing initiative to work with hydrogen and carbon capture and storage (CCS) companies. The production side of the industry is already actively promoted by LED. Our recommendation for LABIC would be to identify niche opportunities for Louisiana in the research and development pipeline for the industry and to position industrial fabricators in Louisiana to construct the infrastructure and processing equipment that the

hydrogen and carbon capture industries will require. A niche strategy is needed because of the significant lead that the Houston region has in this industry. The Houston metro has a labor force exceeding the labor force in the entire state of Louisiana. Companies like S&P Global, that have developed significant market data and research in this industry, could identify niche opportunities in Louisiana.

- Offshore wind production became a rapid growth industry with the passage of the Infrastructure Investment and Jobs Act in 2022. DOE's goal for offshore wind energy is to increase the current capacity of 1 gigawatt to 30 gigawatts by 2035. Louisiana and Texas are Gulf states with a high capacity for wind energy development. Wind energy is closely tied to global trade since much of the equipment used to produce wind power is imported as project cargo or in containers. Offshore wind farms also require the fabrication of offshore structures for housing wind generators. These structures have similar engineering and fabrication requirements as offshore oil platforms, which are a strong specialization within the Louisiana economy. The opportunity in Louisiana offered by offshore wind generation is both a trade and industrial fabrication opportunity. LABIC's strategy for wind generation should inform and educate Louisiana fabricators on the industry's needs for industrial fabrication. LED's Business Retention and Expansion Group could work with LABIC to offer workshops and web tools to prepare fabrication companies in Louisiana to respond to tenders for wind power equipment. LABIC could also add major wind energy trade shows and events to its calendar of annual marketing activities.

Other Targets

- The maritime cluster in Louisiana employed 24,000 citizens directly and indirectly in 2022. Employment in this cluster dropped by 4,000 direct jobs between 2012-2022 due to the dramatic drop in liquid bulk imports. Global and maritime services remain one of the principal economic drivers in Louisiana. The growth in maritime employment worldwide, however, is in services other than cargo handling. Maritime communities such as Bergen, Singapore and London have adopted formal strategies to stimulate growth in the service portion of their maritime clusters. Industries such as ship finance, admiralty law, ship brokerage and insurance offer better growth opportunities than those in cargo handling. Louisiana already has a core of companies in these services. Taimerica recommends that LABIC investigate the further development of the secondary maritime services listed above plus inland services in the maritime logistics chain. The maritime cluster strategies completed in Singapore and London provide templates for the investigation. Research demonstrates that this initiative should be a "bottoms up" strategy (driven by maritime companies) rather than a "town down" strategy (government driven).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ADVOCACY GOALS

Goal C: LABIC will inform political and economic development actors of the critical importance of enhanced and stable maritime and infrastructure funding, improved quality of life, and stable and consistent regulatory and business climate on FDI and global trade development in Louisiana.

Background & Discussion

Political and economic development leaders in Louisiana must support the four advocacy goals identified by members of LABIC in June 2023, namely:

Goal No. 1: Louisiana public ports have consistent funding that fully supports maritime development opportunities and port transportation connectivity.

Goal No. 2: Louisiana has robust and stable funding for the infrastructure investments needed to support trade and FDI.

Goal No. 3: Louisiana offers a quality of life that is comparable to or superior to those in leading maritime states.

Goal No. 5: Louisiana has a consistent and predictable regulatory environment and business climate.

Economic development leaders and industrial trade associations in Louisiana universally recognize the importance of Goals 3 and 5. LABIC needs a supporting rather than leading role in attaining these two advocacy goals.

The attainment of Advocacy Goals 1 and 2 requires a higher level of engagement by LABIC. LABIC needs to quantify and communicate state infrastructure and maritime development needs to the Louisiana legislature and local and state political leaders. While the share of the state budget spent on infrastructure has dropped significantly in the last two decades, the level of investment needed to compete for FDI and global trade has surged.

Additional background and discussion to inform the advocacy goals is reproduced in Appendix One of this report.

Primary Actors

The legislature and governor's office are the primary actors for achieving Advocacy Goals 1 and 2. Industrial trade associations and local government officials are the primary actors for achieving Advocacy Goals 3 and 5.

Actions by LABIC

The following actions are proposed to help LABIC achieve its advocacy goals.

1. LABIC will formally share its vision for FDI and trade development with leaders in the Louisiana legislature, the Governor's office, local and state-level political and business leaders.

2. LABIC will communicate the defined funding gap for maritime and infrastructure investment to the governor's office.

3. LABIC will initiate an investigation of statewide infrastructure needs for development. Water and sewer capacity are primarily provided by local jurisdictions, either municipal or parish-level owner/operators. Because of the fragmented ownership of these assets, state level information on funding needs is not available. Moreover, local owners lack the data to forecast or design increases in capacities needed to accommodate new industrial customers. LED could in fact provide hypothetical projects to these systems in its defined target industries to help them quantify the cost of meeting the increased loads. Since these local systems lack the financial incentives, LED could also provide financial resources to quantify expansions in water and sewer capacity.

4. LABIC will communicate the surface transportation connections needed for FDI and trade development to LDOTD and private railroads. A detailed study is required to determine the funding sources and needs for interconnections. In other states, such as Florida, the state transportation budget allocates funds specific to planning and building the surface transportation interconnections needed by maritime projects.

5. LABIC will quantify the industrial site development requirements in Louisiana. Industrial sites are provided principally by local EDOs and private developers. While private developers make good returns on investment in large industrial real estate markets, such as Dallas, Houston, Atlanta, Cincinnati, and Charlotte, it is difficult for a private owner to realize a market rate of return in a small market where transactions are infrequent, sporadic, and small in size. In such cases, PPPs are a tool for developing sites that meet the market need.

6. LABIC will articulate the connection between improved Quality of Life and success in FDI and international trade to the Secretary of Economic Development and other secretaries in the governor's cabinet.

7. LABIC will communicate to LED the need to expand the number of communities that can enroll in the programs of the Community Competitiveness Division.

8. LABIC members will convey the importance of quality of life to communities in their regions.

9. LABIC will investigate the specific Louisiana business climate for FDI investors and international traders and articulate needed changes to organizations advocating for enhancements to the state business climate, namely LABI, LIDEA, and the coalition of regional economic development organizations. This action likely will engage a consultant to compare the current tax and legal framework in Louisiana against those in states with strong FDI investment levels.

10. LABIC will investigate the Louisiana regulatory climate for FDI investors and articulate needed changes to statewide organizations that regularly monitor Louisiana's business climate and regulatory environment. This action likely will facilitate the need to engage a consultant to compare the current regulatory framework in Louisiana against those in states with strong FDI investment levels.

11. LABIC will raise the level of awareness of the need for an improved business and regulatory climate in LA by sharing the results of these studies with organizations such as LABI, LIDEA and regional EDOs that regularly monitor the state's business climate and regulatory climate.

APPENDIX

SUPPORT AND BACKGROUND MATERIALS ON LABIC ADVOCACY GOALS

Goal No. 1: Louisiana public ports have consistent funding that fully supports maritime development opportunities and port transportation connectivity.

Background & Discussion

It is critical that LABIC focus on maritime development in a holistic manner. The scope of maritime development should not be limited to public terminals. It should encompass public, private, and public/private facilities. Maritime projects also should include transportation connectivity and inland facilities for logistics support.

The attainment of Goal No. 1 requires a renewed political consensus in Louisiana about the importance of maritime commerce to the economic development of the state. State leaders must understand that the capital requirements for ports have jumped dramatically during the last three decades because of the increased size and draft of ocean vessels (see graphic on page 36). Larger vessels precipitate the need for larger docks, marshaling yards and deeper channels, which all require more capital investment. Moreover, the land and infrastructure needed for transportation connectivity in the logistics chain have also increased over time. Speed to customers in the logistics chain in fact accelerates capital requirements inland of the port terminal.

The development of the Louisiana International Terminal project in Violet clearly illustrates how capital needs of maritime terminals have mushroomed in the last 30 years. The Violet container facility is needed to service the latest generation of container ships, which cannot transit the Crescent City Connection due to height restrictions. But the Violet project has more elements than a larger dock and bigger container cranes. The project requires a much larger inland yard for storing those containers moved on or off the container ship; a new intermodal yard for loading and unloading containers to trucks and rail cars; and inland industrial sites that are prepared to meet the needs of import distribution centers operated by major retail chains, which are the project element that draw the container lines to the port.

The $1.8 billion LIT project is merely one example of the growing capital required to maintain Louisiana's position in the maritime market. Additional facilities, intermodal connections, and inland sites are required for capitalizing on the shifts in markets underway in the global economy.

One of the strategies used throughout the world to increase capital spending for ports is to grant concessions for private operation of public port terminals. The private interests in these public-private partnerships (PPP's) typically bring the needed capital to the partnership. The data suggests this strategy works for raising project capital.The World Bank database of infrastructure projects lists 495 PPPs in the port sector totaling $96 billion of investment between 1990-2022. About two-thirds of these are greenfield projects designed to increase efficiency or volume, while the other third are concessions to operate existing facilities.

A tool that is used to allocate public port financing in other states is the requirement that the state investment be matched by the local port authority. This is a characteristic of the port projects developed by the FSTED (Florida Seaport Transportation and Economic Development Council). The concept reinforces the incentives for project performance to the local ports which have to own and operate the assets. Transferring the risks for project performance to the ultimate owner is a strong mechanism for prioritizing the project tendered by the local owners for state financing.

The attainment of Goal No. 1 is hampered by a lack of data that quantifies the statewide need for enhanced maritime development. he FSTED in Florida and the Port Authority Advisory Committee (PAAC) in Texas provide templates for quantifying maritime needs on a state level.

Statewide prioritization of projects must begin with strategic comprehensive plans for individual ports that quantify capital needs. he port level comprehensive plans need to coordinate intermodal connectivity with transportation plans developed by MPCs (Metropolitan Planning Commissions) and Louisiana DOTD.

Federal funding for ports through the Maritime Administration was increased significantly with the passage of the Infrastructure Act in 2022. Projects that have been prioritized for state funding (Goal No. 4) are more likely to receive federal funds than projects that represent local priorities.

Primary Actors

The attainment of Goal No. 1 will require statutory changes. The Governor's office must drive these statutory changes, but the legislature is the ultimate actor for attaining this goal.

Source: International Ship Engineering Service Association: https://www.isesassociation.com/

Dimensions of Vessels Over Time

Year	Length in m (ft)	Width in m (ft)	Draft in m (ft)
1996	300 (987)	40 (132)	13 (43)
1996-2003	340 (1119)	43 (141)	14.5 (48)
2005-06	397 (1306)	56 (184)	15.5 (51)
2019	400 (1316)	61 (200)	16 (53)

Source: Jean-Paul Rodrigue (2020) The Geography of Transport Systems

Goal No. 2: Louisiana has robust and stable funding for the infrastructure investments needed to support trade and FDI within the following realms:

a. Public water and sewer capacity.

b. Highway and intermodal connectivity.

c. Prepared industrial and warehouse sites.

d. Port terminals and interconnections with other transportation modes (See Goal No. 4).

Background & Discussion

The relative budget in Louisiana for capital outlays and for infrastructure has dropped dramatically over the last 20 years. According to the Census Bureau's Annual Survey of Governments, capital outlays fell from 8% of state expenditures in 1998 to 6% in 2018 (the latest available report). Highway spending dropped even more, from 7% of state expenditures in 1998 to 4% in 2018. Yet total state government expenditures in Louisiana jumped by 135 percent during the period, nearly three times the rate of inflation as measured by the GDP deflator. What then explains the dramatic increase in state spending? Two items:

- Spending on insurance jumped from 10% to 14% of the state budget.
- Public welfare program spending increased from 20% to 35% of the state budget. The expenditure categories in public welfare include state supplements to SSI, vendor payments for medical care under Medicaid and SSI, and public support of government-owned nursing homes.

Without additional sources of state level funding or a reprioritization of long-term capital spending in the state budget, Louisiana will continue to face infrastructure barriers to its economic development. Louisiana is not unique among the United States. Other states are witnessing the same budget squeeze. They have developed new financing sources for increasing infrastructure investment. We offer some examples from our investigation.

The robust growth in economic development in Texas has been financed principally by local sales taxes earmarked for economic development. Voters in over 700 communities in Texas have voted to levy sales taxes for economic development. This program generates more than $1 billion per year of capital that is restricted to investments in development infrastructure and sites.

Texas and Florida have also augmented their capital resources for transportation by authorizing toll roads and public/private partnerships for transportation access and connectivity. Florida now has 734 miles of toll roads, bridges, and causeways. Texas has 36 tolls roads totaling over 550 miles as of 2023. Public/ private transportation ventures are a tool for increasing infrastructure funding in Louisiana that has the advantage that financing is only viable in the presence of market demand for mobility. Public/private ventures, therefore, are another way to prioritize transportation projects. Money goes to the projects with the most demand.

Other states are earmarking state budgets for site acquisition and development. Governor Glen Youngkin of Virginia proposed $500 million of state funding for site development in the state's 2022-24 amended budget to increase funding for Virginia's Business Ready Site program. Virginia is not alone. Equivalent programs for industrial site development are funded in North Carolina, South Carolina, Tennessee, Georgia, Mississippi, Kentucky, Indiana, and Ohio. The inventory of developed industrial sites throughout the United States has dwindled since the 1990s, except in distribution hubs like DFW and Atlanta, because the demand for developed properties dwindled with the offshoring of U.S. manufacturing. The trend has reversed in the last five years and will likely continue because the flood of FDI into China has reversed.

Primary Actors

Since the attainment of Goal No. 2 is not within its statutory mandate, LABIC must help others attain the goal. The actors in each of these infrastructure components differ. LED, for instance, has an existing Site Certification and Development Program, outside of the International Division.

Goal No. 3: Louisiana offers a quality of life that is comparable to or superior to those in leading maritime states.

Background & Discussion

The attainment of Goal No. 3 is not within LABICs statutory mandate. LABIC will have to support the actions of other state-level and local actors in attaining it.

Primary and Secondary Actors

Quality of Life varies dramatically within states because many components of a strong quality of life, such as public safety and strong schools, are built at the community level. The primary actors for attaining this goal are local governments, local law enforcement, local schools, and local EDOs.

The resources for achieving a strong quality of life begin at the local level, but statewide programs and budgets can become barriers to improvements in quality of life. The governor, executive departments of state government, and state legislature all play a role in enhancing quality of life in Louisiana communities.

Most of the actions to enhance the quality of life in Louisiana communities are already receiving attention by the Community Competitiveness division of LED. The following actions are a joint venture between LABIC and LED outside of the International Division.

Goal No. 5: Louisiana has a consistent and predictable regulatory environment and business climate.

Background & Discussion

LED and its regional economic development partners rather than LABIC are the primary vehicles for communicating needed statutory and regulatory changes to executive departments and the legislature.

Primary Actors

The governor, executive departments, and legislature are the primary actors in delivering a stable and predictable regulatory environment and business climate. Statewide associations such as LABI, LIDEA and the State Chambers Association are allies to support an enhanced business climate and regulatory environment.

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Table 1: Economic Concentrations and Specialties in Louisiana

Louisiana Industrial Clusters in 2022

Description	*2012 Jobs*	*2022 Jobs*	*2012-2022 Change*	*2022 Business Locations*	*Location Quotient*	*Percent of Cluster Emp*	*Jobs Multiplier*	*Total Jobs with Spinoff*	*Avg Earnings*	*Global Trade*	*FDI*
Wood Products	10,126	10,275	150	398	5.2	5%	2.80	28,771	$90,387	X	X
Heavy/Industrial Construction	39,034	39,791	756	487	6.3	20%	1.95	77,592	$86,245	?	
Energy Production	51,916	27,949	(23,966)	1,506	6.8	14%	2.70	75,463	$120,507	X	X
Process Industries	33,710	35,739	2,028	630	9.6	18%	8.34	298,059	$183,262	X	X
Food Products	7,971	7,946	(24)	161	12.9	4%	1.93	15,336	$56,284	X	?
Oil & Gas Equipment	10,631	6,557	(4,074)	208	8.5	3%	2.08	13,640	$95,205	X	?
Shipbuilding	11,149	5,089	(6,061)	112	3.3	3%	1.98	10,076	$83,711	X	?
Global & Maritime Trade Services	27,451	23,723	(3,728)	736	17.5	12%	3.10	73,542	$106,363	X	X
Gambling Industries	10,965	5,987	(4,978)	250	4.8	3%	2.28	13,651	$43,669		
Other Industrial Specialties	37,188	36,804	(384)	2,154	1.2	18%	1.16	42,693	$81,601		
Total Industrial Clusters	240,142	199,862	(40,280)	6,642	7.5	100%	2.7	532,570	$99,508		
Total Louisiana	2,145,621	2,114,310	(31,311)	146,904	1.0	9%	1	648,824	$64,890		

Figure 1: Maritime Cluster Definition

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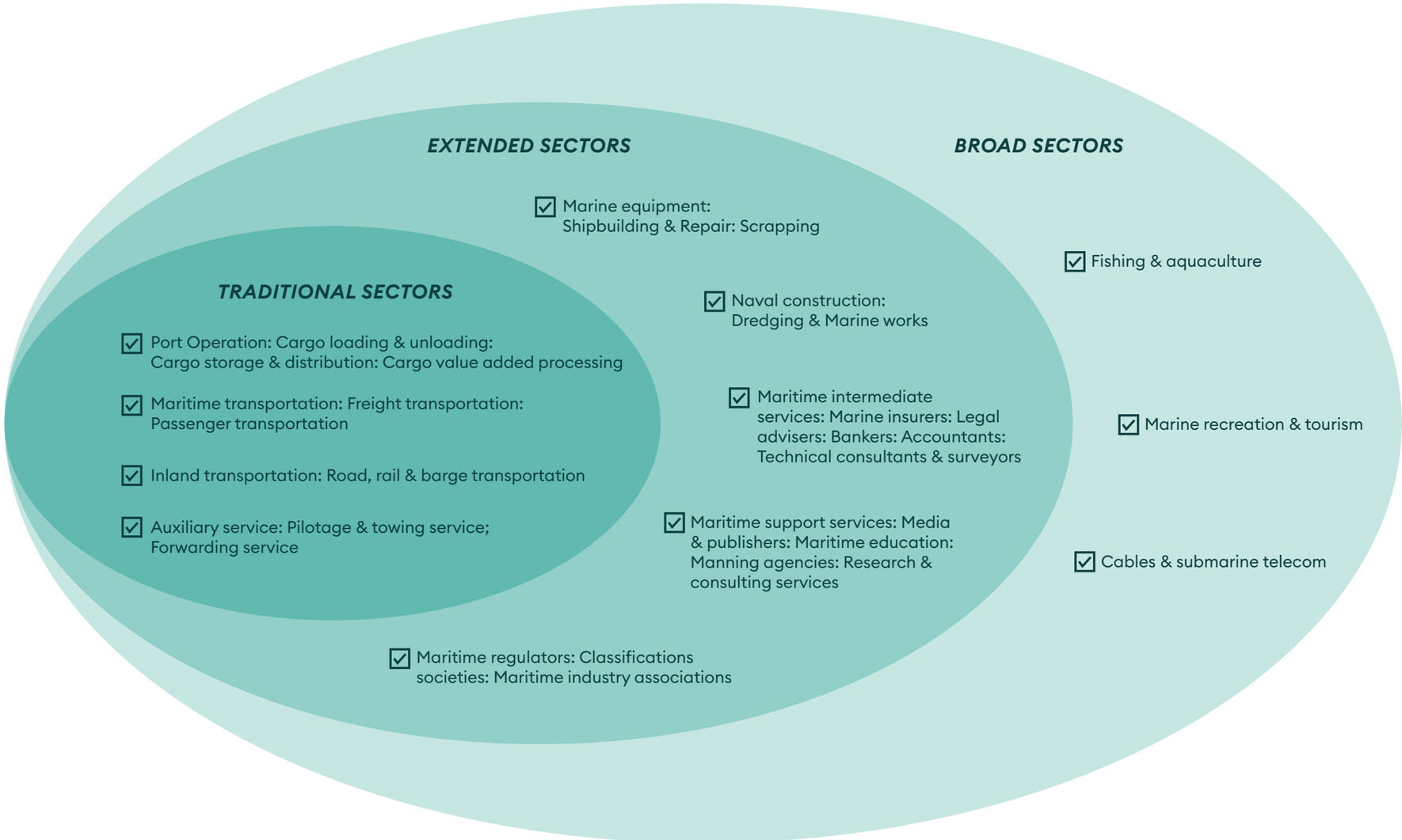

COMPREHENSIVE DEVELOPMENT PLAN

LOUISIANA BOARD OF INTERNATIONAL COMMERCE