

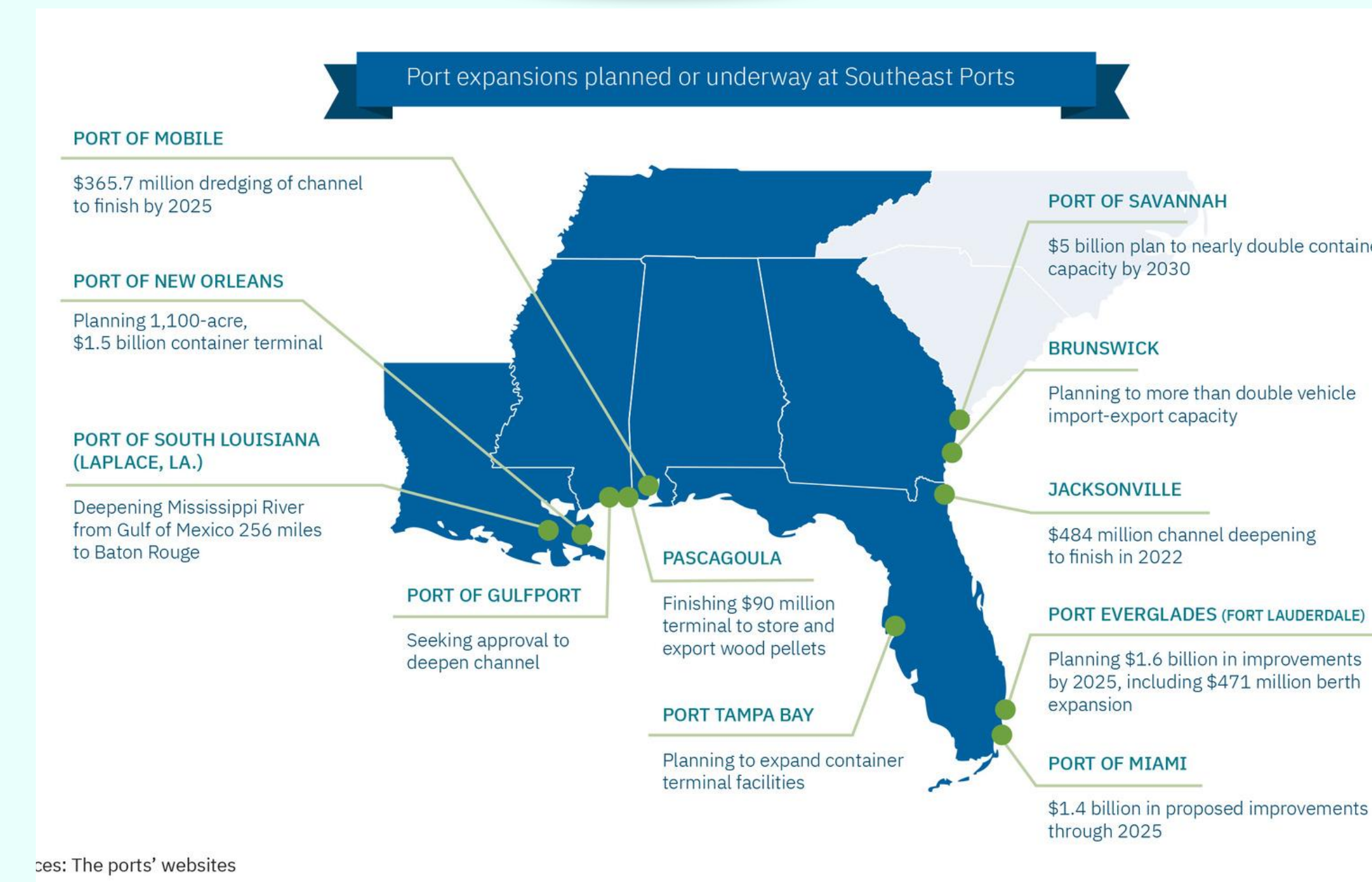
ABSTRACT

The U.S. auto industry is experiencing a strategic shift, with companies such as Honda signaling a move away from foreign production models toward domestic manufacturing of electric vehicles (EVs). This study evaluates the feasibility of relocating EV production to the United States through a three-pillar framework. First, it examines whether U.S. ports and supporting landside infrastructure can accommodate increased automotive volume. Second, it assesses the capacity of shipping carriers to transition effectively to domestic distribution. Third, it analyzes workforce readiness and scalability to meet heightened production demands. Together, these factors provide a coordinated approach to understanding the viability of domestic EV production and its implications for U.S. economic and industrial policy.

METHODOLOGY

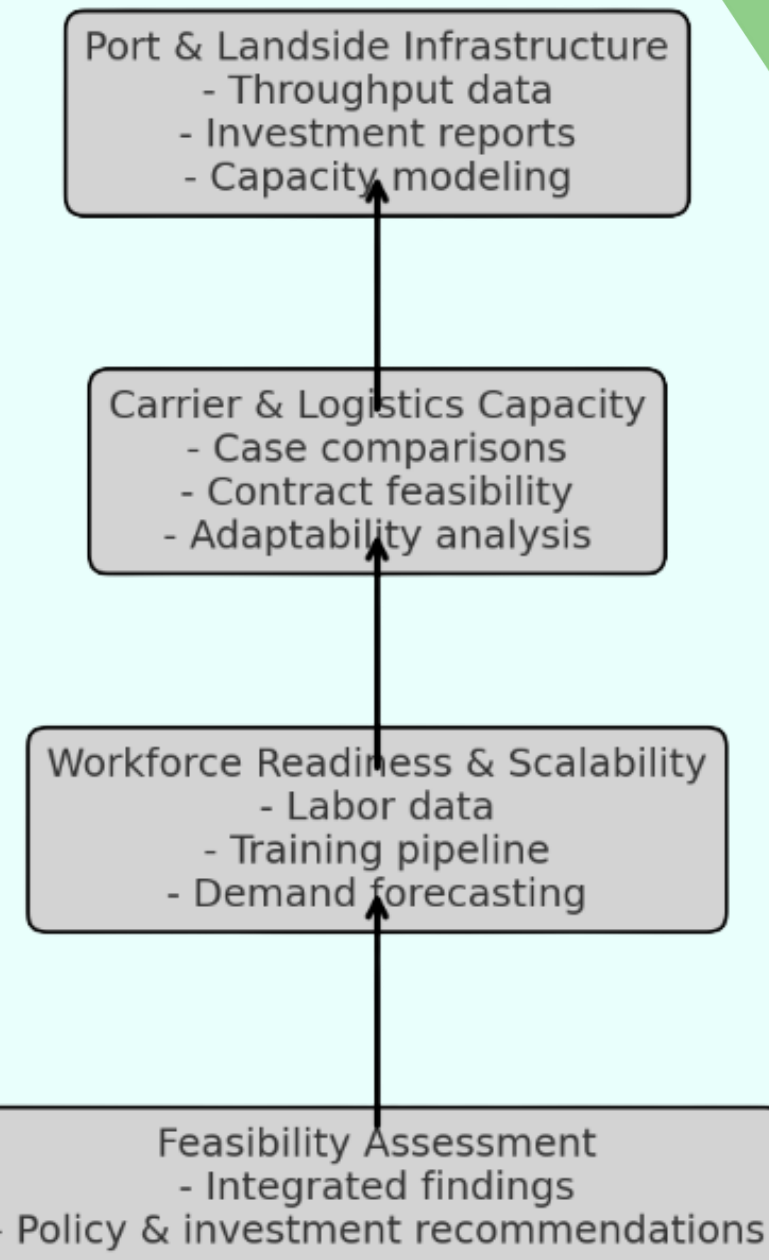
This study uses a mixed-methods feasibility analysis to assess relocating EV production to the U.S., focusing on three pillars: **Port & Infrastructure:** Analyzes U.S. port capacity and upgrade needs using throughput statistics, federal reports, and capacity modeling. **Logistics Capacity:** Reviews domestic vs. international shipping practices through case studies, carrier data, and contract analysis. **Workforce Readiness:** Uses BLS data and training pipeline studies to forecast labor demand, identify skill gaps, and evaluate scalability. **By combining quantitative analysis, case studies, and scenario modeling, the study offers a comprehensive view of the practicality of domestic EV production.**

PORT-RELATED EXPENDITURES

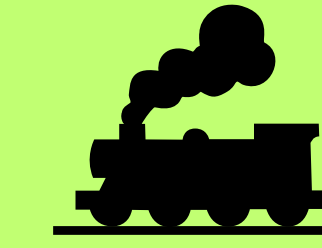


PATH FORWARD

- Port & Landside Infrastructure**
The top U.S. auto-handling ports (Baltimore, Brunswick GA, Jacksonville FL, Los Angeles/Long Beach) handled ~2.3 million vehicles in 2023.
- Carrier & Logistics Capacity**
Current carriers are optimized for international auto shipping. A domestic model would shift emphasis to rail + trucking for distribution.
- Workforce Readiness & Scalability**
The EV transition requires not just auto assembly but also battery production expertise.



U.S. needs an estimated 80,000 additional EV battery workers by 2030 (U.S. Dept. of Energy, 2023).



U.S. railroads carried over 1.2 million automotive units in 2022 (Association of American Railroads)



Introduction

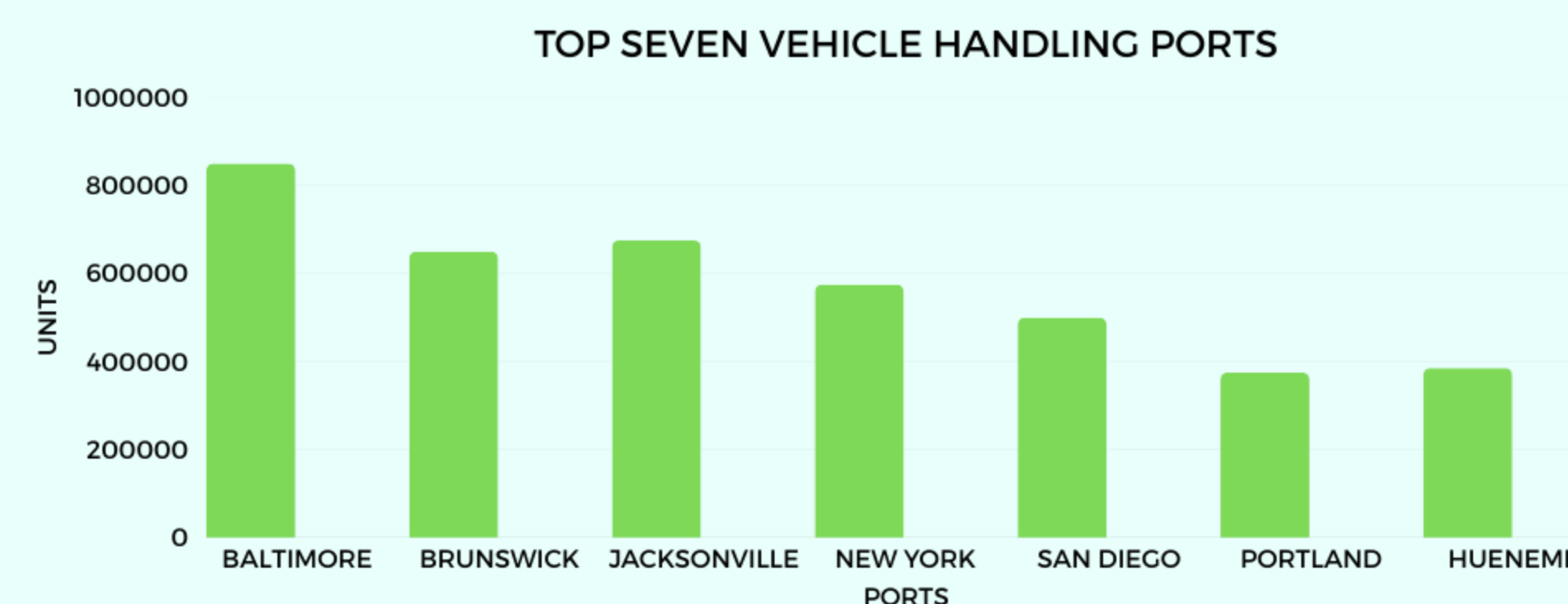
In recent years, demand for electric vehicles (EVs) has grown rapidly, driven by global efforts toward sustainable transportation and greater consumer awareness of environmental issues. Stricter emissions regulations and government incentives have further accelerated adoption, pushing automotive manufacturers to scale up production. At the same time, shifting economic conditions and geopolitical factors have forced companies to rethink their production strategies. In particular, tariffs and trade policies are reshaping supply chain dynamics. By relocating production facilities to the United States, manufacturers can reduce tariff-related costs, improve supply chain efficiency, and better serve the growing domestic EV market—positioning themselves competitively in the evolving automotive landscape.

CHALLENGES

- Risks:** Port congestion, rail strikes, battery safety concerns, labor shortages.
- Impact Example:** 2021–22 semiconductor shortage reduced U.S. auto production by 2.2 million vehicles (Center for Automotive Research).
- Mitigation:** Strategic reserves of key materials, stronger labor pipeline, public-private partnerships.

CONCLUSION

Rising EV demand, stricter policies, and tariff pressures make U.S. production an attractive option. This study shows that port capacity, logistics, and workforce readiness are key factors, positioning domestic production as both practical and strategic for the growing EV market.



Domestic Alternatives for EV Production: A Feasibility Study for Moving Automotive Production to the United States

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