

Summary: “Terminal Automation in Southern California: Implications for Growth, Jobs, and the Future Competitiveness of West Coast Ports”

Automation will enable West Coast ports to remain competitive, facilitate growth in both cargo and jobs, and reduce greenhouse gas-emissions, according to a new study by Dr. Michael Nacht, Professor of Public Policy at the University of California, Berkeley, and former Assistant Secretary of Defense, and Larry Henry, Founder of ContainerTrac, Inc.

The study, which analyzes new public and previously unpublished data, was commissioned by the Pacific Maritime Association during the Covid-19 pandemic, when a surge of Asian imports exposed severe shortcomings in the U.S. supply chain. The ports of Los Angeles and Long Beach, which process 40% of containerized imports from Asia, bore the brunt of this influx. They handled record levels of cargo, but backlogs – at times more than 100 ships anchored offshore awaiting berths – underscored the need for the country’s largest port complex to enhance terminal efficiency and productivity to accommodate growing container volumes and stanch the diversion of cargo to East Coast and Gulf Coast ports.

Automation at two of the 13 container terminals in Los Angeles and Long Beach is delivering those gains in a win-win-win for commerce, International Longshore and Warehouse Union (ILWU) workers, and the environment, the study shows. Key findings include:

- With physical growth limited at the twin ports, automation is enabling terminals to expand cargo throughput and capacity on their existing footprints through densification:
 - Since 2019, automated terminals have processed containers faster – at times more than twice as fast – as conventional terminals.
 - Throughput of Twenty-Foot Equivalent Units per acre is 44% higher than in non-automated terminals, thanks to autonomous vehicles and cranes that stack containers higher, closer together, and more efficiently for transferring to trains and trucks.
- Contrary to fears of job losses, the higher output due to automation at the San Pedro Bay ports has increased, not reduced, ILWU jobs and work opportunities, including training and upskilling. Between 2015, the last year before the transition to automated operations, and 2021:
 - Paid ILWU hours at the two automated terminals rose 31.5%, more than twice the 13.9% growth in paid hours at the non-automated terminals.
 - The registered ILWU workforce in Los Angeles and Long Beach grew 11.2%, compared to 8.4% for the other 27 West Coast ports.
- Automation brings measurable environmental and health benefits for workers and residents of neighboring communities. Autonomous electric and hybrid-electric vehicles reduce emissions and make terminals more efficient, cutting turnaround times for diesel-powered trucks.

Automation is a global trend and the hallmark of the world’s most advanced ports. In their study, Nacht and Henry make the case that automation is generating efficiency gains that are vital to cargo growth, job growth and the future competitiveness of the ports of Los Angeles and Long Beach, the anchors of 29 West Coast ports that support 12.5 million jobs nationwide and generate nearly 9% of the country’s Gross Domestic Product.