

## Mitigating Urban Freight Through Effective Management of Truck Chassis

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### Project Objective

Intermodal chassis are an integral part of the global supply chain. They facilitate the movement of goods, allowing truckers to move containers between key points along the supply chain, including ports and the beneficial cargo owner, the entity taking legal possession of the cargo. This report evaluates the development of a pooled chassis strategy for the Southern California goods movement sector, focusing on the ports of Los Angeles and Long Beach, and its implications for urban and regional freight mobility. The key stakeholders—port operators, drayage trucking companies, marine terminal operators, rail companies and independent chassis pool operators—are interviewed to better understand the incentives for them to participate in a shared equipment management strategy.

### Problem Statement

In the United States, ocean carriers traditionally owned intermodal chassis and provided them to truckers for their use in transferring containers between the ports, distribution centers, and intermodal facilities. Under this business model, truckers are not charged a fee for chassis usage but they are required to reposition the chassis back to the terminal. As a result of the 2008-2009 financial crisis and its negative impact on trade volumes, many chassis were being stored on marine terminals at a significant cost to ocean carriers, and taking up already scarce space on the terminal. This created problems for large port complexes, specifically in the San Pedro Bay in Southern California, which has 13 different container terminals spread across two ports, covering more than 10,000 acres. Starting in 2012, as part of a divestiture process, ocean carriers sold approximately 100,000 chassis in Southern California to various equipment-leasing companies. At the same time, ocean carriers were investing in larger, more efficient cost-saving megaships that carried more containers and created peak period demands for chassis and other landside infrastructure as the cargo was being discharged. The impact of these vessels was felt the most at major trade gateways, like the Ports of Los Angeles and Long Beach, a situation that was exacerbated by cargo increases that came with economic recovery. More chassis were needed than were available and truck drivers found themselves repositioning chassis between terminals.

In response to all of the issues the ports were facing, in September 2014 the Port of Long Beach created a Chassis Relief Team. The relief team's short-term solution was to track and report chassis equipment. The medium term solution was to develop an asset-sharing system of

chassis from major leasing companies. The long-term goal was to implement a neutral or gray chassis “pool of pools” which would allow for an interoperable chassis environment eliminating split chassis moves and permitting truckers to use the equipment for multiple trips without repositioning first.

## Research Methodology

During a twelve-month period, October 2014 through October 2015, the research team monitored the developments surrounding changing chassis management through local press and trade publications, and created a series of questionnaires for stakeholders engaged in chassis operations. All questionnaires focused on the impact of the pool of pools on operations, allowing the researchers to analyze the new business model and create before-and-after process flows.

After conducting 17 interviews with stakeholders, the researchers were able to identify key themes. A major theme circulating throughout the interviews concerns the impact of labor agreements on chassis management. If chassis are owned and maintained by third parties but used at the ports, are they subject to contracts negotiated between longshore workers and marine terminal operators? If they are not subject to labor-managed inspections at the outgate, then there are potentially significant efficiency benefits for truckers as a result of improved turn times.



Figure 1: Chassis stored at container terminal

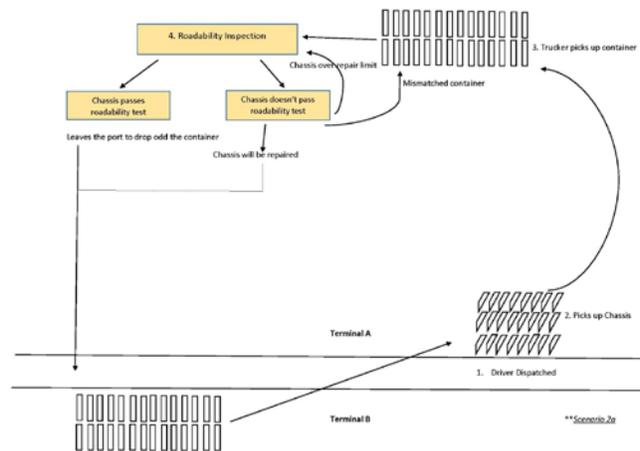


Figure 2: Typical chassis process flow

## Results

For context, figure 1 shows a typical stacked chassis storage area on a container terminal. The scenario presented in figure 2 shows the process flow of a chassis on a typical day. This process takes place when the correct chassis size is available for the driver when he/she arrives at the terminal. The process may change depending on the kind of transaction (import, export, empty container e.g.); therefore different process flows are included in the report. One of the major results of the analysis is that most stakeholders see the ‘pool of pools’ model as a temporary solution to chassis management. Even though this model is more efficient than the carrier-supplied model, it has not eliminated the repositioning of equipment between terminals to ensure equipment availability. Additionally, chassis inspections have created an uncertain and contentious environment from a labor perspective.