

# **Value-Stream Mapping and Simulation Modeling of the Street-to-Fleet Supply Chain: The Builder Community**

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## **Executive Summary**

The *Value Stream Mapping (VSM)* is an approach focusing on the key value-added supply chain network processes. Implementation of the VSM approach within the traditional supply chain networks has provided a host of improvement opportunities for a variety of industries, resulting in significant cost and cycle time reduction and greater satisfaction of the end customers. The first objective of this pilot research project was to study the potential application of the VSM approach for visualization, assessment, and selection of processes for improving the Builder (BU) Community “Street-to-Fleet” supply chain. The second objective of the current pilot study was to develop a simulation model of the street-to-fleet supply chain and conduct a few key “what-if” or “policy-impact” analyses. While the VSM exercise identified areas of improvements, the simulation modeling exercise and its follow-up “what-if” analyses allowed the research team to study the impact of some important “what-if” questions on the supply chain. Overall, this study shows the inherent potentials of the VSM approach and simulation modeling in visualization, assessment, and improvement of the human resource management environment within the BU Community and the entire Navy. Also, this report presents a set of conclusions with implications to the entire range of skill communities and offers a unique approach to and a research initiative for the manpower and personnel supply chain.

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