**Many industrial projects involve the use of prefabricated modules built offsite, and installation on-site using mobile cranes. Due to their costly operation and safety concerns, utilization of such heavy lift mobile cranes requires a precise heavy lift planning. Traditional heavy lift path planning methods on congested industrial job sites are ineffective, time-consuming and non-precise in many cases, whereas computer-based simulation models and visualization can be a substantial improving tool. By providing a VR environment in which the crane crew can experience lifting process in an immerse virtual environment. Providing such VR model not only facilitates planning for lifts, but also it provides a training environment to enhance safe climate prior to the actual lift. The developed VR model is implemented successfully on an actual construction site of a petrochemical plant on a modular basis in which heavy lift mobile cranes are employed.**