**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 lift planning. Traditional lift planning methods on congested industrial job sites are ineffective, time-consuming and non-precise in many cases, whereas computer-based simulation can be a better tool. By providing a VR environment in which the crane crew can experience lifting process. Providing such VR simulation not only facilitates planning for lifts, but also 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.**