Project alliancing involves the collaboration of owners and non-owner participants (designer, contractors, and suppliers) to deliver projects, with all participants sharing the responsibility for project risks in achieving project objectives. But in real practice, it fails to create a true alliance environment since only part of the value chain (owner, designer, main contractor) is considered for integration. Consequently, sub-contractors are not within the alliance and alliance members are not interested in improvements in sub-contractors’ processes. Therefore this research identifies and recommends changes in the alliance process so that critical sub-contracting processes can be integrated into the main alliance project. To achieve this objective the research follows a comparative study approach. Information obtained from the review of literature is used to identify current subcontractor management practices and best practices for sub-contractor integration in alliances. Case study of an alliance project was used to identify certain failure factors in sub-contractor management practices in an alliance environment. From these findings, the study proposes a framework to improve sub-contractor management practices in alliance by using lean supply principles. It is concluded that sub-contractor management practices in real alliance lies between traditional supply and lean supply systems and integration of sub-contractor to the alliance will change the win-loss behaviour.