Dengue virus is one of the leading causes of morbidity and mortality in the tropics and subtropics. It is transmitted by the mosquitoes *Aedes aegypti* and *A. albopictus*. It is still uncontrolled globally with prevention and control depending largely on vector control and good case management. Dengue virus is however expanding rapidly globally with increased frequency and magnitude of outbreaks. As a result about half of the world population lives in dengue affected areas. The WHO estimates that there are 50-100 million dengue infections annually resulting in 500,000 severe dengue cases and around 25,000 dengue-associated deaths. Newer estimates put the number of new dengue infection to about 300 million annually. Based on these estimates, it can be argued that dengue is as important as malaria in terms of morbidity. Still there is no effective antiviral agent for dengue infection. This means developing an effective and affordable dengue vaccine is essential. This paper will discuss some of the latest innovation in dengue vaccine development and based on latest techniques employed in infectious diseases put forward a number of strategies that will help expand the development of dengue vaccine.