Enterprise Resource Planning (ERP) plays a key role in technology driven Business Process Reengineering (BPR) by ensuring smooth alignment with best business practices and dynamic market needs in current business setting. According to Gartner analyst firm, around 75 percent of ERP enabled BPR projects were failures in recent 10 years. However, ERP specialists regard agile approaches positively to mitigate common ERP implementation downsides. Although agile practices are widely used during designing, development and quality assurance process of ERP projects, they are rarely applied for the implementation process. However, only limited studies have been conducted on the synchronicity between the ERP implementations and agile approaches. The purpose of this research was, therefore, to explore a partway to develop a new agile ERP implementation approach. A questionnaire analysis was carried out in Sri Lankan ERP implementation companies. It was analyzed using statistical approaches to assess the coexistence between the ERP implementation success and agile approaches. A widely used performance metric in strategic management was used to assess the success level of ERP implementation projects. The analysis revealed that there is a significant positive correlation between agile approaches and ERP implementation success. At the same time incremental change, multiple project views, business value prioritization and change management act as key success factors for agile implementation of ERPs. The findings of the research would be an aid to the practitioners and academics in the respective field.

**Keywords:** ERP, Agile, Coexistence