## **Methodology**

The project will be developed using agile methodology. Agile can be regarded as a mindset or culture. Unlike traditional methodologies, agile methodology divides a project into different phases and uses an iterative and incremental approach to complete them along with constant customer collaboration and continuous improvements at every iteration. The sequence of project phases like analysis, design, development, testing, and deployment in an iterative way rather than a linear way is the main difference between agile and traditional software development methodology. Scrum framework is mostly used agile approach in software development and it will be used in this project also. In Scrum methodology, requirements are divided into user stories and all the user stories are given story points according to how difficult the user story might be. Easy user stories contain low story points whereas hard user stories contain high story points. Then they are categorized into epics, set high, medium, and low priority, and assigned to the product backlog in the storyboard. Then the higher priority user stories are brought into the sprint backlog in the sprint planning before starting a sprint. Low priority user stories can not be brought to the sprint backlog unless all the higher user stories are completed. A sprint last 2 to 4 weeks and it is mandatory to complete all the brought user stories during this time. From analysis to deployment, all phases are done in a sprint. However, the amount of user stories that are brought to the sprint backlog depends on the velocity of the developers. Velocity refers to the amount of work that can be completed in a sprint. In the end, the completed works are moved to the Done section in the storyboard to review them. In the other hand, if there is any task left to be completed or requires some modification then it will be completed or modified in the next sprint. Similarly, the user stories are again brought to the sprint backlog from the product backlog for the next sprint in the sprint planning. The sprint repeats until all the user stories are completed (Team, 2018) (Peek, 2021).

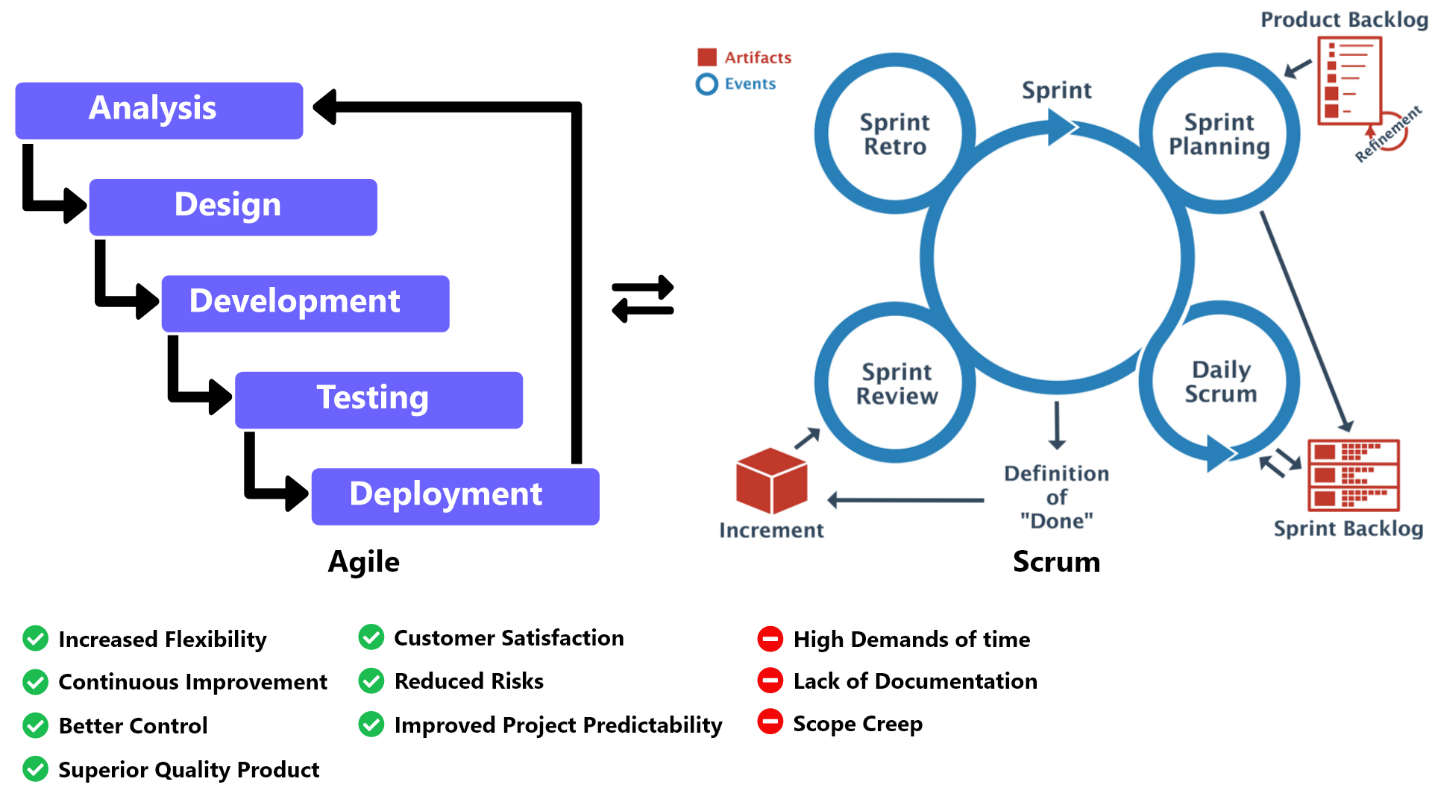


Figure 1: Agile with Scrum methodology

In traditional methodology, Limited customer involvement results in poor customer satisfaction, and documentation consumes more time rather than spending time on product delivery. Once the requirements are defined, then those cannot be changed or modified. This all results in a low-quality product (Team, 2018). This methodology is best for those projects whose requirements are rigid and well understood. On the other hand, Agile continuous delivery, continuous improvement, and continuous collaboration over every iteration increase flexibility and improve project predictability. It fulfills the main drawback of the traditional methodology by accepting changes and modifications at any time. In the same way, it also provides better control of the project due to which project risks are highly minimized. Customer collaboration increases customer satisfaction. Continuous improvement and customer satisfaction increase product quality at a high rate (Kissflow, 2021). The agile methodology also has some downsides like lack of documentation, continuous collaboration is difficult to maintain, and lack of processes easily sidetracks teams. The agile methodology does not match with a long-term process like building a house that has a fixed delivery (Wrike, 2022).

## **Tools**

The project will be designed and developed using Android Studio, Visual Studio Code, and MongoDB Compass. Help will be taken from Google Chrome/Firefox. MS Word, Adobe XD, and Team Gantt will be used for documentation.

## **Technology**

Flutter along with Dart programming language is the major technology that will be used in this project.