**Beet Seed**

| **No** | **Name of The Methodology** | **Pros** | **Cons** | **Appropriate Industry** | **Comments** |
| --- | --- | --- | --- | --- | --- |
| 1 | Waterfall | * Follows the stable structure * Final product is correctly defined | * It's really hard to make changes in the process * Testing is started later in the process | * Air space or Aeronautical projects * Defense projects * Life critical projects * Banking | Appropriate for life critical projects since the waterfall method follows a streamline process and specifications are well known in advance and stable. |
| 2 | V-Model | * Test activities start early in the process * Reduces the rework as bugs are identified early | * Actual S/W built in the implementation stage and hence no prototypes * Not flexible for changes | * Automotive industry * Embedded systems * Life critical projects | As the testing begins with early stages of development this method can be used for small and medium projects with clear fixed specifications. |
| 3 | Incremental Model | * Working S/W can be provided early * Easy work with changed requirements | * Requires better planning and design as it product is broken down to pieces * Changes to each pieces may require other changes in the S/W | * Websites * Web based applications | This model delivers a working product in a short period of time and the new technology and features are added on the way. |
| 4 | Agile | * Higher customer satisfaction with early working prototype * Requirements changes in later in the projects are accepted | * Lack of focus in the design and documentation in this process * Assessing effort required in some large projects is challenging | * IT * Banking * Entertainment * Mobile | As Agile methodology is able to deliver working products in minimum time and the increased collaboration with the client, it is also sensitive to the changes in requirements hence its widely used in many industries currently |

**Beet Sprout**

2)

1. Software development is the process where we build a working piece of software step by step. Earlier in computer science history they used this systematic flow of waterfall method to software development projects. Since projects are unique in several different ways, this methodology did not seem to always fit.

In the waterfall method it is very systematic and it does not cope well with the changes and the testing stage begins in the latter part of the process where it could lead to more critical failures. Further the requirements changes are not addressed and its complete isolation from the client which resulted in delayed feedback. Moreover the waterfall method is a linear model where it moves only forward and to move to the next cycle requires to exit the previous stage resulting in very disconnected development and excessively time consuming.

So to address these issues a group of software developers got together in 2001 and sought to overcome those challenges in a more flexible and adaptive approach to software develeopment. They believed the software development should be an incremental and iterative process with the collaboration of clients and several different teams in the project.

1. Agile was introduced to overcome the incompetences of traditional software development methods and to benefit both parties, clients and stakeholders in the process.

Traditional software development methodologies like waterfall method followed linear progressions which lacked opportunity for flexibility and adaptability. As we all know the technology industry is emerging and changing,hence this rigid sequential method could not be proceeded with.

In those times the involvement of the customer was merely a contract and had no interaction during the development process. This resulted in validation failures in most cases as the end product failed to deliver the expectation of the customers and ultimately ended up as project failures.

The process was so formal, where all the stakeholders of the project corresponded via an official documentation or a formal meeting. It was undoubtedly time consuming and the information was misinterpreted most of the time.

Getting feedback was not a major part of the development process back then.So whatever the feedback received was only at the end of the development cycle, which made that feedback ineffective.

To overcome these practical issues in the traditional development methodology, a group of well versed software engineers got together and created an Agile manifesto in 2001. They succeeded in introducing a more flexible dynamic adaptive development methodology to overcome these apparent concerns.

Agile encourages team collaboration face to face rather than processes or tools which makes it easier to clear the miscommunications and activate prompt feedback. It focuses on delivering working software rather than comprehensive documentation which can save a considerable amount of time. Customer interaction is one of the many things that agile promotes over a traditional customer contract which helps us to deliver the expected product of the customer with continuous feedback. Additionally Agile embraces the changes over a strict plan which makes it more appropriate selection in this emerging technological era.

It has successfully addressed those inabilities and most importantly it has proven to reach higher customer satisfaction, decreased product delivery delays and more collaboration in project stakeholders. As it has evolved in the period of time, we can see it was not just one fit process for every project but it can be combined with other methodologies to reach more tailored solutions.

**Mighty Beet**

2.

For the process of developing a mobile application for sharing cat photos I would choose “Agile”.

As a startup company we should be sensitive to the user experience as well as the market behaviors. Hence Agile gives us the opportunity to use close collaboration with the client and be more dynamic with the changes. As mobile technology is vastly evolving we need to be prepared to change the requirements in the middle of the process.

With the use of Agile processes we are able to deliver a working product within a short period of time which can be beneficial to a startup company to keep the assurance for the client for better understanding.

Moreover, as Agile promotes close collaboration with the team, It would be crucial to a startup company to keep steady communication among the team members as each one of them possesses different expertise and roles.

Therefore I would like to suggest Agile software development methodology for developing mobile applications.