Adaptive Software Development (ASD)

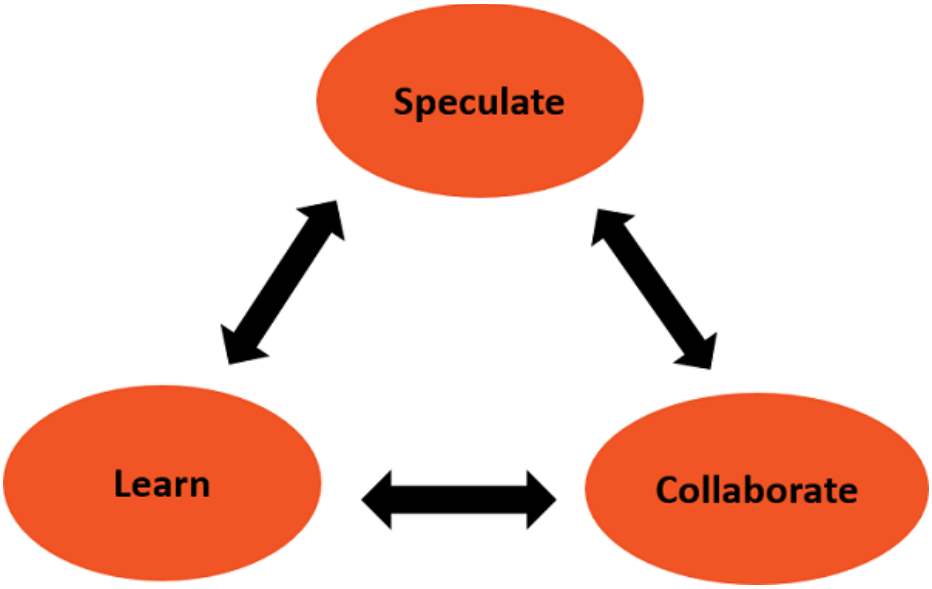
ASD is a development methodology that encourages continuous learning throughout the software development project. It believes that this is the only correct way to sail through software development's inherent complexity smoothly.

Three phases of adaptive life cycle

The adaptive life cycle is an evolution of the spiral life cycle that started during the mid-1980s. The major problem with the spiral life cycle was its reliance of predictability. Though RAD was less predictable and deterministic, the mindset of the practitioners of the spiral life cycle was still not changed.

The adaptive life cycle in Adaptive Software Development tries to address this issue of changing the mindset by way of reflection and naming the phases during this process exactly as per that reflection.

These phases of the adaptive life cycle that accept uncertainty and chaos as "normal" during the software development process are speculation, collaboration, learning.



Speculation

The word "speculation" describing this very first phase of the adaptive life cycle in itself reflects what Adaptive Software Development example is all about. Speculation phase carefully and intentionally removes the factor of planning that often brings with it lots of unnecessary baggage and tension.

This phase gives the teams full liberty to welcome and accept the outcomes without the fear of the unknown or uncertainty. It totally eliminates the toxic need to be right all the time, putting all the stakeholders at ease.

the speculation phase finds itself divided into two steps. These steps are roughly called the project initiation step and adaptive planning step. As the name suggests, the first step of initiation involves stuff that serves as the project's foundation. This includes project management information, mission statement and other essential tools and information.

Collaboration

It is in this phase that the actual development begins. This phase is about group emergence. It is about coming together of diverse experiences, knowledge, and skills. This forms a collaborative environment where diversity serves as the building block for creativity and innovation during the entire development cycle.

Learning

Adaptive software development is all about experimentation and exploration. It is natural, therefore, that it offers great learning opportunities too. Learning phase is precisely about that.

In this phase which happens after each and every iteration, an agile software development team comes together to analyze its level of knowledge, skills, and expertise. This is done through:

- Studying technical reviews
- Studying project retrospectives
- Facilitating user feedback through focus groups and other possible or available means.

Major characteristics of Adaptive Software Development:

- A specific mission drives it in spite of being open-ended
- It is a feature based
- It encourages frequent and small iterations
- It adopts timeboxing
- It is risk-driven
- It is tolerant of change
- It has components-based cycles.