**Birla Institute of Technology & Science, Pilani**

**Work Integrated Learning Programmes Division**

**Second Semester 2021-2022**

**Assignment**

**Weightage 15%**

**Course: SE ZG544 Agile Software Processes**

**Assignment Date: 19th April to 28th April 2024**

**Task Overview:**

In this assignment, you will apply your knowledge of Agile methodologies and practices to real-world scenarios. You are required to watch specific YouTube videos, read provided materials, and explore relevant web links to gather information. Based on your understanding, you will then answer a series of problem questions that challenge your experience and knowledge of Agile practices.

This is a group assignment. Students are grouped arbitrarily. Each group submits one submission. One student from each group must take responsibility for submitting the assignment for the group.

Students must write the group name and the list of members belonging to the group on the first page of the assignment. Students must submit a Microsoft Word or PDF file.

**Case Study-1:** Marks=5%

1. Explain how agile planning may be applied far beyond software development to other elements of business operations, particularly the finance function, by watching this video.

URL: <https://hbr.org/webinar/2015/05/bring-agile-planning-to-the-whole-organization>

**Case Study-2:** Marks=10%

1. Agile can be a very difficult thing to do if a significant amount of cultural change is required. It is also a very empirical process, which means sometimes you have to try things to see what works and then make adjustments and corrections (a key idea behind agile is “fail early, fail often”). For that reason, these case studies should be regarded as learning opportunities and not failures.

The following are some of the major issues that these businesses have encountered when implementing Agile. Take a look at these challenges and problems. Make a list of your solutions to these issues.

COMPANY A

Background

Company A has a mid-sized IT organization. The company embarked on an agile implementation and trained most of the IT application development staff of about 80 to 100 people in agile practices. An agile coach was brought in for over a year to provide coaching to the teams, and the company made some progress on implementing an agile process at the development team level; however, due to cost-cutting pressure, the agile coach was let go, and there was little or no support at the executive level to take the agile process to the next level.

The approach

About 80 to 100 people in the organization were trained in agile practices, and, at least at a mechanical level, a number of agile practices such as daily standups were being implemented. However, the scope of the effort was very limited to the development organization; the approach was fairly mechanical without an understanding of the principles behind it and without much of an attempt to fit the approach into the company's business environment. The company operated in a highly regulated environment within the financial services industry.

Issues that have arisen during the implementation of Agile:

1. The company's senior executives regarded the agile method as having considerable benefits in terms of speeding up IT development, so they implemented it across the board. However, they simply regarded it as an IT development process, and they didn't see the value in investing more. The development effort appeared to go faster on the surface, but the truth is that workers were overworked in order to make it move faster, and the quality of the products suffered as a result.
2. Many of the "mechanical" parts of an agile development process were introduced (e.g., daily stand-ups), but there was no significant change in the way workers were assigned to teams. People were not loyal to their teams and may be allocated to as many as three or four separate groups. In certain circumstances, developers were not directly involved in the teams and were represented by their supervisors.
3. A separate product management group was responsible for developing a business requirements document (BRD) and handing it off to the development team. The procedure was inefficient and not very collaborative. The product management team insisted on maintaining control over the requirements and served as a "middleman" between the development team and the business users to clarify requirements.

Company B:

Company C is a tiny business with a small IT department that has been mostly focused on servicing legacy systems. For several years, the organization has not had to develop a big new application. Over a lengthy period, the existing legacy apps matured steadily and were created incrementally. The company embarked on a project to replace and restructure a huge, existing legacy programme, opting for an agile development strategy. The organisation had no prior experience with agile, and no agile coaches were hired to give project team training and mentorship.

Approach:

Within the development organization, the corporation established an agile development process from the "bottom up." The process was limited to a development process exclusively, with business input limited solely to JAD sessions to identify requirements, and the product owner's role was not completely implemented.

Issues that have arisen during the implementation of Agile:

1. The right people at the right levels were not engaged in making the right decisions about the project at the right times. Direction from different people was sometimes in conflict.

Some people were making decisions that they should not have been making. For example, some of the executives in the company were making detailed decisions about such things as UI screen designs. Some decisions, such as defining the high-level business objectives the project needed to fulfill, were not being clearly defined by anyone at all. The project was way behind schedule with no end in sight and senior executives had lost confidence in the project being successful.

1. The organization assumed that by breaking down the development process into sprints and managing the sprints with an agile methodology, the development effort could be sped up. However, because the agile development process was not properly integrated with the business, the project-level and release-level planning that was required was overlooked. As a result, the development team got right to work writing code, but there was no clear plan in place for how that code would be published or what the minimal functional requirements for a production release would be.
2. On the project, there were no official QA testing resources, and whatever testing that was done was done on an ad hoc basis by developers and business analysts with no professional QA test training. For many agile initiatives, this can be an issue. It was considered that formal QA was no longer required, and that testing would be performed by project members such as developers and business analysts who did not have official QA training. As a result, testing was rather haphazard, with no framework in place and no well-defined, repeatable test cases to assure an acceptable degree of test coverage.
3. There was a major risk connected with the cutover of the existing legacy system to the new system in this project, which had to be planned. For the transfer to be successful, certain key architectural considerations had to be made about how the two systems would coexist for a period of time. The architectural design for that transition was not given enough attention, and a solution to this architectural difficulty was postponed until later in the development phase.
4. In this particular project, a project manager was assigned; however, the company tried to implement a pure agile approach at the development level without a higher level of planning to perform some traditional project management functions such as planning a roll-out strategy, developing milestones, and performing general risk management tasks.
5. The individual users had sales goals that they needed to meet, and there was a significant amount of pressure to meet those goals. The management approach in the company had a strong command-and-control orientation. As a result, there was a lot of top-down direction to the project without a sufficient level of delegation of responsibility and empowerment of the team.
6. An agile project management tool was used on the project, but no one on the project team was fully trained in its use. As a result, the tool was not well utilized, and it was very difficult to plan and organize the project.