

# Case Study Material for Agile - Scrum in Software Engineering (UE19CS302)

## **TEAM MEMEBERS -:**

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## **CONTRIBUTIONS -:**

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## **The assignment:**

**1) Answer the following questions based on your understanding in not more than 10 sentences**

**a. Identify from the observations, where all would you think Service Inc did not meet the intent of the Agile Manifesto (any 10)**

- Service Inc maintained heavy documentation instead of having an effective working software.
- They did not complete the working software in the expected timeframe as the backlog at the beginning of the scrum was more ambitious than the average velocity of the scrum teams.
- Product owners had never met a customer ever since the centres had been set up.
- Instead of focussing on simple ways to explain about the completed tasks they had detailed presentation on the just concluded sprint.
- The team members had meeting for a longer time than the required time.
- The backlog changes which had to get over before the sprint, underwent changes till 3rd week.
- The quality engineers who had to join during the 1st week joined only after 2 weeks.
- The work which had to be assigned by project manager was done by the scrum master.
- The test engineers who had to write test cases earlier delayed it till the 3rd week.
- The task list which had to be finalised at the beginning of the week was delayed till the end of the week.

Points 1,2 did not follow Working Software over Comprehensive Documentation while 3 does not follow Customer Collaboration over Contract Negotiation. Point 4 was against Focus on Simplicity whereas 5,6,7,8,9,10 does not follow Responding to Change over Following a Plan.

**b. Identify from the observations, where all would you think Service Inc deviated from what is expected from a SCRUM implementation? (Any 10)**

- Scrum Master and Product owners are rotated across sprints.
- Daily scrum meetings usually took more than an hour than the expected 15 minutes time-box.
- Two test engineers are assigned among the development teams which is a clear violation of scrum framework and shows structure of sub-teams.
- Idleness and inefficiency as the test engineers were actually doing their only assigned work on the 3rd week of every sprint as there was nothing ready for testing.
- The scrum master should not assign work to developers but facilitate them for self-organisation.
- Scrum master making commitment on behalf of the team.
- Convincing and motivating the development team on commitments made by the scrum master violates the whole point of a sprint planning.
- The sprint backlog which contains the priorities of the product goal was delayed until the third week.
- It is a clearly known that the scrum master has to take responsibility of the product issues so as in order to protect the scrum development team in order to not affect their efficiency.
- The whole Scrum Team should collaborate to define a Sprint Goal that communicates why the Sprint is valuable to stakeholders instead of the product owner first approaching the stakeholder.
- Manager has the team of 200+ members.

**c. Discuss each of the findings in the table and indicate whether the finding contributed positively or negatively in go/no go recommendation and indicate with ~5 sentences why it is so.**

**i) From the experience and records it is clear that all daily scrum meetings, sprint review meetings happened without fail. Each of the team members took 10 minutes to update and for an 8-member sprint, daily stand-up meeting takes 60-90 minutes including all the discussions. Each sprint team has 1 scrum master, 1 product owner, 2 test engineers and 5 developers. Scrum Master and Product owners are rotated across sprints.**

This would be an **NO GO**. They can decrease the time to 25-30 min from 60-90 minutes because if they exclude all the unnecessary discussions, they could save time. As the Agile manifesto would consider to put it short. Scrum master and the product owners are rotated across sprints would not be suggested as it could not lead to many changes and different plan.

**ii) In the 4-week sprints, quality engineers joined after 2 weeks as they are rotated among projects and there was nothing ready for testing till the end of 3<sup>rd</sup> week. The test engineers wrote test cases in the 3<sup>rd</sup> week and tested in the 4<sup>th</sup> week. This was the usual pattern.**

This would be an **NO GO**. The agile manifesto which stated that software should be tested on an iteration-by-iteration basis but if we look at the work done by the testing team who would start at the 3<sup>rd</sup> week and then test it at the 4<sup>th</sup> week which is not recommended as they would be free and would not be doing any work which is a waste of time.

**iii) The project manager has been trained into the new role of Scrum Master. They are now doing these main tasks -:**

- **Deciding and assigning tasks among team members**
- **Keeping track of the assigned tasks**
- **Making commitment on behalf of the team. Convince and motivate the team members on the commitments made.**

This would be an **NO GO**, as in Agile we know that it gives flexibility to the developers so the project managers should have even discussed with the team before committing.

**iv) Team members are also responsible for emergency product issues and that tends to majorly upset the sprint deliverables. The sprint backlog underwent changes till 3<sup>rd</sup> week.**

This could be an **NO GO** a sprint backlog cannot change during an in-flight sprint, but can undergo changes but the changes should be said immediately.

**v) In sprint review meetings, two things were routinely done:**

- **Detailed presentation about the just concluded sprint feedback was collected from all members**

This would be a **GO** as sprint review meetings are necessarily done to verify whether the sprint backlog is fulfilled or not and this is a very important step in the agile manifesto so would need a detailed presentation.

**vi) After the Sprint planning meeting, task list was only a draft. The product owner discussed the draft with the centre manager and based on his feedback, there were few online discussions with the scrum master and team members following which task list is finalized by end of 1<sup>st</sup> week of the sprint.**

This would be an **NO GO** because the task list or sprint backlog cannot be changed while the sprints are progressing. The entire task list must be finalised before the sprint starts that is in the sprint planning meeting itself.

**vii) In terms of metric, the backlog at the beginning of the scrum is more ambitious than the average velocity of the scrum teams recorded so far as the teams prefer to take ambitious targets. They were encouraged to do so.**

This would be an **NO GO** as scrum teams preferred to take ambitious targets. This goes against the scrum methodology which emphasised on building small things and then combining them to see the whole.

**viii) Product owners in the scrum teams have worked with the products ever since the centres have been set up but have never met a customer.**

This would be a **NO GO** as a product owner is the person who must ensure the Communication with the end users and specify the requirements to the developer.

## **2) How can Service Inc achieve 40% growth in margin while achieving only a 25% growth in revenue?**

Service Inc's revenue was growing steadily at 12%, whereas the margin was growing at 10%.

→To achieve greater margin and revenue, they entered product engineering space, as consulting business was not scalable.

→The Product Inc believes that for a pure product engineering operation (i.e., agile operation) wanted Service Inc engineers to learn Agile methodologies for smooth and profitable work.

→So, it came to the point that Service Inc should become agile and follow one of its methodologies like SCRUM principles to reach to its target.

→The SCRUM principles included -:

- Control over the empirical process
- Self-organization
- Collaboration
- Value-based prioritization
- Timeboxing
- Iterative development

→An internal process quality team was roped in for this transition, most employees underwent training of these methodologies.

→In this way, Service Inc can achieve 40% growth in margin and 25% growth in revenue.

### **3) What are the cultural differences between Service Inc and Product Inc that you think is a challenge for successful scrum implementation that would satisfy Product Inc?**

- Culturally Service Inc and Product Inc are poles apart. As an example, Product Inc is a flat organization with open offices, where engineers and managers including VPs and SVPs share open cubicles, with the senior managers having offices in corners where engineers do not need to go often and are designed with dedicated conference rooms for meetings. On the contrary, Service Inc, one can make out the seniority of a manager in the organization by the size of his desk and room that he has been allocated.
- Service Inc's had set up multiple engineering centres with many international product companies (which were an existing customer of Service Inc's IT services) and have limited themselves to customer support, sustaining discontinued products, or near end of life (EOL) products or planned to be discontinued EOL products in which these product companies do not want to continue devoting their critical engineering resources on. The demand of these products was not

paying Service Inc's with a market value that they aimed for. Hence, a product engineering services SVP was setup by the CEO of Service Inc.

- So, the SVP of Product Inc Ltd (which was one of key client of Service Inc) had a meeting with Service Inc SVP where the challenges for a successful scrum implementation was discussed:

- Service Inc operates on building airtight requirement, tends to freeze it before committing their resources, have trained project managers focusing on coordination, have skilled program managers concentrating on rigorous change management, builds extensive documentations with super elaborate processes and these are helpful in billing clarity for both and preventing revenue leakage for Service Inc.
- Additionally, Service Inc has been very successful in shielding Product Inc from resource issues, customer complaints and the sustenance headaches the Product Inc SVP want his core engineering team to be shielded from.
- These were listed as the strengths of a service-based company (Service Inc). But in order for it to have hope in a product-based profession which is in the growth phase, these were equally the Service Inc's weaknesses. The above listings claimed that Service Inc was simply not agile enough for an agile product where uncertainty and constant change are the only truth and relying on volumes of documentation is just a waste of time that a fast-growing product cannot afford.

- The ways of working of Service Inc engineering management is hierarchical and bureaucratic which would work for sustenance, but for a pure product engineering operation being agile is an imperative and thus Service Inc cannot be relied upon for product line roadmap, in spite of its army of quality professionals with certifications

- With the above points, it's clear that for Service Inc, these were the cultural differences to satisfy Product Inc and the major challenge would be these mentioned transitions to have a successful scrum implementation for the company to have a better reach in the market as a product-based entity.