

SOFTWARE ENGINEERING LAB 1

Section: H

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TASK 1: Agile and Scrum

Q1) Answer the following questions:

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

- Service Inc gives importance to **comprehensive documentation**.
- Their processes (rotating scrum master, product owners, quality engineers) are extremely elaborate and **not simple**
- Requirements are fixed early on before resources are committed.
- Missing customer interaction as product owners in the scrum teams have worked with the products but never met with the customer.
- Any changes or remarks in Service Inc rely on its bureaucratic division of senior managers, rather than focusing on individuals and their interactions.
- Meetings were long and elaborate in spite of this the managers and product engineers were not on the same page (found after taking anonymous reviews).
- Since there was **no flexibility**, Service Inc was unable to adapt to the uncertainty and commit to changes, hence they cannot make an Agile Product.
- Service Inc. has been very successful in shielding Product Inc. from resource issues, customer complaints and the sustenance headaches the Product Inc. SVP wants his core engineering team to be shielded from. However, these are the strengths are also the weaknesses for executing a roadmap for a product which is in the growth phase. (focusing more on maintenance ops when they should be implementing new features)
- General Managers of Service Inc preferred following a **process** of elaborate meetings with engineers and junior managers, defying the value of individuals and interactions.
- Service Inc's product line roadmap does not align with the Agile Manifesto despite having quality professionals.

(b) Identify from the observations, where all would you think Service Inc. deviated from what is expected from a SCRUM Implementation.

- Sprint planning meetings had failed as backlog changes went on till the third week
- In terms of metrics, the backlog at the beginning of the scrum was more ambitious than the average velocity of the scrum teams recorded so far therefore there was always a delay in each sprint and the team was not following the burndown chart.
- Sprint Review meetings did not fulfil matching of business needs with delivered increments or evaluation of preset criteria.
- Sprint Planning meetings failed to choose user stories, and lacked planning for capacity and identifying goals.
- Sprint planning did not result in a final plan as an outcome. The draft was finalised into a plan at the end of the week.
- Scrum Master is deciding and assigning tasks among team members whereas scrum teams are self-organising.
- Product owners have not met the customers in spite of working in the same center since the start.
- Since there was no interaction between the product owner and the customer, the priorities of the multiple stakeholders were not properly communicated, hence a proper roadmap could not be developed
- The whole process took 5 weeks, exceeding the maximum sprint limit of 2-4 weeks
- The scrum master failed to organise pre-planning meetings, sprint review meetings and sprint retrospective meetings

c) Discuss each of the findings in the table and indicate whether the finding contributed positively or negatively in go/no-go recommendation.

(i) This point negatively affects the go/no go recommendation as the scrum masters and product owners are changed every week. This makes them have to catch up with the scrum after every point.

(ii) This point negatively affects the go/no go recommendation as the test before development philosophy is not being followed and there is not enough time for improvisation in case of any changes.

(iii) This point negatively affects the go/no go recommendation as the scrum master assigns the tasks between team members instead of it being a team effort.

(iv) This point negatively affects the go/no go recommendation as the team members are also responsible for emergency product issues. This affects the sprint deliverables.

(v) Negative effect. Sprint Meetings do not require detailed presentations about previous meetings, rather, sprint meetings should be utilised to Evaluate against preset criteria, Get feedback from clients and stakeholders, Ensure the delivered increment meets the business need, Help support reprioritizing of the product backlog and Optimize the release plan if needed

(vi) Negative effect. The sprint planning meeting failed as only a draft of the task list was prepared during this meeting, whereas a finalised task list is supposed to be defined. The scrum master, along with the scrum team were required to define the scope of delivery and decide how to accomplish that work, based on the product backlog, sprint team capacity and the past performance of the development team.

(vii) Negative effect since most engineering centres were advised to set ambitious goals without proper consideration of the sprint team capacity and past performance. This resulted in an unrealistic burndown chart, which, ultimately, the team could not follow

(viii) Negative effect. Product owners have not met the customers in spite of working in the same center since the start. Since there was no interaction between the product owner and the customer, the priorities of the multiple stakeholders were not properly communicated, hence a proper roadmap could not be developed

Q2) How can Service Inc. achieve 40% growth in margin while achieving only 25% growth in revenue?

Service Inc can achieve their growth targets by setting up multiple engineering centres with international software product companies. These centres should be owned by Service Inc only as they have high margins.

Service Inc should focus more on product engineering of growing products because they command higher pricing. Instead, they have so far only been

limited to customer support, sustaining discontinued products and support for near or planned to be discontinued EOL products.

Service Inc should implement the Agile philosophy in their day to day operations so that they can keep up with the ever changing requirements of a fast-growing product. They needed to move away from a hierarchical and bureaucratic system of management to a more simple system of management.

They needed to train their project managers, program managers and lead engineers in Agile and Scrum. A process quality team was formed to ensure these practises were being followed. Service Inc could improve their operations by conducting anonymous surveys through which employees could suggest or give feedback about the way things are run in Service Inc. This can help Service Inc achieve 40% growth in margin while achieving 25% growth in revenue as these surveys can help increase efficiency.

Q3) What are the cultural differences between Service Inc. and Product Inc. that is a challenge for Scrum implementation that would satisfy Product Inc.?

These companies have completely different management ideologies. While in Product Inc, there is no distinction of desk and room allotment for all the employees even on the senior scale as they share open cubicles, no requirements of engineers reporting often.

On the other side, managers in Service Inc are separated based on their seniority and is easily made out from their resource allocations. Service Inc manifests following elaborate process and schemes to carry out their jobs, and their focus was on increasing their margins and revenues more than satisfying their client needs. Lot of time was spent in building extensive documentation that was deemed unfit by Product Inc as they believed it was of no use for a fast growing product.

At last, Service Inc has a hierarchical and bureaucratic management system which works for sustenance as opposed to agile and adaptable solutions demanded by Product Inc.