

# How To Do Successful Backlog Refinement: A Case Study

Menik Teannkoon, Rajitha Gamage, Dulanjali Gallge, Gayani Jayabahu, Pasindu Piumal, Sumudu Athukorala, and Subangan Bamakanthan

**Abstract**— This paper describes the Teams’ Observations on the current scrum practices of this organization, the problems that have arisen as a result, how to overcome those problems, the expected status of the team and how to apply the lessons we have learned from the Scrum Ambassador training and the experience gained in applying that learning. It specifically discusses about the backlog refinement in scrum framework, how the current backlog refinement setting and issues occurred and how to do successful backlog refinement based on the learning acquired in Scrum ambassador training, what are the lessons learnt when applying those practices and plan we did for solve the challenges in our team, the authors provide recommendations on how to overcome potential problems in teaching agile software development and make their adoption more effective.

**Index Terms**— Scrum Ceremonies (SC), Certified Scrum Master (CSA), Backlog refinement (BR), Scrum.

## I. THE PROBLEM STATEMENT

Failure to conduct the backlog refinement properly, can lead to not have proper product backlog which cause to have a lack of understanding of the product increment that the scrum team needs to do. Therefore, there is no way to quantify what is going on in that product, whether the product increment is done or identify what is the next primary task. This has become a major reason for business values to be added to the organization and all added values to be blocked.

How do we can do successful backlog refinement to get a proper understanding of the product increments, to build priorities of those items, to create an environment where it is possible to discuss with the relevant people if it is proposed to add value which seems not related to product goal and properly track the valuable increments of the product?

## II. OBSERVATIONS

The backlog refinement is conduct mostly with developers (Developers and QA). There is one backlog refinement happening in each sprint of first Thursday of the sprint. Product owner not coming to the ceremony. There is no product backlog. Team simple discuss the currently doing task, discuss the blockers. The developer and QAs suffer lot of dependencies. Most of the discussion about these blockers and how to clear that. Most of dependencies fall to them again to clear them self at the end of the ceremony. No one has clear idea about the product increment they are doing. Not have a sprint goal. The team is not collaborating for single increment, each member involves with different project, and some of them involve more than 1 product. Most of the time each asset of the team allocation happens in percentage

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IMAGE 1  
SPRINT’ OBSERVATION. THE OBSERVER IS THE TEAM MEMBER AND OBSERVATION PRESENT AS POINTS.

Date	Ceremony Item	Observer	Observations
2021/07/12	Sprint Planning	Rajitha	Couldn't Start onetime. Key Resources are not joined properly Groomed Items not too clear. Stories are not fully ready in the backlog
		Menik	Only developers came to the sprint planning. No BA. There is no product owner or scrum master show up in planning. There is no facilitation to the team from scrum master. There is no product backlog at all. Because there is no requirement. There is no groomed sprint backlog. No DoD, accept criteria. Time box is 4 hours. As soon as daily scrum is over we starting the sprint planning which is start at 9:45a. Until that time no item to do. Developer fill a excel sheet with the task & convert them to JIRA stories, not getting from backlog. No correct time estimation happening. Only focus on the burn down chart
2021/07/13	Daily Standup	Rajitha	All team members not got attended. Started on time Some clarifications couldn't clear due to availability of key resources.
2021/07/15	Backlog Refinement	Menik	There is no product backlog. Product owner is not participate to the event Discussed team impediments No grooming happened Time box is 2 hours
2021/07/22	Retrospective	Menik	PM get our suggestion for improvements. He has a confluence page to update those suggestions. Team has same problem as previous month. Seems like issues not sorted out. Just update the ceremony was done for auditing purposes. PM said he cannot address those issues and told team to handle it. Time box is 1 hour
		Rajitha	Couldn't start on time Got update the individual achievements only. Discussed the issues faced not in the current sprint but also in general Test environment configuration discussion is mainly done. not prioritised the next sprint items. Verbally discussed only and not properly go through with the backlog items and there are no clear backlog items as well.
		Gayani	Less understandability, when giving estimations for the user stories Taking more stories for the sprint due to less understandability of the complexity.
		Dulanjali	Separate sprint planning and task breakdowns for each product. Items moved from the previous sprint to this sprint, <del>anasa</del> have not discussed how to complete those in this sprint. Most of the time focusing on the estimation and delays. Not focusing on product development capacity, testing capacity, blockers and dependencies.
2021/07/22	Sprint Review	Dulanjali	A lot of time was spent discussing development issues.
		Rajitha	Test environment configuration discussion is mainly done. not prioritised the next sprint items. Verbally discussed only and not properly go through with the backlog items and there are no clear backlog items as well.
		Gayani	Less understandability, when giving estimations for the user stories Taking more stories for the sprint due to less understandability of the complexity.
		Menik	There is no stakeholders came to sprint review And no any valuable product increment on that sprint. Product manager is not in the review. Time box is 1 hour

## III. DESIRED STATUS

When a new value addition comes from the company, the product owner is responsible for discussing it with the relevant stakeholders. Anyone in the Scrum group can create these items. But the responsibility for grooming the product ultimately falls on the product owner. The product owner enlists the help of business analysts and developers to groom the product backlog items based on the type of item. The most used method of creating these items is the user story method. Depending on the value added, this could be a technical story or a user story. The product owner always grooming these items and the others in the team help. He always thinks about the product goals. This helps the product owner to reduce the collection of unwanted value items come from the organization, which in turn reduces the team's unnecessary hours and the developer protect from the noise.

Every product increment has a DoD and acceptance criteria. On the day of the backlog refinement, the product owner comes to the ceremony with a good idea of the increments. The Scrum team has a good idea of how many backlog refinement sessions are needed. In the backlog refinement, product owner discusses the items to the scrum team and do the prioritization. The scrum team uses the RCI value to measure story readiness. This helps the forecasting of the Sprint planning.

#### IV. IMPACTED AUDIENCE

TABLE I  
IMPACTED AUDIENCE IN THE ORGANIZATION (DEPARTMENT WISE)

<b>Group Business Control</b>
Software Engineers, Quality Assurances, Business Anylisis
<b>Customer Relationship Management &amp; Billing</b>
Project Managers, Product Owners
<b>SBU (DTV,GSM, HBB)</b>
Stakeholders, BUs

#### V. ISSUES AND PAINS IDENTIFIED SOLVING THE CHALLENGES

Team members are involved in a variety of products. So, the team has different product owners. The main problem was the involvement of all product owners in the group's backlog refinement. Most of the product owners are new to scrum framework. They were not accustomed to continuously grooming backlog items. Due to the early stages, there were some misunderstandings during the discussions with the developers. DoD and writing acceptance criteria were new to them so many mistakes were made. A major problem in creating priorities among product owners was that each product increment is individually important for each Product owners.

#### VI. PLANS TO SOLVING THE CHANLLANGE

Various working agreements are planned. One working agreement is to decide with the team the number of backlogs refinement to be planned in each sprint. Further, all members should arrive on time without delay to backlog refinement as scheduled and plan other sprint activities according to the time used. It is plan to Knowledge transfer sessions to product owners and other members who new to the scrum framework for a successful backlog refinement. It is planned to introduce the use of RCI value to check the readiness of user stories. It is planning to do knowledge transfer to members on the importance of DoD and Acceptance criteria writing, as well as accountabilities of scrum roles. Also plan to do knowledge transfer is to explain scrum is all about teamwork, about the importance of product goal setting, the importance of sprint goal setting, how to track the product increments, and how to set priorities.

#### VII. APPLIED SCRUM AMBESSADOR LEARNING

The concept of working agreement that we learn from training can be applied to the general decisions that need to be made as a team. Learned about product backlog, creating user stories, breaking user stories into smaller done able stories, posterizations items and accountabilities of each roles, importance of setting prodcut goals and sprint goals can be use. DoD writing, acceptance criteria writing, and using the INVEST concept to validate user stories are also planned to be used for successful background refinement challenges.

#### VIII. LESSONS LEARNED

It is difficult to transform a company that operates as silos into an agile environment. As these organizational values still flow vertically, there are many dependencies and blockages. The KPI calculation must be changed for Scrum to be fully implemented. One of the main lessons to be learned is that it is difficult to transition into an agile environment if we do not work as a team. Everyone must work together and collaborate to achieve a common goal. Everyone is accountable for doing their roles. Scrum Masters should do a full-time job. It is easy to make changes in management if managers have an open mind.

#### IX. NEXT STEP

The next step is to contact the relevant stakeholders and plan a successful retrospective and sprint review. We are in the initial stages of Scrum, and it is best to have a good Sprint review with stakeholders. Since they have been following the waterfall SDLC so far, we need to accustom them to an agile environment where small developments are constantly being released. We can use Sprint review to confirm what we did wrong and discuss how to correct it.

#### X. CONCLUSION

Agile software development is most efficient if it is done in an agile manner. The best way to get an agile environment is with a scrum framework. Backlog refining is one of the major functions of the Scrum framework. Since all activities are centered around this, this is one of most important ceremony. Background refinement helps to create an efficient organization by creating an environment where valuable ideas can flow into the organization and be discussed with the relevant stakeholders.

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