

## **Metrics to Gauge Agile Scrum Adoption**

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and

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Recently, in our experience with some of the best Agile Coaches and Scrum Masters, we have identified some of the most effective ways to measure the level of employment of Agile Scrum principles. The assumption is that if the teams are delivering well on these effective measures, the more business value the teams would be adding. This article will outline some of the top key indicators that some of our experts identified as useful indicators as to the effective use of scrum. The idea is if they look good to us, they might be something you would like to explore as a way to measure effective use of Scrum in your environment. The assumption is that these will be used in an environment where software is being developed to sell a service or product.

**With respect to business value** we feel that the best way to measure the level of contentment of the Product Owner (PO) after deployments is to survey the PO and possibly other client-stakeholders. We see the most important question on the survey as being, “Is the software working the way that you expect it to?” A good score would indicate that the Product Owner and team are communicating well. A lower score would likely be caused by poor communication between the Product Owner and the team. Ways to improve communication are:

- Insist that the Product Owner take an active role if they have a tendency to miss key meetings and ceremonies.
- Suggest the use of a Product Owner Delegate (POD) if the Product Owner is unable to fulfill the commitment to actively participate in Scrum Ceremonies
- If the issue is that the market space is changing so frequently that project scope is not stable, then the Product Owner will need to have even more contact with the development community and indicate the changes to the application that are needed.

Another, more automated way to do this is to track and trend the priority numbers, as assigned by the Product Owner, of User Stories getting completed. The lower the average number of priorities assigned to User Stories (priority 1 is the highest priority), the more successful the team is in terms of giving the PO what he/she asked for. Previous iterations can be used to compare to in order to understand if the team is improving.

**The next area to address is code quality.** Our experts have seen that code quality can be improved by automating testing and also automating code quality checking. Look for tools that support unit testing as well as testing end-to-end. So, one test of a Scrum Team’s

effectiveness is if the Scrum Team is using automated testing software. Using a software package to build the product after each code check-in allows the developers to receive immediate feedback. In the event of a test failure, a developer can quickly determine which section of coded caused the issue. Since mature Scrum Teams take ownership for improving the metrics for test coverage and code quality, they will want to take this step.

**As for how to improve speed to market,** User Stories should not be forced into the middle of an iteration. This is very disruptive as it breaks the cadence and thus slows things down. Another issue that has been seen is User Stories need to be fully defined and appropriately sized before they are accepted into an iteration. Ideally, a User Story can be completed within 2-3 working days. Poorly defined or sized User Stories requires the team to slow down to complete and/or divide the poorly written or sized User Story when they should be working to complete the User Stories committed for the current Iteration. The bottom line is product owners need to support and participate in the creation of well defined, properly sized User Stories, and respect the concept that User Stories are not to be introduced mid-iteration. Therefore, measuring how many user stories are added during an iteration and how many are not groomed properly before acceptance into an iteration are great metrics to understand the POs effectiveness in supporting the Scrum Team.

One item last item the Scrum Masters and Coaches at this meeting shared is they would measure the number of Story Points added to an iteration beyond the velocity of the team. This metric indicates how effectively the team can keep its work load at a reasonable, sustainable level. Please note, story points are not comparable between teams. How this relates to speed to market is that a team who is asked to accept more than its average velocity is more prone to see diminished returns, and actually slow down.

Another way to tell how effective a team is in its use of Agile Scrum is a quick glance at the burn-down chart. It is not easy to have a burn-down chart as you need:

- a trend for the amount of work the team can perform in an iteration (velocity)
- each Scrum Team member to report progress and amount of time worked on the project daily
- the work complete line needs to generally follow the expected complete line

Once a team's actual performance tracks to the plan, there is a good chance it is a well working Scrum Team. And, if a team is using the burn-down chart, a metric such as number of User Stories completed in the iteration or the number of Story Points completed in an iteration is needed to ensure throughput is maintained as the burn down chart will not provide this information.

In summary, three areas stood out for attention when addressing level of employment of Agile Scrum principles; business value, code quality, and speed to market. There are many ways to measure these, and, good examples of how to do this were provided in this article.

Special thanks to Clayton Meyer for his input.

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