A Hands-on Introduction to Agile & Scrum

Sprint Exercise

This exercise was designed to bring the participants through a complete Scrum Project Cycle, also known as a "Sprint", within a project framework that lasts exactly 1 hour. The tasks are very straightforward, but may vary in terms of difficulty and duration. By design, there are substantially more tasks in the inventory than there is time to complete them within the allotted interval, so much of the challenge is to ***size***and ***order***the tasks, and then see how accurately your sizing estimates are.

Please keep in mind that this entire activity has been designed to highlight the ***MANAGEMENT PRINCIPLES*** involved, not to determine the most ambidextrous person in the room. That said, it is important for each team to quickly come together and establish the optimal level of cohesion and strategy in accomplishing the tasks. It is far better to be assertive and direct, balancing such a posture with the need to collaborate and succeed as a team.

Required Materials

Each table should have received the following materials:

- 1 stopwatch
- 1 standard deck of poker cards
- 1 pen (more pens available for any participants who need them)
- 1 permanent marker
- 2 "googleeyes"
- 1 colored 4" X 6" foam pad
- 5 colored 8 inch balloons
- 3 sheets of red, blue and yellow "dot" stickers
- 1 pad of 5" X 3" paper
- 1 glue stick
- 10 or more craft sticks (popsicle sticks)
- 1 pair of standard dice
- 1 burn down chart
- 1 packet of "Product Backlog" User Story Cards
- 1 blue plastic string circle – 8" in diameter (to measure circumference of balloons)
- 1 straight edge
- 3 answer keys to the PMBOK questions

Competitive Nature of the Project

Each table constitutes a team. The first thing you will need to do is decide on a **name for your team**. Once you've decided on a name, write your team name on the Table Tent Card on your table (there is a permanent marker in the provided kit). Each team will be competing to achieve the most delivered value within the Sprint. For the team that achieves the most delivered value, **each team member will receive a valuable prize**.

Critical Time Resources

- The entire Sprint must be completed in **60 minutes**and this includes providing the resulting "acquired value" calculation back to the speaker
- The total cumulative time devoted to **executing** the tasks is **3 minutes** (**180 seconds**)
- For planning purposes, you should move from the PLANNING portion to the EXECUTION portion of the Sprint at 20 to 25 minutes into the Sprint (e.g.: evaluate & size tasks, establish which tasks are going to be accomplished, and which order they will be accomplished in within the first 20 to 25 minutes, then use the remaining 35 to 40 minutes for execution of the tasks and plotting the burn down charts)

Additionally, there are completed versions of the stick shapes and the Smiley Face available for inspection, as well as 2 Rubic's Cubes and 4 pairs of scissors available to share amongst all teams for teams that elect to work on those stories.

General Principles

Each backlog "User Story" should be thought of as an **independent** and **complete** task in and of itself. ***HOWEVER***, some tasks may have a natural dependency on and/or mutual exclusivitywith other tasks, and it's up to you to determine what those dependencies or exclusivities are. For example, if you choose a task that asks you to pop balloons that are not yet inflated, then you must either decide to inflate them before popping them, or sequence them after another task that called for their inflation.

The manner in which the task is stated will act as a guide for any implied dependencies. For example, if a task specifically states that you are to use a standard, shuffled deck of cards, than any sorting or sequencing done in a previous task no longer applies.

Finally, some tasks may require resources that must be shared across all teams (specifically, there are a total of TWO Rubic's Cubes and FOUR pairs of scissors, which will be made available to all teams on a first-come, first-served basis. In such cases, please be respectful of other teams and only acquire the resources for the time they are needed.

Procedures

1) Start by reviewing the User Stories (***Product Backlog***) you are provided. For each story, determine the resources required to complete the story, and **attempt to estimate the size** of the story (e.g.: the amount of time the story will take to accomplish).
    a. Use the following guide to size each story: **1, 2, 3, 4, 5, 6,BIG,** or **?**and writing this number in the "**Estimate**" square on each card. For each story, each increment should roughly equal 10 seconds. Thus, a task that you expect to take 20 seconds should get a "2", 30 seconds, a "3", and so on. Upon the consensus of the team, if further

refinement of the size is desired, a given story point can be given a **PLUS** (+) or a **MINUS** (-).

b. You CAN attempt to accomplish a given story as a practice to help you gauge the size, but just keep your eye on the clock, because you want the sizing and sorting activity to be completed within 20 minutes

c. If there is disagreement within the team in sizing a given story, it is important that they team manage themselves to consensus. For most teams, this may involve a simple majority, but if a member feels strongly that a story is wrongly sized, they should make the exact nature of their concerns known. Ultimately, the team is much better off if the stories are sized as accurately as possible.

d. Be REALLY CAREFUL about tasks that have been labeled "BIG". You don't want to waste the entire 3 minutes on a single task!

e. ***HELPFUL HINT***: Once a story is sized, it is helpful to divide the "Importance" by the "Estimate" to provide a broad indication of value-per-unit. Feel free to write this value on the card in a prominent place.

2) Now that you have sized each story, you should order them. The most effective way to do this is to start by ordering the cards with the highest ratio of importance vs. effort (using the helpful hint in 1.d above will assist this effort.

   a. Once you establish a rough order, you should adjust the order to handle any implied dependencies.

   b. The sizing activity should also involve discussion amongst team members about what makes sense. Use your judgment and don't just rely on the ratios – they are guides to assist, not the final arbiters.

   c. Once you are happy with the order of the tasks, you should cumulatively sum the EFFORTS of each task until you reach a total of **18 (EIGHTEEN)**. Since the sizing activity was related to 10-second increments, this reflects the estimate of the 3 minutes (180 seconds) total execution time allotted. These activity cards should be affixed with a BLUE DOT STICKER. In so doing, we have moved these tasks from the PRODUCT BACKLOG to the SPRINT BACKLOG. The stickers are referred to as "INFORMATION RADIATORS", because –at a glance – everyone understands which tasks are in the Sprint Backlog.

   d. During this process, have one of the team members become familiar with the stopwatch. Make sure it is in the correct mode for timing events, and that the time has been zeroed out. To begin timing, click the UPPER RIGHT button. To stop timing, click the UPPER RIGHT button again. To zero the time out, click the UPPER LEFT button.

   e. You are now ready to execute the tasks of the Sprint. If you have gotten to this point within 20 minutes of the start of the Sprint, you should be in good shape to complete it successfully.

f. Count up the total number of "Estimate" points represented by all the cards that have blue dots. This is your target for the Sprint. This should be 18, and is already represented in the Burndown Chart by the diagonal line (starting with 0 Points Achived and 180 seconds remaining to ZERO time remaining, and 18 Estimate Points achieved. Ideally, the actual results of the Sprint execution should follow this line.

3) As you begin the task execution, start by placing a YELLOW DOT STICKER on the card that you are currently working on. For this "mini-project", the value of this indicator may be harder to appreciate, but it is very helpful in indicating "Work In Progress" at a glance on any given Sprint.
   a. You should discuss the task prior to execution to determine how it will be accomplished and who it will be accomplished by.
   b. Coordinate yourselves such that task can be accomplished as efficiently as possible. Select a non-participating member of the team to work the stop watch.
   c. Have the time keeper start the stopwatch by clicking the UPPER RIGHT. Proceed until the task is done, then click the UPPER RIGHT hand button again. Write down the seconds that have transpired. Feel free to write these values directly on the story cards themselves.
   d. Using the Scrum Burn Down Chart, begin by placing a hash mark on the UPPER LEFTHAND CORNER of the chart. This indicates that NO sizing points have yet been achieved, and that 180 seconds remain to be "spent". Now, determine how many seconds have transpired and how many sizing points have been accomplished. Starting at 180, count TO THE RIGHT the number of seconds that have transpired and count DOWN the number of sizing points achieved, and place another hash mark, and connect these hashes with a straightedge. This indicates your ACTUAL velocity. If it below the existing diagonal line, you are ahead of schedule. If it is ABOVE, you are behind.
   e. PLEASE KEEP IN MIND THAT THE ***VALUE*** OF THE ITEM DOES NOT ENTER INTO THE PLOTTING OR CALCULATION OF VELOCITY. This is because the effort may have little correlation to its value. Once efforts have been estimated by the team, all velocity calculations are done using these team-assigned values.
   f. Continue through the tasks in a similar fashion, timing each task, and plotting the time differential and value earned from the point of the last hash mark until no time remains.
   g. If your team has accomplished all of its planned work with time remaining on the clock, you can evaluate stories in the Product Backlog, and select and perform those tasks too.
   h. If the time has expired in the middle of a task, NO VALUE should be awarded for that task.
   i. The total elapsed time for a task should be measured by the time it takes to accomplish the task. Inspecting it is not part of that time. If inspection has proven that the task does not meet the requirement of the task, the timer should restart the time measurement while the task is completed as per the requirement.

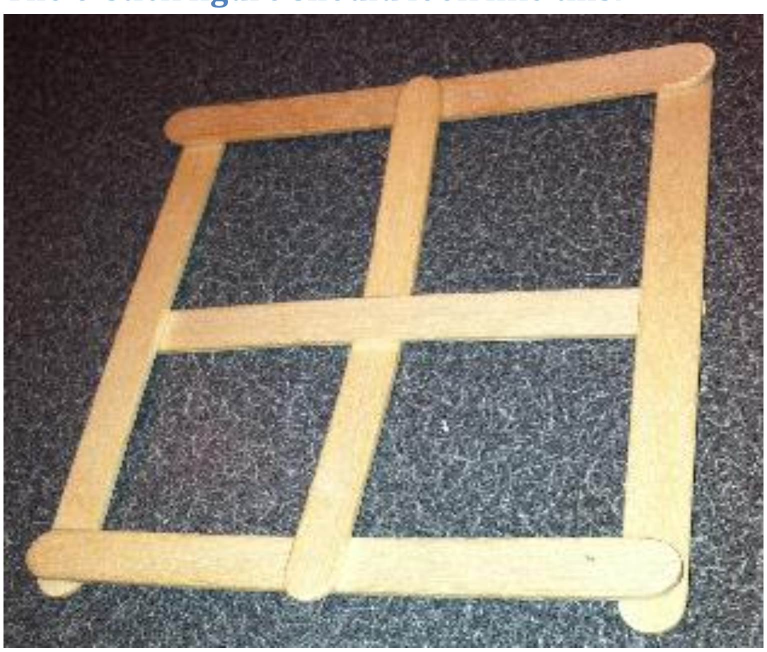
j. Once a task has been VALIDATED as complete, put a RED DOT STICKER on the card. This indicates that the task is completed.

4) Once either the three minutes has been consumed or the hour has been reached, there is no additional time for acquiring value.
   a. Once all value has been acquired, and the burn down chart is complete, go back over all the cards with RED STICKERS, and sum up the “Importance” points. This is the “Score” your team has achieved.

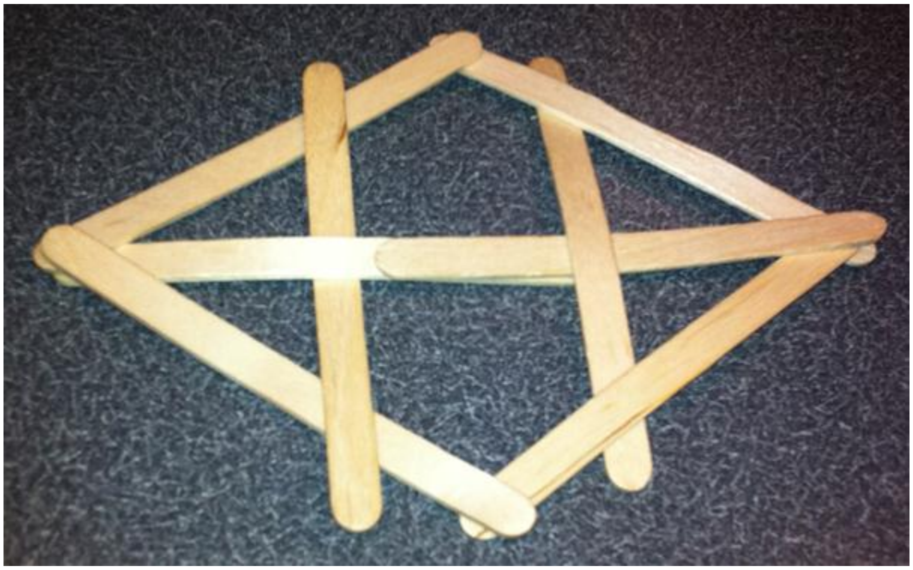
Stick Figures & Smiley Face

The 5-stick figure should look like this:

The 6-stick figure should look like this:



The 8-stick figure should look like this:



The Smiley Face should look like this: