

Sensemaking in the Agile Forest

Agile management products¹

Henny Portman

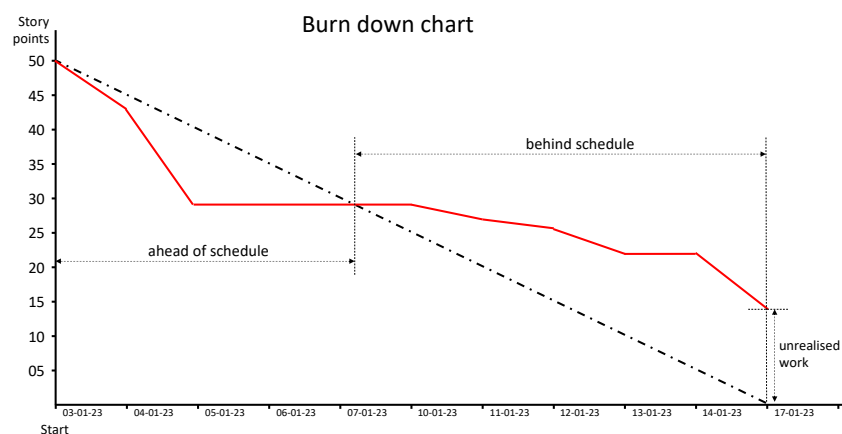
Introduction

Agile and management products may seem like a contradiction in terms, but nothing could be further from the truth. Even within an agile approach, some simple management products can ensure better manageability of the work. In this blog, the burn down chart, the burn up chart and the cumulative flow diagram will be highlighted successively.

The burn down chart

When using Scrum, the burn down chart is a simple tool, used and maintained by the agile team to show the status of the sprint. With a simple glance at the chart, it becomes clear if the team is behind, on, or ahead of schedule within the sprint.

The red line shows how many story points the team still needs to realize. At the end of sprint day 1, 8 story points have been realized and the team still needs to realize 42. At the end of the sprint, 35 of the 50 story points have been realized. So, 15 story points have not been realized. If the team is below the dotted line, then the team is ahead of schedule and if the team is above the dotted line, then the team is behind schedule. At the end of day 5, the team can therefore already identify that they are behind schedule.

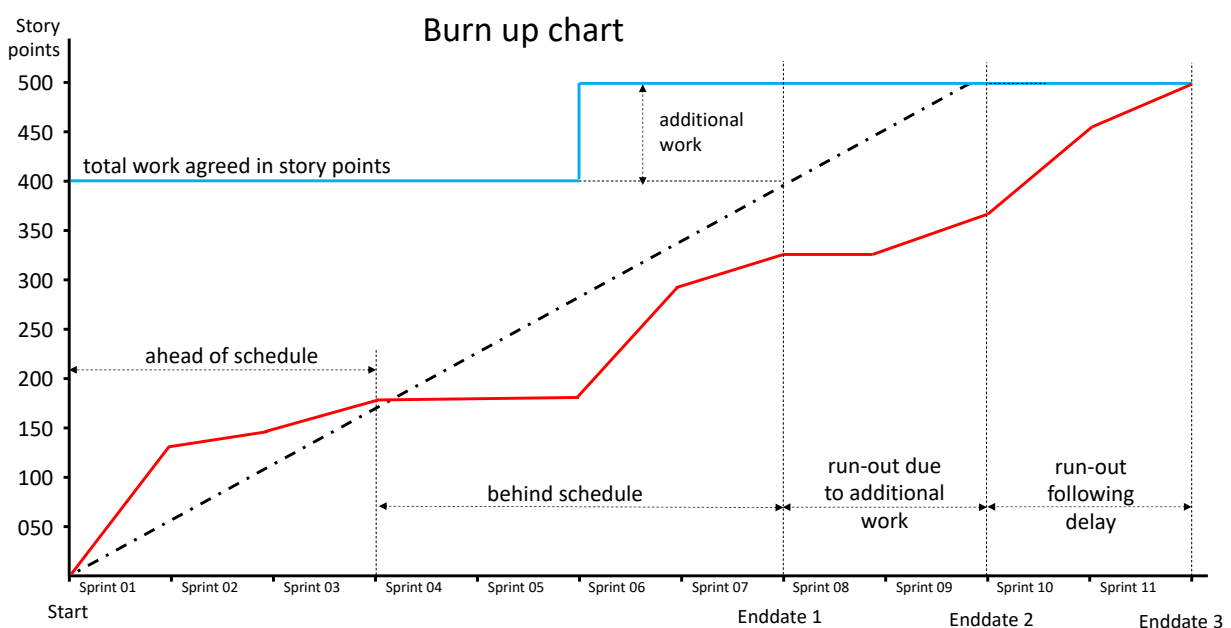


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If during the retrospective it is found that there is no explainable reason for the achievement of only 35 story points, the team can decide to change the velocity to 35 story points.

The burn up chart

The burn up chart is more complex than the burn down chart. It shows the total project scope in addition to the work completed. On the horizontal axis are the sprints (or days or weeks) within a project. On the vertical axis are story points. At the start of the project, it was determined that there is a backlog of user stories with a size of 400 story points (the blue line). The estimate is to achieve that in 7 sprints (end date 1).



The red line shows the completion of the sprint. If the red line is above the dotted line, the project is ahead of schedule. If the red line is below it, the project is behind schedule.

At the end of sprint 5, the team receives 100 story points of additional work. In the burn-up chart, this is visualized by the blue line making a jump to 500 story points. The consequence of the additional work is that, according to the ideal line, the end date is extended by two sprints to end date 2 (assuming constant velocity).

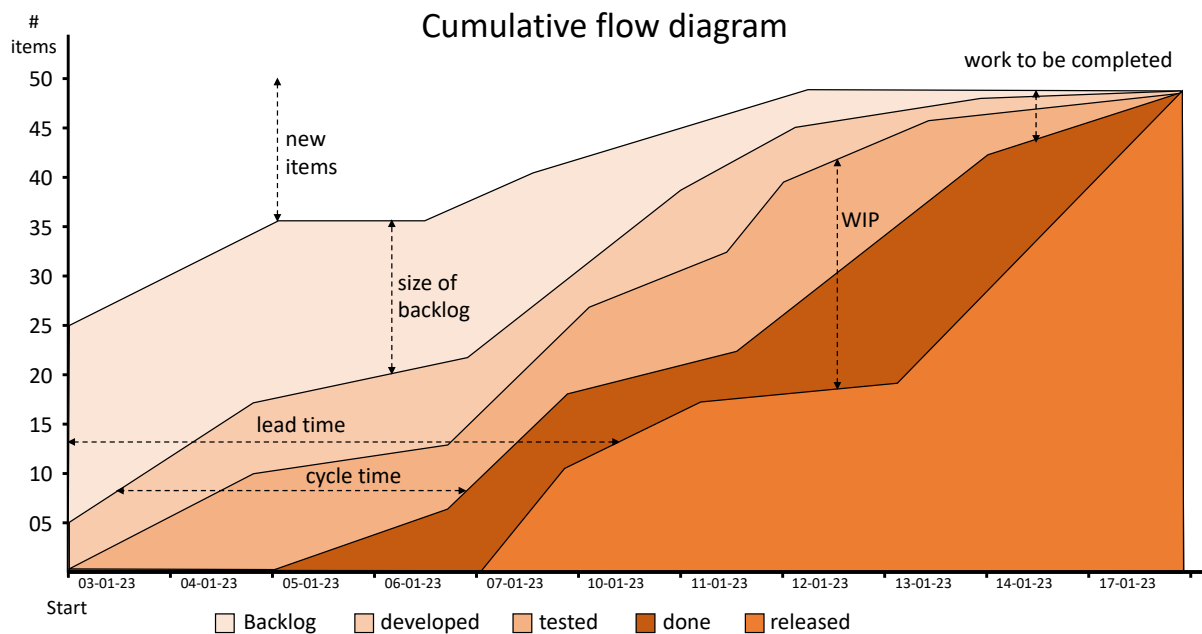
The team does not catch up with the already existing delay. If all story points are to be delivered, the project is completed on end date 3. One can of course decide to stop the project on end date 2 anyway. Then the team delivers over 360 story points belonging to the must have and should have user stories.

During the retrospective, the developers can decide to adjust the team's velocity. For the next project of around 400 story points, the team will use 10 sprints for this (around 40 story points per sprint).

Cumulative flow diagram (CFD)

A cumulative flow diagram is a tool originated in queuing theory. It is an area graph that depicts the quantity of work in each state of the items (backlog, developed, tested, done, released), showing arrivals, work in progress (WIP) lead time and cycle time.

A cumulative flow diagram could be seen as a more sophisticated version of a "burn up chart". In agile software development, when teams use Kanban methodology, the cumulative flow diagram shows the number of active items in each column on a Kanban board.



Over time, the CFD shows how much work went through each stage of the process. The vertical axis shows the number of items and the horizontal axis the passage of time. The number of items is tracked cumulatively per day or period. The top line shows how much new work is placed in the process or on the Kanban board. The bottom line shows the number of items released. The intermediate lines show the amount of work produced by each process step. The vertical distance between two lines shows the WIP of the respective process step.

Conclusion

The agile management products burn up chart and burn down chart provide a lot of information for the team to identify in a timely manner whether it is ahead or behind schedule. Based on this, the agile team can take any appropriate measures to continue meeting sprint or project

objectives. Within a sprint, it is obvious to use a burn down chart. Within a project comprising several sprints, it is obvious to use a burn up chart as well. When using a Kanban-system the cumulative flow diagram gives the information to optimize the flow through your development process.

Sensemaking in the Agile Forest series

This article is part of a series of articles called *Sensemaking in the Agile Forest*. This series² consists of the following parts:

- [Portman, H. \(2022\). What is Agile? Sensemaking in the Agile Forest series, PM World Journal, Vol. XI, Issue I, January.](#)
- [Portman, H. \(2022\). What is Scrum? Sensemaking in the Agile Forest, series article 2, PM World Journal, Vol. XI, Issue II, February](#)
- [Portman, H. \(2022\). Is agile always better? Sensemaking in the Agile Forest series, PM World Journal, Vol. XI, Issue III, March](#)
- [Portman, H. \(2022\). The ideal Product Owner, Sensemaking in the Agile Forest series, PM World Journal, Vol. IX, Issue IV, April](#)
- [Portman, H. \(2022\). The Ideal Scrum Master, Sensemaking in the Agile Forest series, PM World Journal, Vol. XI, Issue V, May](#)
- [Portman, H. \(2022\). Is an agile team always autonomous? Sensemaking in the Agile Forest series, PM World Journal, Vol. XI, Issue VI, June](#)
- [Portman, H. \(2022\). What do iterative and incremental mean in Agile? Sensemaking in the Agile Forest series, PM World Journal, Vol. XI, Issue VII, July](#)
- [Portman, H. \(2022\). The Minimum Viable Product \(MVP\) unraveled; Sensemaking in the Agile Forest, series article, PM World Journal, Vol. XI, Issue VIII, August](#)
- [Portman, H. \(2022\). Prioritizing in an agile team, Sensemaking in the Agile Forest, series article, PM World Journal, Vol. XI, Issue IX, September](#)
- [Portman, H. \(2022\). Multitasking, task-switching or monotasking; Sensemaking in the Agile Forest series, PM World Journal, Vol. XI, Issue X, October](#)
- [Portman, H. \(2022\). Being predictable as an agile team; Sensemaking in the Agile Forest series, PM World Journal, Vol. XI, Issue XI, November](#)
- [Portman, H. \(2022\). Self-managing or self-organizing agile teams, Sensemaking in the Agile Forest series article, PM World Journal, Vol. XI, Issue XII, December](#)
- [Portman, H. \(2023\). Slicing user stories, Sensemaking in the Agile Forest series, PM World Journal, Vol. VII, Issue I, January](#)
- Agile management products
- Agile user testing
- What is Kanban?

² This series is based on a number of short blogs I made for Forsa Advies, a project management training organization in the Netherlands (<https://www.forsa-advies.nl>).

- Culture makes or breaks your agile transformation
- Why agility?
- Towards a more agile organization
- Getting started as an agile team (a pilot)
- Agile team of teams structures
- Agile centers of excellence (CoE)
- Knowledge sharing within and between agile teams
- The evolution of agile frameworks
- ?

Please let me know if you would like to add specific agile topics to this series.

About the Author



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Henny Portman, owner of Portman PM[O] Consultancy and was partner of HWP Consulting, has 40 years of experience in the project management domain. He was the project management office (PMO) thought leader within NN Group and responsible for the introduction and application of the PMO methodologies (portfolio, program, and project management) across Europe and Asia. He trains, coaches, and directs (senior) programme, project and portfolio managers and project sponsors at all levels, and has built several professional (PM(O)) communities.

Henny Portman is/was accredited in a variety of qualifications, including P3O, PRINCE2, MSP, MoP, PRINCE2 Agile, AgilePM, AgilePgM and AgileSHIFT trainer and an SPC4 SAFe consultant and trainer. He is a P3M3 trainer and assessor and PMO Value Ring Certified Consultant (PMO Global Alliance). On behalf of IPMA, he assesses mega and large projects for the IPMA Project Excellence Award. In addition to this, he is an international speaker, author of many articles and books in the PM(O) field, and an active blogger (hennyportman.wordpress.com/).

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