



CSA360

Case Study



Overview

CSA360 is an “All-in-one Dynamic Security Signal Measurement Solution” for security companies. During this study, we found that implementing Agile and Scrum methodologies improved our efficiency. Between Sprint 1 and Sprint 3, our team experienced a 34.55% increase in efficiency. The mean resolution time per ticket down by about 2 days 7 hours and 11 minutes. From Sprint 1 to Sprint 5B, we saw a 146.56% increase in the mean number of tickets closed each day.



Alicia Silhavy
arsilhavy@gmail.com
(317)213-9697
www.asilhavy.com

CSA360
info@csa360.app
www.csa360.app

CSA360 is an “All-in-one Dynamic Security Signal Measurement Solution” for security companies. Named after its predecessor Cirrus Security App, CSA360 features 16 modules within a custom “360 View” user interface (UI).

CSA360 was previously managed under a misinterpretation of Agile. We were near the end of Sprint 1 at the time I joined the team. Sprint 1 took nearly four months to complete, and, in the end, tickets were still without resolution. The sprint scope changed nearly every day as tasks were added directly to the sprint rather than to the backlog. By the end of the 112-day sprint, the

development team completed only 95 tasks.

When Sprint 2 began, I became aware that something was very wrong with the way the project was managed. The developers seemed burned out and had no say in what they coded. There was never a clear deadline or end, and if a deadline was passed, there were no consequences. The code was rushed, buggy, and not scalable.

One of the first issues I identified was in the sprint scope. Developers had no say in what they worked on, the tasks weren’t estimated with the developers (managers and the Product Owner

Sprint Comparison by Duration (Days) and Number of Tickets Closed

Fig. 1

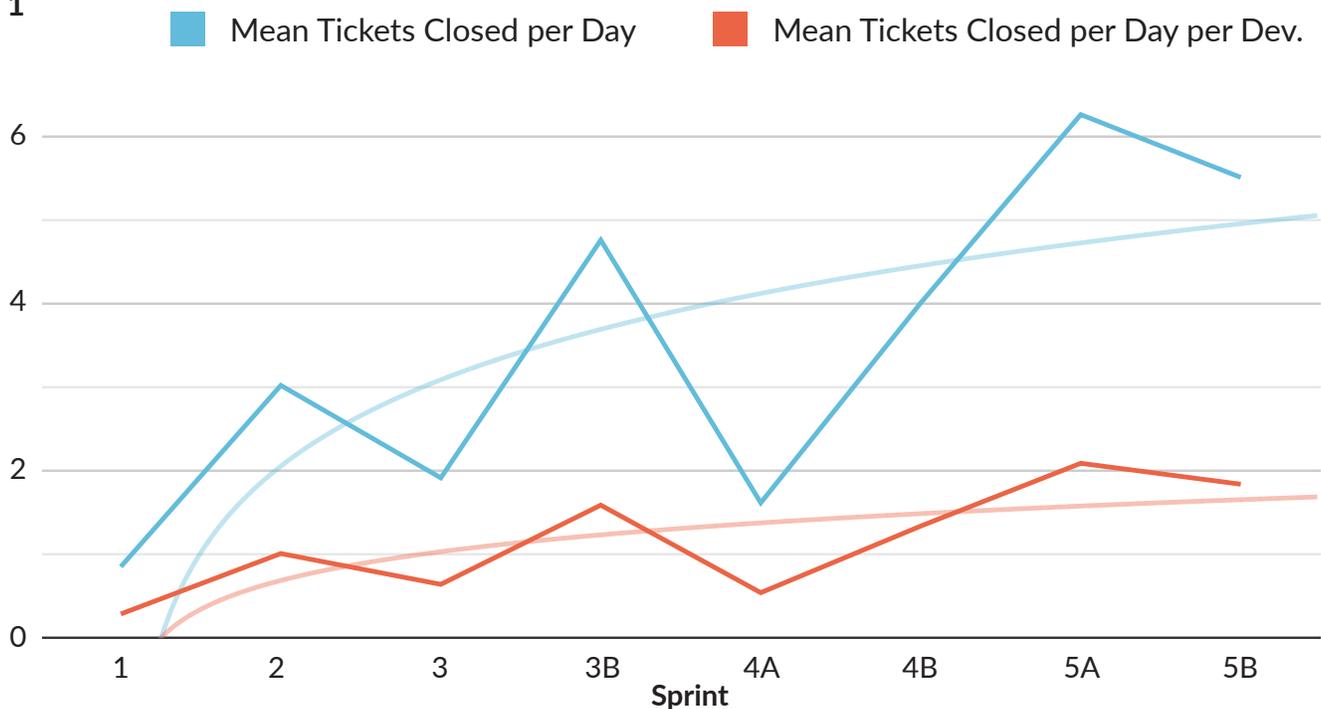


Fig. 1: A line graph illustrating the comparison between tickets closed per day and tickets closed per developer per day according to each sprint.

added estimations based on how long they thought it would take), and there were too many tasks in each sprint. Another scope issue we faced was the frequency the scope was changed.

Resolving these scope issues completely transformed our team. It took us from hundreds of tasks in Sprints 1 and 2 to 42 tasks in Sprint 3. I continued to shift our team towards Agile and Scrum methodologies by implementing daily stand-up meetings, retrospectives, backlog management, and time estimations. The development team was encouraged to ask for help and to ask for clarification on confusing tickets. The changes facilitated a total shift in team communication.

The combination of a controlled scope, properly utilized project management tools, and constant communication skyrocketed our team's success. For this study, our team's efficiency was measured by counting all tickets closed for a given sprint (all Tasks and Bugs with a resolution of Done) and dividing it by the number of days in the sprint. After that, we divided by the number of developers (three) to give us the mean tickets closed per day per developer.

Sprint 1, which lasted 95 days and contained 237

**Mean resolution time
per ticket ... decrease[d]
by about 2 days 7 hours
and 11 minutes.**

tasks, had a mean .85 tasks closed per day, or .28 tasks per day per developer. Sprint 3B, which lasted 20 days and contained 95 tasks, averaged 4.75 tasks closed per day, or 1.58 tasks per day per developer. Between Sprint 1 and Sprint 3, our team experienced a 34.55% increase in efficiency. The mean resolution time per ticket went from 3 days 4 hours and 14 minutes to 5 hours and 3 minutes -- a decrease by about 2 days 7 hours and 11 minutes.

Fig. 1 illustrates that although the improvement isn't consistent, the trend is positive and our efficiency is improving. This growth doesn't come without bumps in the road: Sprint 4A averaged only 1.61 tickets closed per day while its surrounding sprints had a mean of 4.38 tickets closed per day. There are many reasons why this may have occurred: maybe we weren't sticking to our usual strategies, maybe the tasks at hand were harder than usual, or maybe the tickets were

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larger. Despite that, we got back on our feet with a record high for average tickets closed per day in Sprint 4B.

Fig. 1 specifically reveals significant increase in efficiency. From Sprint 1 to Sprint 5B, we saw a 146.56% increase in the mean number of tickets

closed each day. On a smaller scale, from Sprint 1 to Sprint 3B, we saw a 139.4% increase in efficiency. If we were to continue the logarithmic trend in Fig. 3, by Sprint 9B, we will theoretically close 6.18 tickets per day. Although such a number will likely not be achieved due to our team's human limitations, it is a promising goal to work towards.

At its start, CSA360 was managed under an amalgamation of Waterfall, Agile, and Scrum. Changing to a more strict Agile and Scrum framework has expedited our progress significantly. Going forward, we expect to see more growth from the team to create both a healthy work environment and a successful product launch.



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