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Spotify: Waterfall or Agile

Spotify is a music streaming service that can be downloaded for free and provides access to millions of songs. What software development do they use and why? Well, Spotify, and many companies, are now using Agile.

“[Agile](https://www.seguetech.com/blog/2013/04/05/what-is-agile-software-development) is an iterative, team-based approach to development. This approach emphasizes the rapid delivery of an application in complete functional components. Rather than creating tasks and schedules, all time is ‘time-boxed’ into phases called ‘sprints.’ Each sprint has a defined duration (usually in weeks) with a running list of deliverables, planned at the start of the sprint. Deliverables are prioritized by business value as determined by the customer. If all planned work for the sprint cannot be completed, work is reprioritized and the information is used for future sprint planning” (seguetech.com).

The other software development methodology that companies can use is Waterfall. “Waterfall is a linear approach to software development. In this methodology, the sequence of events is something like: Gather and document requirements, design code and unit test, perform system testing, perform user acceptance testing, fix any issues, and deliver the finished product” (Seguetech.com). “The waterfall model emphasizes that a logical progression of steps be taken throughout the software development life cycle (SDLC), much like the cascading steps down an incremental waterfall. While the popularity of the waterfall model has waned over recent years in favor of more Agile methodologies, the logical nature of the sequential process used in the waterfall method cannot be denied, and it remains a common design process in the industry” (Airbrake.io).

Ultimately, there are a few key differences when deciding whether to choose Agile or Waterfall. How often do you want your customers to be involved? If you want the customers to be involved in the process a lot and to keep them updating throughout the development, than Agile is better. Agile lets the customer see the work delivered early on. They can make changes, if they wish, earlier than would normally be possible in Waterfall, since in using Waterfall, the customer only sees the development at large milestones. If you know the scope in advance, Waterfall is preferred over Agile and vice versa. If you want smaller, organized teams who are more synchronized and coordinated, due to their smaller size, than Agile is also better. In Waterfall, developers and customers agree on what will be delivered early on in the development, therefore making planning and designing more simple. And lastly, “waterfall reduces risk in Firm Fixed Price contracts by getting agreement up front while Agile works extremely well with Time and Materials or other non-fixed funding” (Seguetech.com). Neither Agile or Waterfall is always going to be the preferred software development, the decision must be based on how you want to run your company.

For Spotify, Agile is the best software development. Agile is great for many reasons, but one significant reason Spotify uses it over Waterfall is because Agile allows more interaction with the customer. “As work is completed, it can be reviewed and evaluated by the project team and customer, through daily builds and end-of-sprint demos. Agile relies on a very high level of customer involvement throughout the project, but especially during these reviews” (Seguetech.com).

This interaction between the customer and developer provides the customer with a product that is frequently looked at, and is tailored specifically throughout the process for the customer. This is great for companies with the time to look at the early stages rather than their product only being shown to them at milestones. This frequent interaction also allows the customer to feel more included in the process of development and lets the customer feel a sense of ownership in the development. While this interaction with the customer might seem like the preferred way for every company, it must be taken into consideration that companies without the time to be constantly involved in the development process will not like this. If they do not want their time to be taken up on the smaller things and just want to see the milestones, they will lean towards Waterfall instead of Agile.

Another positive to Agile, that Spotify specifically likes, is their smaller teams. Agile prefers smaller teams who stay synchronized and coordinated, as opposed to the teams in Waterfall whose team coordination “is limited to handoff points” (Jaxenter.com). This is especially important to Spotify because they pride themselves in their organisational culture and their teams work in the same location. “The thing that sets apart Spotify’s agile practices from other companies, aside from their creative naming structure, is the organisational culture behind the framework. While a good amount of variation exists in the processes used by individual teams, Eriksson states that their specific workflow proves the existence of a largely coherent and consistent engineering culture which is shared throughout the organization” (Jaxenter.com). Each team for Spotify has the ability to design, develop, test, and deploy, and they each have a specific mission. The teams can do these tasks by themselves, and since they are so organized, this leads to trust. As a result of the trust already in place due to the high level of organization, Spotify gives their teams the freedom to act independently. Joakim Sundén, who works for Spotify said, “What is the best thing about working at Spotify? “What is the most challenging thing about working at Spotify? The answer for both questions is the same: Autonomy.”

Spotify chooses Agile for a number of reasons like staying connected with each other face to face, keeping the customer involved and updated, and keeping everything simple and organized within smaller teams. Spotify has succeeded thus far using the Agile method and kept things running smoothly, much of which can be derived from their efforts in sticking to Agile’s preferred steps and hard work.

Works Cited

Lotz, Mary. “Waterfall vs. Agile: Which is the Right Development Methodology for Your

Project?” *Seque Technologies*, July 5, 2013, https://www.seguetech.com/waterfall-vs-agile-methodology/

Vlatko, Natali. “How Spotify does Agile.” *JAXEnter*, October 21, 2015,

https://jaxenter.com/how-spotify-does-agile-121651.html

Powell-Morse, Andrew. “Waterfall Model: What Is It and When Should You Use It?” *AirBrake*

*Blog*, December 8, 2016, https://airbrake.io/blog/sdlc/waterfall-model