# Understanding the feedback in ‘The Feedback Loop’

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## What is Feedback?

Feedback occurs when the return of information concerning the results of a process or activity takes place (http://www.thefreedictionary.com.). This event is part of a chain of cause-and-effect that forms a loop onto itself. Feedback comes in two forms: good feedback and bad feedback. Without feedback, the Agile process of inspection and adaption could not occur. An Agile process thrives in an environment with constant change. Because of this variability, adaptation and adjustment points are made on a regular basis. If we can shorten the amount of time elapsed between these calibration points, then we can more quickly adapt to these changing realities. In short, this is the feedback loop in our process and environment.

## Types of Feedback

There are, however, different forms of feedback, which are listed here for the reader’s reference and throughout:

1. **Communication feedback** (e.g., onsite customer, open team workspace, ubiquitous language)
2. **Technology feedback** (tools we use to give us quick feedback, like Cruise Control, mocking,

BigVisibleCruise, CCtray, Resharper, TFS real time compilation/warnings, and confirming that we use the right technology)
3. **Requirement feedback** (when a customer need realizes in a demo or the production environment)
4. **Market feedback** (to see how the market reacts to a new story/feature/module, frequent and numerous deployments)
5. **Analysis, design and coding feedback** (e.g., pair programming, whiteboard mockups, code reviews)
6. **Defect and testing feedback** (the quicker we find out about bugs, the quicker we can fix them, deploying often and always, test driven development)
7. **Operational feedback** (process, methodologies, practices and how to improve them)

The quicker we can get these forms of feedback from the source, the faster we can validate our progress and adapt to the information received.

> *A company's ability to deal with change and adapt accordingly to changing conditions will improve its competitiveness in the marketplace. Companies that struggle with a slow feedback loop will find themselves caught up in trying to solve problems that have already changed or are not important anymore.*

## Effects of a fast feedback loop

Having a fast feedback loop allows dominance of a company during market changes. For example, one of our clients using our health and safety management system had a deadline for submission of reports. Approximately 800 companies assigned to each performed various tasks and submitted reports showing the work completed. There were some features and latency problems that the client wanted to be fixed, and the deadline was one week away. We were able to get quickly the high-priority features added, and latency issues resolved three days into

the week using our engineering practices, automated testing, and automated deployments. We went live before the deadline to get much-needed feedback on our changes in a real production environment. If we had waited until after the deadline, we wouldn’t have obtained the actual feedback from the end users re the added features, nor the feedback from an environment production perspective, since the client wouldn’t be using the system until the next deadline, which was months away. Using this feedback from deployed features in a production environment allowed us to make more improvements so that the next period time would go even more smoothly.

## Summary

Being able to perform a full cycle of development from client request to production deployment in a few days helps ensure the company can quickly adapt to changing market conditions.

***(This is an excerpt from the mini book series “Agile from the Trenches: The Feedback Loop”)***