

The Importance of Continuous Tracking

Developing early software project estimates is an industry best practice, but creating those estimates is only half the battle when it comes to improving productivity. By continually keeping the pulse of a project—measuring performance against estimates and adjusting when necessary—teams can gain valuable insight into their software development processes. This insight can be leveraged in future development cycles, leading to more efficient production and a better bottom line. Estimates are just the beginning. Project tracking, reforecasting, and post project review are three valuable strategies teams can employ to monitor the development process and improve outcomes.

Strategy #1: Project Tracking

Current popular methodologies, like agile, promote metrics tracking, specifically with respect to size and velocity. But all developers, agile and otherwise, should take care to ensure that they're tracking the correct metrics, which can include:

- **Cumulative size produced:** this can include source lines of code, agile stories, screens and so forth;
- **Monthly effort:** the number of person months or person hours spent;
- **Staff:** the number of full-time equivalents billing time to the project; and
- **Defects:** how many errors are discovered.

Data can be collected weekly or monthly, depending on the project's schedule, and, to gain the most insight, should be compared with the project's original estimates. Then, teams should try to figure out why deviations from estimates are happening. Is there an imbalance between management and developers, leading to a lack of skilled employees needed to complete the project? Has the team introduced new tools, methods, or team members? It can take time to ramp up on production if any of these variables have been introduced.

Strategy #2: Reforecasting

Software development cycles are rarely executed exactly to plan. Team members may have been pulled away to other projects, a large number of errors may have been found, or other variables may have been introduced. Any one of these situations will cause a deviation from a project's original estimate. When teams examine metrics and notice that deviations are happening, it is best to reforecast, or re-estimate the project.

Certain project management tools use metrics to automatically recalculate project roadmaps. These tools can give new forecasts based on the data the team provides. It is certainly more advantageous to correct deviations early, rather than waiting until the end of a development cycle and risk missed project commitments.

Whether teams use prepackaged tools or their own estimation techniques, they should inform stakeholders of revised project plans as they develop. Reforecasting provides a window into the project's progress at regular intervals. As more data is collected and forecasts are continually refined and communicated, project transparency and accountability also improve.

Strategy #3: Post Project Review

When a project is finally finished, teams are usually ready to power down, close the books, and take a break before diving into the next big thing. The project's level of success is often perceived as somewhat irrelevant—team members usually want to move on quickly.

However, taking time to do a post-project assessment is a great strategy to continuously improve team outcomes. Just like project tracking and re-estimating, post-project assessments provide the opportunity for a collective pulse taking.

In its most basic form, a post project review gives team members a chance to evaluate what went well and what could be improved upon for the next project. Post-project assessments also give teams chances to assemble final sets of metrics that, when examined with data previously collected on the project, may provide more accurate estimates for projects going forward.

The Bottom Line: A Better Production Cycle

Strategies such as project tracking, reforecasting, and post-project assessment all help team members refine project estimates on the fly. When updated estimates are shared with stakeholders, communication among project team members and accountability are improved.

Over time, the process of collecting data, updating trends, and using trends to estimate future projects creates a circular process that creates more refined estimations over time and across multiple project cycles. More accurate estimates can translate into happier stakeholders, a more judicious use of resources and, ultimately, a better bottom line.