



WHITE PAPER

6 TIPS FOR MAXIMIZING YOUR AGILE KPIs

In order to make informed technology decisions for your organization, you have to measure the performance of your software development. Read more to find out tangible steps for IT and business managers to understand Agile KPIs and choose the right ones for their business.

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If you have embraced Agile in your organization, pat yourself on the back. You've chosen a savvy software-development process, which will be sure to yield great value. But are you sure you're using the right key performance indicators (KPIs) to truly make the most of your Agile methodology? These are what will help you measure the performance of your digital product development process and give you the data you need to make sound business decisions. Here are six tips to help you make the most out of your Agile KPIs.

Measure For Outcomes As Well As Outputs

There are primarily two types of Agile KPIs used to measure and manage software development. The first are process outputs such as velocity, cumulative flow, and burndown. These are used to manage process to increase predictability and allow for improved planning. The second type of KPIs are delivery outcomes that measure business value. These can be more difficult to measure and are often ignored. Examples are increased brand awareness, unit sales, revenue tied to the release of a new feature, reduced risk to test proof of concept, and the reduction of operational costs from building a new software capability.

It's not uncommon for organizations to focus only on process outputs, these are invaluable indicators and should be proactively managed to improve process predictability, but they do not give you the full story. You need measurements that help you evaluate and manage the business value of the outcomes delivered by your development team.

Managers tend to measure what is easily identifiable. This is called the Streetlight Effect, which is based on a story about a man mistakenly looking for his keys under a streetlight because that's where the light is. Your challenge is to look not just at the easily identifiable output KPIs but to get the full story you need to identify KPIs that measure the delivered outcome even if they are harder to locate (not under the streetlight).

An example of the Streetlight Effect is when managers look at KPIs from past development efforts where experience has shown low output KPIs (ex: velocity), which historically indicate that the targeted outcomes won't be achieved. Managers will then make the mistake of equating high-process output KPIs with achieving high business value, which is not always true. Without identifying KPIs of the delivered outcomes, business value cannot be measured.

You have two challenges: 1 – Identify Agile KPIs for process outputs and delivery outcomes and 2 – hold yourself accountable to them. The good news is Agile KPIs are not difficult to use as a means to measure and manage the development of your software product. When used correctly, Agile KPIs will help you improve process predictability and increase the business value of your products.

Abandon the Waterfall Measurement Mindset

In traditional waterfall software development, the primary KPIs have three elements: delivery of the planned scope within the planned timeframe with the planned cost. This is considered the triple constraint, or the iron triangle, with quality often displayed at the center. These waterfall KPIs focus on processes over a long period of time, not business value, and they do not provide time to adjust the development process to respond to end-user demands and market forces.

Often on waterfall projects, the completion of the planned scope may not provide business value when delivered. Worse, new requirements that provide a higher business value are put aside in order to meet the planned cost and timeline.

A study from the Standish Group showed that 21 percent of waterfall software development projects were canceled mid-project, or, while considered successful by delivering production-ready software within the constraints, offered no business value and was not used in production.

Using Agile KPIs, a company can adjust scope and development processes in short-development increments. This provides greater flexibility and strategic focus. Agile KPIs will allow you to make necessary scope changes that align with market forces, user demands and changes in technology. The KPIs provide data to allow you to adjust process and outcomes before the start of the next increment, which will help you improve development process and increase business value of the outcome.

Monitor Your KPIs On an Ongoing Basis

Business value benchmarks such as quarterly and yearly revenue goals decreases in operational costs and reduced risks should be continually measured and adjusted to align with your product road map. New features and capabilities in the product road map should be business-value driven and based on analysis of the current product, using tools like end user surveys and the Net Promoter Score. Your road map should be forecasted for the next three to six months and adjusted every two to four weeks based on data from end user demands and market forces.

Get To Know These 5 Primary Process KPIs

Here are five primary process KPIs that can be used for quantifiable analysis:

- **Cumulative Flow.** An area graph that depicts the quantity of work in a given state, showing arrivals, time in queue, quantity in queue, and departure.
- **Velocity.** A measure of the amount of work a team can tackle during a single sprint and the key metric in scrum. Velocity is calculated at the end of the sprint by totaling the points for all fully completed user stories.
- **Burndown.** A graphical representation of work left to do versus time. The outstanding work is often on the vertical axis, with time along the horizontal.
- **Escaped Defects.** This is a process that finds defects that escaped from the quality assurance team.
- **Automated and Manual Test Coverage.** Can be used to assess on-time delivery, product quality, customer satisfaction and visibility.

Use Agile KPIs To Inform Future Development

A company could have honed their development processes to provide quick and efficient outputs, but the outcomes delivered offer little business value. That's what you want to avoid. Agile KPIs pull output and outcome data from the development processes to identify areas for analysis, using such indicators as gaps, lags, spikes and fluctuations across sprints. These indicators point to stability of the development process, the health product road map and the strength architectural runway.

Make Your Delivery Measurements Count

Taking a quantitative analysis that include delivery outcome KPIs makes the business value clear. Delivery outcome KPIs are business value indicators provided by the product manager with guidance and input from the product owner. Business value indicators are typically calculated at the epic level by the product manager and product owner using different techniques from Planning Poker, which delivers a swag number to Return on Investment, to a more precise number using Net Present Value. A few examples of data points used in the business-value calculation are page views promoting brand awareness, increased revenue expected from a new feature or capability and reduced user complaints. For modernizing a legacy system or building out an infrastructure, you can measure the forecasted operational cost savings for improved system reliability, availability, maintainability, security and scalability.



How do you gauge success? Are you measuring the correct things? Agile KPIs can help you answer three essential questions:

- Can I learn something about the business value planned in the product road map from these metrics?
- Can I rely on the predictability of the development process to make business decisions?
- Do the chosen KPIs align with my organization's mission?

When implemented effectively, Agile KPIs help you develop trust in your organization. That's the core of the Agile philosophy. After all, as the old adage says, "You can't manage what you can't measure." Agile KPIs can help you learn fast, adapt, and accelerate your business toward growth.

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