eGuide







What Does It Mean to Have an Agile Mindset?



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8 Keys to Transforming into a High-Performance Agile Team



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You're sold on the benefits on agile software development: higher product quality, increased customer satisfaction, and earlier and more predictable delivery. But self-organizing teams are a key principle for all agile methodologies, so where does that leave managers? The truth is that leaders are still very necessary for agile teams. This eGuide provides resources to help you get your team to embrace an agile culture, methods and metrics for transforming your already agile team into a high-performing powerhouse, and critical ways you can provide leadership to your self-directed team.

### In this Leadership for Today's Agile Team eGuide

#### What Does It Mean to Have an Agile Mindset?

There has been lots of talk about the "agile mindset," but what does that mean? It does not merely encompass the skills that make a successful agile team member, but rather what drives a person to want to be part of an agile team. It should include the quest to learn (even when you fail) and leveraging what you learn to continuously improve on what you do.

#### The Role of the Agile Coach

One of the new roles introduced by agile software development is that of the team coach. Until agile came along, coaches were confined to the executive suite or the sports field. As with any new role, it will take awhile before it is fully understood and scoped. Agile teams can—and do—exist without the coach role, but such teams do not necessarily achieve peak performance.

#### 8 Keys to Transforming into a High-Performance Agile Team

Following an agile process alone will not guarantee your teams will be high performers. Teams undergo various challenges while transforming into a highly productive team. This article looks at the areas where teams generally struggle in adopting agile principles and the typical root causes for those struggles, as well as eight behaviors that can help drive teams toward greater success.

#### **4 Balanced Metrics for Tracking Agile Teams**

Whatever your feelings on metrics, organizations will expect them for your team. You don't want to measure only one aspect to the detriment of other information, but you also don't want to measure too many things and scatter your team's focus. Here are four metrics that balance each other out and help gauge an agile team's productivity, work quality, predictability, and health.

#### The Role of the Test Manager in Agile

In traditional software processes, test managers are responsible for all management aspects of their team. Agile, however, is self-directed, so teams handle all the usual duties. Still, there is a role for test managers in agile, and it's much more strategic than it was before. Here are the opportunities for the role.

#### Scrum Isn't the Only Path to Agility

Scrum can really help a team to become more agile. But that doesn't mean it is the only way for a team to become agile. Agile is all about self-organizing teams collaborating to find what works for them, so if a nontraditional approach helps your team get started, then you're just forging a new path to agility.

#### **Building a Culture of Continuous Improvement**

A culture of continuous improvement means you are open to improving how you build and deliver. You don't accept the status quo; you choose how to work and feel empowered to change it if it no longer makes sense. Kevin Goldsmith gives some ideas for frameworks to adopt in order to move toward this people-first culture.

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# What Does It Mean to Have an Agile Mindset?

By Leanne Howard

#### **Definition of Agile Mindset**

A mindset is a set of assumptions, methods, or notations held by groups of people that is so established that it creates a powerful incentive within these people to continue to adopt or accept prior behaviors, choices, or tools. Simply put, it is a way of thinking about things that those in a group share or have in common to the point that it becomes a way of life.

There are several characteristics I believe make up the agile mindset:

- Positive attitude
- Thirst for knowledge
- Goal of team success
- Pragmatism
- Willingness to fail

To me, an agile mindset is "There is no failure, only feedback." It's about taking everything as lessons, adjusting actions according to the feedback, and proceeding toward desired outcomes, resulting in continuous improvement.

The ideal is for everyone to have what the team decides is its collective agile mindset, but that all starts with the individual. I have worked with some great people who I think embody this mindset. They attack their work with a positive attitude, providing suggestions to overcome obstacles. They ask questions to understand what is in the best interests of the business, often coming up with innovative solutions as they experiment. They have realistic and practical attitudes focused on helping the team succeed.



When looking for people to be part of my agile teams, these are the mindsets I look for. It is difficult to change people's intrinsic personalities and ways of thinking, so it is important to get the right selection of people for your team.

#### **Positive Attitude**

There are always challenges on projects; people are human and make mistakes, and everything is not always going to go well. What is most important is how the team members deal with these situations. As issues are identified, they need to be dealt with in a timely manner with a positive attitude. In most cases something that may look negative can be turned into an opportunity for improvement. I expect my team to recognize problems—or, even better, potential risks—quantify them, and come up with suggestions for solutions. For people new to agile, self-management is often difficult. This is





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where keeping a positive attitude is so important. Some of the things they try may not always work, but they should not give up. It is easy to become downhearted, but instead, team members should keep in mind that they have learned something.

#### **Thirst for Knowledge**

Agile is about learning and adapting. Your goal should be to gain as much information possible in order to deliver a quality product—you should not make assumptions that what you are doing is best for the client. With the fast pace of business requirements and new technologies seemingly appearing every day, industry professionals need to keep abreast of changes.

This is particularly true for agilists, who often are challenged to think outside the box to get tasks done within the tight timeframes of an iteration. Participation in meet-up groups and reading technical articles are good sources of new ideas.

A person with an inquisitive mind asks questions to help the team gain a common understanding of user stories. They are the people who adapt best to the use of experience-based techniques such as exploratory testing, where you start with a simple plan, execute tests, learn about the product, and then make informed decisions about what to explore next. They do not rely on lots of documents; if they do not understand something, they find the right person to give them the answer.

A good technique for gaining knowledge is the "five Ws": asking who, what, when, where, and why. When you ask a question people may not give the real answer at first—they will give you the symptoms of the problem, and it can take a number of probing questions to understand the underlying issue.

Testing is now the responsibility of the whole agile team, so everyone needs to be eager to gain knowledge about the product in order to improve quality.

#### **Goal of Team Success**

Agile is about the success of the team, not individual success or heroic behavior. It is more important for the team to succeed than for the individual to have completed her tasks.

A good example of this is when team members are working on user stories of varying priorities and realize that they are not going to be able to complete a higher value story by the end of the iteration. Those who were working on lower value stories will swarm together and offer to help to complete the higher value story, even if they do not have the exact skills to complete the tasks left.

Being prepared to move outside of your comfort zone in order to help on a particular project for the overall good of the team is a valuable trait. Likewise, it it important for team members to be willing to train others in areas where they may not be confident. If there is a culture of finger-pointing, people are less likely to volunteer to work on an important task if they are not an expert in that area.

Taking the time to coach others or walk through the user story design with those who are less familiar with the coding in that function is a sign of a good team member. This shares knowledge and lessens key person dependencies, plus the whole team having a common understanding of what the story involves leads to more accurate estimates and planning for sustainable commitment.

#### **Pragmatism**

Quality is an important facet of agile. However, everyone may have a different view of what "quality" means. It is critical that the team understands what is important to the business and then deals with things sensibly and realistically in a way based on practical rather than theoretical considerations.

Instead of making excuses, team members need to provide options. Don't say it can't be done; explain what can be done.





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You can't force change on people. Instead, show them how the future might be and help them participate in creating it. The team needs to be willing to help each other to succeed on the higher priority items, even if it means you will not complete your individual task. Often, if team members see someone "walking the walk," they understand that it would be beneficial for them to do the same.

When faced with an impossible problem, identify the real constraints. Ask yourself: Does it have to be done this way? Does it have to be done at all? Once you start breaking a problem down, it can seem easier to resolve.

If there is a defect, it doesn't really matter whether it was your fault or someone else's—it is still your problem, and it still needs to be fixed. While you are in that piece of the code it is often quicker to just fix it rather than document or discuss it. Be pragmatic about the greater good of the team and the product.

This is often where I think common sense comes into play (although it seems to not be that common). For example, do not spend hours compiling a status report when what your customer simply wants to know is whether the project is on track and a simple explanation if it isn't. Find out what your customers really want instead of assuming and potentially wasting time, even if it has always been done that way in the past.

#### Willingness to Fail

Some people say that the best way to learn is to fail at something. I am not sure I agree with this totally. I want people in my team to have done as much research or questioning as possible beforehand and to ask for help from someone with more knowledge in that area to guide them so that they fail less.

Having said that, not everything is going to work well all the time. If it is a choice between having a go with the possibility of failure and not having a go at all, then I want them to feel comfortable to try.

# Don't be afraid to question the norm if something is not working as well as it could.

While I want my teams to challenge themselves without the fear of reprisal if they fail, there are some important lessons:

- Learn from this experience and, given a similar situation, do not make the same choice leading to failure
- Understand that it did not work in this situation but it may in others, so you have a new technique to add to your toolkit
- Feel empowered to talk about this failure so that others may learn from it
- Do not hide the failure; be open with your team

Innovation often comes from trying things that you may not have thought of carrying out during your normal tasks. For example, my team was using a mandated configuration for a tool that was just not working for them. They decided to change some of the workflow, trying different configurations, which eventually saved them considerable time entering data in a more logical flow. Don't be afraid to question the norm if something is not working as well as it could.

#### **Continuous Improvement**

My take on the agile mindset is that it should include the quest to learn (even when you fail) and leveraging what you learn to continuously improve on what you do.

The agile mindset is an attitude that equates failure and problems with opportunities for learning and invaluable feedback. In other words, it's a belief that we can all grow stronger over time if you put in effort to increase your knowledge and support the team, and the organizational culture gives you the space to do it. Though there are undoubtedly many definitions of an agile mindset, these are all characteristics that would be good for any agile team member to have. {end}









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## The Role of the Agile Coach

By Allan Kelly



One of the new roles introduced by agile software development is that of the team coach. Until agile came along, coaches were confined to the executive suite or the sports field. As with any new role, it will take awhile before it is fully understood and scoped. Agile teams can—and do—exist without the coach role, but such teams do not necessarily achieve peak performance.

Reports from Yahoo! suggest that coaches can make a significant contribution. In this study, Scrum teams without coaching support increased their productivity by 35 percent, while those with coach support recorded 300 percent or greater improvement.

#### What Does a Coach Do?

For some people, the title "agile coach" is self-descriptive, but let me offer a definition: An agile coach helps a teams or individual adopt and improve agile methods and practice. A coach helps people rethink and change the way they go about development.

The coach role is part embedded trainer and part consultant—specifically, an adviser. Even the best agile training courses cannot cover every detail or eventuality a team will encounter. The coach is there to continue the training after the formal classes are over.

Having an on-site coach helps team members put their training into action. Too often, people attend training, think it's good stuff, and then fail to incorporate their new learning into their daily work. This is particularly true when the organization sends mixed messages about change.

The coach can help teams apply agile and lean thinking to the specific environments and impediments they face. Working as an adviser, the coach can help the team adapt the methodology to their situation, and help them challenge the existing environment.

Taken together, these two sides make the coach an effective change agent—someone who is both motivating change and making it happen. That an organization is prepared to spend money on a coach demonstrates that they are serious about making change happen.

So as well as helping the team execute the agile vision, the Coach may also help motivate the team to that vision by painting a picture of how the agile world works by telling stories and providing explanations.



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While every agile coach brings their own approach to an assignment, there are, broadly, three types of coach.

The first is technical. Such a coach works mainly with those cutting code and sometimes becomes fully integrated with the developers.

Technical coaches are likely to be found pairing with developers to help them apply test-driven development, support developers in refactoring work, and help improve the continuous integration system or other activities that are close to the code.

Technical coaches are experts in what they do, and they aim to both transfer their knowledge and enthuse team members to try new approaches and techniques.

The second type of coach is also an expert who aims to transfer their knowledge. However, the focus is not on technology, but on process, management, and requirements. These coaches work with project managers, line managers, business analysts, product managers, and others who are responsible for making the work happen.

Rather than working with the code, coaching tends to happen in meetings and one-on-one sessions. There is a greater focus on facilitating events that help create change and improvement.

For example, in addition to moderating stand-up meetings and planning meetings, I normally run retrospectives and "future-spectives," an event that applies many of the same ideas and techniques as a retrospective but is used to kick off a new project or agile transition.

When working with managers, there is more to coaching than simply knowledge transfer. It is much more about helping people rethink their assumptions and mental models. Many managers have experienced career success with other development modes, so they may perceive agile as a threat. Here, coaching gives way to the third type.

The third type of coach may work with everyone in the team, but mostly with managers and analysts. In this mode, the coach drops the expert persona and focuses instead on helping individuals and teams solve their own problems. To do this, the coach takes on a nondirective approach, declining to provide direct advice and recommendations. The coach may or may not be an expert in the field, but they assume the "coachee" is the expert, so the coach helps facilitate their learning.

The diversity of coaching roles makes it difficult for one person to fill all of them. A technical expert will find it difficult to switch to a nondirective mode, and team members may be confused when an expert starts throwing questions back at them. Even if one individual can cover all the bases on all but the smallest projects, there is unlikely to be enough time to do each role justice.

Rather than working with the code, coaching tends to happen in meetings and one-on-one sessions.

#### **Longevity of Coaching**

However a coach works, and whatever approach they take, the coach needs to avoid creating a learned dependency. This happens when the team comes to depend on the coach, and without them, the team falls back to their old ways. Coaches need to be able to withdraw when the time is right and let the team continue.

While many companies will have their own coaches on staff, and some will work with teams day in, day out for months or even years, there is a lot to be said for using external coaches and limiting the period of coaching. Internal coaches may start with the advantage of knowing the team and domain, but external coaches benefit from bringing a fresh mind and new perspective. This allows them to challenge assumptions more easily and suggest alternative approaches.





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Some coaching activities, such as running retrospectives, can become stale and formulaic over time. Changing the facilitator can inject energy and new ideas.

#### **ScrumMaster or Coach?**

I am frequently asked, "What is the difference between a coach and a ScrumMaster?" Indeed, there may be very little difference if a ScrumMaster decides to play the role from a coaching perspective, but this is not always the case. Some organizations see ScrumMasters as thinly disguised project managers, and in these cases, there are several differences between coaches and ScrumMasters.

There are perhaps two main differences between a ScrumMaster and an agile coach. The ScrumMaster is tasked with ensuring the team follows the Scrum process and rules. An agile coach's remit is somewhat wider, with a greater emphasis on the change agenda.

As such, the second difference is one of duration. All Scrum teams should have a ScrumMaster who works with the team in every sprint and stays with the team for the duration of the work. An agile coach may stay with a team, but they may also move on, or they may stand back over time.

On an assignment last year I coached several teams at one company. Initially I started with some training and by walking each team through the agile ceremonies: planning, daily meetings, retrospectives, etc. As the teams became more familiar with the activities, I

reduced my involvement and allowed team members to take over.

Again, this approach casts the coach as a change agent. It may be that teams need different coaches at different stages of their development: a technical coach to help the developers master test-driven development, a second coach to lead the team through early adoption, and a third to refine the processes and practices later.

#### **Agile Is in the Changes**

Much of the coach's work is about changing individuals' mindsets, mental models, and shortcuts they have built up over years. As my fellow coach Niels Malotaux put it recently, "Coaching is about resetting people's intuition."

There are hundreds, even thousands, of small decisions made every day during software development. These decisions are based on people's mental models of how development works or doesn't work. Part of the coach's role is to help people unlearn many of these models and trade them for models based on agile values.

Cumulatively, these many small decisions are more important than the few big decisions made occasionally. Due to their size, you usually know when big decisions are being made, but small ones are made without thinking. It is no use switching to agile if you keep making the small decisions based on some other model.

The architect Mies van der Rohe once said, "God is in the details," and so it is with agile. It is the small decisions that can't be seen in advance that often derail work. It's the coach's job to help spot the small decisions and ensure that agile principles are applied.

Part of the reason I prefer working as a coach with a team rather than as a trainer is because you see the changes play out over time. As a trainer, yes, I deliver training, but when I'm gone, do people use it? When I'm there as a coach, I walk people through the details, and I see the change happen. **{end}** 







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## TECH WELL"

# 8 Keys to Transforming into a High-Performance Agile Team

By Uday Varma

In this age of digital transformation, every organization is working to build teams that produce predictable outcomes and deliver software that meets user demands and timelines. Following agile methodologies and practices has become the norm for such teams to meet these business requirements. Every business stakeholder expects their teams to exhibit high performance and frequently release working software to production.

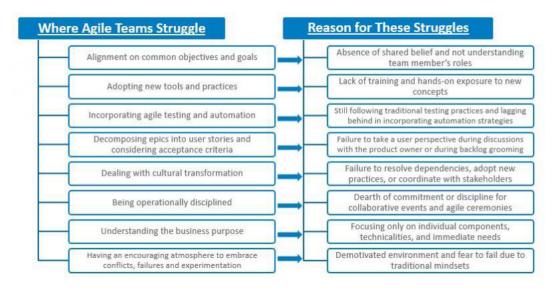
But following an agile process alone will not guarantee your teams will be high performers. Teams undergo various challenges while transforming into a highly productive team. Let's look at the areas where teams generally

struggle in adopting agile principles and the typical root causes for those struggles, as well as the behaviors that can help drive teams toward greater success.

#### Where and Why Agile Teams Struggle

There are many areas where agile teams struggle while working to become high-performance teams. Issues with a change in culture, effectively utilizing individuals' expertise and experiences, adopting to new ways of working, socializing and collaborating with stakeholders, and understanding the business can all be challenging.

The following table depicts the typical areas where teams struggle in their journey.



Let's look into each of these areas in more detail.

#### **Alignment on Common Objectives and Goals**

Absence of a shared belief in the team and a lack of understanding of each team member's role will hamper the team's speed. Roles that are still aligned with traditional functional silos will often not be on the same page as other team members and will not be effective.

#### **Adopting New Tools and Practices**

With the evolution of agility in software development activities, new tools and practices are necessary for efficiency. Application lifecycle management (ALM) tools such as JIRA and Rally, continuous integration (CI) tools such as Jenkins and Bamboo, distributed software





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configuration management (CM) tools such as Git and GitHub, and lightweight test automation tools such as Selenium and JUnit all become critical.

New practices such as test-driven development (TDD), behavior-driven development (BDD), and DevOps also are introduced during this transformation. A lack of formal training and hands-on experience with these agile tools and practices will often result in a team that struggles to meet its commitments and to reach its full potential.

#### **Incorporating Agile Testing and Automation**

Teams often struggle with how to build and test software in concert, as they are used to following traditional testing practices that often start testing after code is frozen and automation is only done as an afterthought. But following these traditional practices results in delayed feedback to the developers about the quality of their code, as

testing gets deferred to subsequent iterations. It can also lead to delays in deploying tested features into downstream test environments.

### **Decomposing Epics into User Stories and Considering Acceptance Criteria**

One of the most important activities in agile planning is properly decomposing epics into user stories and estimating their size. Teams often lack the focus and ability to scrutinize requirements from a user-centric perspective, resulting in ambiguous user stories that are difficult to properly implement and test within the time the team planned for.

#### **Dealing with Cultural Transformation**

While teams are doing their best to transform to agile, there are organizational and cultural aspects that impact their performance, such as resolving dependencies with other teams in the same program or portfolio, new release management processes that must be followed, coordination with multiple stakeholders on priorities and feedback, and learning new communication and interaction channels. Not addressing these cultural challenges often results in pseudo-agile behavior where agile principles are followed in name only.

#### **Being Operationally Disciplined**

Being operationally disciplined means adhering to a set of well-defined, proven, and well-thought-out processes and consistently performing them correctly. In agile, this means conducting agile ceremonies diligently, such as having periodic meetings and discussions with stakeholders for planning, user acceptance and sprint reviews, sprint retrospectives, team brainstorming sessions, and daily Scrum meetings. These collaborative activities demand a lot of commitment and discipline from the team members in order for them to be productive.

#### **Understanding the Business Purpose**

It is very important for every member of the team to understand the business purpose of what they are working on and what impact new





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features will have on the users of their software. Often, the tendency of a new agile team is to focus only on their individual software component or feature, the technical details in developing it, or the immediate delivery need, while ignoring the bigger picture of the project. This results in teams that veer off track, away from customer value and needs.

#### **Having an Encouraging Atmosphere**

Agile is not only about following certain practices and ceremonies or using automated tools and technologies to speed software releases. It also demands that teams have no fear of failure, can deal with lots of unknowns, and can manage and embrace conflicts. It is also about the ability to try out innovative ideas, experiment frequently, and fail fast if failure is going to happen. Lack of having a safe environment will lead to demotivated individuals who are afraid to try new practices and processes and will not produce innovative solutions.

#### **Becoming a High-Performance Team**

While coaching helps get teams on the right path, it's the team's responsibility to embrace agile principles and sustain the efficiency in their activities and effectiveness in their outcome. I have found that the following eight practices help a team become high performers.

#### 1. Aligning with Leadership Regularly

Agile teams should have regular interactions with the program sponsors or leadership and have a common understanding of project goals. Teams should understand their role in addressing the business objectives, and the entire team should speak with a "one-voice" approach when communicating with stakeholders.

If leadership asks the team to act in a way that does not align with agile principles, it is incumbent upon the team to respond in a unified voice that what is being asked isn't acceptable agile behavior.

#### 2. Sharing Knowledge and Experiences

Sharing new knowledge and experiences across all teams is critical

to getting your entire organization up to speed as fast as possible. By actively participating in team product demonstrations, showcases, and established agile communities of practice, organizational knowledge grows much quicker than if each team attempts to learn everything on its own. Sharing experiences frequently also builds relationships among teams and increases the likelihood of effective collaboration.

### 3. Adopting Test-Driven Development and Behavior-Driven Development

TDD is a development practice in which low-level unit tests are used to drive successful software implementation. BDD and ATDD (acceptance test-driven development) are similar practices for specifying expected software behavior for stories and use cases using tests. All allow the business, testers, and developers to collaborate on understanding the requirements and properly building and testing the right functionality. Embedding these practices into day-to-day activities of the team not only fortifies the quality of deliverables, but helps the team reduce rework and communicate what needs to be done more clearly.

Sharing new knowledge and experiences across all teams is critical to getting your entire organization up to speed as fast as possible.

#### 4. Defining User Stories and Requirements

The effective decomposition of epics into appropriate user stories is one of the most important activities for agile development. This not only helps provide clarity to the agile team on the requirements, but also aids them in estimating their work properly.





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A proven practice for effectively breaking down epics is to use a Three Amigos approach, where representatives from the business, development, and testing have collective conversations on deriving the behavioral aspects and acceptance criteria for every user story. Your entire team should also participate in backlog grooming sessions to share their ideas and define the guidelines for a definition of "done" to determine when a user story is ready to be picked up for development.

#### 5. Participating in Organizational Change Management

When an organization is undergoing transformational change, it is not only the responsibility of the management, but also the individual teams, to contribute positively to the process. Teams should consistently demonstrate their commitment toward achieving business goals through continuous collaboration with business stakeholders while helping to instill a high-performing agile culture in their team and overall organization. A key aspect of this commitment is delivery of promised functionality during each sprint.

#### 6. Practicing Good Collaboration and Communication

Achieving high performance within the team and software delivery process without strong communication and collaboration will be very difficult. Team must exhibit the behavioral aspects of discipline, close collaboration, and commitment with stakeholders during iteration planning, and be open to feedback during review and retrospective meetings. Availability of high-end infrastructure, such as video conferencing, messaging systems, and other collaboration tools, at the team's workplace will help distributed teams effectively collaborate and communicate.

#### 7. Having Systems Thinking and Mindfulness

It's very important that each team has a complete picture of the project and program within which they are working. To achieve this,

teams should develop a deep understanding of business domain, business rules, enterprise architecture, and applications of client organization and align this knowledge with the software modules they are working on. As much as possible, teams should not focus on optimizing their specific aspects of a larger program, but help the entire program optimize its efficiency.

### 8. Generating a Positive and Energizing Work Culture within the Team

If team members are not open with each other and with their stake-holders, there will be very little trust. Team members that trust others, are open-minded to feedback and suggestions, are cheerful, and encourage others will make it easier for all to express and articulate new ideas. These attributes can be spread among team members through activities such as discussions without agendas (e.g., lean coffee), celebrating small achievements, and constant inspiration from leadership.

#### **Making Agile Really Work for Your Team**

When transitioning to agile, teams undergo training on whatever methodology they'll be adopting, such as Scrum, kanban, or Extreme Programming. However, they are often not given as much help understanding the interpersonal dynamics necessary for agile to be successful. This is how teams fall into the habit of agile antipatterns.

To become a successful, high-performance agile team, it's important to identify and act on any interpersonal or cultural issues that may be standing in the way of true agility. By adopting the eight practices outlined above, your agile team can realize the benefits of improved communication, more frequent software releases, happier customers, and overall higher performance. {end}

To become a successful, high-performance agile team, it's important to identify and act on any interpersonal or cultural issues that may be standing in the way of true agility.









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# 4 Balanced Metrics for Tracking Agile Teams

By Joel Bancroft-Connors

There are as many was to measure a project as there are to build it. Unfortunately, many of these metrics are useless. Eric Ries calls them "vanity metrics" because they look good and make you feel good but offer little in the way of actionable value.

Whatever your feelings on metrics, at the end of the day, organizations will expect and want them. With the yardstick of "helping the team to self-reflect and improve" and the caveat "your mileage may vary," here are my four go-to metrics for an agile team, along with some experiences on their effectiveness.

#### **Four Interlocking Team Measures**

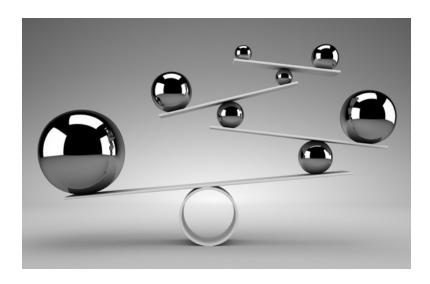
Why are there four? If you only measure one key metric, it is easy to get tunnel vision. Be it the teams focusing on just making the metric better (often through gaming the system) or management using the measure to drive all decisions, you can end up with a product or organization that looks good but is really driving off a cliff.

Likewise, with as many as ten metrics it is more likely that different parts of the organization will focus on different metrics, driving a wedge into the efforts to align the organization. Humans best handle three to five concepts at a time, so four main metrics seemed like the optimal dashboard.

#### **Cycle Time**

Cycle time is your direct connection to productivity. The shorter the cycle time, the more things are getting done in a given timebox.

You measure this from when work starts to when the feature is



done. In software terms, I tend to think of this as "hands on keyboard" time. Measuring cycle time is best done automatically via your agile lifecycle tool of choice, though even measuring with a physical task board will give you useful data.

#### **Escaped Defects**

This measure is the connection between customer satisfaction and the team. The lower the defect rate, the more satisfied the customer is likely to be with the product. With a high escaped defect rate, even the most awesome product is going to have a lot of unsatisfied customers.

You measure this by the number of problems (bugs, defects, etc.) found in the product once it has been delivered to the user. Until a story is done, it is still in process, so focus on the story's execution is preferable over tracking in-progress defects.



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#### **Planned-to-Done Ratio**

This metric is a way to measure predictability. If a team commits to thirty stories and only delivers nine, the product owner has about a 30 percent chance of getting what they want. If, on the other hand, the team commits to ten stories and delivers nine, the PO has roughly a 90 percent chance of getting what they want.

Measuring is a simple exercise of documenting how much work the team commits to doing at the start of the sprint versus how much they have completed at the end of the sprint.

#### **Happiness**

This is the team "health" metric. It creates awareness that puts the other three metrics into better context. If all the other metrics are perfect and happiness is low, then the team is probably getting burned out, fast.

Build this into your sprint retrospectives. Open every retrospective with the team writing their happiness scores on whatever scale you choose. Track these numbers from sprint to sprint to see the trends.

#### Why These Metrics?

Cycle time and escaped defects are highly quantifiable and well understood across industries. Smaller numbers mean you are delivering a higher quality product, faster. I originally added the planned-to-done ratio primarily because it was something the teams could have an immediate and real impact on, so this fulfilled the "early wins" idea. It becomes useful long term in mapping predictability, which helps in forecasting. The happiness metric is the "human factor," which lets us gauge the overall team health.

The first three measures form a self-supporting triangle that prevents gaming the system. If you crash your cycle time, then defects will almost certainly go up. A high planned-to-done ratio can be great, unless cycle time is through the roof, showing the team is getting very little done per sprint. Finally, by layering happiness over

If all the other metrics are perfect and happiness is low, then the team is probably getting burned out, fast.

the rest, you can see the human side of the equation. A low happiness score is nearly always a sign of underlying problems and can be a leading indicator of something else.

You may be wondering about velocity. I track velocity also, but I think it has a very specific place. The four team metrics are for the team to reflect upon during a retrospective, with an eye toward getting better.

Velocity, on the other hand, is a measure the team uses during sprint planning. Its only use is as a rough gauge to how much work to take on in the next sprint. It also can be horribly misused if shared up the management chain—there are better ways to predict when a team will be done or how effective it is.

When measuring velocity, I measure both the story point and story count velocity. By doing this, I find the team has built-in checks and balances to their workload. For example, let's say the team has a three-sprint average of 50 story points and ten stories. If their next sprint is 48 points and nine stories, then they are probably going to finish all the work. If they exceed one of the numbers—say, doing 48 points but twenty stories (a bunch of small ones)—then the sprint might be at risk, as that's a lot of context switching. And if they exceed both numbers—say, committing to 70 points and fifteen stories—then this is a clear warning flag, and a good coach might want to touch base with the team to make sure they are confident that they can do better than their rolling average.





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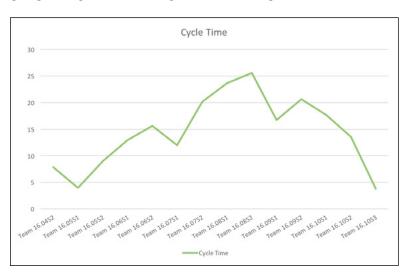
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#### **Metrics in Action**

These charts are based on real data and are a snapshot about eighteen months into an agile transformation. I tend to stick with a sixmonth rolling window because if you go much beyond that, things have changed so much as to be irrelevant to what the team is doing or working on now.

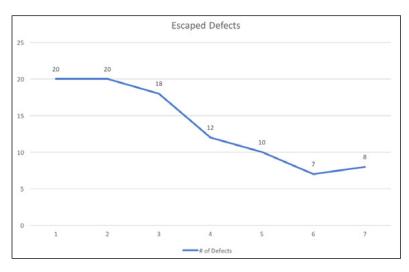
#### **Cycle Time**

The spike represents the team moving to a new project and the ramp-up time as they got used to the work on the new project while going through a series of organizational changes.



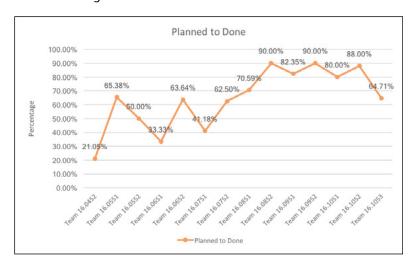
#### **Escaped Defects**

This graph shows a fairly typical curve for teams that have moved to cross-functional roles and automated testing. With everyone in the team jointly responsible for the story and the quality and a greater focus on test automation, we see a dramatic drop in defects found in the product after release.



#### Planned-to-Done Ratio

This team lost its ScrumMaster, which impacted its overall performance, as reflected in the first sprint's data. In the second sprint, an experienced ScrumMaster came in to help. The early dips represent the team getting used to a new set of norms, and the later dips were a result of changes in the program that reduced the clarity of the team's backlog.







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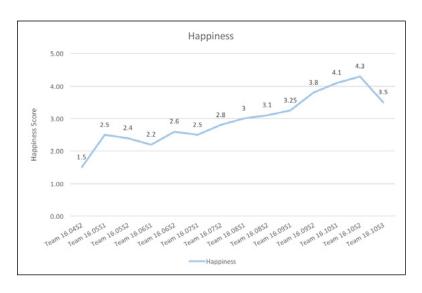
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#### Happiness

These data show how the support of a ScrumMaster improved the team's overall health. The graph also reflects that the churn in the product and organization impacted the team's happiness later on.



Based on these graphs, the first thing I'd plan is to engage with the team and listen to what's been going on in the last couple of sprints. The dip in the planned-to-done ratio and in the happiness metrics

are enough to tell me there might be something going on. The low cycle time and escaped defects would lead me to suspect the problems were external to the team.

The real challenges were coming from a chaotic product strategy that had the team bouncing around among priorities. The volatility in the backlog changes led to lower quality stories. The team was developed enough to stop when they dug into a story they didn't understand and shift to work they did. This lowered the planned-to-done ratio because not all work committed to could be finished, while cycle time was low as they worked on things they had a good understanding of.

#### **Try These Team Metrics**

These are the team metrics I've had the most luck with. Their interrelationship prevents gaming one measure without impacting others. They provide useful data to the team for retrospective improvement, and they are meaningful to leadership and help with forecasting.

If you're interested in trying these metrics out, you can use the Team Dashboard pack I've created in Google Docs by downloading it here. {end}

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# The Role of the Test Manager in Agile

By Jeffery Payne

A transition to agile can be confusing for everyone in the organization. Agile changes many roles, as it works in a much different way from traditional software development processes. Some might argue that test management is the role that changes the most.

In traditional software processes, test managers are responsible for all management aspects of their team. They dole out tasks and assignments, hold frequent meetings to stay on top of progress, review and approve estimates, and often provide technical guidance as well. Agile, on the other hand, is self-directed. Teams are responsible for all those duties themselves.

Unfortunately, many test managers try to keep their role the same. They attend every agile ceremony, get involved in estimating testing efforts, insist their teams still attend a weekly status meeting, and want the authority to swap team members in and out of projects. I've actually seen projects where as many managers attend agile ceremonies as team members!

But trying to keep your test manager role the same in agile is a bad idea. A self-directed team is a productive team. Allowing a team to create its own estimates and decide who is going to work on what keeps a team accountable. Take away this authority, and there goes the team's commitment. Also, time is very valuable when working in small increments, so any time spent providing status beyond the daily standup is a waste—as is time spent by test managers in sprint ceremonies.

Still, there is a role for test managers in agile, and it's much more strategic than it was before.

First, test managers can focus on growing the capabilities and skills of their staff. While agile teams are great at giving tactical feedback to team members, no agile team is going to guide an employee in their career. Test managers should be driving the growth of testers, sitting down with staff members regularly to review career goals, and making sure progress is being made.

Second, test managers should make sure agile teams have effective testing staff. If the team can't figure out how to deliver working software each sprint, an experienced test manager can help guide them to the answers. Also, hiring and firing of testers is not something agile teams typically do. Test managers need to own staffing and address performance issues.

Another role test managers can play is starting and running a testing center of excellence (CoE). It is critical that agile practices, tools, and approaches a team finds useful are shared across the organization. Forming a center of excellence that works to share knowledge, introduce new technology, and give testers a place to grow works well in agile.

Finally, testing needs advocates to make sure senior management understands the importance of testing in software development and delivery. Test managers can be those advocates, aggregating team quality metrics, educating leadership on the role on testers on agile teams, and managing test tools, training, and budgets.

Agile opens up new opportunities and roles for any test managers who wish to take their career in a different direction. Leadership skills and a passion for quality are always useful traits. {end}







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# Scrum Isn't the Only Path to Agility

By Thomas Stiehm

While working with one of my current clients, a team said they didn't want to do Scrum. At this organization, there is a lot of Scrum—most of the teams there are Scrum teams. The team in question decided that Scrum wasn't working for them and they wanted to try something else. So I asked them what they wanted to do.

They said that they spent two days laying out the work they need to get done for the next release. (The release is about two months away, so doing some planning toward that release timeframe doesn't seem bad.) They laid out the work to be done in weekly increments and agreed to measure their progress and replan every week. They also agreed to have weekly retrospectives so that the team could provide feedback and adjust.

They have set up a team room so that they can work together on a daily basis. This allows them to focus on getting their work done and to swarm on problems.

So, to sum that up, the team is:

- Working on a release plan for a two-month release
- Using a one-week cadence for meetings and replanning
- Using retrospectives to help the team reflect and tune their process
- Working together in a team room

It certainly isn't Scrum. But that doesn't mean it isn't agile.

Their process is allowing the team to react to the business needs. It is helping the team understand their progress and set expectations

with their business partners. But because their plan has strayed from the Scrum norm, they weren't sure about its agility. They asked me if it was OK for them to follow this plan.



I told them that if it

works, it will be good for them. It will give them a base to build on. It will give them a chance to continue to grow and improve their process as they learn more and adopt more agile practices.

I would like them to adopt a few things next: continuous integration, including unit tests; functional test automation; and pair programming or code review before code check-in.

Depending on how this experiment goes, we will tweak things as we go. We may need to change our processes or practices in order to improve. But this plan allows us to get started with something the team thinks they can commit to and will be able to reflect on.

I have used Scrum a lot. I believe it can really help a team to become more agile. But that doesn't mean it is the only way for a team to become agile. Agile is all about self-organizing teams collaborating to find what works for them, so if this particular plan helps this team get started, then they're forging a new path to agility. {end}





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By Kevin Goldsmith

A culture of continuous improvement is a culture where you are always open to improving how you build and deliver. You don't accept the status quo; you choose how to work and feel empowered to change it if it no longer makes sense. It is a people-first culture.

Having had the benefit of a culture like this at the last place I worked, when I started at my current company, I wanted to see if I could create a continuous improvement culture there, too. It took some effort, and we learned some painful lessons along the way, but we did make significant improvements to how our teams operated and how the engineering organization functioned.

As a result of these changes, our teams are able to execute at a much higher level, and the morale of the organization improved significantly. In short, we get a lot more stuff done, and we are happier doing it.

To get there, we had to change some of our frameworks, structures, and processes, or adopt new ones.

Here are some of the frameworks we created that could be helpful for any company:

- WIGs and sWIGs: A way to align the company around a common mid-term strategy and shorter-term tactical deliveries in a way that preserves team autonomy and agile delivery. WIG stands for "wildly important goal," and sWIG means "sub-wildly important goal." Our WIGs clarify the midterm strategy for the company, and the sWIGs clarify the shorter-term tactics we are using to achieve that strategy
- DUHBs: A data-driven decision-making framework that allows individuals in the company to craft a clear, data-based argument for a making a change. DUHB stands for data, understanding,

- hypotheses, and bets, which describes the linear process of solving a problem
- Journey teams: An autonomous team model that gives teams more direct control over how they work, aligned with customer journeys
- RFCs: A mechanism that allows anyone in the organization to drive large-scale change inclusively. It is a document and a process that uses the "request for comment" structure from standards groups as a basis
- Retrospectives everywhere: A cultural shift in how we think about examining our organizational strengths and weaknesses when it comes to executing projects

Each framework builds upon the others. By making the priorities and goals of the company clear, people have context to make good decisions. With a common data-driven process for vetting ideas, people have a good, structured way to propose changes. With autonomous teams, we can test new ideas locally and let the best practices emerge organically. With an inclusive mechanism for proposing larger-scale changes, the organization can participate in the process instead of having it pushed down from leadership. Finally, with a practice of retrospectives at all levels, the organization can learn from successes and mistakes made in any of the other components.

These frameworks created an environment that was not only adaptable and nimble, but also one where the members of the organization were empowered to make changes and were given tools to make advocating for change easier.

If there are more companies with continuous improvement cultures, it means a healthier and happier industry for all of us. {end}







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"Good leaders focus on goals but are not obsessive about them: They understand the difference between tactics (small moves to get around an immediate obstacle) and strategy (where we want to get and how). They'll make sure the team understands the strategy longer term, and the immediate tactic. They'll drive towards the goal, but not at the expense of their people suffering."

"The difference lies in, right now, you're showing up to coach and to support and to help to remove the cultural barriers that will really allow these teams to thrive—any other barriers or blocks around things that they need access to—to make the changes that they need or to do the technical work that they're there to do. Now you get to show up to tackle even bigger problems, all the organizational stuff that maybe you thought was always getting in the way. Now you get to focus your energy on those areas collectively with other managers, which is pretty cool."

» Selena Delesie

» Isabel Evans

"If you want traditional teams who follow your lead, then don't change. You'll get the same results you always have. And you might notice that the capacity of your teams to deliver is directly proportional to the amount of time and energy you have to lead them. But if you want teams that exhibit more initiative, empowerment, accountability, engagement, self-direction, and fun, then stepping aside usually allows for this. These are among the attributes of high-performing, self-directed agile teams. And being these attributes, these teams typically deliver more results, far more, than their directed counterparts."

#### » Bob Galen

"In my opinion, the whole team owns quality, the automation is just a task on the sprint, and we need to have a few people on the team who can perform that task. With that said, I do encourage and train those testers that want to learn on how to code. I believe in the T-shaped Scrum team—the more multiskilled people on the team, the less 'Scrummerfall' there is."

» Mary Thorn

"I think first the environment needs to be set up so that part of the agile mindset is to be okay with making mistakes, with exploring those, learning from them, and gaining new perspective. I think the more that people see there's a new perspective, or a new idea that comes out of the mistakes, the more they're willing to sort of put themselves out there and not just do status quo because they're afraid that somebody's going to get mad if they do something wrong."

#### » Jessie Shternshus

"I think it was Donald Rumsfeld who had the quote, something along the lines of, 'You go to war with the army you have, not the army you want to have.' and I think sometimes people go, 'Man, I'd love to have a great team. I wish we could hire, I wish I could get rid of these people,' but here's the deal: You've got the army that you have. Use your leadership skills to develop the team that you have, and if you do that, you're going to do great things."

» Andy Kaufman

"If you want traditional teams who follow your lead, then don't change. You'll get the same results you always have."











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