# Chapter 11: A Tester's New Role

Many teams struggle with only one tester as part of the team – or even worse, a tester who supports more than one delivery team. If the tester is the only one doing testing activities, it generally creates a bottleneck. Agile teams who deliver changes to production at every iteration (or even more frequently if they're implementing continuous delivery) cannot afford to have a single tester to do all the testing.

We can't predict the future, but it is informative to look around to see how a tester's role is changing. We asked other experienced agile testing coaches and trainers to find out what their thoughts are about the changing role of a tester. These different perspectives may help you understand how testers and teams can adapt and help build a quality culture.

Testers are quality glue for a team

Alex Schladebeck – Germany

When I started out, the tester role in a team (if the tester was even a part of the team) was often to be solely responsible for UI automation and manual testing. Over the last 12 years, I've seen a huge diversification of the role, and always in a context-dependent way based on how the team operated. I see testers working on more automation tasks, even pairing at the unit level with developers. I see them being involved at all process points. I see them organizing mob testing sessions with the team to perform exploratory testing. I see them campaigning for better feedback loops. I've even seen testers start to fix bugs or implement features.
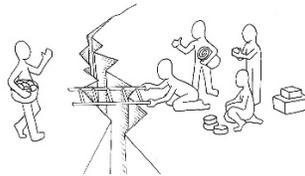
Make connections

For me, this diversification and role-blurring is a huge freedom and a great responsibility. It means that we have to ask ourselves, "How do I, my skills, and my potential to learn best fit into this team's context?" We become very much "quality and communication glue," identifying and filling in the gaps in any team.

I've started using the term "embedded quality engineer" or "embedded quality consultant" for this role. The problem with the title "tester" is that it contains the name of one of the many activities we do, so you hear questions like, "If everyone is involved in testing, why do we need a tester?" or statements like, "The developers are automating tests, so we don't need a tester role." Testing is just one of the many things that a tester does. In my opinion, we need to fight against the idea that an agile team should consist of "chimeras": a mix of different roles, or a Swiss-Army-knife team member that can do everything: requirements, UX, test, security, front and backend. Agile teams need to be diverse and cross-functional, and that means we need people with different backgrounds, interests, and specializations, without any one person being a silo or bottleneck. I think that's a balance that is achievable.

I see the tester role as consisting of multiple activities. There are things that have always been part of the role, like working with stakeholders, bringing expertise to test activities, pairing with developers and other testers, supporting the product owner, organizing and adapting the overall quality strategy, getting good test data, and identifying risk. I think there will be even more tasks that can be taken on or supported by testers in the future. Some of these might be: working with the team to ensure testability and observability for testing and monitoring in production, asking questions of the production system to explore how it is being used, honing our performance and teaching skills for exploratory testing, helping the team to focus on value (and sometimes on minimalism, i.e., the value of something not done). I also see testers starting to add "team health" to their quality attributes, looking out for the communication and stress levels of the team as a whole. These are, after all, things that can affect quality greatly.

In short, I believe that the tester role remains important. They are the person in the team whose main priority is quality. They are also the person with the passion for quality and testing, and they advocate and champion for them.

An agile tester's professional journey

Paul Carvalho – Canada

When I coach agile teams, I help the whole team learn to work together and build upon each others' strengths. A product owner brings business and industry knowledge, a programmer brings strong coding and development skills, a designer brings insights into the user's perspective and experience, and a tester brings something of value to the table as well.

A tester's professional journey starts with moving away from accidental and random testing, to thoughtful design of tests through models, techniques, and other specialized skills and knowledge. Agile puts a strong focus on working closely with others, so testers need to get out of their heads when thinking about testing and find their voice to help other team members understand the many ways to generate quality information about the systems in development. A great agile tester spends more time with a whiteboard marker in hand and pairing with other team members than anything else. It's about helping the rest of the team to see and understand more about the system, before the system is built. "Build Quality In" is more than a slogan; it is a reality that great testers can help enable on high-performing collaborative teams.
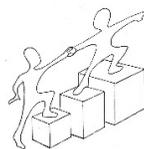
Mentor

An agile tester's professional journey progresses from random, haphazard testing, to understanding the techniques and design of good testing, to finding a voice and expressing these ideas so they may help elevate the rest of your team's performance.

As a tester, aim to enhance and grow everyone's understanding of the systems and solutions through thoughtful exploration. If you let go of the notion that you must be the one to write test cases or program automation, think about where your unique skills and insights can help carry your team.

The fascinating path of evolving as testers

Claudia Badell – Uruguay

As testers, we can contribute and add value from different perspectives: as facilitators and evangelists toward testing and quality in a product team, as coaches, as test consultants, as experts at certain types of testing (usability testing, accessibility testing, security testing, performance testing, among others), and more. Testers are no longer seen as gatekeepers for quality, so we can be seen and valued as quality advocates.

Nowadays, it is more and more frequent that testers are part of the development team and make contributions from the beginning of the development process. In my experience, the role of a tester in this context is evolving. Besides performing testing activities to support manual testing and automated checks, testers collaborate to build bridges within the team in order to reach a common understanding and engagement about testing. They also define, follow up, and adjust the testing strategies to be applied by the whole team. In addition, they share and evangelize their knowledge of testing within the team.

As technology, methodologies, and processes evolve and teams and communities mature, I believe it is important for us to have a proactive attitude to adapt to such changes. The future will bring new challenges and opportunities. Depending on the context, different skills and different testing activities may be needed, but in my experience, there are core skills that are necessary to keep pace with software development.
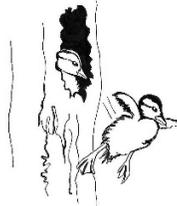
Experiment and find new opportunities

These skills are:

- be eager to learn and try new experiments to enhance testing strategies in the team.
- be an excellent question asker throughout the product lifecycle. Depending on the type of information that we gather, questions can be formulated in different ways. They can be made verbally or in writing, so clear and well-structured communication skills are important. They can also be made programmatically; for example, if we wanted to check certain responses between two services, technical skills are important.
- have modeling skills as a way of understanding what to test and defining testing strategies that cover the different aspects that are needed.
- have some degree of technical knowledge to collaborate in defining testability aspects of the solution while the software is being developed – for example, to support unit testing and automated integration testing.
- have a sharing and collaborative attitude.

We are in an exciting time where we can shape part of our future. How are you getting prepared for it?

Be all that you can be

Mike Talks – New Zealand

Over the last six years, my test team has gone from a single group working on one waterfall project at a time to individuals working across multiple teams.

There's a lot of talk about a whole-team approach to quality and testing, but testers as specialists are looked to lead in this space. That means creating a first-pass approach at a new story or feature, but it is also important to facilitate a discussion with the larger team about these approaches to gain feedback and explore the approach. It also means if a testing task is too onerous for testers to complete alone, they can help organise a division of labor among willing team members.

I find a frequent candidate for this is cross browser/device testing. We often test stories in the iteration using our core devices but will occasionally visit our product on a much broader range of items. This is where the team and their fresh sets of eyes can help, and a little bit of organization from the tester can make a huge difference.

Although most conversations about testing a product happen within your team, it's also useful to "catch up" with others in the same disciplines to share ideas and what's been working on other teams. This can also turn into mentoring to help individuals deal with specific problems as well as become more daring to try new ideas.

Be all you can be

Start with a conversation

Kathleen Naughton – United States

Software testing has simultaneously evolved and stood still. It has evolved to the point that some organizations have reduced the number or even eliminated testers on their teams. It has stood still because these same organizations have struggled to value the specialty skills a tester brings to teams.

In my experience, where testers have been reduced or eliminated, the teams have tried to fill in by moving closer to TDD practices so that they have a large number of automated unit tests. They try to do some intra-team testing (testing each other's code) and rely heavily on their continuous delivery pipeline to execute their automated tests. What often ends up being missed are the integration and user experience tests that are essential for high-quality products. If there are testers in these organizations, they are present to do manual testing after the code is finished. Any insights or suggestions made by these testers tend to be deprioritized in the product backlog in deferment to feature development.


Be relevant and influence those around you

I believe an essential skill that testers need to be relevant is being able to read and understand code. This allows them to understand what unit tests or other automated tests are checking and enables the identification of testing gaps that the tester can fill. It also allows for reduction in test overlap. If there are already unit or integration tests present, the testing approach can be more targeted at the end-user activities that are not covered. Another essential skill I believe is needed might be considered a soft skill. The skill of having conversations with programmers about their unit and integration tests is powerful. These conversations can lead to influencing design decisions that in turn enable higher-quality deliverables. Bringing knowledge about how to have crucial conversations enables the whole team to produce better software.

The world doesn't need more checkers
Aldo Rall – New Zealand

Testing has evolved over the years, and the industry has developed test engineering skills and practices, although not smoothly. I think we have entered an era of testing enlightenment, and there is a big shift in how organizations and testers now think of the testing role.

I observe an increasing movement toward the importance of skills. The more skills an individual has, the more valuable they become for a team or organization. Those individuals with skills that span beyond test engineering skills only are the ones that can contribute more than someone who has a basic set of test design and execution skills. This idea is emphasized by the thinking about generalizing specialists as discussed by Scott Ambler (http://www.agilemodeling.com/essays/generalizingSpecialists.htm) or T-Shaped Skills as discussed by Lisa and Janet in their books. If you want to future-proof your career, build your test engineering skills, as well as skills outside the traditional world of testing. Forget about titles; in ten years' time it is not going to mean much to anyone if you were called "test engineer," "test specialist," "tester," "test analyst," or "verification engineer." Skills are ultimately more valuable than collected job titles; I have certainly found that true in my own career.
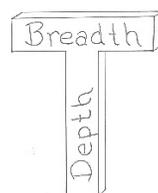
T-shaped skills

I would look at a holistic approach characterized by inclusive "and" conversations. The best example I can think of is to combine your collection of skills in unique ways that suits your specific context, knowing that even that will change. How can you combine a set of test engineering and analysis skills in a given situation? How can you combine a set of negotiating skills with teaching skills? How can you combine different test engineering skills together to obtain better test coverage? Think "and."

I believe one of the key skills a modern practitioner must have is the ability to understand a context, understand its changing nature, and adjust accordingly. The true masters of the future workplace will be those who will be able to observe a context, apply the fit-for-purpose combination of skills, and then continually adjust the combination of skills as the context evolves. That intuition takes time to develop, and it is a constantly changing domain. Learning new skills will enrich the capability and the value that such a person brings to organizations and teams.

We bring many different skills than just test engineering skills. I would like to suggest that we consider (by unashamedly borrowing from others) a multifaceted approach. Call it the "Holistic agile testing skills" or "The ten thinking hats of agile testing," or whatever else makes sense to you. Some of these facets might be:

- **Consultant**: Yes, sometimes we will have to "consult" inside our team or with another team to help solve problems and issues.
- **Test engineering specialist**: We have to know our testing onions from shallots. We require good and solid test engineering skills.
- **Agile scholar**: Keep studying and learning about agile, bring ideas to the team, and experiment.
- **Coach**: We have great opportunities to coach the team or even co-workers (inside and outside the team). This is a life skill, in my opinion.
- **Mentor**: Sometimes we have to mentor someone in testing.
- **Facilitator**: Sometimes we just need to step into the role of facilitator for a decision, discussion, explanation, etc.
- **Change agent:** We may sometimes bring about change and upheaval, advocate a new practice/technique/method to experiment with and learn from.
- **Leader**: Yes, we may sometimes be required to step up and perform leadership in/on behalf of the team.
- **Teacher**: That goes without saying, especially if there is a shortage of testing skills in the team/organization.
- **Business domain scholar / defender of common sense / big picture thinker**: Sometimes it is good to step away and see the forest from the trees.

Lisa's and Janet's thoughts

We hope you've enjoyed reading other people's thoughts about what they consider to be a tester's role. Now we'll share ours. We've encouraged testers to help their non-tester teammates learn testing skills. When the whole team takes responsibility for quality and testing, every team member needs some grounding in testing skills. To accomplish this, we've identified skills we recommend that testing specialists should learn.
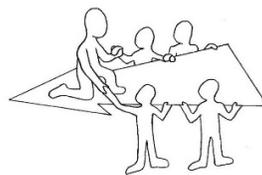
Use your thinking skills

- **collaboration skills** to participate actively in practices like mind mapping or example mapping
- **facilitation skills** to help team members communicate better, facilitate meetings such as retrospectives, facilitate workshops to help non-testers learn testing skills
- **teaching skills** to share their knowledge with other team members
- **coaching skills** to help the team identify problems and design experiments for improvements
- **communication skills** to give and receive feedback effectively (see Chapter 4, "Thinking Skills for Testing," in *More Agile Testing* for additional information)

We see a growing need for testers to act as test consultants for their teams. Many teams have a low ratio of dedicated testers to developers and other non-testing roles. We testers can add more value by helping everyone have the competencies needed to do essential testing activities. Everyone on the team will think more about testing and be more conscious of the need to build quality in from the start.