

The Testers of the Future

The background of the slide features a vibrant sunset or sunrise scene. Three silhouetted figures stand on a dark, rocky mountain peak, their arms raised in celebration. The sky is filled with warm, orange and yellow clouds, and the sun is low on the horizon, creating a bright glow. In the distance, snow-capped mountain ranges are visible under the colorful sky.

BCS SIGiST
Summer Conference

19/6/2025
Gerie Owen

Change



Our Agenda

- How the Testing Profession has Responded to Change
 - Agile & DevOps, AI, QE
- How testers self-determine their own directions
- What are the Skills of the Testers of the Future
- How to become the Testers of the Future



How the
Testing
Profession
has
Responded
To Challenges
of Change



AGILE & DevOps

Short Iterations

Elimination of Silos

Small Teams

Merger of Development and Operations

Minimum Viable Products

Continuous Integration in Automated Pipelines

Increased velocity and speed to market

Continuous Collaboration of Teams

Testing's Challenge



Developing ways of delivering small increments of high-quality work and finding their role in DevOps

Testing's Response

- Implemented continuous testing
- Expanded Skillsets
 - Learned to script and code
- Expanded Mindsets
 - Became Agile Team Members
- Testers became Champions and Managers of the Quality Process and testing becomes a **Social Activity**



Artificial Intelligence

Most software involves some AI-driven elements

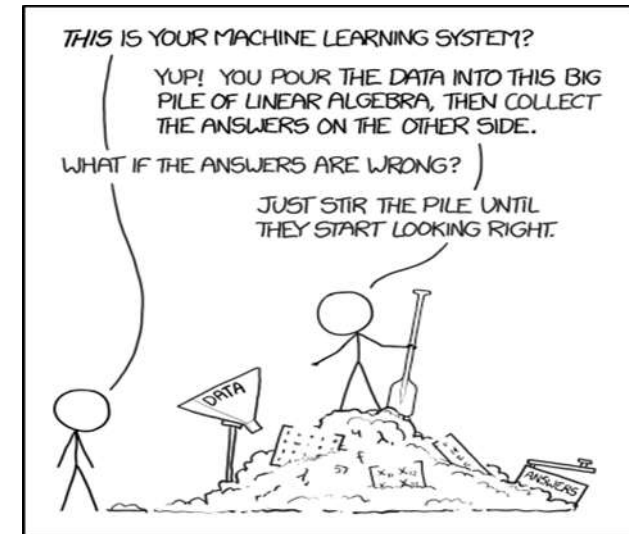
AI makes decisions based on learned knowledge

Requires training as well as testing

Continuous Collaboration of Developers, Testers, & Data
Scientists

Testing's Challenge

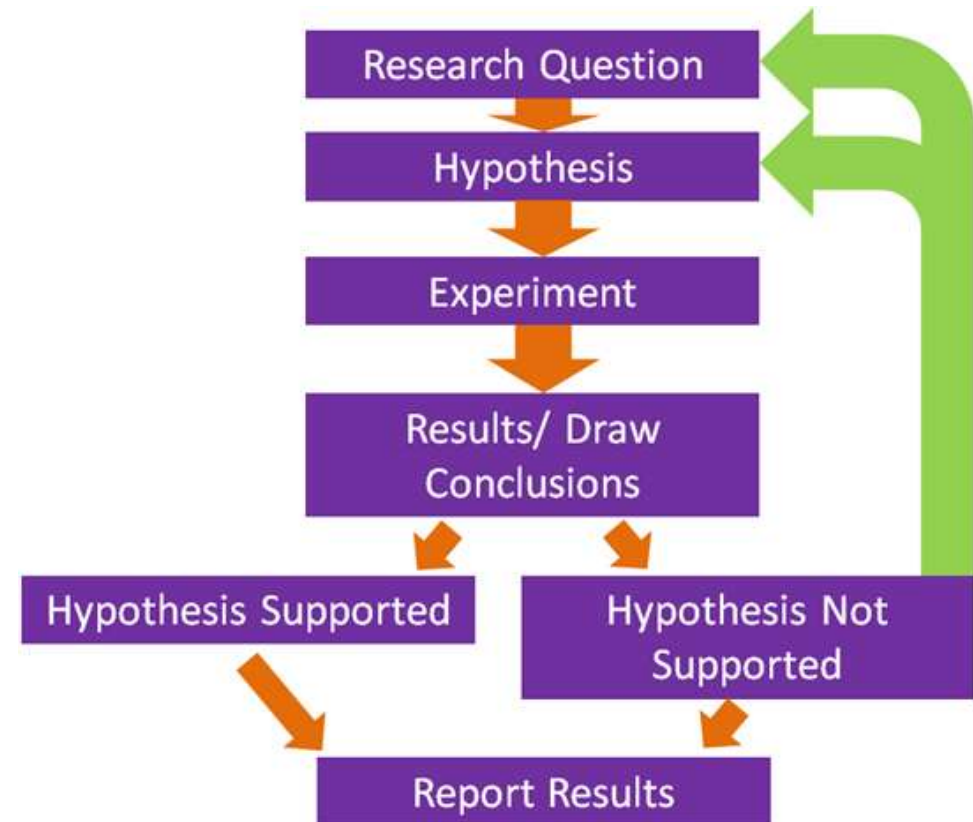
- Training and Testing
- Planning the Training
 - Data Selection and Analysis
- Analyzing the training results
 - Actual results don't exactly match expected



Retrofitting our test approaches and skillsets

Testing's Response

- Implemented Data-based training as part of testing
- Determine whether results are good enough since expected and actual don't always match
- Test with large amounts of data running multiple cycles
- Embrace testing with Devs and Data Scientists as a **Social Activity**



Quality Engineering

Building Quality in throughout the Product Lifecycle

Transformation of People, Processes and Tools

Testing becomes a technique rather than a discipline

The entire team is responsible for quality

Testing's Challenge

The testing profession retrofits

Testers reexamine our skillsets and mindsets to find our roles in
Quality Engineering



Testing's Response

- Champion Quality from the Beginning of the Product Lifecycle
- Testing becomes a **Social Activity** with Dev, Test, and Product
- Implement Quality Reviews even before Development
 - Reviews—Ambiguity, Design, Test Case Design, Code
 - Inspections
 - Checkpoints—Automated testing throughout the CI/CD pipeline
 - Quality Management Techniques



The Constant amid Change

*The
Importance
of Quality*



The Major Shift

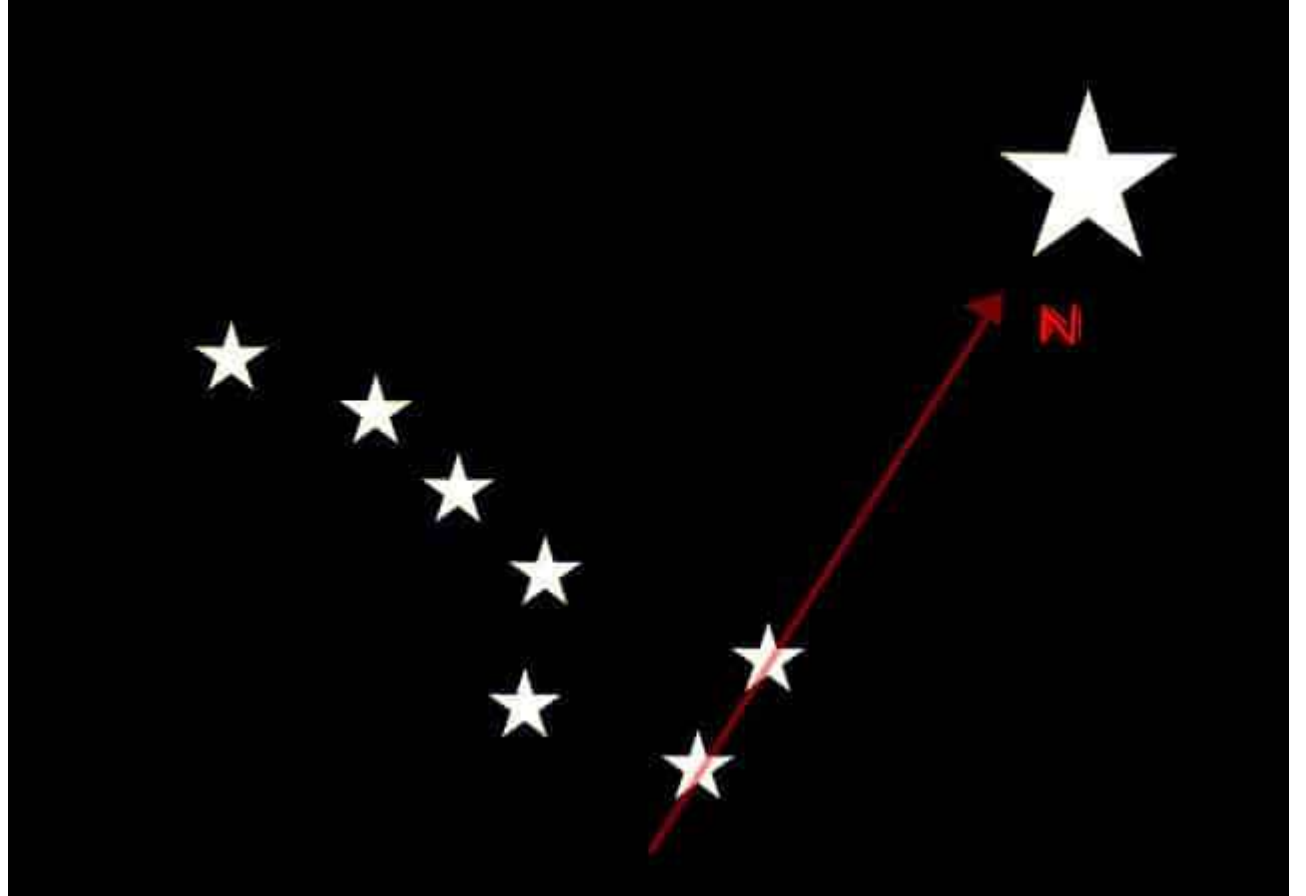
*The Team Responsibility for Quality
and
Testing Becomes a Social Activity*

The Impact to Testers

Testers bring the testing mindset and champion Quality and Collaboration throughout the process.



How Testers Self-Determine their own Directions



Determining Our Own Directions

Self Assessment



Determining Our Own Directions

Assess our Interests

Assess Our Skills

Assess and Adjust our Mindsets

Assessing Our Interests

- *What parts of your role do you enjoy most?*
- *If you could eliminate one part of your role what would it be?*
- *If you could change one thing about your role what would it be and how would you change it?*
- *About what are you most passionate?*
- *Make a Vision Board*



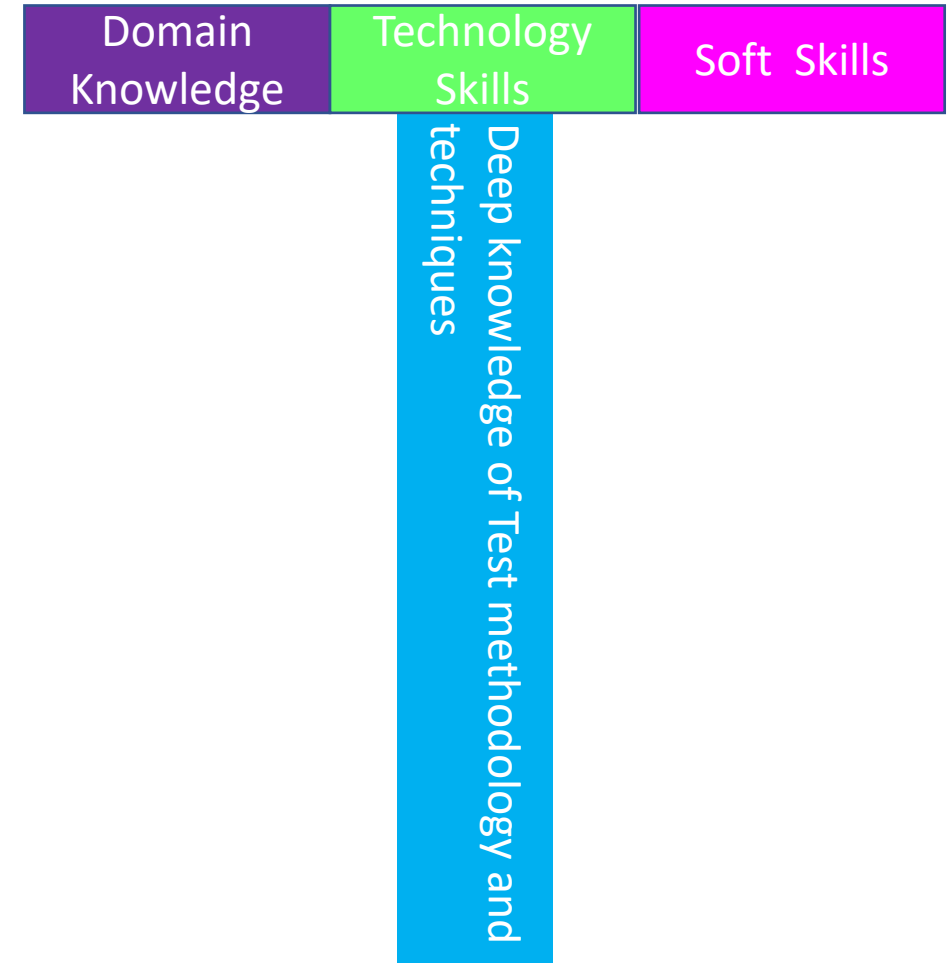
Assessing Our Skillsets

The “T” Shaped Theory

- An approach to skill assessment based on deep knowledge vs broad contextual knowledge that can be applied across functions.
- Skill sets are expressed as shapes with deep knowledge as vertical poles and broad contextual, collaborative skills as horizontal bars.
- The model can be as a way of assessing our skills to determine to which roles we might and might not want to aspire.

The “T-Shaped” Tester

- *Vertical Pillar*
 - *Tester is the expert; the specialist*
- *Horizontal Pillar*
 - *Tester is the generalist*
 - *Empathy, flexibility, adaptability and curiosity, especially about other disciplines*
- *The “T-Shaped Tester” has a balance of skills and an appreciation of and ability to work with those who are strong in different areas*



Assessing Our Skillsets

The “T” Shaped Tester

- As we look at each section, we can determine:
 - where we are strongest
 - where we are weakest and,
 - most importantly, where our interests lie.

Assessing Our Skillsets

The “T” Shaped Tester as the Test Champion

- The test consultant or test coach manages the test process throughout the software development lifecycle.
- The test champion must be flexible, adaptable and innovative to develop creative solutions to issues.
- The test consultant must be empathetic to understand the needs of both their colleagues and customers in order to influence and lead change.
- Often, this role is entitled Quality Engineer.



The “I-Shaped” Tester

- *Vertical Pillar*
 - *Tester is the expert; the specialist in one area*
- *Test Specialists in*
 - *Test Automation, Performance Testing, Security Testing, Accessibility Testing etc.*
- *The “I-Shaped Tester” also needs some domain experience and soft skills to work with the team and the stakeholders.*

Deep knowledge in one area of expertise

Assessing Our Skillsets

The “I” Shaped Tester as the Test Specialist

- The Test Specialist will work very hard to keep current in order to remain at the top of your field.
- Up-to-date industry knowledge becomes even more important at higher levels as become you responsible for planning the test architecture and selecting right tools to solve the issue at hand.
- As a test specialist at all levels, it is so important that your favorite tool doesn't become a hammer at which you swing at everything.

“Well, in our country,” said Alice, still panting a little, “you’d generally get to somewhere else – if you run very fast for a long time, as we’ve been doing.”

“A slow sort of country!” said the Queen. “Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere, you must run at least twice as fast as that.”

Lewis Carroll’s Through the Looking-Glass



Assessing and Adjusting our Mindset

What is a Mindset?

- A concept developed by psychologist Carol Dweck
- How we mentally approach life and its challenges
 - Why brains and talent don't bring success
 - How they can stand in the way of it
 - Why praising brains and talent doesn't foster self-esteem and accomplishment, but jeopardizes them
- Mindsets are characterized as Fixed And Growth



Characteristics of a Fixed Mindset

- We are either smart or dumb
- We have to continually prove ourselves
- Failure is a personal reflection on our intelligence



Characteristics of a Growth Mindset

- We can work to improve our intelligence and abilities
- What we have now is only a starting point
- We accept failure as a learning process

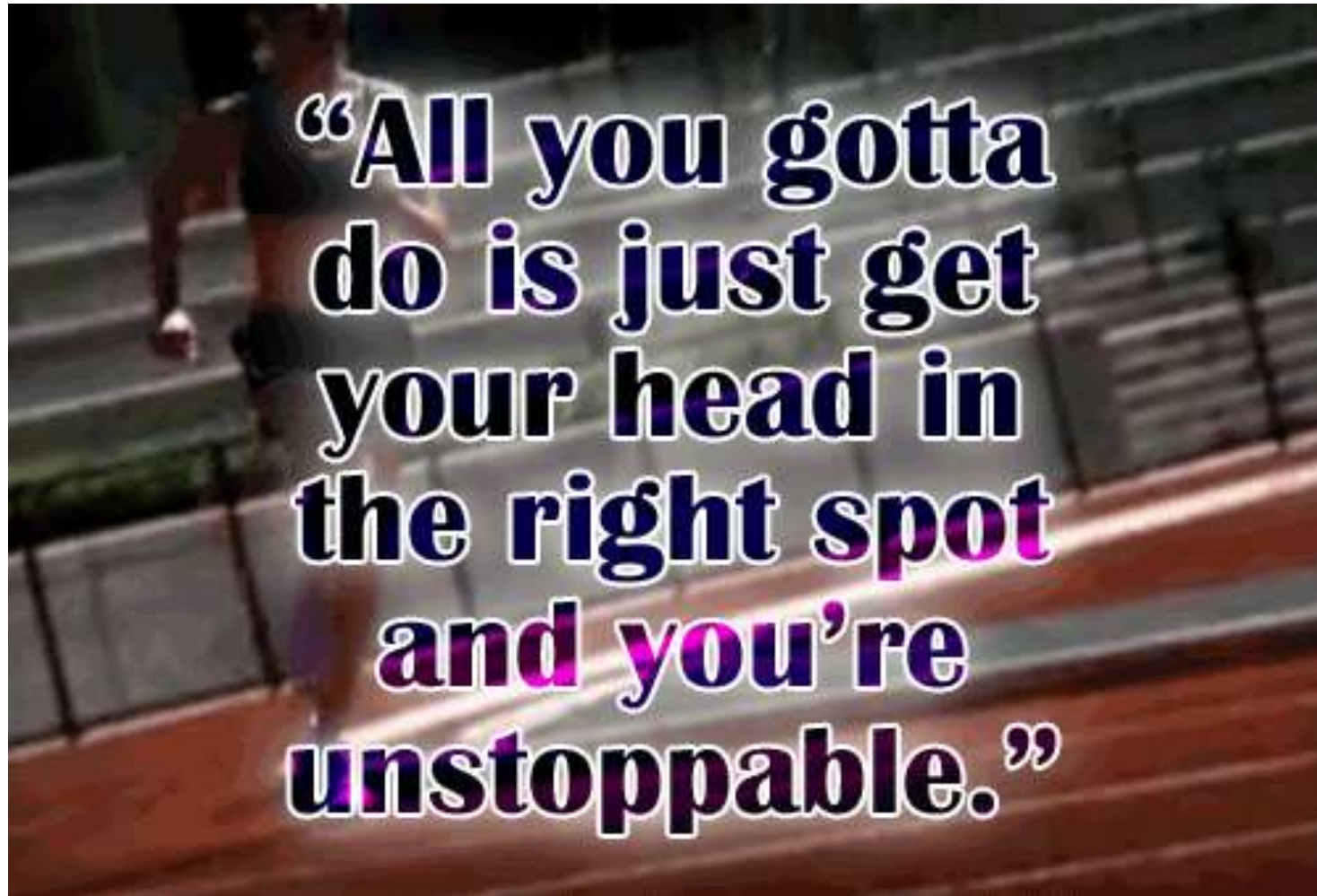


Adjusting Our Mindsets

- Take an interest in everything in your environment
- See all experience as interesting and meaningful
- Pay attention to all skills needed to design/develop/test/deliver apps
 - Learn and practice those skills



Adjusting our Mindsets



What Are The Skills of The Testers of The Future?



Skills of the Testers of The Future

Although we cannot predict the future, when we look at how the testing profession has evolved to meet the challenges of the most recent decades, we can see themes or advances in the skillsets and mindsets that have brought us, as testers, into our present-day practice and profession.



Themes of the Testers of The Future



They will be:

- flexible, adaptable and empathetic
- willing, figuratively and sometimes, literally to walk a mile someone else's shoes
- curious and innovative and will excel at communication and collaboration
- critical thinkers who solve problems.

Themes of the Testers of The Future

They will:

- develop and evolve deep skills in testing approaches and techniques
- embrace new trends in the practice in areas including AI, Robotics, Security, Codeless/No Code Automation and more.
- Embrace the importance of science and truth in testing

They may or may not become specialists, yet they will recognize the importance of having a basic understanding of the important trends.



Themes of the Testers of The Future

- Practitest's State of Testing Report 2022, showed respondents gave the “Very Important” rating to:
 - Communications Skills (81%),
 - API testing (65%),
 - General Test Methodologies (62%)
 - Web Technologies and testing (60%)



Themes of the Testers of The Future

- Practitest's State of Testing Report 2022, found that the desired skills, knowledge and experience for which hiring managers are looking is a balance:
 - soft skills (30%),
 - technical skills (35%)
 - testing experience (35%).



Who Are The Testers of The Future?



The Flexible Generalist

Peter Varhol, in his presentation, “Careers in Transition”, suggested that the Tester of the Future will be a “Flexible Generalist”.

“A Flexible Generalist is someone who doesn’t necessarily know the answer, but who can very quickly find the answer, even though it may not be in their area of expertise and apply it to the problem at hand.”



The Flexible Generalist

Flexibility relies on Expertise

- Experts usually have the right answers
- Yet experts may not be the best people to apply their expertise
 - That's straight out of Kahneman – Thinking Fast and Slow
- If all you have is a hammer, everything looks like a nail
 - So there is a symbiotic relationship between expertise and flexibility



The Truth-Seeking Negotiator

Testers will seek the truth about the software we test

- Sometimes that involves negotiating for the time and resources to needed to get to the truth of how the software works
- The Truth-Seeking Negotiator will have honesty and integrity

Michael Bolton, Demonstration, Experimentation and Software Testing, SEETEST 2022

- In this way, they will champion the customer and protect the reputation their organizations' reputations.



The Swiss Army Knife

Joel Montveliski and Lalit Bhamare, in Practitest's [State of Testing Report 2022](#), suggest that “a tester was and continues to be the equivalent of a Swiss army knife for his or her team.

This means that we need to have a combination of skills that will serve our needs depending on the challenge being thrown at us.”



The Testers of the Future are....

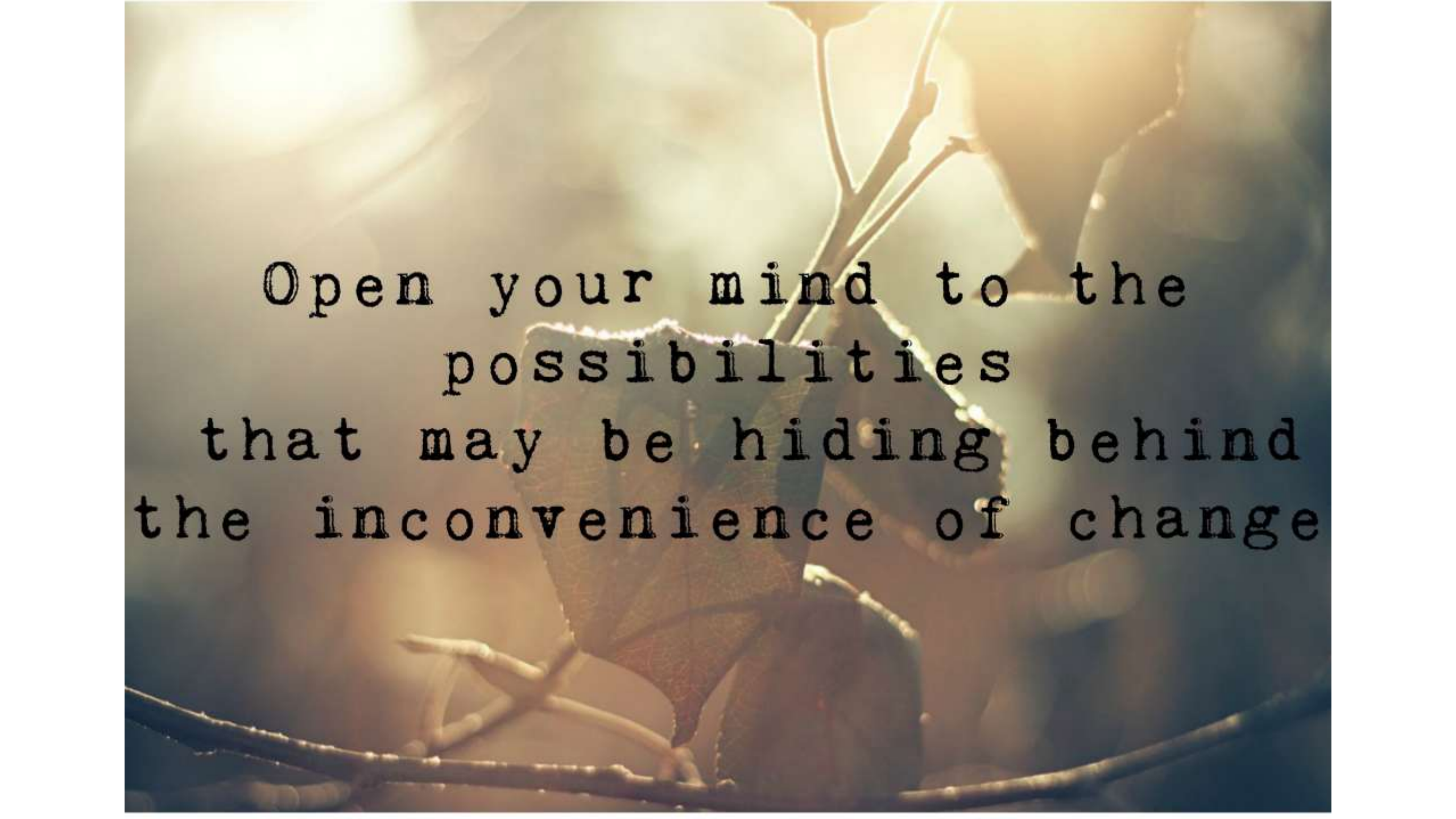
All of Us!

The Testers of the Future, whether our titles reflect tester, QA, QE or a totally different discipline, by applying our testing skills and mindsets to whatever role we may be embracing, we will champion quality and the customer in all we do.



We are all testers of the future

- I wish each and every one of you the joy that comes from knowing yourself and doing what you do best
- Choose the path that suits your skillset your expertise and most importantly, your personality best
- The future is ours and we have only to choose our path, the way in which we can contribute and find joy best.



Open your mind to the
possibilities
that may be hiding behind
the inconvenience of change

References

- “Careers in Transition” presentation at Swiss Testing Day 2020 by Peter Varhol
- <http://www.erikvanveenendaal.nl/site/wp-content/uploads/Erik-van-Veenendaal-The-T-Shaped-Tester-eBook-2.pdf>
- <https://blog.codinghorror.com/everything-you-know-will-be-obsolete-in-five-years/>
- [T-Shaped Testers and their role in a team - The Social Tester](#)
- <https://www.qamadness.com/skills-qa-engineers-should-have-now-and-in-the-future/>
- [state-of-testing-report-2022.pdf](#) Joel Montvelisky and Lalit Bhamare
- Mindset: The New Psychology of Success by Carol S. Dweck
- Thinking, Fast and Slow, by Daniel Kahneman
- Michael Bolton, Demonstration, Experimentation and Software Testing, SEETEST 2022
- Contact me: gerie@gerieowen.com