SQmag

A4Q
Selenium Tester
Foundation

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The Certified Selenium Tester Foundation offers a practical training course

✔ be able to create and run Selenium WebDriver tests without supervision

✔ learn about factors to consider when deciding to automate testing

✔ as well as specific techniques for navigation, interacting with GUI elements, logging, reporting, and more

With the A4Q Selenium Tester Foundation Certification you will

✔ have an independent, internationally recognised certification as proof of expertise in the field of test automation with Selenium WebDriver

✔ be able to create and run Selenium WebDriver tests without supervision

✔ be able to apply correctly test automation principles to build a maintainable test automation solution

✔ be able to choose and implement correct test automation tools

✔ be able to implement Selenium WebDriver scripts that execute functional web application tests and implement maintainable scripts

isqi.org/en/certified-selenium-tester-foundation

Stephan Goericke
CEO, International Software Quality Institute

NEW STANDARDS ARE REQUIRED

IT professionals are more in demand than ever. And specifications and further education are – of course – still requested. Only the topics and fields change. Digitization, the Internet of Things and artificial intelligence are topics which require new standards in the field of software development and software testing.

The International Software Quality Institute (iSQI) is a partner for all who want to be up to date and who want to be professionally qualified with certificates accepted worldwide. To prepare you for the certification exams, we work together with more than 250 training providers all around the world. This summer, we started a new cooperation with the international initiative Alliance for Qualification (A4Q). A4Q develops and provides training material, syllabi and exam questions.

Recently, A4Q developed a new certification: the A4Q Selenium Tester Foundation. In September, the first training started to teach software testers using the open-source tool Selenium WebDriver. This tool is prevalent for test automation, and professionals who specialize in it are in demand. We are already getting positive feedback. Next time, we plan to support you even further with new certifications together with A4Q.

This SQ mag includes exciting and entertaining articles from authors from all over the world. They describe their experiences in testing and how it has developed in recent years, write about digital workplaces and talk with the SQ mag about the growing software-testing scene in Tunisia.

Enjoy the read!

Yours sincerely,

#CONTENT

A TESTING VOYAGE

A PERSONAL STORY TOLD BY DILEEP MARWAY, QA MANAGER AT *THE ECONOMIST*

QA and Dev divide — 2006

Getting stuck in! — 2010

Automation driver — 2012

My testing pilgrimage began in 2006, whereby I took up a graduate systems tester role at an automotive software provider. Having graduated in Computer Science, this role was ideal to utilize the skills learned at university, namely the attention-to-detail skills which I showcased in my studies. The role was as a manual tester and I remember that in my first month, my initial view of testing was to find as many bugs as possible. This resulted in me finding 400 bugs in my first month; looking back, I must have been the most hated person in the company by developers, as most of these issues were cosmetic. The key memory for me is the fact that developers sat on a different floor compared to the QA team and we were not allowed to communicate with them; instead, all comments were logged in an issue-tracking tool. The QA and Dev divide was evident and, looking back, testing has evolved since.

In 2010, I reached out for a change and a more challenging role, which led to me joining an insurance provider whereby I worked in a support team, Java developer role and SQL analyst role. I can honestly say that these roles helped to open my eyes around how testing actually fitted into the whole development lifecycle. I would recommend that all testers get involved in a development role at some time in their career, as it will not only make you a better tester, but it will also help to galvanize the relationship with the development team.

2012, I went back into QA and worked for a shares package provider in downtown Birmingham. This was more of an analytical role, given that I was dealing with share denominations. Having started as a manual test analyst, I was promoted to senior test analyst. In this position, I started to use Selenium Web driver, code in Java and gain an understanding of Jenkins.

I looked after a client in Ireland and single-handedly put together a test strategy and made the testing more efficient. By this stage I was now a more rounded
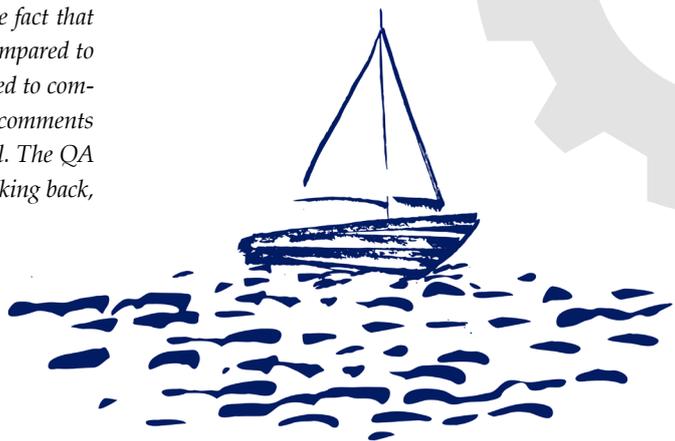
Testing is a skill and we should be proud of it! Long gone are the days when people ultimately fell into testing because they were poor at programming. We now are working in sync with developers to bridge the divide and showcase that our role is not a bridge gap, but rather a necessity. I am QA Manager for The Economist. Having 12 years of testing experience, I am passionate about quality assurance and I am an avid enthusiast of giving back to the testing community.

↗ **Dileep Marway**
QA Manager at The Economist

> **GONE ARE THE DAYS WHEN WE WERE SEEN SOLELY AS POOR PROGRAMMERS!**

Creating a QA strategy from the ground up...

Onwards and upwards

QA Centre of Excellence

2014

2016

2017

Fast forward two years (2014): I joined a jewelry retailer as Test Manager and I was initially told that I would be managing a team of testers and driving automation. My first day in the role involved me establishing that my test team was actually just myself and one business analyst. There was limited manual testing in place, let alone any automation. The first baptism of fire was the Ernest Jones and H Samuel websites; we were moving away from rich HTML text to ensuring they contained cross-compatible content which could be displayed on an array of devices. My strategy involved building a small team of manual testers and I initially used a crowdsourcing company to bridge the testing gap.

The strategy was successful and we won various awards for the simplicity and effectiveness of the website, not forgetting the fact that orders were on the rise, given that the website was more user-friendly.

After the success of the website project, I put together a larger team and put automation in place using the Selenium web driver, coding in more progressive languages. The strategy was ultimately a success, and we worked in an agile way, with automated processes to complete the regression testing and a high level of continuous releases.

The key success factor for me was that testing was seen as an important task and it was being rolled out across all business areas, with even our stores completing "acceptance testing" on the day of a live release.

A model which worked, also used by other retailers, was that we recruited store staff with business knowledge and gave them the testing knowledge. We even had some staff who we trained on a technical level; they could maintain the Selenium scripts.

Last year, I was head-hunted by The Economist, and have been tasked with setting up a QA Centre of Excellence in Birmingham.

The Economist Group is the leading source of analysis on international business and world affairs. We deliver our information through a range of formats, from newspapers and magazines to conferences and electronic services. What ties us together is the objectivity of our opinions, the originality of our insight, and our advocacy of economic and political freedom around the world.

"What am I doing differently, I hear you ask?" Well, first and foremost, we are working in a DevOps culture, so efficient testing is key. Also, ensuring that we shift testing left is now not a nice-to-have, but rather a necessity. The key to being efficient is for all QA members to look at their tasks and ask themselves on a daily basis: how can this be made more efficient? For instance, if functional testing is bringing up multiple rounds of testing, then the unit/integration testing layer needs to be made more efficient.

Bringing on people with the right mind-set is key to achieving this task. We are building a QA center where members are passionate about quality and ultimately are happy to work with developers to shape unit/integration tests, and also ensure that we do not test at GUI level if not required. Instead, if we can test at the integration/API level and this improves software quality, then it should be factored in.

Pachydermatous

My closing statement is that QA is a necessity and should not be understated; my journey has shown me how important QA is to a development process and also our day-to-day routines. For instance, if me laptop which I am currently typing on had not been tested and constantly crashed, how would you read this article?

Testers can be summed up as "pachydermatous" – we are thick-skinned and we will always evolve in the world. Gone are the days when we were seen solely as poor programmers! ▮

REX BLACK ABOUT SELENIUM TESTER FOUNDATION

" THIS NEW STAR IS QUITE A NICE STAR INDEED!

A

Automated testing continues to be a major transformational factor in software development and there is no doubt that there is an urgent, and rising, requirement for QA and test professionals with automation skills. In particular, Selenium is globally rated as a top priority in the test automation field.

iSQI has introduced the Selenium Tester Foundation certificate into its portfolio in response to significant market demand for Selenium WebDriver skills. The certification is based on a highly practical hands-on training course that will give an immediate return on investment back in in the workplace.

Rex Black, President of RBCS and past President of the ISTQB®, supported the development. The SQ mag asked him about the new course and the certification:

" WE FEEL THE TRAINING AND CERTIFICATION WE'VE DEVELOPED PERFECTLY FILLS THAT NICHE.

1.

Rex, a new star is born: the A4Q Selenium Tester Foundation. Tell us more!

The A4Q Selenium Tester Foundation is an entry-level training and certification program for people who want to learn and use the very popular test automation tool Selenium. The Selenium Tester Foundation syllabus addresses the key fundamental concepts of application GUI test automation using Selenium WebDriver, which in itself is a really valuable resource for the Selenium community. The three-day training course is exceptionally hands-on, which is critical for test automation, since you can really only learn how to do test automation by doing test automation. The exam for the certification allows people to demonstrate mastery of the concepts in the syllabus, thus providing a way for people to prove their mastery of the fundamentals of Selenium test automation. We think this new star is quite a nice star indeed!

2.

What is special about Selenium WebDriver? Why do so many testers work with it?

Selenium has become very popular for a number of reasons. For one thing, it's an open-source tool, so it doesn't require a huge tool budget for a company to use, unlike a number of other commercial GUI test automation tools. It has a very large user base and community built around it, so it's a safe choice for automation as it's unlikely to disappear due to a collapse of interest, as can happen with open-source projects.

It's also closely associated with behavior-driven development or BDD, an increasingly popular technique in agile development. BDD allows automated tests to be built in parallel to the development of the software to be tested, using a syntax called Gherkins to express feature acceptance criteria in a human-readable yet automatable form. There is a whole family of open-source test automation tools that have grown up around BDD, and Selenium is part of that family.

Of course, Selenium is a GUI test automation tool that works through a browser. It supports the most popular browsers, and many applications are browser-based now, so Selenium can be used to test through the user interface for a large number of applications. Thus it complements other tools that allow automation via APIs, data layers, and at the unit level.

So, testers have a number of compelling reasons to learn and use Selenium. However, until now, testers faced a situation where no internationally recognized certification existed for Selenium, and training options were limited. Hence there was a real demand for something like the A4Q Selenium Tester Foundation, and we feel the training and certification we've developed perfectly fills that niche.

REX BLACK ABOUT SELENIUM TESTER FOUNDATION

3.

What do participants learn during the training provided by RBCS? What is the main focus of the new course and certification and why do we need it?

Participants in our RBCS Selenium Tester Foundation course get a really practical, hands-on experience. In three intensive days of training, they learn the factors to consider when deciding to automate testing as well as specific techniques for navigation, interacting with GUI elements, logging, reporting, and more. When I say the training is practical and hands-on, that means that there's as much hands-on content as a lecture. Participants will spend most of their time seeing Selenium demonstrated by the instructor and then applying the concepts just explained in realistic test automation exercises. There are even solutions to the exercises provided, so participants can check their work immediately.

To do these exercises, the participants use the popular Oracle Virtual Box platform, with a pre-configured virtual machine that they download and install before the course. This virtual machine includes all the tools needed for the course and is 100% consistent from one participant to the next. So, attendees can be confident that they will be able to follow along with the instructor's demonstrations, since they have the exact same environment as the instructor. They can be confident that the exercise solutions will work in their environment, and they can compare their solutions to other attendees, too.

This standardized environment allows classes to be hands-on and productive immediately, with none of the time-wasting, frustrating experiences associated with other hands-on classes where students must configure their own environments, which inevitably results in problems for many students and wasted classroom time to debug screwed-up attendee configurations. None of that nonsense in this class. Participants will fire up their Windows, Mac, or Linux PCs, load Oracle VirtualBox, start the pre-installed virtual machine, and be busy writing Selenium code within the first couple hours of the course. How great is that?

This immersive, 100% practical approach means that, by the end of the course, attendees can:

▶ Apply correct test automation principles to build a maintainable test automation solution
▶ Choose and implement the right test automation tools
▶ Implement maintainable Selenium WebDriver scripts that execute functional web application tests
▶ Create and run Selenium WebDriver tests without supervision

Furthermore, the training is not about throwing together a big heap of automated tests, because that unstructured approach to test automation just yields a lot of disorganized test automation assets that don't deliver value over time. Instead, as part of this course, participants learn how to fit Selenium test automation into the context of a maintainable test automation architecture, consistent with what's explained in the ISTQB's Advanced Test Automation Engineering (TAE) syllabus. Since we also offer the TAE training and certification, the Selenium Tester Foundation training and certification is a perfect match.

We designed the training to be as accessible as possible, in order to reach the broadest possible audience. The main people we had in mind while developing the course were:

▶ People with no test automation experience who are starting to automate in Selenium (or who want to get a job doing that).
▶ People with some GUI test automation experience who are new to Selenium or starting to automate in Selenium (or who want to get a job doing that).
▶ People with some non-GUI test automation experience who are new to Selenium and starting to automate in Selenium (or who want to get a job doing that)

Really, anyone wanting to acquire a basic, hands-on knowledge of Selenium can attend, provided they have a basic level of technical knowledge, and general familiarity with programming languages such as Java and scripting languages such as Python.

" THE TREND IN HIRING TESTERS IN AGILE SOFTWARE SHOPS IS TO REQUIRE TECHNICAL SKILLS, ESPECIALLY TEST AUTOMATION.

Speaking of Java and Python, we are using the Python technology stack with Selenium in the virtual machine. Python is a very popular scripting language, and lots of people are using Selenium with it. Further, as a scripting language, it is easier to understand and use than a complex, sophisticated object-oriented language such as Java. If we had used Java, that would have created a significant obstacle for people who don't know how to write object-oriented code, which is a significant proportion of our target audience. By using the simpler, more accessible Python scripting language, we open the course up to more people.

Now, some people might ask, "Well, if I'm using Java instead of Python with Selenium, does this mean that I'm going to waste a lot of time learning Python?" Absolutely not! The course only uses Python as a vehicle to teach Selenium, not vice versa, so the focus is on Selenium. The concepts attendees learn will transfer over easily to Java environments. Further, Python, as a procedural scripting language, is something that anyone who can program in Java should be able to read and understand.

4.

How does the certification improve the personal career of a software tester?

As I discussed above, test automation with Selenium is a really big trend now, fueled by all the factors I cited. Agile is an especially big factor. More and more organizations are using agile methods. The increased regression risk associated with frequent software change means that automated regression tests – such as those you can build using Selenium – are critically important in agile. Furthermore, the trend in hiring testers in agile software shops is to require technical skills, especially test automation. So, this certification future-proofs the software tester's career, positioning them to succeed in the current job environment and in the future. The fact that there is a certification that goes with the hands-on training means that course attendees can prove their mastery of the topics. ▌

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Rex Black
Rex Black is President of RBCS, a worldwide testing and quality assurance firm serving clients ranging from small start-ups to Fortune 20 global enterprises since 1994. Rex has been involved in software engineering since 1983 and has been doing software testing, starting with test automation, since 1987. He is past President of the ISTQB, current chair of the Agile Working Group, author, lead, or contributor to over a dozen ISTQB syllabi, and author of 14 books on software testing.
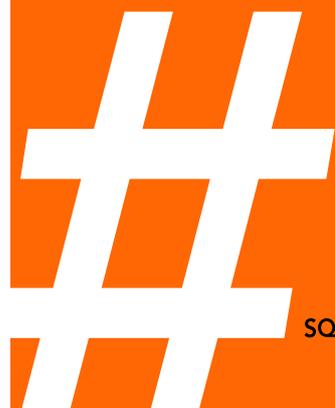
iSQI CERTIFICATIONS RECOGNIZED AS UNIVERSITY CREDITS!

iSQI certifications (ISTQB®, iSQI Scrum Master Pro and iSQI Certified Agile Tester) have been given "Recognition of Prior Learning" (RPL) status by the Charles Sturt University – CSU, Australia. ▮

WHAT'S

iSQI AND TMMI FOUNDATION ANNOUNCE NEW CERTIFICATION

The International Software Quality Institute (iSQI) and the TMMi Foundation announce to confirm that the new "TMMi Test Process Improver" certification is now available globally. A certified TMMi Test Process Improver will be able to provide effective support within the organization, or project, to initiate and implement TMMi based improvements and deliver business value to sponsors and stakeholders.
The first number of test professionals acquire the TMMi Test Process Improver certificate and are listed on the TMMi website's public register. Congratulations to Ella Shang, Shark Ren and Hongxia Zhu from China! ▮

iSQI AND GASQ OFFER SELENIUM CERTIFICATION

The International Software Quality Institute (iSQI) and the Global Association for Software Quality (GASQ) are pleased to confirm that the first module in the Certified Selenium Tester Scheme is now available as part of their respective internationally recognized professional certification portfolios. Upon successful completion, participants will be able to create and run Selenium WebDriver tests without supervision. ▮

A4Q
Selenium Tester Foundation
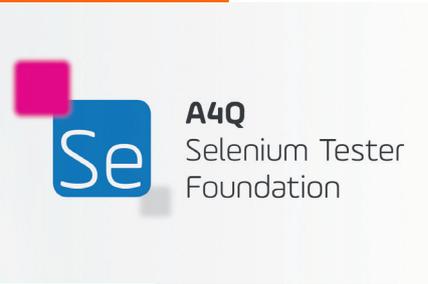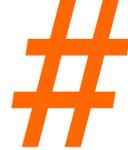
iSQI AND IMBUS CANADA CORPORATION ANNOUNCE AN EXCLUSIVE PARTNERSHIP IN CANADA


The International Software Quality Institute (iSQI) and imbus Canada Corporation are pleased to announce an exclusive partnership in Canada to benefit the software-testing community. Through this partnership, imbus Canada Corporation will be an exclusive training partner for some of the most sought-after ISTQB certification and software testing courses in Canada. iSQI will be the preferred certification exam provider for the training provided by the imbus Canada Academy. ▌

HAPPENING

With over 30,000 certifications per year, iSQI paves the way for successful career development. Join an exklusive insight into iSQI´s world.

THE NEW ISTQB CTFL 2018

iSQI is delighted to have both the 2011 and the 2018 ISTQB® Foundation Level exams available! The 2018 exam is available in English (Pearson VUE, paper and computer-based) and Spanish – other languages will follow. In addition to the 2011 and 2018 Foundation Level exams, iSQI is proud to be offering exams across all of the current ISTQB® portfolio including Advanced Level Test Automation Engineer and Security Tester. ▌
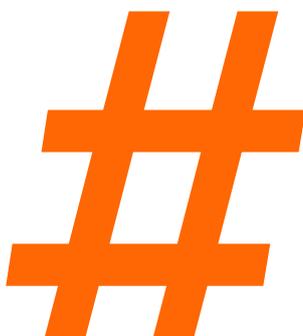
TESTING AND QUALITY IN SAFe®

Among large organizations, the Scaled Agile Framework for Lean Enterprises (SAFe) is the most popular framework for achieving business agility. In this article, Mette Bruhn-Pedersen and Derk-Jan de Grood explain how testers can contribute in a SAFe environment.

O

Organizations understand that business agility and responsiveness are key factors for surviving and staying ahead of their competitors. In order to yield value, the work of single agile teams should therefore be embedded in larger business processes. Many organizations embrace the Scaled Agile Framework for Lean Enterprises (SAFe) to enable multiple teams to collaborate on a single release, plan and manage dependencies and translate business strategic needs to user stories that can be completed by individual teams.

SAFe is a freely revealed knowledge base of integrated, proven patterns for enterprises' Agile-Lean development. Of the scaling frameworks available, it seems to be the most documented. Other frameworks like LeSS and Nexus are less documented and also less prescriptive. This might explain the popularity of SAFe with organizations that are used to formal processes and want a clear structure.

The Portfolio configuration of SAFe has three levels. On the bottom, there's the team level. This describes practices for individual and cooperating teams working on user stories. It builds on familiar Scrum and Kanban practices. The program level above that describes how organizations divide work between individual teams and how they merge completed features into a continuous delivery pipeline. The Agile Release Train bundles the teams' work into controlled product increments. At the top, the portfolio level translates strategic organization themes into value streams and defines portfolio epics. This article will go through each of the three levels and explain what SAFe states about testing and how quality can be embedded in the agile practices.

3

"IT DOES NOT EXPLICITLY ADDRESS THE NEED FOR AN EFFECTIVE QUALITY STRATEGY TO SUPPORT THE AGILE TEAMS.

Quality at team level

One of SAFe's core values is that quality is built in. Built-in quality practices ensure that each solution element, at every increment, meets appropriate quality standards throughout development. That's a good starting point.

The test-first practice recommends building tests before writing code. Another SAFe practice is pair work. At the team level, testers can pair with both users and developers to co-create tests. Testers lacking coding skills can still pair with team members to review the automated tests and discuss the frequency with which tests should be run. By taking a leading role, testers can ensure that all team members learn and use agile testing methods. This practice gives the development team a good understanding of the problems to be solved, both functional and non-functional.

On a more practical level, testers could review the Definition of Done (DOD) to help teams define quality measures. The DOD is a great tool for embedding quality into the process. While discussing, team members are likely to identify valuable tests that are not done or done outside the sprint. Comparison of the DOD used by one team with those of the other teams enables cross-team alignment. It's really helpful for Agile coaches and the SAFe program consultant if test advocates bring in their vision and knowledge on how to embed these quality measures into the agile processes.

In practice, we often see that tests are still executed manually. Automated tests (if any) are usually created after coding instead of before using a test-first approach, and are often run from a separate platform not integrated in the build process. The release process is often only partly automated, and therefore vulnerable. SAFe states that organizations should aim for a repetitive and hands-off build process enabling quick deployments in various environments. Testers can contribute by emphasizing the need for this and ensuring the pipeline includes automated functional and non-functional regression testing.

Unfortunately, SAFe does not describe these practices to a great extent. Neither does the framework talk much about formal roles in testing. It does not explicitly address the need for an effective quality strategy to support the Agile teams. We think all test professionals can contribute at team level by bringing attention to quality practices and the need for a quality strategy, and by helping to implement relevant quality assurance and testing practices.

> ❝ ANOTHER CHALLENGE
> WITHIN SAFe IS GOVERNANCE.

Quality at program level

The quality strategy will most likely be defined on the program level, since it outlines what's needed to deliver an integrated and tested solution to customers. Its implementation will also have an impact on the team level. A quality strategy ensures that the critical aspects are clear from various perspectives – business, technological and operational. It outlines what needs to be tested and may include views and interests from external suppliers and stakeholders such as compliance officers.

A quality strategy should also define how feedback on product quality and progress is gathered. Taking the program increments (PI) objectives as a basis, the quality strategy can outline how this is done in practice. Such a strategy should also address the test quality. Does the test work need auditing; how are the teams coached on their testing? Another item to address in the quality strategy is the organization of tests that do not fit in a sprint.

In practice, we all too often see organizations lacking overview and focus. A clear quality strategy aligning teams and their work and providing a shared insight into the work to be done not only leads to better-quality solutions, but also reduces the amount of eleventh-hour surprises. It enables teams to discuss progress and impediments and re-plan their roadmap. It ensures that teams know what's expected from them and testing is not forgotten, and provides room for coaching and training.

The later is a key issue. With the adoption of Agile, testing is a team responsibility, and more often than not is done by developers and users with limited test expertise. They feel uncertain about the way they test, or lack enthusiasm since they don't know what to do. They can do an even better job when they receive relevant training and are helped by experienced testers to improve test design, execution, tool support, logging and reporting. This will give organizations a multidisciplinary look at quality and will increase the team flexibility.

In SAFe, the last sprint in the PI is reserved for PI planning and, if needed, integration of the various system or solution assets. Testers can typically contribute to this by facilitating risk analysis and root cause analysis (RCA). Identifying business and technical risks prior to or during PI planning may lead to extra acceptance criteria or even new user stories.

The program level in SAFe is also designed to help alleviate typical integration challenges. End-to-end integration should be a starting point for planning development and cross-team collaboration.

Testers and test managers should emphasize the quality mind-set so that integration testing is taken into account during PI planning. Integration tests should be executed in each iteration, but some tests might be better suited for the last sprint of the PI.

To get feedback and learn how the system is used, it's important to deploy frequently and with as few delays as possible. Testing the operation model to ensure operational readiness should be a topic while defining the PI objectives. Integrating the business-readiness testing in the overall quality strategy enables an early time-to-market.

Another challenge within SAFe is governance. Progress and quality are often discussed at a Scrum-of-Scrums meeting, but progress indications are often subjective and incomplete. Testing helps provide a transparent and objective insight into the available working software. The availability of lean, mean but adequate data to assess the release progress enables better planning and makes it easier to revise the release train roadmap.
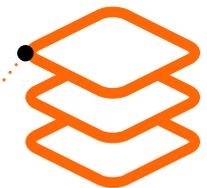
Quality at portfolio level

The portfolio level is the linking pin between organizational goals and development work. If we want to embed quality into the organization, we should do it here. SAFe doesn't define a quality ambassador at the portfolio level, but it might be very useful to have one. This ambassador can see to it that strategic themes not only focus on "new business functionality"; technical debt reduction, test architecture, supporting and developing good QA practices must be prioritized as well, since they enable a sustainable delivery rate.

A portfolio-level quality ambassador can also be instrumental in prioritizing the compliance epics. Compliance is often not second nature to IT people, leading to last-minute surprises and penalties. Defining compliance epics and implementing the required security, traceability and revenue assurance functionality at portfolio level ensures that the right proof (logging, testing of controls and documentation) is available. This will stand out during audits and will reduce the misalignment between what's needed by the authorities and what's implemented.

SAFe describes the quality management system (QMS) as a set of approved practices, policies and procedures. It ensures that development activities and outcomes comply with all relevant regulations and provides the required documentation to prove it. The QMS might be in the portfolio of the compliance officer, but the quality ambassador should also include it in the quality strategy. The portfolio level is all about business. Organizational readiness at the program level can be a measure to ensure that technical solutions will be used and yield benefit. An assessment is advisable here: do the implemented strategic themes deliver the expected value? The portfolio-level quality ambassador could help the organization to define KPIs that provide this insight and help to assess the user experience of the value streams in a broader sense.

↗
Mette Bruhn-Pedersen
Mette Bruhn-Pedersen is an experienced tester, test manager, and test lead. She works as an agile transformation leader in Safe Journey helping clients to improve their business agility and implement SAFe.

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Derk-Jan de Grood
works for Valori as a senior test manager and Agile transition coach. In 2016, he published the book Agile in de echte wereld – Starten met Scrum (Agile in the real world – Starting with Scrum).

> " TESTERS MIGHT VERY WELL TAKE THE LEAD IN CREATING THE AWARENESS THAT TRUE BUSINESS AGILITY REQUIRES BUILT-IN QUALITY.

Quality at all levels
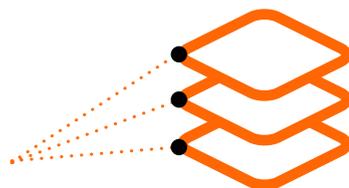
Communication and managing dependencies are typical challenges of scaling. The discussed measures focus on having a strategy so people know what's expected of them, taking quality into account during planning sessions and ensuring that quality-related work gets sufficient priority. We find there's a need for a quality focus at all levels and recommend taking a strategic approach to quality and testing.

People who are currently in testing and quality roles have a lot of knowledge and can take on an ambassador role to promote built-in quality.

For test professionals, this might require some training in additional skills. Test automation and implementing a continuous delivery pipeline requires technical knowledge at the team level; to be effective at the program and portfolio level, business skills are needed as well.

To make SAFe effective, test professionals can help others build in quality and facilitate broad collaboration. This means that non-testing professionals will improve their skills regarding quality and testing practices. We can help them through coaching, teaching and showing them the strategic advantages a quality focus has.

Scaling requires collaboration between all people to make it work. Testers might very well take the lead in creating the awareness that true business agility requires built-in quality, and that implementing SAFe with its current guidance on quality practices is not sufficient. It requires attention on all levels, discipline and quality ambassadors ready to help build quality solutions relentlessly. ▮

TUNISIA:
INDEPENDENT SOFTWARE TESTING STARTS GROWING

Software testers are the ambassadors of software quality, and they are in high demand across the global job market. For software testers worldwide, the ISTQB certifications are an especially sought-after proof of their qualification. As the demand in Tunisia is also growing constantly, the International Software Quality Institute (iSQI) is happy to welcome Salah Elamami (Expert Team Tunisie and Improve Software) as a new local training partner. The SQ mag talked with him about his experiences in software testing in Tunisia.

> ## "SOFTWARE TESTERS ARE THE AMBASSADORS OF SOFTWARE QUALITY, AND THEY ARE IN HIGH DEMAND ACROSS THE GLOBAL JOB MARKET.

Salah, it is nice to meet you. Please introduce yourself: Where are you living? What do you do for work?

I am Salah Elamami; I live in Paris and Tunis. I am an expert tester and ISTQB trainer. I am a founder of two companies: Expert Team Tunisie, which specializes in software testing training. The second company specializes in software testing consultancy and is based in France: Improve Software. This is why I spend my time travelling between Paris and Tunis.

You are a software testing expert. What experience do you have?

I have been a Java development manager for seven years. I started my professional experience as a testing team leader in 2011 at Orange France, where I worked on testing the portal website for two years. After that, I have been a test manager as well at companies such as Solocal and Seloger in France. Recently, I have been contracted by Engie to set up a strategy test and test automation architecture and coach to train their Agile Team in testing.

In the meantime, as an ISTQB Certified Tester Advanced Level (CTAL) FULL Trainer, I trained hundreds of software testers and helped them to succeed with their ISTQB Certification.

Which trends have you recognized in software testing and development in Tunisia during recent years?

First, independent software testing is starting to grow in Tunisia. It's the same thing for Agile methodologies. Consequently, the demand for software testers is increasing, which explains the high demand on ISTQB certification and the number of people who would like to become testers. Personally, I have helped 200 people to get the ISTQB certificate with brilliant results.

What do you think about topics like Selenium, Agile and the Internet of Things? Are certifications for that interesting for Tunisian testers and developers?

Tunisian testers and developers are interested in certifications like Selenium and the Internet of Things because they count in their CV, which helps them to get a job. However, there is little demand for Agile testing and specialization in testing.

You are a new representative of iSQI. What was your motivation to take on that role? What is your next target?

At the moment, we are promoting software testing as a profession in Tunisia. That's why we are organizing an annual meeting for testers: TOP TESTERS.

So, being the number-one training center specialized in software testing in Tunisia, we are seeing high demand for ISTQB certification.

Thank you, Salah. ∎

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DEPLOYING A DIGITAL WORKPLACE

Today, the evolution of business technology is being fueled by the speed of innovation in the consumer world. People want and expect to have access to apps from anywhere and from any device, and to enjoy a high-quality user experience. Now they are increasingly bringing these expectations with them to work. Office workers today demand to be connected to other businesses and employees through a complex layer of technology — Internet, email, cloud storage, desktop computers, telephones or VOIP, and mainframe systems.

IT teams face a significant challenge: how do they deliver the flexible access to applications and content on the corporate network that their employees are increasingly demanding, together with the enhanced connectivity that they need, while at the same time meeting the business imperative of ensuring the highest possible levels of security, control and compliance?

These twin drivers, ostensibly in conflict, are increasingly coming together to fuel the evolution of the digital workplace, defined by Paul Miller, CEO and founder of the Digital Workplace Group as "the technology-enabled space where work happens – the virtual, digital equivalent of the physical workplace." Key to its appeal is its emphasis on the preferences and needs of employees. To be successful, the digital workplace requires a technology layer, designed around business strategies and ensuring security and compliance, but also focused on the needs of staff who use or manage information and giving them what they need to achieve optimum levels of efficiency and productivity.

Introducing the Digital Workspace

Today's companies must re-design how they work to meet this growing need and to accommodate the consumer technology expectations of their workforce. In turn, this helps them react quickly to customer and market needs, while maintaining high levels of security, keeping control of processes and meeting regulatory demands. It's a difficult balancing act, but the end goal of digital workplace transformation must be to make it work for all parties.

DEPLOYING
A DIGITAL
WORKPLACE

That's why we are seeing today the emergence of the concept of the workspace – a key element of the digital workplace. The workspace is about managing all the things the user needs to do their job effectively from any location, at any time and from any device.

Workspaces must be role-based, intuitive and customizable. Take a financial services organization, for example. A bank teller may spend most of their time utilizing the same core banking application to serve their customers. The branch director requires a much more complex set of standard and banking-specific applications, while the CFO needs yet another mix of applications, data and documents. In short, each staff role has different requirements in terms of the software, data, content and devices that need to be provided to optimally support their working day.

Scoping the Benefits

The great news is the technology to deliver this vision of the workspace is available today. Intuitive, web-based access to applications, services and content are prepared and presented to employees across business departments and roles. Workspaces can then be modified to meet individual user requirements and preferences and end-users can customize them to become even more productive. Integration with an enterprise service store enables users to search for an app or service to be automatically added to their workspace.

Dynamic, engaging and customizable workspaces yield significant benefits:

Advantages for IT – The IT department gains, mainly due to the workspace principle that no longer focuses on the management of the operating system, but on delivering the required applications, data and services directly to a browser-based dashboard in a targeted manner.

Central governance – Configuration drift, often caused by end users installing their own unapproved software (shadow IT), can result in dramatic security concerns and even legal liabilities. Workspaces – in combination with enterprise IT service stores – provide central governance by enabling end users to add their favorite approved SaaS and local applications to their workspaces. This eliminates the incentive to go around IT and place confidential documents in their private file-sharing account or use unsanctioned project-management software that does not appropriately protect intellectual property. This type of central governance also enables IT to monitor user behavior in terms of which groups typically leverage what software applications. Users can then be encouraged to free up software licenses that are mostly unused.

Storage cost savings – Virtual desktops mostly consume expensive tier-1 SAN storage to ensure optimal performance and reliability. In addition, capacity planning is difficult, as the daily "boot-storms" experienced when multiple users log onto the system at the same time must be negotiated, and software patches and other specific performance requirements must also be accommodated. Workspaces reduce storage demands because instead of managing and delivering operating systems, they enable access to apps, content and services from browser-based dashboards.

Consistent delivery across devices – Delivering the same set of SaaS, mobile, virtual and locally hosted applications to any device, depending on user role, location or device type, dramatically reduces management effort. When applications and data are delivered via HTML5 – without the need for a local client – workspaces will ensure a consistent user experience, no matter the device type or operating system.

> THE DIGITAL WORKPLACE IS ABOUT
> BREAKING DOWN THE TRADITIONAL BARRIERS

" GIVING EMPLOYEES THE FREEDOM AND FLEXIBILITY TO BE PRODUCTIVE AND CREATIVE REGARDLESS OF WHERE THEY'RE LOCATED OR WHICH DEVICE THEY'RE USING

↗

Jordi Suñer
is Vice-President Product Management for Workspaces at ASG Technologies – a global provider of technology solutions. In his more than 15 years of experience in software product management, Jordi worked on B2B and B2C products in digital transformation, cloud, IT remote support, retail and photography markets. Jordi holds a degree in computer science and a master's degree in IT management.

Flexible maintenance and high availability – Workspaces enable a much more granular approach to maintenance, failover and disaster recovery than could be achieved through traditional desktops or VDI. During scheduled or unscheduled maintenance windows, individual apps can be repaired, replaced or updated, without affecting other parts of the user experience. High availability can be configured for individual applications or at the workspace level, ensuring optimal SLA compliance.

Reaping the Rewards

Ultimately, though, beyond the benefits above, the concepts of the digital workplace and digital workspace remain focused on employees. After all, the well-architected approach to software and technology that the digital workplace supports transforms both the work environment and the capabilities of people performing that work, making work easier for them and driving up productivity at the same time.

The digital workplace is about breaking down the traditional barriers that limit employee productivity to help companies increase agility, better serve their customers, and compete globally. ASG Workspaces provides IT staff with centralized control to deliver a consistent, secure, role-based user experience across the enterprise while giving employees the freedom and flexibility to be productive and creative regardless of where they're located or which device they're using. ▌

SEETEST IN BELGRADE, SERBIA

iSQI CEO Stephan Goericke gave a talk titled "Restructuring a company? How to change from sheep to bees." He and Erika Paasche, Key Account Manager at iSQI, also met with partners from Macedonia SEMOS Education and Certiadria at the iSQI booth together with the president of the SEETB, Mitko Mitev.

HAVE YOU SEEN ...

ANDICOM 2018 IN CARTAGENA, COLOMBIA

This year, for the first time, iSQI was present at ANDICOM, the International IT Congress, as well as the largest technological event in Colombia. iSQI supported its local partners and expanded knowledge of the certifications in the region.

NATIONAL SOFTWARE TESTING CONFERENCE NORTH IN YORK, GREAT BRITAIN

iSQI Managing Director Debbie Archer provided information about certifications at the National Software Testing Conference North.

iSQI EXPANDS ITS ACTIVITIES TO LARGER UKRAINIAN CITIES. THE FIRST STEP IS LVIV

iSQI will expand the public exam sessions to the Ukrainian city of Lviv. The town is a very good location, with highly educated people and great business potential. In addition to tourism, information technology is currently the most important economic activity in Lviv. Software companies develop applications for a wide range of uses, from artificial intelligence for storage systems to in-flight WLAN for aircraft manufacturers.

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