Managing affirmatively through the "Great Resignation"

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Abstract

Most of our QA team has been with the company for over five years and many over ten. Our team was impacted by the "Great Resignation" recently. Members found themselves being heavily recruited with offers of unusually high compensation and benefits. At the same time, QA needs upskilling for a future of increasingly technical and non-functional testing. Requiring a systematic approach, I developed a repeatable framework to navigate training the current QA team and hiring the quality engineering talent for future requirements. We have successfully made multiple recent hires with this framework. Also, it is actively directing advancements in QA's training.

Learning Objectives: Attendees will learn how to develop a customized QA skills gap analysis. The framework runs on basic six sigma structure. This incorporates the sum of existing individual strengths, organizational redundancy, and domain expertise. This is then analyzed with skills required for the success of the future QA organization. Inputs include known and anticipated projects, technologies, and capabilities. Attendees will learn how to create a key deliverable for their recruiting group. The process above requires defining skills of the 'as is' and 'to be' QA team. Attendees will learn how to design a visualization for communicating training objectives to the team. This tool is critical for the leader of the software quality organization.

Biography

In 2015, became part the Advanced Research Center for Software Testing and Quality Assurance at the University of Texas in Dallas (UTD). Mark presents on QA leadership, KPIs, and root cause analysis in local, national, and international software conferences. Mark is a PMP & CTAL (Full) from ISTQB.

Mark & his wife Melissa are the two-time, past President Couple of 'Better Marriages Texas' and have been active in Marriage Enrichment since they said "I do" in 2001. Prior to working in technology, he worked in YWAM & Mercy Ships in Switzerland and Namibia. He lives in Allen with his wife and two boys, ages 14 and 18.

1 Introduction

Standing at the office door of our HR Manager she and I were discussing an alarming fact. It was the first time we could recall having five resignations in a single week from the software development group. It was in her explanation that I first heard three ominous words, “The Great Resignation”. When asking about this trend, she explained how after the pandemic, employees were changing priorities around “work-life fit” or leaving the traditional professional model altogether. Technically skilled people are pursuing a different type of career model or lifestyle away from commutes and normal hours in an office, at a cube.

In that moment my selfish side thought, “Sounds tricky for the leaders who are dealing with this. Glad it’s not me.” Soon, I was joining these managers. It started with an employee giving a wo week notice unexpectedly. The QA team had several years where turnover was zero. Most of the team had been at the company at least five years and a few for more than ten. I was caught off-guard and shouldn’t have. My consolation, everyone in this industry seemingly is now in the same boat. If you are leading a technology work group right now, you’re faced with talent leaving and doing your best to manage knowledge capital.

I cleared time on my calendar for putting together a strategy to manage affirmatively through the weeks and months ahead. A broader, repeatable strategy was necessary. A typical ‘hire to replace’ wasn’t going to solve this.

2 Considerations

2.1 Managing knowledge capital in QA

Can you accurately measure the business-critical knowledge in QA today? If you have any doubts about measuring QA expertise and knowing where content is documented, you are unlikely to manage and improve this body of knowledge and the individuals with it. Don’t rely on ‘tribal knowledge’. Managing knowledge capital will be a key success factor in the weeks ahead.

2.1.1 Variety is best

The best approach is to have more than one methodology available for team members. Components of a strong methodology include recorded training sessions, checklists and detailed info on a wiki, and a contact sheet with the domain expert in each area. People learn differently and the level of detail drives the platform. The best, next step is to brainstorm ideas on how and what to document for training purposes. Let the QA team know you are looking for undocumented work process. Let them capture this over time and monitor progress. Follow up, follow up. Ge the most exhaustive list possible. Don’t leave undocumented work process off the list.

2.1.2 Prioritize

It’s impossible to document every process gap. The goal is to ensure business-critical ones are first. Develop training you will use in nine months or less. Documentation can be a black hole. Spend your time and effort where you’re confident the deliverables will get use. Find activities where documentation and planned worked can be conducted in consort. Focus on absent checklists or undefined standards. The next occurrence of that work is the best time to capture and publish a deliverable.

Also, do not overlook the resources you have available today. Where feasible, use real world content for training. Leverage test assets. Test scripts are excellent as a training tool. Likewise, retesting legacy defects in a complex functional area is useful and pragmatic. This requires tests being accurate. If they are not current, this is the optimal time to update the test library.

2.2 Take a moment

Take a moment and consider this. What if you could not hire? You lost some people on the team and you have no choice but to find a way to make it work. How does this change your perspective, priorities, and objectives? Using imaginary constraints will require you to get innovative. Trying to find a solution with a non-standard method can shift your approach. Innovative thinking accelerates getting from ‘as-is’ and achieving a ‘to-be’ state.

This typically results in eliminating low value, reoccurring tasks, reports, and meeting redundancy. This step requires discipline. Making decisions and eliminating work feels risky. If you are like the vast majority of other SDLC work groups, more than 30% of your team’s work falls in this category. Identify what can be delegated or combined with other work in the organization. Are standards for dev testing published? Are they being followed? How do you know. Now is he time to verify upstream quality checks are both in place and effective.

2.3 Work Intake

Review your work intake process. Can this be improved to eliminate waste and reduce risk? The answer is “Yes”. Set expectations realistically. Don’t agree to accomplishing the impossible. Be solutions oriented, outcome focused, and understand the mission. Chaos at the time of accepting work will compound. Be a supportive business partner, while at the same time, understand the success criteria for your team’s accountabilities.

2.4 Hiring

Fortunately, this mental exercise of not backfilling is designed to increase the effectiveness of hiring for the QA organization. A critical next action is to acknowledge that you must determine the skills and characteristics to fill. Don’t be convinced you already know exactly what the team needs.

3 Process

The objective is to identify the skills necessary to be in place across your team. Skills to effectively support the next twelve to eighteen months of quality assurance. The exercise will be critical path for QA’s strategic training and any testing tool needs. This process requires you to take an inventory of your current state, objectively score the inventory, and outline future needs of the organization. Defining the “as is” state of skills across your team and then a desired “to be” state creates a visualization of your skills gap. A single visualization of your skills gap will be a critical tool as you communicate the training and hiring requirements to HR, peers, and executives.

Let the QA team know what you are doing and more importantly ‘why’. This is a process to ensure you’re hiring the right talent. For the current QA team, it is identifying training areas to target. Part of the communication is to inform the team that there will be a self-rating step. Do your best to announce this in person and answer questions. Your goal is to strengthen the team. You are being strategic. Bring the team into the process. When communicating ‘why’, schedule the meetings required for the remainder of QA’s processes in the assessment exercise.

4 Data Capture

The individuals of the QA team will be rating themselves across skills. Specifically, the skills as defined for this exercise. The manager will also rate each direct report. Anticipate differences between individual self-rating and manager rating. The following process will normalize the data, visualize skills that are a gap, and provide a deliverable. The output communicates strategic hiring requirements in the QA organization. The six sigma analysis guides long-term insight for standards in performance management

activities and QA training plans. When announcing, be clear and upfront regarding the objectives, how the process works, and their part of making it successful for QA.

4.1 Process

This process requires reviewing the self-scoring and manager results and providing the visualization quickly back to the team. Two business days or less is ideal. When this work can be scheduled, begin the communication plan. You will need at least two weeks to forecast this activity and explain its value for hiring new QA members.

4.2 Skills and Definitions

Create a structure for your inventory. This may fall into categories such as quality assurance, testing, and process. The next level of detail is where you will be scoring the individuals on the team. It is recommended that the number of total skills areas be twenty or under. More is not always better for the consumer of this data. Having the primary key elements presented is most effective. Otherwise, the visualization may communicate all the team's strengths and minimize the necessity to fill a strategic gap.

There are skills and competencies specific to QA. There are more that overlap with the cross-functional team. The best practice is to have a balance, while including QA specific ones. Requirement's quality can be decomposed into multiple skills. Is it necessary for your purpose here? Where possible, do not decompose into too much detail. Remember, it is all about your audience. What do you need them to do with this information? How can you determine if you are being effective?

Definition. You have the wording, but that's not enough. Definition is critical. Document a concise, context relevant definition for each term. It will be used by those who score themselves as well as those assisting in training and hiring processes. To be clear, HR is unlikely to understand the difference between reliability and performance testing. Should 'assertive' be one of your areas, for everyone's benefit, be specific in how this is applicable to QA skills.

Quality Assurance

Requirement Quality	Analysis of completeness of requirements for development and testing. Provide input that eliminates ambiguity, increases testability, and ensures a distinct expected result of the specifications.
Reliability	Non-functional performance, reliability, fault tolerance testing. Including proven expertise leading NF testing for Accuracy, Observability, Recoverability, Reliability, Responsiveness, Scalability, and Stability.
Security	White Hat pen testing, Burp Enterprise Suite, Authentication, Authorization, Nessus, Whitesource, SonarCube, Veracode
UI/UX	Usability testing, knowledge of tech behind it; HTML, CSS, JavaScript, JSON, React
Azure	Setting up environments, NF testing in the cloud, monitoring, analysis
Pure non-functional	Innovation of ideas that increase product quality. Identification of specialized needs to test product. Design or develop scripts, tooling, solution to meet this unique need.

Testing

Functional	Basic testing to ensure product fitness to acceptance criteria, requirements, and other specifications.
Backend testing	(SQL Server Management Studio) Database / SQL Queries expertise. Proven competence testing relational databases (SQL Server, ORM Technologies, and Stored Procedures). For web services, (Ready! API, Postman)
UI Automation	Designing frameworks, developing scripts, analyzing results, troubleshooting failed, executing automation, Selenium, Cucumber Scenarios
Logs	Using logs to find errors and root cause. Review ARGO logs, traces & files (e.g. using BareTail Logs)
Virtualization	Create virtualized test APIs or other stubs to accelerate testing.

Process

SDLC	Methodology experience
Specifications	Business & technical requirements definition and understanding quality standards. Ability to accurately estimate work efforts for testing processes using requirements as basis.
Test Management	Leading testing processes by developing the test plan, accountable for scripts, execution, analysis and reporting status and risks
Assertive	Decisive, ability to make decisions and complete assignments independently. Team player aligned to project objectives and sense of urgency.
Integration	Cross-functional effectiveness. Design integration testing strategies and cross-disciplinary effects of new software solutions. Develop test scripts aligned to business value while also validating the backend. Focus on pragmatic usage by end-user.
Prob Solver	Strong analytical, reasoning, and problem-solving skills with an ability to visualize processes and outcomes. To identify root causes. Ability to escalate issues to appropriate levels of management.
Prioritization	Ability to prioritize work and manage multiple assignments within estimates, commitments, completion dates. Has strong follow through meticulous attention to detail.
Delegation	Ability to effectively communicate deliverables and expectations to individuals and customers. Ensure commitments are completed by others.
Eff Comm	Persuasive, articulate, and professional. Written and oral communication skills and the ability to present testing methodology and strategies to both customers and internal teams. Ability to train, upskill, and perform knowledge transfer to other QA members.

4.3 Self-Rating Prerequisites

Have managers reporting to you complete their personal self-rating beforehand. You will rate them and complete this at least a week before rolling it out to the QA team. Managers will better understand this process by going through it firsthand. This provides a process quality check. Anticipate making some modifications from insight acquired here.

The week prior to self-scoring, remind QA about the exercise, and provide the date when the worksheet will be sent. Ideally, communication can be in your weekly team meeting or other regular meeting or communique. Answer questions and prepare the team to receive definitions of skills they will use in the worksheet. Send the definitions directly afterwards.

By doing so, the team members will be given every opportunity to ask questions and understand the self-rating. Your communication and upfront efforts will pay dividends. Your goal is to have an efficient process while completing the self-rating process. Your goal in this phase is getting as much of the team onboard as early as possible.

After this meeting you are sending everyone the list of skills and corresponding definitions. Let everyone understand they will need to be familiar with the areas prior to self-scoring. Also, reiterate the process of self-rating they will have directly after the upcoming meeting. That meeting has been on everyone's calendar since you defined the 'why'. Now you've done your utmost in setting expectations.

4.4 Rating

Rating is divided into dual processes. The self-rating individual contributor step and the manager's rating. Managers score their direct reports. The rating categories below provide a heuristic. Use a skill rating scale best suited for your context. Skill rating scales using whole numbers 0 to 10 are recommended.

- 0 No experience
- 1 - 3 Low
- 4 -6 Moderate
- 7 - 9 High
- 10 Master

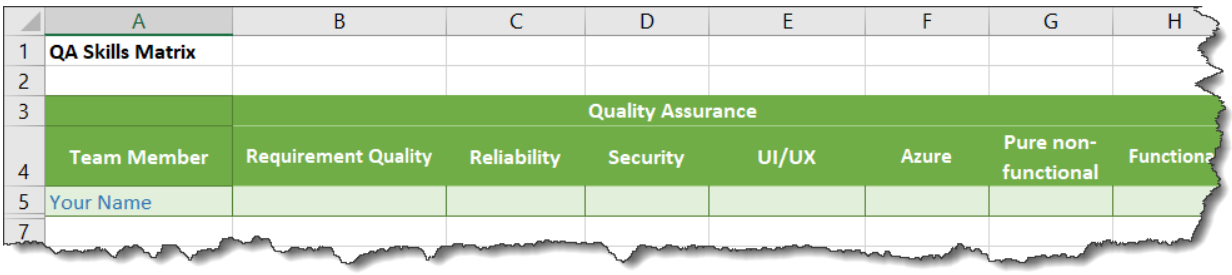
Consistency is the paramount success factor when selecting a rating scheme. This is the basis for the following two processes.

4.4.1 Manager's rating of QA

After defining the terms, score the team. Consider the job level, and you will be documenting your best subjective assessment of the QA team through grading all the members. The best practice is to do this once, efficiently, and think of a normal distribution.

4.4.2 Self-Rating

The self-rating process occurs after the launch meeting. In many ways, self-rating becomes the most mechanical. Below is a sample self-rating form.



	A	B	C	D	E	F	G	H
1	QA Skills Matrix							
2								
3		Quality Assurance						
4	Team Member	Requirement Quality	Reliability	Security	UI/UX	Azure	Pure non-functional	Functiona
5	Your Name							
7								

Everyone has the definitions, the worksheet they receive following the launch meeting requires them to score themselves. Scoring is based off the skill rating scale.

4.4.3 Launch Meeting

Walkthrough the expectations leading to this meeting. Provide the scoring scale and guidelines. Remind QA members to score against the definitions for the exercise.

In this meeting a deadline is set to complete the self-rating activity. Plan on one business day to complete their worksheet. The key is to have everyone perform the self-rating quickly. Providing more time does not improve accuracy.

Directly afterwards, send the self-rating form. QA members then individually complete and return the self-rated form to their manager

4.4.3.1.1 Publishing results

Keep in mind, you have let the team know what you're doing. This is not a surprise. Give them 24 hours or less to complete their self-rating part of the process. Quickly distribute the combined, anonymous results you will calculate in the Standardized Data section. If QA sees the output within the time expectations set, this will be a positive experience for the team.

4.4.3.1.2 Alternate Rating Option

This is an optional rating. If integrating the skills gap exercise with career planning, consider an additional rating dimension. The employee can choose to use this secondary rating scale to document their desired growth plan. Use the skills rating scale for X (Today) and Y (By next year).

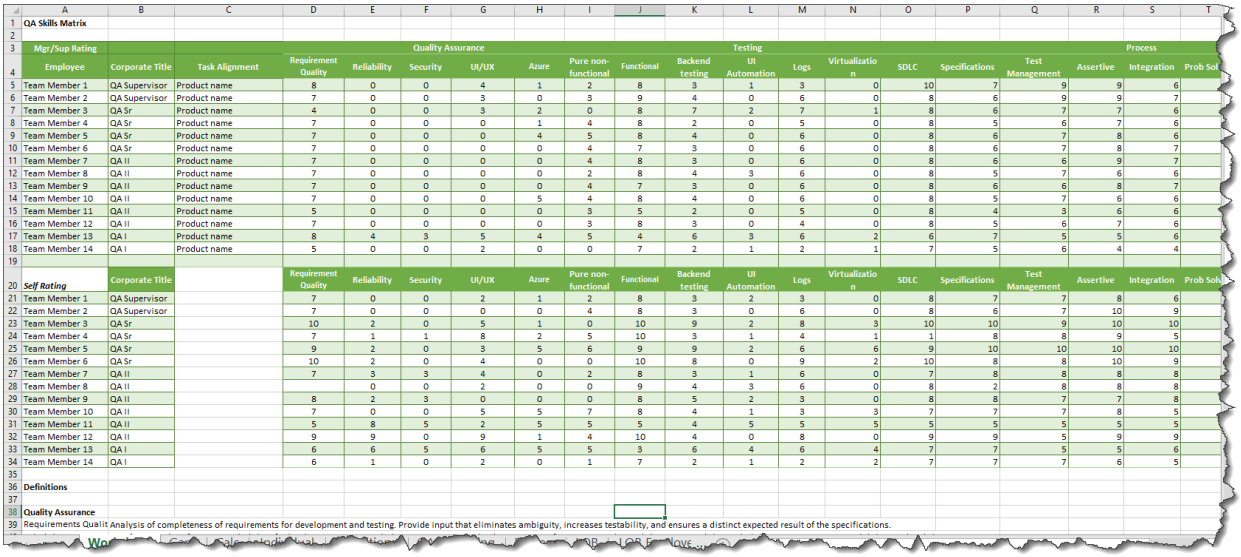
X = Current employee skill

Y = Desired employee skill, where do you want to be a year from now

	A	B	C	D	E	F	G	H	I	J	K
1	**QA Skills Matrix**										
2											
3		Quality Assurance								Testing	
4	Team Member	Requirement Quality	Reliability	Security	UI/UX	Azure	Pure non-functional	Functional	Backend testing	UI Automation	Logs
5	Your Name										
6	X/Y [Alt Scale]										
7											
8		**Definitions**									
9											
10		**Quality Assurance**									
11		Requirements Quality	Analysis of completeness of requirements for development and testing. Provide input that eliminates ambiguity, increases testa								
12		Reliability	Non-functional performance, reliability, fault tolerance testing. Including proven expertise leading NF testing for Accuracy, Ob								

4.5 Standardized Data

You have now collected all results for skills across the QA team. See an example below of data organized with scores collected from both manager and individuals.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	QA Skills Matrix																			
2																				
3	Mgr/Sup Rating			Quality Assurance							Testing								Process	
4	Employee	Corporate Title	Task Alignment	Requirement Quality	Reliability	Security	UI/UX	Azure	Pure non-functional	Functional	Backend testing	UI Automation	Logs	Virtualization	SDLC	Specifications	Test Management	Assertive	Integration	Prob Sol
5	Team Member 1	QA Supervisor	Product name	8	0	0	4	1	2	8	3	1	3	0	10	7	9	9	6	
6	Team Member 2	QA Supervisor	Product name	7	0	0	3	0	3	9	4	0	6	0	8	6	9	9	7	
7	Team Member 3	QA Sr	Product name	4	0	0	3	2	0	8	7	2	7	1	8	6	7	7	6	
8	Team Member 4	QA Sr	Product name	7	0	0	0	1	4	8	2	0	5	0	8	5	6	7	6	
9	Team Member 5	QA Sr	Product name	7	0	0	0	4	5	8	4	0	6	0	8	6	7	8	6	
10	Team Member 6	QA Sr	Product name	7	0	0	0	0	4	7	3	0	6	0	8	6	7	8	7	
11	Team Member 7	QA II	Product name	7	0	0	0	0	4	8	3	0	6	0	8	6	6	9	7	
12	Team Member 8	QA II	Product name	7	0	0	0	0	2	8	4	3	6	0	8	5	7	6	6	
13	Team Member 9	QA II	Product name	7	0	0	0	0	4	7	3	0	6	0	8	6	6	8	7	
14	Team Member 10	QA II	Product name	7	0	0	0	5	4	8	4	0	6	0	8	5	7	6	6	
15	Team Member 11	QA II	Product name	5	0	0	0	0	3	5	2	0	5	0	8	4	3	6	6	
16	Team Member 12	QA II	Product name	7	0	0	0	0	3	8	3	0	4	0	8	5	6	7	6	
17	Team Member 13	QA I	Product name	8	4	3	5	4	5	4	6	3	6	2	6	7	5	5	6	
18	Team Member 14	QA I	Product name	5	0	0	2	0	0	7	2	1	2	1	7	5	6	4	4	
19																				
20	*Self Rating*	Corporate Title		Requirement Quality	Reliability	Security	UI/UX	Azure	Pure non-functional	Functional	Backend testing	UI Automation	Logs	Virtualization	SDLC	Specifications	Test Management	Assertive	Integration	Prob Sol
21	Team Member 1	QA Supervisor		7	0	0	2	1	2	8	3	2	3	0	8	7	7	8	6	
22	Team Member 2	QA Supervisor		7	0	0	0	0	4	8	3	0	6	0	8	6	7	10	9	
23	Team Member 3	QA Sr		10	2	0	5	1	0	10	9	2	8	3	10	10	9	10	10	
24	Team Member 4	QA Sr		7	1	1	8	2	5	10	3	1	4	1	1	8	8	9	5	
25	Team Member 5	QA Sr		9	2	0	3	5	6	9	9	2	6	6	9	10	10	10	10	
26	Team Member 6	QA Sr		10	2	0	4	0	0	10	8	0	9	2	10	8	8	10	9	
27	Team Member 7	QA II		7	3	3	4	0	2	8	3	1	6	0	7	8	8	8	8	
28	Team Member 8	QA II			0	0	2	0	0	9	4	3	6	0	8	2	8	8	8	
29	Team Member 9	QA II		8	2	3	0	0	0	8	5	2	3	0	8	8	7	7	8	
30	Team Member 10	QA II		7	0	0	5	5	7	8	4	1	3	3	7	7	7	8	5	
31	Team Member 11	QA II		5	8	5	2	5	5	5	4	5	5	5	5	5	5	5	5	
32	Team Member 12	QA II		9	9	0	9	1	4	10	4	0	8	0	9	9	5	9	9	
33	Team Member 13	QA I		6	6	5	6	5	5	3	6	4	6	4	7	7	5	5	6	
34	Team Member 14	QA I		6	1	0	2	0	1	7	2	1	2	2	7	7	7	6	5	
35																				
36	Definitions																			
37																				
38	Quality Assurance																			
39	Requirements Quality Analysis of completeness of requirements for development and testing. Provide input that eliminates ambiguity, increases testability, and ensures a distinct expected result of the specifications.																			

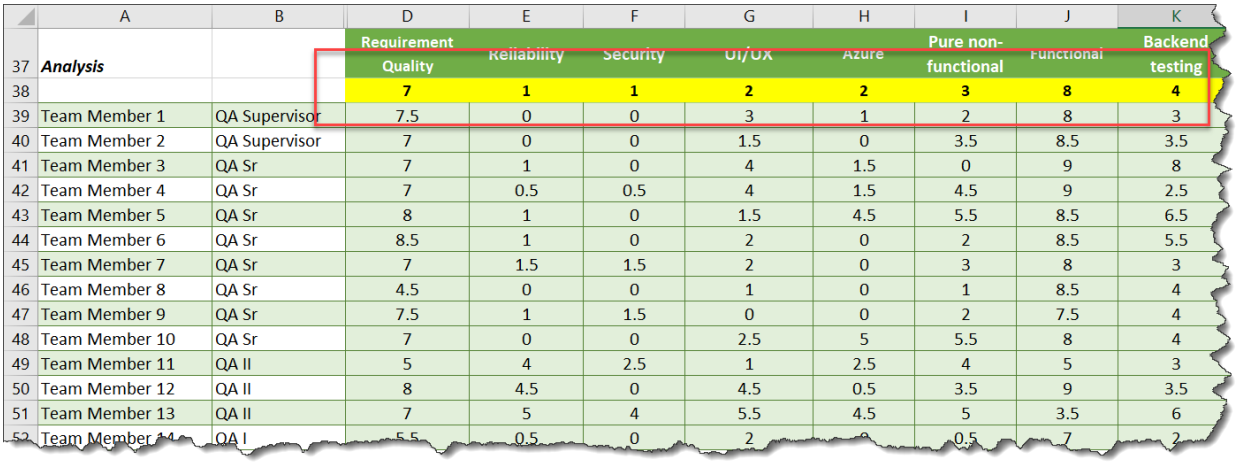
This will be organized to provide a view for skills-based strengths and weaknesses. These will be describing the current skill levels in QA. These skills can be enhanced with training. The business-critical, strategic gaps can be filled via hiring. The gap can also be filled from lateral movement into QA from other areas of the company.

4.5.1 Basic Mean Analysis with Pareto Visualization

Use a mean analysis when self-rating and manager ratings are similar in scoring. If scoring is +/- 2 for 80% of the areas, this method is preferred.

4.5.1.1 Sum of Means

The objective is to calculate a mean from the two scores provided. One by the manager and the second through self-rating. A third table will reflect this.



	A	B	D	E	F	G	H	I	J	K
37	*Analysis*		Requirement Quality	Reliability	Security	UI/UX	Azure	Pure non-functional	Functional	Backend testing
38			7	1	1	2	2	3	8	4
39	Team Member 1	QA Supervisor	7.5	0	0	3	1	2	8	3
40	Team Member 2	QA Supervisor	7	0	0	1.5	0	3.5	8.5	3.5
41	Team Member 3	QA Sr	7	1	0	4	1.5	0	9	8
42	Team Member 4	QA Sr	7	0.5	0.5	4	1.5	4.5	9	2.5
43	Team Member 5	QA Sr	8	1	0	1.5	4.5	5.5	8.5	6.5
44	Team Member 6	QA Sr	8.5	1	0	2	0	2	8.5	5.5
45	Team Member 7	QA Sr	7	1.5	1.5	2	0	3	8	3
46	Team Member 8	QA Sr	4.5	0	0	1	0	1	8.5	4
47	Team Member 9	QA Sr	7.5	1	1.5	0	0	2	7.5	4
48	Team Member 10	QA Sr	7	0	0	2.5	5	5.5	8	4
49	Team Member 11	QA II	5	4	2.5	1	2.5	4	5	3
50	Team Member 12	QA II	8	4.5	0	4.5	0.5	3.5	9	3.5
51	Team Member 13	QA II	7	5	4	5.5	4.5	5	3.5	6
52	Team Member 14	QA I	5.5	0.5	0	2	0	0.5	7	2

Calculate each value for this table.

> Where a QA member has manager scoring in cell D5 and self-scoring D21. Use **=(D5+D21)/2** for D39.

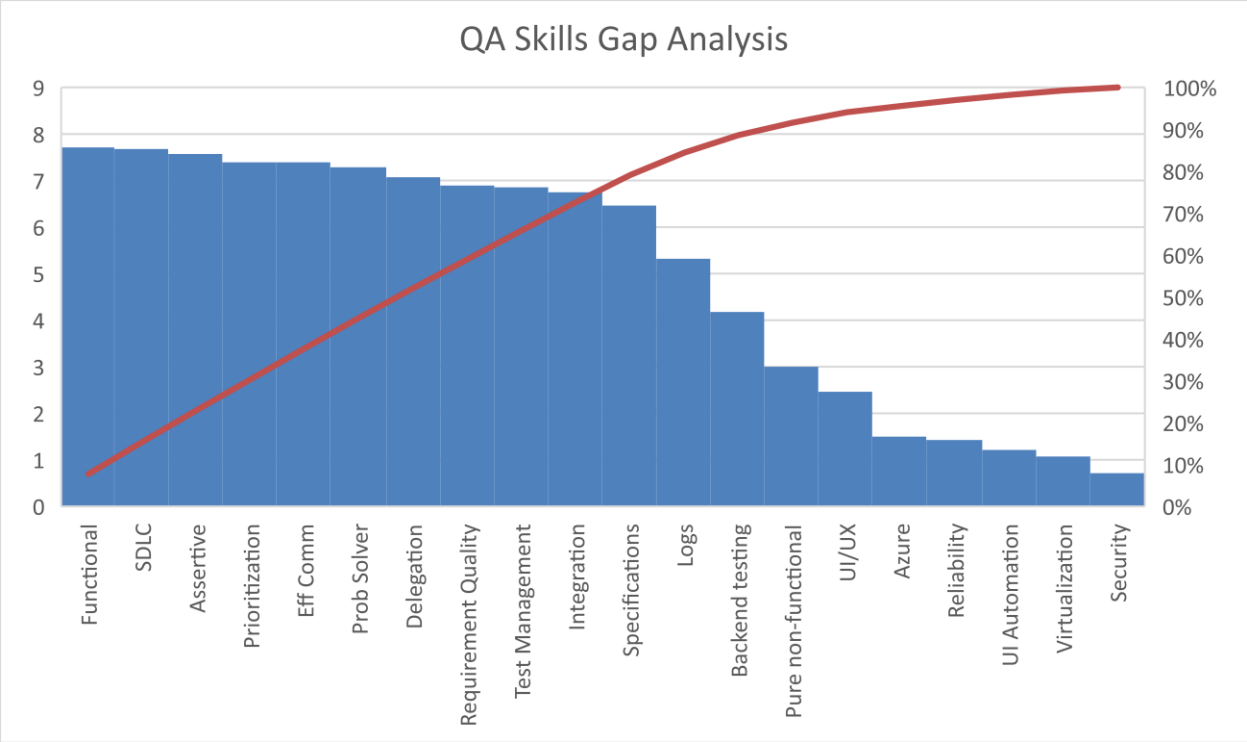
After all mean values are calculated, the average across the team can determined.

With the mean values for team members listed on rows 39 through 52, use **=AVERAGE(D39:D52)** for D38.

The team's combined average becomes the basis for visualization of the gap analysis. This method is useful when scoring is similarly aligned between manager and team member.

4.5.1.2 Pareto Chart

The output of this analysis is clear in Pareto chart format. This is not an 80/20% dataset that might typically be used with this visualization tool. Nonetheless, this format communicates to your audience. In one view, the skills gap is clearly identifiable.



4.5.2 Advanced Standardization

4.5.2.1 Overview of constituent calculations

The combination of manager and self-rating mean will be included with the sum and standard deviation. Then standardizing (Z-score) the data will provide what is necessary for identifying anomalies in the data. By doing this, data will be comparatively similar. This methodology eliminates subjectivity of individuals and increases overall objectivity of results. The results will not be whole numbers.

4.5.2.2 Basis of mean data

Use the same data from the sum of means methodology previously described.

Taking a skill where column D contains its scoring. And where scores are on rows 21 through 34, use **=AVERAGE(D21:D34)**

4.5.2.3 Standard Deviation

Producing the mean, standard deviation provides insight to distribution and confidence in the data. A standard deviation of two or less is excellent.

Taking a skill where column D contains its scoring. And where scores are on rows 21 through 34, use **=STDEV(D21:D34)**

The best standard deviations are low. A one or two. Typically, there will be threes in the set with a low count of data. Any standard deviation beyond three is a signal the score is unrealistic for the expectations of the dataset. This will be amplified with the Z-score.

4.5.2.4 Standardizing (Z-score)

This method of standardization provides a simple way to compare a data point to the norm. The prerequisites for using this method are the mean and standard deviation.

Taking a skill where column D contains its scoring. The value to normalize is D21, mean D36, standard deviation D37, **Use =STANDARDIZE(D21,D36,D37)**

This provides the manager with a view of any data outside the expected values.

20			Requirement Quality
21	Team Member 1	QA Supervisor	7.5
22	Team Member 2	QA Supervisor	7
23	Team Member 3	QA Sr	7
24	Team Member 4	QA Sr	7
25	Team Member 5	QA Sr	8
26	Team Member 6	QA Sr	8.5
27	Team Member 7	QA Sr	7
28	Team Member 8	QA Sr	4.5
35			
36		Mean	6.96428571
37		Standard Eviation	1.262846075
38	***Z-Score***		Requirement Quality
39	Team Member 1	QA Supervisor	0.4242118
40	Team Member 2	QA Supervisor	0.028280791
41	Team Member 3	QA Sr	0.028280791
42	Team Member 4	QA Sr	0.028280791
43	Team Member 5	QA Sr	0.820142932
44	Team Member 6	QA Sr	1.21607400
45	Team Member 7	QA Sr	0.0282807

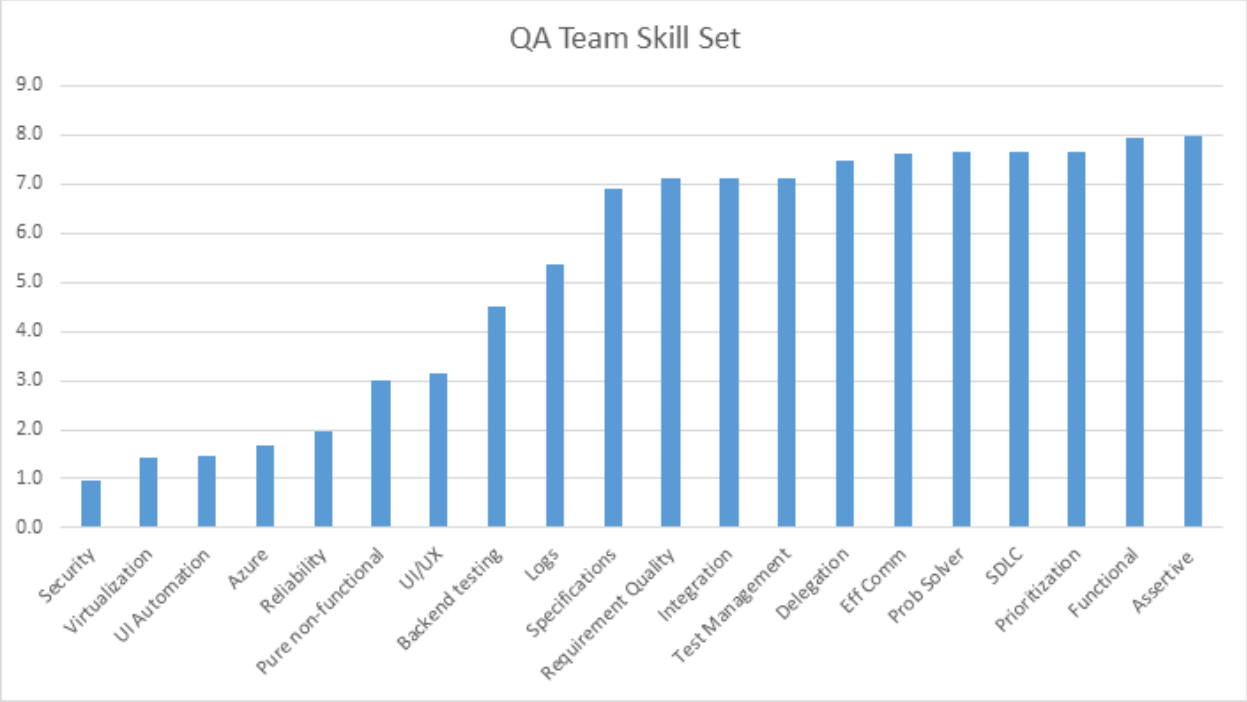
In this illustration team Member 6 is higher than the average. This may be valid and expected. It also can be an opportunity to leverage their under-utilized skills. Alternatively, this may show an area where the manager and team member are out of alignment with performance.

4.6 Presentation of Data

Consider the audience. What do you need them to do with this information? If HR, you might be communicating how to search LinkedIn or where to focus resume screening. If this work does not change the hiring process for you in a material way, rethink how you are defining your required skills. If the

audience is a peer manager and she is counting on you to support them in the SDLC, does this identify where core competencies are covered. While at the same time, clarifying your understanding to adapt QA to future challenges or new technologies. When presenting at a senior level, are you defining the situation, the complication, what can you do, and the plan you are selecting from various possibilities? Do you require a decision, or support, or are you simply waning to build confidence that you are up to the task of solving this in a strategic manner? This is a communication tool. Having this visualization provides an efficient message to get support, build confidence you understand the need, and take the next actions to fill skill gaps.

4.7 Visualization of Normalized Data



5 Strategic Benefits

5.1 Hiring the right talent

In hiring processes ahead, use this as a blueprint for the needs of the current QA organization. Remember that this will change over time. Nonetheless, a quantification of team skills provides insight to filling the gaps and avoiding redundancy.

As hiring continues, consider how skill coverage has increased or new needs come to light. Depending on team size, in two to four hires most QA skill gaps can be covered.

5.2 Training

Training members of the team to cover skill gaps is often preferred. Training is normally planned across an annual period. This visualization is a key input when requesting budget. It is also likely training will be planned in other areas of the organization. Identify scheduled training that will cover the skills gap.