



Dedicated to Software Quality Professionals

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WELCOME TO SEASON 26!

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WELCOME TO SEASON 26!

- All-volunteer **non-profit** with no membership dues!
- Supported entirely by our sponsors...
- Over **1,500** members on LinkedIn, **1100** on MailChimp
- More than **580** members have joined our Meetup Group
- Jorge Rodriguez welcomes your tweets at SQGNE_Twitter.
- Monthly meetings - Sept to June on 2nd Wed of month
- **SQGNE Web site: www.SQGNE.org**



Officers / Hosts / Mission

Current Officers:

- John Pustaver – Founder
- **Stan Wrobel–*Interim* President**
- Robin Goldsmith – Vice President
- Barbara Wioncek – Treasurer
- Naiying Weigand -- Clerk

At-large Directors:

- Bill Basinski
- Mike Arnold
- Jim Turner

Our Gracious Host:

- Darin Kalashian
- Chandrakant Natarajan (Chandu)

Mission

- To promote use of engineering and management techniques that lead to delivery of high quality software
- To disseminate concepts and techniques related to software quality engineering and software engineering process
- To provide a forum for discussion of concepts and techniques related to software quality engineering and the software engineering process
- **To provide networking opportunities for software quality professionals**
 - **Job openings**
 - **Needs and other announcements**



A Practitioner's Guide To Agile/Scrum Software Development

This course is designed to instill fundamental agile software development methods and frameworks, particularly, those related to Scrum, taught by practical application. Participants in this course will develop a good working knowledge of the principals of Agile and SCRUM and how to effectively apply these principals into a software development project enabling delivery of high-value, high-quality products through iterative development cycles.

The focus of this course is to establish a common language and understanding of the principles of Agile and Scrum. The course serves as a means to help individuals (and teams) increase their capability and efficiency while working within the Scrum framework. This course has served as a launch pad for individuals interested in taking the Certified Scrum Master I (CSM-I) exam. The course is comprised of multiple sessions with each session designed to introduce the driving concepts and then re-enforce these concepts through hands on exercises and projects.

6 Sessions 5:30pm ~ 8:00pm Bedford/Burlington, MA
Likely January 2020 Look for more info next month

**Contact instructor Darin Kalashian darin@dskquality.com for more info
and to discuss additional topics**

SQGNE 2019-20 Schedule

Speaker	Affiliation	Date	Topic
Darin Kalashian	RSA	2019 Sept 11	Building Quality In... by Engaging To The Left
Gleb Bahmutov	Cypress.io	Oct 9	Good News About End-to-end Testing with open source Cypress.io
Lisa Dennis	Knowledge Associates	Nov 13	Get Deserved Respect & Understanding with an SQA Value Proposition
Robin Goldsmith	Go Pro Management, Inc.	Dec 11	Write Right Agile User Story Acceptance Tests Right
Rob Zalgenas Vijay Ankireddypalli	Harvard Pilgrim Health Care	2020 Jan 8	Transforming a Large Enterprise Manual QA Team to 85% Automation Run Rate
Adam Bahret	Apex Ridge Reliability Consulting Services	Feb 12	Reliability and FMEA Keys to Software Quality
Bob Crews	Checkpoint Technologies	Mar 11	An Agile Risk Analysis Approach to Improve Your Testing Process
Kevin Weiss	Philip Crosby	Apr 8	Using Quality Function Deployment (QFD) Thinking to Drive Software Quality
	SmartBear	May 13	BDD, Beyond Given-When-Then, Making Cucumber Work
	RSA	June 10	How RSA Supports and Delivers Software Quality <i>Annual Election of Officers</i>

Jan 2020
Please suggest topics and speakers

Tonight's Topic

Transforming a Large Enterprise Manual QA Team to 85% Automation Run Rate

Rob Zalgenas, Harvard Pilgrim Health Care QA Director

Vijay Ankireddypalli, Automation Solutions Architect at NTT Data

Abstract

QA teams are being asked to do more with less. Automation is an obvious path but easier said than done. Building an automation team from scratch is one thing, but what do you do when you already have a large enterprise manual QA team of subject matter experts that are beloved by the business? The answer was to retain what we valued and convert our existing manual team into an automation shop. Through trial and error, we learned a lot along the way and ultimately found the correct recipe to convert our team from a 15% automation run rate to 85%. Share this story, including hard lessons.

- How to transform a functioning, largely non-technical QA team into an automation success story.
- A roadmap on how to increase test breadth, scope and coverage within resource and cost constraints without compromising quality results.
- Insight into key metrics that help to monitor progress along the way and expose areas at risk.

Bio:

Rob Zalgenas has been with Harvard Pilgrim Health Care (HPHC) for almost twenty five years. In that time he has helped evolve the Quality Assurance practice from the ground up. Rob currently manages a team of about 100 testers across five offices in three countries. Recent efforts have focused on creating meaningful test metrics and analytics. For fun he likes to conduct quality audits.

Vijay Ankireddypalli brings over 16 years of experience in IT. He has extensive experience with QA, End to End Automation Solutions, Automation Framework Architecture/Re-Engineering and Automation Consulting on many different platforms. He specializes in a consultation role for test automation accelerators and tools to test partners' products. He carries experience in developing CI/CD pipelines soup to nuts including unit test, build, deploy and test.

Who We Are

Rob Zalgenas

QA Director, Harvard Pilgrim Health Care

- Built and manages the QA practice at HPHC
- Established and oversees a Testing Center of Excellence
- Advocates for Quality at every opportunity

Vijaya Ankireddypalli

End to End Automation Solutions Architect, NTT Data

- Automation Framework / Architecture
- Automation Framework Re-Engineering
- Automation Consultant for open source and commercial tools
- Enterprise Automation strategy

Who We Are

- Harvard Pilgrim and its family of companies provide health benefit plans, programs and services to more than 3 million customers in New England and beyond. A leading not-for-profit health services company, we guide our members—and the communities we serve—to better health.
- NTT DATA is a Global IT Innovator delivering technology-enabled services and solutions to clients around the world. NTT DATA is partnered with Harvard Pilgrim for technology-enabled services delivery and implementation.

Agenda

Management Perspective

1. Problem Statement
2. What Worked / What Didn't Work
3. What's Next



Solution Perspective

1. Test Automation Transformation
2. Transformation Journey
3. Q&A



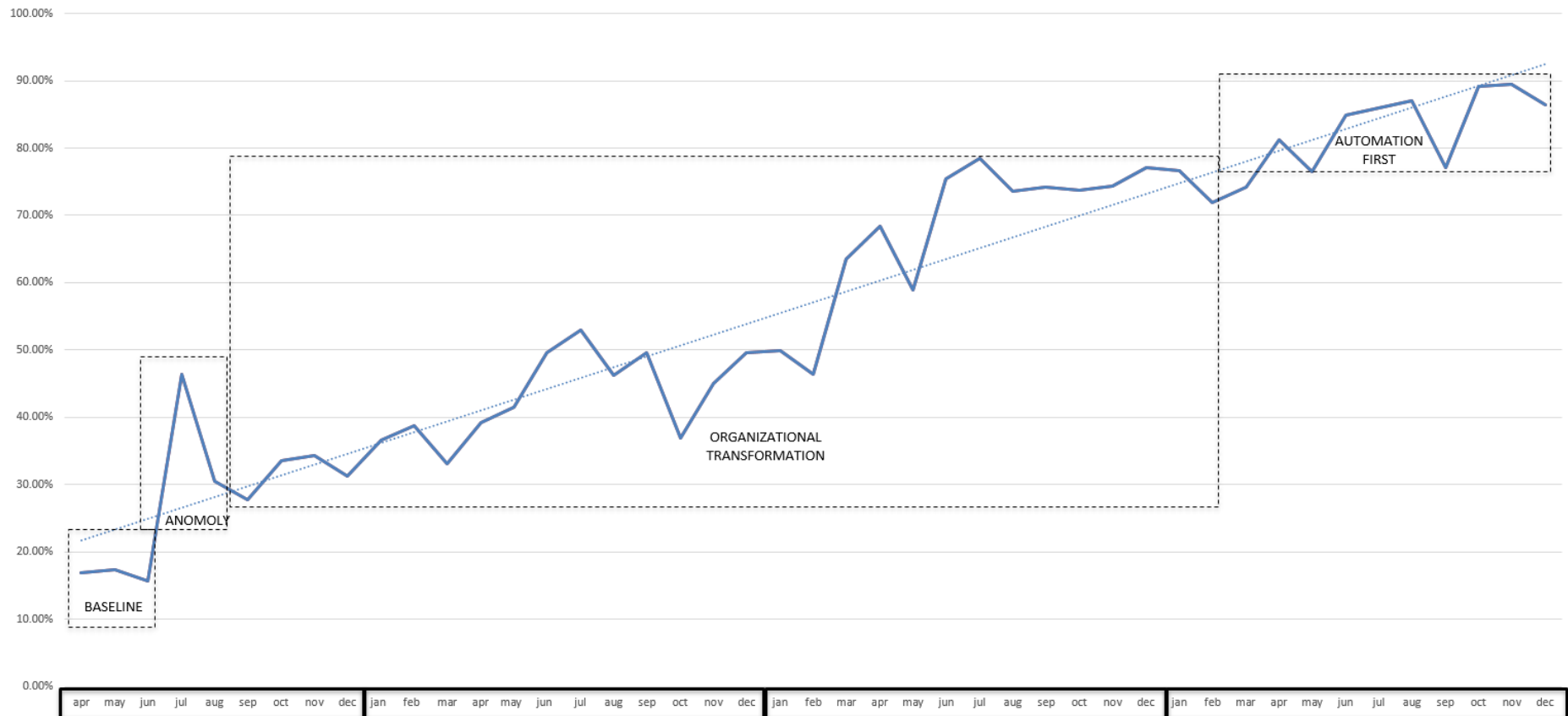
Management Perspective



Problem Statement

- Automation is good, so I ***must*** need more of it. Why?
 - *Cost savings, better coverage, free up resources for analytical tasks*
- To start the journey, I needed to understand what was my starting point. The end point is a moving target. I'll worry about that later.
- It all looks great in demos, but we're not a pure software development company.
- My team resources are my best assets, but they need to be retrofitted.

Spoiler Alert: 74% Increase in 45 Months



Organizational Transformation

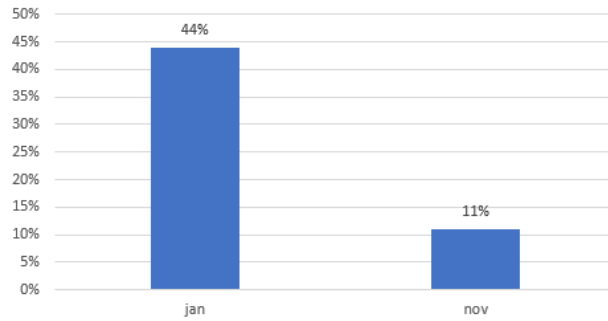
- Step 1: Recognition and declaration that automation is no longer “us & them”. All QA are part of an automation organization.
- Step 2: Automation Task Force – volunteer driven
 - Pros – identified our potential rock stars (innovation minded, tech savvy, energetic & enthusiastic)
 - Cons – driving transformation in spare time does not work, hard to drive change with junior members on the org chart
- Step 3: ROI calculator.
 - Go for the big hits first.
 - Manage it on a Kanban board
 - 100% automated is a unicorn. If it's not worth it, don't do it.

Organizational Transformation

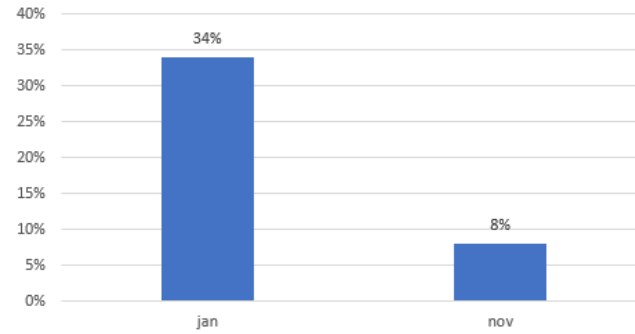
- Step 4 Proposed: The “Shadow Org” – take transformed individuals and start to build automation teams from scratch that are insulated from the manual slippery slope.
- Step 4 Reality: A pipeline that enables all of our resources to gain fundamental automation skills.
- Step 5 (2019) – Break Up The Band – Automation specialists are decentralized.
 - Embedded in teams
 - More influencers/enablers than doers

Results

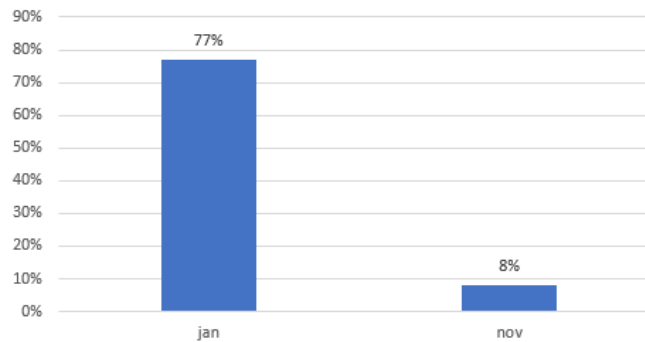
Automated Test Runs



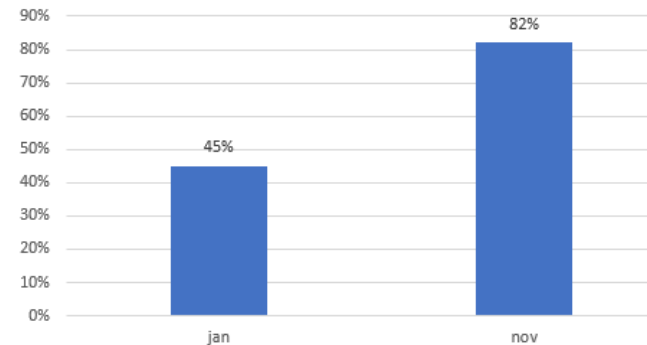
Automated Test Maintenance



Automated Test Creation



TDM Stories Completed w/ Auto Solution

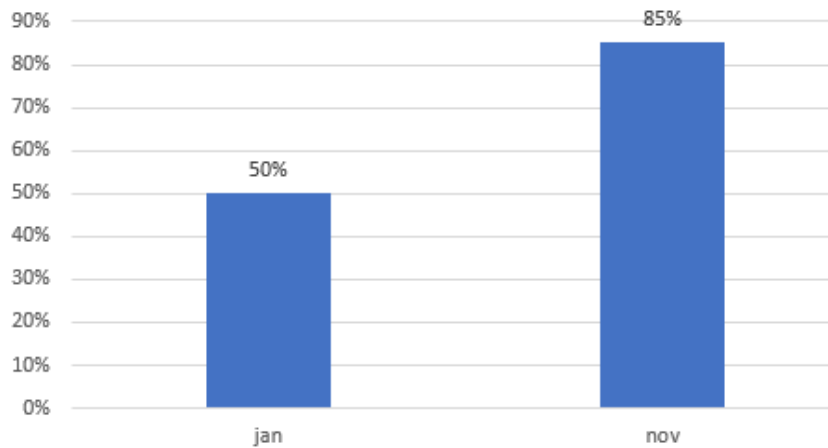


Automation First

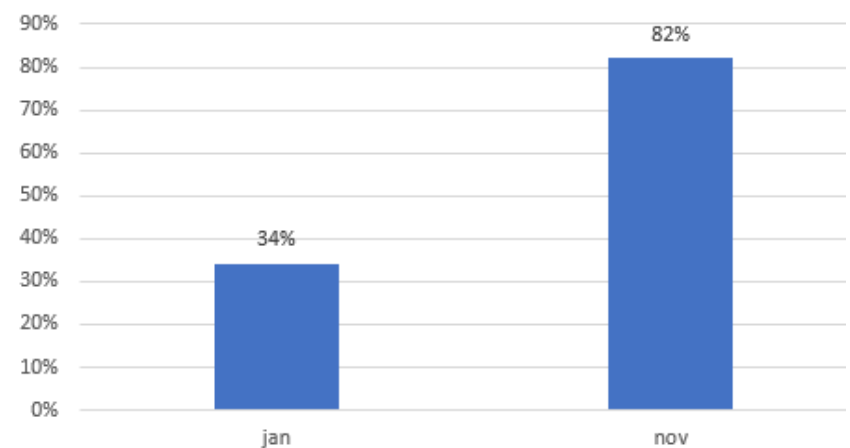
- Beyond regression testing. Let's automate our functional tests.
 - Create a test case once
 - No more throw it over the wall to automate at a later date
 - What is the best tool match to achieve this scenario with a team semi-trained team?
 - Scriptless/Codeless automation

Results

QA Teams Utilizing Auto First



Functional Test Volume Automated



Where to Now?

- Not all automation is equal. Let's measure and evolve to a higher maturity level
 1. Manual
 2. Automated steps / manual validation
 3. Automated steps / automated validation
 4. Automated steps / automated validation – triggered automatically
- Targeted automation
 - More coverage is a good thing, but can we get smarter about what changes need to be tested?
 - If we do this successfully, our automation run rate will decrease
 - Is it decreasing for the right reasons?
 - How to we sell this to senior management?

Solutions Perspective



What is Automation Transformation?

As people, process and technology are critical for succeeding in the software development, the automation transformation is :



Why Automation Transformation?

- ❖ To achieve faster software delivery, organizations are increasingly adopting Agile development methodology
- ❖ To maximize the benefits of Agile software development, requires testing to be performed concurrently with development
- ❖ Scriptless approach for organizations to return on investment (ROI) more quickly, by significantly reducing the cost of test development and maintenance.
- ❖ Speed of Technological Adoption –Migration to technologies, Adapting cloud environments SAS, PAS and IAS.

Transformation Journey Thru 2019

Test Automation

- ❖ Resources to projects on demand
- ❖ Framework at individual resource interest and knowledge
- ❖ Tools and utilities
- ❖ Automated manual regression test cases

Enterprise Test Automation

- ❖ One automation team at Enterprise level
- ❖ Best practices, tools and methodologies
- ❖ Requests prioritizing at enterprise level
- ❖ Enterprise dashboards and Monitoring

Enterprise Automation First

- ❖ Enable every QA resource to write, execute and maintain just 1 automated test script
- ❖ Homegrown testing tool
- ❖ In sprint automation script development



Automation Taskforce

- ❖ Forum to join with automation skills interest
- ❖ Help on small requests of test automation
- ❖ Learn about internal tools, utilities and solutions

Automation Organization

- ❖ Established automation training programs
- ❖ Up to 95% of QA resources are completed these training program
- ❖ Goal with over 50% of automation scripts execute and maintenance by Automation Org
- ❖ New functional automation scripts development

Specialist Distribution

- ❖ Automation is now the responsibility of every QA resource
- ❖ Increase depth of test automation coverage
- ❖ Increase automation at functional testing
- ❖ Mentor project QA resources
- ❖ Make automation resource available

Transformation Journey of 2020

- Automated Test Automation (ATA) – Intelligent test automation
 - Self healing capabilities for unexpected error due to:
 - Object property or position change
 - Network latencies
 - Upstream/Downstream applications are not responding
 - Determination of action for test failure:
 - Re-execution
 - Categorization of failure
 - Defect logging
 - Test data on demand
 - Rule based decisions

People – Enhancing skills

The first consideration was what new skills would be needed to achieve automated testing during development and train manual qa resources with required skills



2020:

- Codeless and Model based test automation
- Codeless performance testing tool
- Distributed performance specialists
- Self catering test data skills for automation alignment

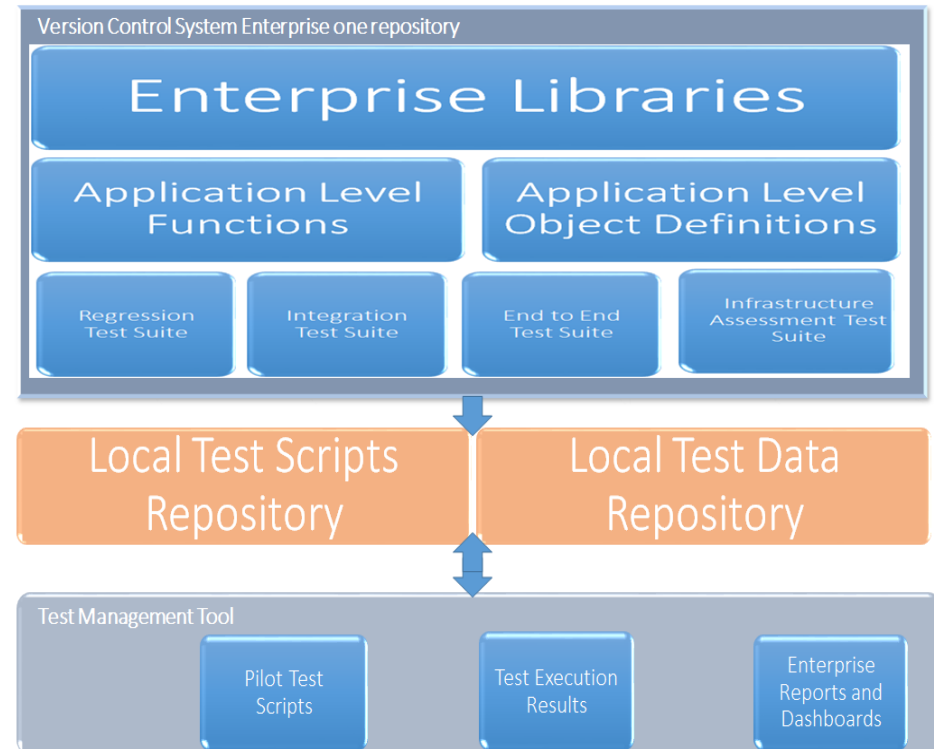
Process – Test Automation to Enterprise Test Automation

Test automation to:

- ❖ Increase the effectiveness, efficiency and coverage
- ❖ About adopting best tools, frameworks and practices

Enterprise test automation to:

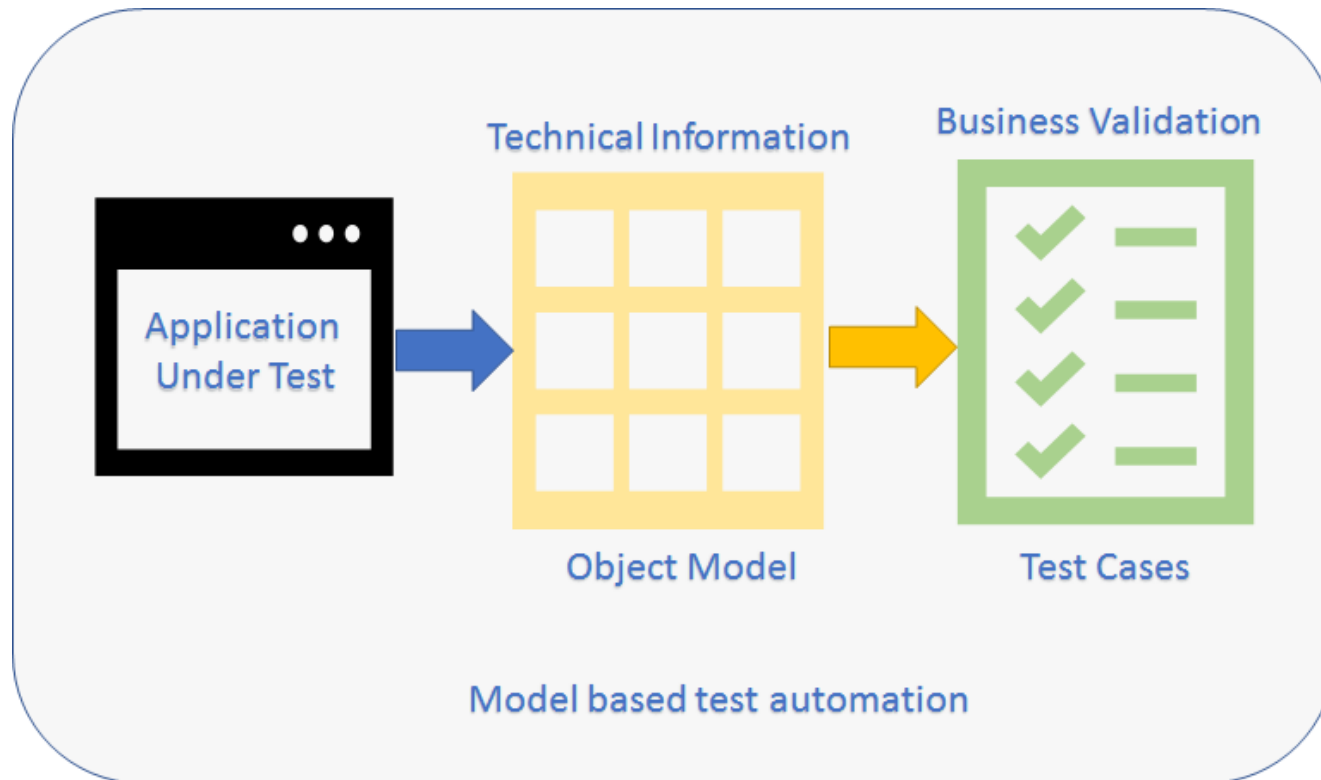
- ❖ Inline test automation deliverables with enterprise application landscape
- ❖ Make test automation scripts alive for Business-As-Usual (BAU) operations
- ❖ Utilize test automation for application, technology, infrastructure change
- ❖ Single view dashboards at enterprise level quality reporting.



Process – Model based test automation

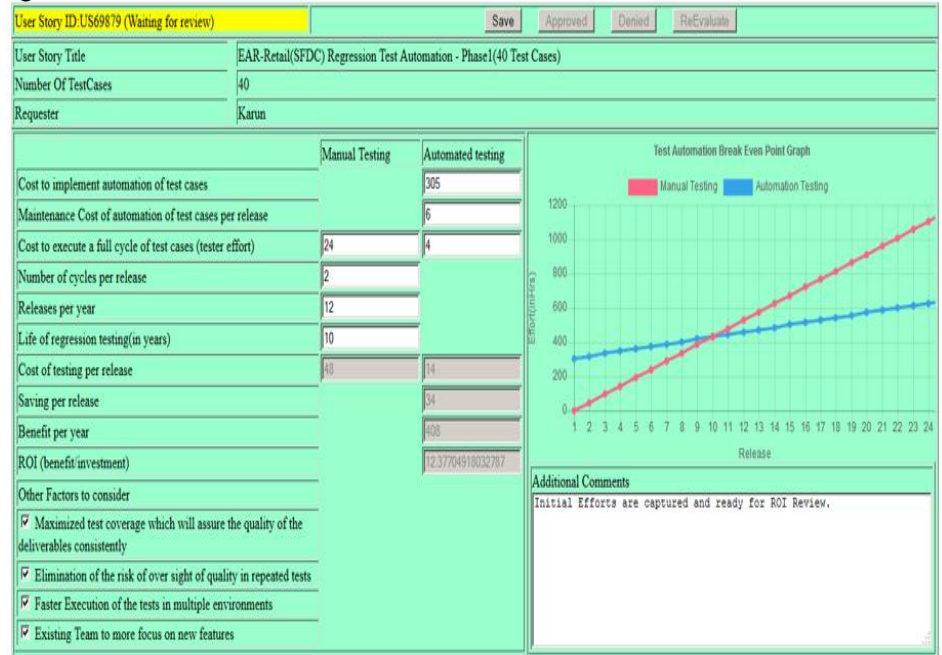
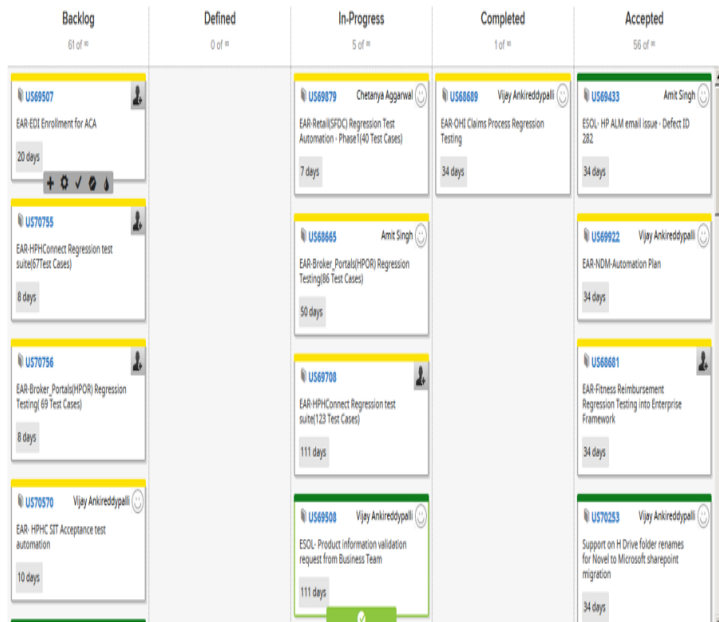
Model-based test automation empowers

- ❖ Anyone from developers to business experts to contribute to test automation
- ❖ Eliminates the maintenance burden that impacts most test automation initiatives

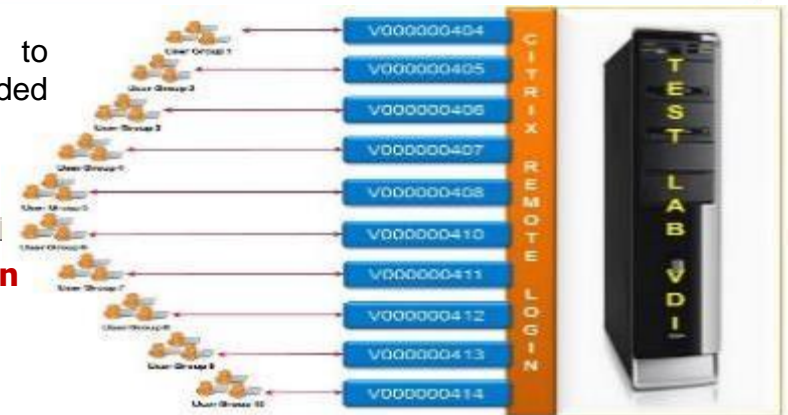
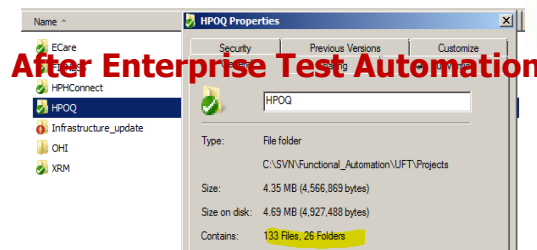


Process – additional improvements

Managing test automation requests at enterprise level by using Kanban and ROI calculator



Dedicated test automation lab to trigger test automation in unattended mode



Increasing the reusability by reducing redundancy code

Technology – Evaluation in tools for features



Centralized test artifacts repository

Test artifacts are stored in-house or cloud centralized database server like SQL Server or MySQL



Easy of use interface

Well-lit look and feel interface with all core operations with minimal number of buttons and menu options



In-Built object recognition

In-Built Object recognition to build page object models. Customization of object physical names to make business friendly



Reusable components

Building UI related reusable components by drag and drop of page object models



Test flows from components

Building functional test flows by selecting the list of reusable components as per test requirements



Execution from third party tools

Silent runner allows to integrate with any third party test management tools



Scheduled executions

Command line execution allows to easily schedule execution from windows scheduler or any third party



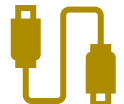
Business friendly execution reports

Html reports ready to share business and developers for analysis along test data used in execution



Early performance reports

Generate performance report for various functional key actions like submitting order and getting order number



Continuous integration

Silent runner allows to integrate with any Continuous integration systems



Ready to use actions

100 + API ready to use actions and 35+ UI automation actions helps to speed of automation



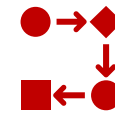
Debugging

Interface allows to Comment actions, insert break points , pause execution and resume execution



Test data management security

Test data file access controlled by project level access from individual users



Handling complexity

Provides easy of use Conditional Goto and LoopUntil keywords to handle complexity



Project access management

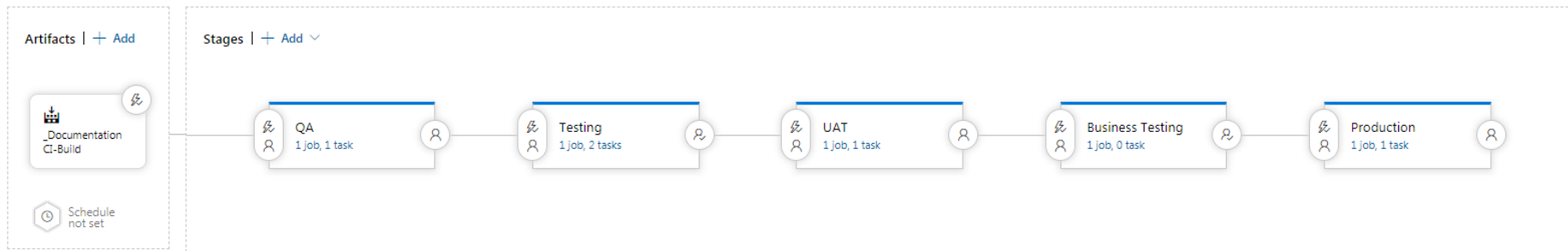
Project access is controlled by Administrator and access is granted with appropriate justification

Technology – Test Data on Demand

- ❖ Real time delivery of test data during automation execution
 - ❖ Real end to end test data management and test automation solution
 - ❖ Reduced maintenance, evergreen test data
 - ❖ Reduced testing downtime triaging false negative stale data issues
- ❖ Test automation + real time test data = POWERFUL COMBINATION



Technology – Evaluation in delivery mode



EA	Release-28 📦 20191228.1 🧑 master	12/28/2019, 5:49:59 AM	✅ QA	✅ Testing	✅ UAT	✅ Business ...	✅ Production
EA	Release-27 📦 20191220.9 🧑 master	12/20/2019, 12:13:11 PM	✅ QA	✅ Testing	✅ UAT	✅ Business ...	✅ Production
EA	Release-26 📦 20191220.8 🧑 master	12/20/2019, 11:53:49 AM	✅ QA	✅ Testing	✅ UAT	✅ Business ...	✅ Production
EA	Release-25 📦 20191220.8 🧑 master	12/20/2019, 11:42:33 AM	✅ QA	✅ Testing	✅ UAT	○ Business ...	○ Production
EA	Release-24 📦 20191220.8 🧑 master	12/20/2019, 11:38:41 AM	✅ QA	❌ Testing	○ UAT	○ Business ...	○ Production
EA	Release-23 📦 20191220.8 🧑 master	12/20/2019, 11:11:42 AM	✅ QA	✅ Testing	✅ UAT	✅ Business ...	✅ Production
VA	Release-22 📦 20191220.7 🧑 master	12/20/2019, 5:00:33 AM	✅ QA	✅ Testing	✅ UAT	✅ Business ...	✅ Production

Technology - Evaluation in deployment automation

To address challenges:

- ❖ Transparency on Development and QA activities at release, requirement and defect level
- ❖ Not tested code changes into SIT and Prod and risk for business
- ❖ Tester doesn't know what testing efforts are coming ahead or what to be tested in ahead
- ❖ Developer priorities are QA priorities
- ❖ Code coverage, Functional test coverage
- ❖ Single report generation on promotion for Product owners, business analysts, QA managers and other stake holders for effective decisions

