



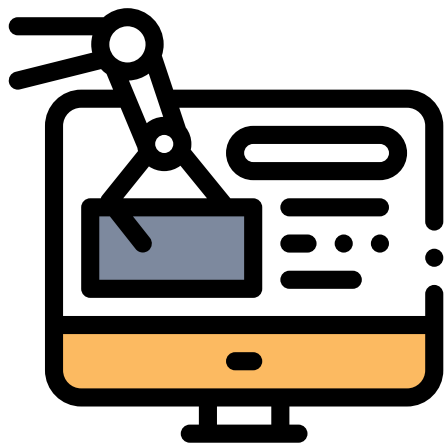
How Applied Materials' Cutting-Edge Change Management Approach Enables Fast Response to Dynamic Business Needs



**Strategic Change
Impact Analysis
Enables 2X Faster
SAP Releases and
More Agile RPA**

by **Lauren Bonneau**, Senior Editor, SAPinsider

Companies that exhibit cutting-edge engineering and technology in the materials they produce and sell are best served when they walk the talk — employing innovation internally to keep their system landscapes current and to stay on top of the latest and greatest trends. One such company, [Applied Materials, Inc.](#), is a global corporation that provides materials engineering solutions — including equipment, services, and software — used to manufacture semiconductor chips for electronics and flat panel displays for mobile devices, and televisions.



Applied has been running various business units on SAP software for more than two decades and has been on a multi-year journey to migrate business units to a single instance of SAP ERP. The migration of the Semiconductor unit, the largest line of business, was successfully completed in 2018. The Display business unit will migrate at the end of 2020, putting a majority of the company on the same SAP ERP instance.

This significant SAP project was a key driver for the Test Support Office (TSO) at Applied to turn attention toward its testing and change release management processes. “Now that we are in the process of getting our final large business unit over to the SAP platform, testing and change management issues consequently become bigger — and we are refocusing on the maintenance and stability of our core ERP platform to ensure we keep the business running, with an emphasis on quality and efficiency,” says Heather Whitfield, Program Manager Head of Operations — Robotic Process Automation (RPA) at Applied Materials.

As more business users are rolling onto SAP ERP, more requests for customizations are coming into IT. For example, users are looking for minor enhancements such as a new report, an additional tax code, or a different location for a field on a screen. There are major releases where many changes go in all at once, and there are smaller requests that come in daily, such as functionality changes from the production support organization or bug fixes from the SAP implementation teams.

“We like to be able to deliver changes and enhancements to the business as quickly as possible — so when we are notified from our governance and review boards that changes are approved for release, our window to move them to production is about 24 hours,” says Whitfield, who has worked in the semiconductor industry for more than 20 years and has recently been focused on automation initiatives. “I became heavily involved in automation of testing and change release management because there was just so much that we could do to drive efficiencies, create standardization, and improve quality using automation.”

To help improve its SAP testing processes, Applied deployed Tricentis [LiveCompare](#), which promises to deliver SAP updates 85% faster by helping teams understand what’s most important to test in each release. Using AI-driven impact analysis, the tool identifies changes that place business processes, system integrations, custom code, security, and governance at risk. Using LiveCompare, the Test Support Office has less testing to perform and can focus its efforts on those high-risk items and release changes with confidence. “We run the impact analysis, send the results to the required individuals, and give them time to take action on those results before the changes are moved into the system,” says Whitfield. “LiveCompare was instrumental in helping us move from performing major upgrades twice a year to every quarter, effectively doubling our output.”

Driving quality through testing is a big deal to Applied; the company implemented a whole testing program, built a lot of automation assets, and gained a ton of efficiencies with testing, according to Whitfield. “We went really far with that, and it’s working great, and now we are in maintenance mode, just making small tweaks to be even more efficient where we can,” she says.

Applying Test Automation Change Management Strategies to RPA

With the SAP implementation programs underway, the Test Support Office began having a lot of RPA-focused discussions and started getting excited about the technology. Due to its popularity in the market, business units were launching their own research into RPA. The interest was growing, and the Test Support

Advice from/for Women in Technology



— **Revathi Chandrashekar,**
SAP Basis Consultant

With only 26% of professional computing jobs being held by women, it's not uncommon for large IT meetings to be mostly (if not all) men. In these types of situations, women often worry about being the only woman or being ignored. "Always sit at the table" is advice that someone once gave me, but I didn't truly understand what that meant until I went into my first big meeting within IT and it was all men," says Whitfield, who originally got her degree in Business Law, but after landing an internship at a company in the semiconductor industry, her journey veered away from law and toward technology. Over her career, she moved from SAP project management to testing and most recently to robotic process automation. "Even if you're nervous or uncomfortable, have the confidence to literally take a seat at the table," she says. "Don't have that negative self-talk. Be authentic. Make yourself heard. Ask questions. Just be present and be part of the whole."

Chandrashekar recommends that women seize every opportunity presented to them. Starting her career off in human resources, it wasn't long before she discovered an interest in technology. After taking some courses and getting certified, she soon found herself at Applied Materials working in change control and release management. "You never know where your journey will take you next," she says. "Look at me: six months ago, I never would have expected or imagined that I would end up learning RPA — and here I am."

Whitfield adds that it is vitally important for women to make a point to support other women more often, especially those who have considerable experience and valuable learnings to share. "If you've made your way up the ladder, turn around and lend a hand to help the next person," she says. "We should always be looking for those opportunities to help other women climb up."



— **Heather Whitfield,**
Program Manager Head
of Operations — Robotic
Process Automation (RPA),
Applied Materials

Office had its hands full fielding requests for RPA-like functionality using existing test automation tools.

As Whitfield started working on RPA projects, she recognized a lot of synergies with test automation, with many overlapping methodologies and processes. “What led us down the RPA road was that most of the demand we were getting within our testing organization was to perform RPA-like activities, even for some of our major projects,” she says.

However, employees initially had a hard time wrapping their head around RPA capabilities and envisioning what software robots (or bots) can do and how they work, according to Whitfield. “But once we explained how we could build an automation for one task, they began to connect how it could work for something else,” she says. “For instance, production support has to send weekly reports to audit. These take several hours of a person’s time to generate. We created a bot that scheduled the report to run and then emailed it as an attachment to the process owner.”

With RPA, the driver is not necessarily cost savings but rather time savings. Bots allow people to focus on more strategic tasks that need human attention, while automation handles the tedious and repetitive manual tasks. “One of our big goals was to make employees’ lives easier by eliminating their mundane activities,” says Whitfield. “Because these processes can work 24x7 — without needing to go home and sleep — and



COMPANY SNAPSHOT

Applied Materials, Inc.

Headquarters: Santa Clara, California

Industry: Technology

Employees: 22,000+

Revenue: \$14.6 billion

Company details:

- Holds 13,300+ patents
- Has 100+ locations in 18 countries
- Founded in Mountain View, California, in 1967
- Went public in 1972
- www.appliedmaterials.com (NASDAQ: AMAT)

SAP solutions: SAP ERP; SAP Customer Relationship Management; SAP Supply Chain Management; SAP governance, risk, and compliance solutions; SAP Business Warehouse; SAP Solution Manager; SAP Process Integration; SAP HANA; SAP Supplier Relationship Management; SAP Global Trade Services; and SAP Enterprise Portal

Third-party solution: Tricentis LiveCompare

many can be deployed simultaneously, we were able to achieve significant savings for major projects by repurposing and applying some of our prior automation work. It was an ideal transition to start out having that test automation history behind us because we could recognize what pitfalls to expect and take the lessons learned from test automation and apply them to RPA.”

When the RPA Center of Excellence (COE) started forming, one of the first items discussed was change management. “When we started with test automation, one of the greatest challenges was rapidly responding to the changes that came into the SAP environment daily or weekly,” says Whitfield. “Change management was by far our biggest challenge there, so when we started talking RPA, we expected we would have similar challenges.”

To help sift through the various options for a solution and identify the best fit, Whitfield turned to Revathi Chandrashekar, SAP Basis Consultant. “Since I’m part of the core SAP Basis team, I’m very well aware of the amount of changes that are introduced into various quality assurance and production systems and how these changes could impact our RPA processes,” Chandrashekar says. “For our entire program to be successful, it’s very important that we deal with these changes before they impact production.”

After researching many of the available RPA tools, Chandrashekar discovered that none of these tools could effectively identify the potential impacts of changes, so the SAP Basis team committed to exploring different approaches to meet their RPA change management needs. In a “hackathon” of sorts, each team member piloted innovative approaches to this challenge. “I got a license to access LiveCompare and started playing around with it,” she explains. “I wanted to see if we could leverage the same tool that we used for all the other changes and customize or enhance it for our RPA needs.”

Expanding the use of LiveCompare to cover RPA changes was a very specialized use case, so Tricentis helped adjust the workflows and guide Applied to success. “This has been some great teamwork,” says Chandrashekar. “I had not used LiveCompare before I started working on this project, and the extended support we’ve received from the LiveCompare team to execute this whole process has been exceptional.”

Initial Success with Change Impact Analysis for RPA

LiveCompare helps the RPA COE streamline change management activities with relevant teams. “When changes are requested within the development system, we can identify the impact to the system before it goes into production,” says Chandrashekar. “That way, we are minimizing disruption to both bots and human users.”

The RPA COE started using LiveCompare for RPA changes in May 2020 and has already found great success from using the solution. “So far, we have successfully tested some of the large projects in the pipeline and also some of the changes that we thought would have an impact on other sets of users,”

says Chandrashekar. “We were able to accommodate multiple scenarios to test, and we ran the tests successfully even in production. I can hand off this process to anyone and they can pretty much run it. They don’t have to know all the mechanics and code behind it. And it’s fast.”

Applied employees have given positive feedback about the improved quality of the processes. “Bots just do what we tell them and follow specific rules, and because of that, the output quality is better,” Whitfield says. “Where previously, there may have been mistakes or processes that weren’t followed exactly, now with change management in place, the bots have replaced a lot of that with much cleaner output.” She says that Applied is only in the beginning of its RPA journey. The RPA COE has already begun working on its next RPA project for another business unit, and the expectation is that the program is only going to get bigger.

“The more automation that we deploy, the bigger impact those changes could potentially have to our business,” says Whitfield. “With this customized tool and the processes built around it, we can be proactive so that we can hopefully fix these processes before that change even goes into production.”

The Importance of Change Management Never Changes

Whitfield and Chandrashekar agree that the need for change management is often underestimated. They recommend putting a sharp focus on it at the start of any initiative. “You always try to build an organization barebones, but make change management one of the bones,” Whitfield says.

“Without change management, you can go ahead, but you won’t get far,” says Chandrashekar. “You’ll have to take some steps back to continue forward on your journey if you don’t have it.”

Whitfield advises organizations to take a focused approach to change management with any automation work, and she suggests being proactive about identifying the changes. “Recognize change management as one of your biggest challenges and do something about it,” she says. “Don’t just put yourself in a space where you are reactive. Assign a champion to always be looking for the impact that could break a bot: The goal is to never break a bot.” ■