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HFS Highlight: Process automation enters a deeper dimension with Pega's X-ray Vision

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With technical debt and system complexity contributing to cumbersome processes, organizations need connective tissue across the disconnected systems that business processes traverse. Pega is tackling process complexity from the center out with:

Process Fabric – a cloud-based software architecture across distributed enterprise technologies allowing single-user interfaces and unified processes across multiple applications (including ecosystem partners' systems) and providing cross-application process insight analytics.

X-ray Vision – an automatic method of finding the attributes for uniquely identifying each control instead of matching and mapping when building robotic automations.

Legacy environments are riddled with complexity across silos

Organizations are under pressure as Covid-19 escalates demands for cost-cutting. Everybody is looking at operations with fresh eyes. To support business environments through disruption, global economic downturn, and into the next normal, it is time to connect disjointed, disparate, and disconnected systems properly, automating processes wherever possible. The burning platform created by the pandemic is emboldening organizations to go to the next level with automation.

Pega's Process Fabric can be used to bridge the gaps between systems

Process Fabric, announced at PegaWorld iNspire in June 2020, is the latest remedy for process complexity. Executives at Pega emphasized Process Fabric's streamlining capabilities, especially across distributed enterprise technologies, breaking down technology silos to unify work across incompatible point solutions. Dynamic APIs, and open UX framework, UI components, RPA, and data virtualization all feature in Process Fabric - an agile center layer of business logic and intelligence. The aim is to weave workstreams together without disrupting the existing infrastructure, helping other platforms run better together. Some Process Fabric capabilities are available today, interwoven worklists and experiences are planned for release in the coming quarters.

Although Pega resists the term "middleware" for Process Fabric, it still fits here, but we'll credit it with being more evolved. It's lightweight and cloud-enabled and connects technology and processes. More robust than RPA alone, and presumably more expensive initially, it's not going to necessitate a massive overhaul of either the existing systems or process landscape. It will help manage the complexity with multiple lever-pulls, as HFS often advocates with a toolbox approach.

X-ray Vision conceals some of automation's inherent complexity

Attended automation is the mainstay of many RPA vendors, with origins in screen-scraping technologies developed to help call center agents move data around. It has limitations. Despite assertions that automation is easy, it's only easy to a point. Going beyond a handful of bots to derive significant benefit with the rigor needed to ensure bots do not break (or cause havoc) can break the business case. The costs associated with bots, virtual machines, Centers of Excellence, and automation-savvy professionals increase uncomfortably. Too often the net result is lackluster outcomes, disappointment, and sometimes abandonment.

Pega's X-ray Vision builds on a concept that Pega is working on since 2005 – deep robotics - a secure, object-level injection technique that captures application controls as data objects. As developers set up automations, they must uniquely identify the controls that need to be automated. In practice, instead of having to work with the attributes used for matching, developers will be able to interrogate the application controls (UI components: textbox, button, checkbox, etc.) and the proper attributes will be naturally chosen. As the application runs, X-ray Vision eliminates the use of any attributes that change and adapts to use those that don't. This is why deep robotics matters- it's not only working with the user interface, but it also exposes the objects by injecting code in memory to intercept calls made within the application.

RPA automations can be brittle – Pega is attempting to alleviate this. By binding the automation to the controls, Pega describes X-ray Vision as providing “self-healing” capabilities - if attributes within the control change, the automation can still operate as usual at run time. And Pega often states that during runtime there should be no waiting around for automations to play out, even in attended automations, anything that can happen in the background should happen in the background. Deep robotics runs as fast as the applications it's working with permits, with no pauses, sleeps, or waits. And transactions need not be processed one at a time, many can be processed at once. X-ray Vision's sweet spot is thick client desktop applications and dynamic web applications, areas where spying, object cloning, selectors and matching can struggle with complexity.

Many RPA vendors use computer vision, OCR, and pattern recognition to “read” the screen and Pega does too, when it must - but its preferred method is picking up data objects (controls) as defined when the application was being created. This is similar to what [Microsoft espouses in Power Platform](#) where data is picked up and passed at the deepest level possible, only working at the surface deciphering text from its display point on a user interface when no deeper option is possible.

Pega's plan for X-ray Vision is to conceal complexity further over time, making automation building more accessible to citizen developers with guard-rails. Machine learning will be deployed to automatically find attributes that can be used to identify controls.

The Bottom Line: With increasingly digital front ends, immovable legacy systems, and a plethora of applications in between, organizations need a lot of glue to connect it all together. And every form of glue to date has a downside, ranging from too slow and expensive, to too brittle.

There is a clash of narratives with RPA vendors speaking to business users' pain while tech vendors talk about data, connectors, controls and APIs. While the “doctors” disagree on many points the patients are still hurting. Treating only the symptoms that present in the process won't cure the underlying causes. It's time for something that goes deeper and accepts the legacy for what it is.

A deeper approach might look expensive and difficult if you're trialling a handful of bots in a silo. But once you embark on the route to scale, the ability to take shortcuts through and across systems instead of taking a longer route could impact outcomes exponentially.

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Miriam has considerable experience in systems implementation, systems integration, business analysis, technical analysis, consultancy, and strategic marketing.

Miriam brings 12+ years of analyst and relevant experience at the intersection of technology and business. Prior to joining HFS, she was the Principal Analyst at Ovum where she focused on AI, RPA, and IT services for the last 3 years, and worked at EDS (now DXC), Amdocs, and NATS prior to that. She holds a bachelor's degree in business and legal studies from University College Dublin, Ireland



2020 DEFINING BUSINESS OPERATIONS IN THE NEXT DECADE

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