As organizations continue to digitally transform business processes by adopting and embedding modern technology into their operations, they are seeing unprecedented gains in efficiency and cost savings. But for a long time, these efficiency gains have been reserved for the most digitally-advanced companies.

Business processes relying on manual handoffs and legacy technologies lack automation capabilities, inhibiting digital transformation and leaving organizations with a continued reliance on manual, costly solutions laden with risk.

Whether it’s a team of people performing manual tasks to collect, input, or route data to another part of the organization or working with a siloed system that contains mission-critical information, the effort to find meaningful insights can look herculean when contrasted to the seamlessly connected ecosystem of modern analytics and process automation technology.

Analytic Process Automation (APA) and robotic process automation (RPA) enable entire organizations to realize a fully-connected business. Together, APA and RPA ingest data seamlessly from its source, analyze and interpret it, and then either inject it into operational systems for automated actions or share with organizational leaders to make faster, more confident decisions. Below, we’ll show you how APA + RPA help you go from legacy and outdated to streamlined and automated.
APA

Alteryx Analytic Process Automation (or APA) is the convergence of the analytics lifecycle, including analytics, data science, and process automation.

With APA, business professionals can easily connect to nearly all their organization’s data, transform and enrich it, and produce actionable insights that can be presented or written to a data management system or business intelligence (BI) dashboards. Finally, it can be fed back through another data process.

However, even with automated, end-to-end analytics, there are still hard-to-reach data sources that require human intervention. This data rests within legacy systems that don’t have APIs, websites, or even documents. This is where robotic process automation (RPA) becomes irreplaceable.

RPA

With the UiPath Platform, automation specialists can emulate the actions of a human interacting with software to capture, manipulate, store, and send data through a digital system. UiPath enables organizations to build robots that communicate with enterprise systems, including Alteryx.

Where many software programs and platforms require custom connectors or software developers to write complex code that few can understand, UiPath RPA is software agnostic and can natively connect to nearly any digital system. Users can build robots through a modern interface to connect otherwise disconnected systems. This extends the life of legacy technology within an organization — even when such technology is not able to integrate with more modern counterparts.

APA + RPA

With the power of UiPath RPA and Alteryx APA, robots can capture data from these legacy systems. The resulting dataset can be used to trigger the start of an Alteryx workflow, taking it through an automated analytics journey for cleansing, transformation, joining, modeling, analyzing, and more.

The resulting insights, actions, and time-savings are nothing short of game-changing.

Organizations with a more mature data and analytics infrastructure can also use data pulled from UiPath robots to develop predictive and prescriptive outcomes. The data can be extracted from various point solutions and delivered to predictive, machine learning (ML), natural language processing (NLP), and other advanced models to inform on risk, inventory, and customer sentiment. UiPath robots can also be used for “the last mile” of automation, inputting analytics outcomes into operational systems for action.

Essentially, organizations can achieve end-to-end connectivity and alignment across departments in a way not possible before. The below diagram depicts how this plays out.
APA & RPA in Action

The toughest part about using this technology combination is deciding which use cases are best suited for each technology and, moreover, deciding which technology is best suited to handle the different parts of the analytic process.

When organizations decide to invest in both APA and RPA, there are a few common conditions within their scenario that help craft a blueprint on how to go about architecting an automation solution.

When evaluating each use case, consider this overarching question: Do the outcomes of your process require human supervision and/or interpretation? If they do, then APA is likely the solution for that process. For unattended processes that do not require human intuition, RPA should be used for automated input and output of analytical processes.

After this determination has been made, keep these platform capabilities in mind to help craft the right solution:

<table>
<thead>
<tr>
<th>ANALYTIC PROCESS AUTOMATION (APA)</th>
<th>ROBOTIC PROCESS AUTOMATION (RPA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automates data ingestion from structured and semi-structured files, databases, and APIs</td>
<td>Automates human interactions with nearly any digital system (greenscreen tech, forms, folders, files, enterprise software systems, cloud systems, etc.)</td>
</tr>
<tr>
<td>Drag-and-drop analytic building blocks to wrangle, prepare, profile, cleanse, transform, and blend data for analytic outcomes</td>
<td>Saves, moves, and copies files to feed and pull from analytic processes</td>
</tr>
<tr>
<td>Rich self-service analytic modeling including descriptive, diagnostic, and spatial analytics</td>
<td>Run user-defined scripts, programs, and stored procedures regardless of where they reside within an organization’s technology infrastructure</td>
</tr>
<tr>
<td>Advanced analytic modeling including predictive, prescriptive, natural language processing, text mining, and sentiment analysis</td>
<td>“Last mile” for machine learning and advanced analytics. Robots can act upon analytic outcomes and update the systems that rely on those results</td>
</tr>
<tr>
<td>Scalable analytic apps to enable organization to parameterize and run analytic models as needed</td>
<td>Inputs data into non-API sources such as online forms, VDIs, and legacy systems</td>
</tr>
<tr>
<td>Automated output of analytic outcomes to data visualization tools, BI tools, files, databases, APIs, and RPA bots</td>
<td>Run reports, extract and inject results into a wide array of file types including Microsoft Excel and CSV</td>
</tr>
</tbody>
</table>
APA & RPA for Your Industry

APA & RPA can work in every industry, but below are two snapshots of common industries to help you visualize how APA + RPA plays out in real life.

TAX AND FINANCE

Use Cases

**APA**
- Automate data extraction from connectable sources (API, database, cloud/hybrid or source fed through RPA bot)
- Prep & blend tax and finance data
- Perform advanced tax calculations, including predictive insights for future liabilities, accurate forecasts, and actionable next steps

**RPA**
- Access ERP systems and export balances
- Login and retrieve exports from finance systems
- Retrieve and validate accounts with previous tax periods
- Reconcile cross-departmental transactions
- Retrieve outputs from APA and upload into appropriate systems

Outcomes and Benefits

When tax departments successfully leverage the Alteryx APA Platform and the UiPath Platform, they can automate previously manual processes with the assurance that hard-to-reach data sources are seamlessly connected to the analytic processes that perform the calculations and analysis.

UiPath robots automate the tedium of logging into websites and housing tax forms or financial records. They also input the criterion of the data they want to retrieve and then save the results to a data management or file storage system. An Alteryx analytic model is then triggered to pick up those results, prepare and analyze them to whatever end system necessary, and then deposit the results for another UiPath robot to pick them up and deliver them to their final source.

Rather than devoting valuable human time, reasoning, and intuition to simple tasks, such as high-volume, repetitive interactions with a legacy (but still critical) system, organizations can redeploy that human attention to more complex, value-added tasks that lead to transformational outcomes. Human intervention and corresponding errors are eliminated from the process.

Alteryx + UiPath Solution Brief | 4
Use Cases

APA

• Automate demand data input from connected sources (API, database, or source fed through RPA bot)
• Create predictive demand models
• Compare running demand forecast to six-year validated master plan or guidance
• Match demand to supply planning
• Deliver insights to unique conditions that create increases or decreases in demand
• Continually train models based on observed demand and sensitivities over time

RPA

• Extract data from external processes in real-time to enable analysis and dynamic outcomes
• Prepare the extracted data to be analyzed by APA
• Provide interface to APA to ingest data for further analytic processes
• Prepare APA outcomes for export
• Interface and feed analytic outcomes into external workflow for unassisted process

Outcomes and Benefits

To capture and process the fast-paced data collection and the near-real-time actioning required in retail and CPG supply chains, RPA and APA are essential. Sales data is constantly funneled from point-of-sale systems, then captured by UiPath robots that aggregate and organize it. Finally, it’s sent to Alteryx to train analytic models to help make sense of what’s happening through every sales channel.

With a clear vision of what sells, when and where it sells, and to whom, analysts and data scientists can train Alteryx predictive models to drive decisions and accurately fuel a retail supply chain. UiPath robots pick up the analytic outcomes and send them downstream to other systems or databases within the supply chain ecosystem ensuring that the proper actions are taken.

With Alteryx APA and UiPath RPA, retailers and CPG companies can automate processes in the supply chain, distinguishing between attended and unattended processes to reduce time to action, mitigate risk, and empower analysts and business leaders to employ human intuition to adapt to changes and take advantage of market opportunities.