AntWorks takes a fractal approach to robotic process automation

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Summary

AntWorks uses a fractal approach to address what it believes are the key challenges with today's robotic process automation (RPA) offerings and their ability to feed downstream automation processes – first, the ability to ingest unstructured data, and second, bringing intelligence to the process. Neither optical character recognition nor traditional RPA can address this, AntWorks believes.

The 451 Take

RPA may be intrusive and difficult to configure, but this market is white-hot as firms seek to turn manual processes into automated tasks and save on labor cost. Long term, RPA vendors that specialize only in automating repetitive tasks are less likely to survive as stand-alone companies, and will be subsumed into application development, BPM, workflow or data integration. AntWorks has laid the groundwork for a comprehensive, end-to-end approach to the broader market with its software robot, ANTstein.

Technology

ANTstein, the firm's software robot, is positioned as the only integrated end-to-end RPA stack in the market. It provides data capture, and integrates machine reading, RAP and cognitive ability with supervised and adaptive (unsupervised) learning. ANTstein uses machine learning and pattern recognition techniques, and operates on structured, semi-structured, image and inferred data including forms, images and handwriting.

Crucial to its entire value proposition is ANTstein's use of a fractal network approach to data analysis, which looks for patterns in data and applies the learning (hence cognitive) about these similarities to wider data sets. In this case, as the data set gets bigger, the self-similarity becomes amplified.

More traditional neural network approaches work their way through nodes and division trees. AntWorks believes this becomes cumbersome at scale because it slows down as the number of combinations increases. It says it was actually trying to solve a different problem – image recognition using fractal science (self-similarity and pattern recognition) – and realized its machine reading engine could be applied to other algorithms to get outcomes, and be used as a building block for a more versatile approach.

Business model

Singapore-based AntWorks was formed by technology and outsourcing veterans Asheesh Mehra (Infosys) and Govind Sandhu (Capita). Self-funded until now by its owners and some high-net-worth individuals, AntWorks will seek external funding in order to address the RPA opportunity – the market is white-hot and expanding rapidly.

It expects to close out 2017 at around $12m, and is targeting a $50m run rate within a few years. The 200-person company operates in eight countries, and has delivery centers in the US and India.

After looking at more than a hundred potential targets in automation, AntWorks acquired Benchmark Systems in the healthcare sector in 2015 to get into the market. It took the company's automation building blocks supporting electronic record management and built additional intelligence into it to improve clinical and economic outcomes in hospitals and doctors' offices.

Its go-to-market targets consultants, systems integrators and technology vendors. AntWorks counts the likes of HDFC Bank, Standard Chartered, Aon, Nielsen, KPMG, Accenture, Anz, Mphasis, TCS, Capgemini and IAG as partners and/or customers. It has a joint venture with London-based consultant Alchemmy.

Its software is priced in a traditional per-transaction, per-page or per-bot model, and can be hosted in AWS or on-premises. It has very consciously adopted conventional pricing, because its technology model is so differentiated. However, in future, the company wants to challenge the market with some new (and as-yet-unspecified) approaches to pricing. Average deal sizes are $250,000 a year, although most firms start smaller. Healthcare and financial services/banking are its key markets.

Competition

Blue Prism is based in London, and positions its RPA offerings as a means to provide businesses with an agile virtual digital workforce composed of software robots that automate existing everyday user actions. Contextor operates out of Paris. Its RPA offerings include Contextor Interactive, a workstation module used to analyze actions, orchestrate applications and automate processes; Contextor Studio, an integrated development environment; and Contextor Galaxy, an execution server.

Iselin, New Jersey-based AutomateWork offers its Process Accelerator Framework to automate repetitive tasks as part of structured business processes. The company provides strategy planning, implementation and managed services support. Automation Anywhere's AA Enterprise platform combines RPA (attended and unattended task bots), machine learning for semi-structured processes that require decision-making (attended IQ Bots), and analytics (Bot Insights). The firm claims 500 customers, and IBM is a key partner.

CrowdFlower is headquartered in San Francisco, and likens itself to an AI provider. Its platform crafts what the company refers to as an 'AI solution' that blends humans and machines. It targets data-science teams that need to automate some of the complex tasks associated with data collection, data categorization and content modernization, among others.

EdgeVerve Systems (an Infosys company) has regional offices in North America, EMEA and APAC. It offers a range of business process automation-assistance products for customer service, distributor onboarding, procurement, mobile payments and credit processing.

Irvine, California-based Kofax's Kapow offering is an RPA and integration platform created to automate the exchange of information from application and data sources – including websites and portals, desktop applications, and enterprise systems – without coding. The company focuses on driving employee productivity, adding insight into the decision-making process and delivering better customer experiences.

Pegasystems positions a version of its BPM technology as an RPA platform and as a robotic desktop automation offering. In April 2016, the Cambridge, Massachusetts-based company acquired OpenSpan, an RPA vendor specializing in automating routine customer service representative tasks.

Softomotive operates in Athens and London. Its WinAutomation automates routine rules-based back-office processes and can organize structured workflows such as account opening, claims processing and credit card payments, among others. Thoughtonomy is headquartered in London. Its Virtual Workforce is an as-a-service RPA platform that automates human activities by emulating the way they interact with technology – applications, systems, tools and devices – and the structured decisions they make.

UiPath operates in the UK and the US. Its UiPath Studio, UiPath Robot and UiPath Orchestrator automate manual tasks across business and IT infrastructure management processes. The firm has machine learning, cognition and computer vision on its product roadmap. In the near term, it plans to deliver a cloud appliance version of its software, inter-process analytics and human-robot workflow.

London-based Winshuttle offers RPA for SAP and focuses on shuttling data to and from Excel and SharePoint to ERP systems. WorkFusion is headquartered in New York. Its technology was originally developed at MIT for fraud-detection work. The vendor's platform offers drag-and-drop design tooling and comes preloaded with process templates, as well as prebuilt robotic, cognitive and exception-handling components to configure custom workflows.

SWOT Analysis

Strengths	Weaknesses
Achieving ROI with RPA tools is hard when incoming data isn't clean. AntWorks believes ANTstein, after having been fed with three months of representative data, can achieve an 85% data capture rate, and 99% accuracy when its machine-learning capability kicks in.	AntWorks will need to demonstrate it can extend its expertise in financial and healthcare to other sectors as it seeks to broaden its opportunity and meet its aggressive growth plan.
Opportunities	**Threats**
AI is great, but RPA is where the reality and the revenue is today. However, success and differentiation in this market is less technology-oriented and has more to do with partner ecosystems. The ability to process and manage data is becoming a competitive advantage. Data transformation is the basis for digital transformation.	RPA is a consulting services and partner sale because it requires organizational alignment to be introduced successfully, which is the tricky part. The mistake organizations can make is to try and redefine or change the process at the same time as automating it, which usually won't work.

Source: 451 Research, LLC