

# IDC VENDOR SPOTLIGHT

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To align robotic process automation investments with the goals and objectives of the business, measurements must be implemented that demonstrate the value of process improvements.

# Making Digital Workforce Metrics a First-Class Citizen of Robotic Process Automation

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# Introduction

The maxim of management guru Peter Drucker — "What's measured improves" — is an essential business truth that also applies to robotic process automation (RPA).

RPA investments need to align with the goals and operating objectives of business strategy. If the correct projects are chosen, RPA teams should be able to measure improvement in at least one of three core metrics: reducing process costs, improving throughput, or improving accuracy.

RPA may also be linked to the metrics associated with business outcomes, such as improving customer satisfaction, increasing growth in customer spending, or improving profitability by speeding up the order-to-cash cycle.

#### AT A GLANCE

#### **KEY TAKEAWAYS**

RPA teams should immediately build measurement into their programs. Measuring RPA performance must be included in planning all the way through to production.

The business value of RPA must be understood in the same way that enterprises understand and depend on financial and other analytics-based reporting.

IDC believes RPA teams need to build measurement into their programs at the outset. Without an explicit link to financial or business outcomes, the longevity of an RPA program is not guaranteed. Enterprise technology adoption can be a fickle process, with one technology popular for a few years and then out of fashion as trends shift.

Automation is currently trendy because its benefits make intuitive sense to management. Automation teams thus can build RPA program offices and centers of excellence (COE) that have longevity even as executives turn their attention to other topics. But this effort requires regular concrete communications to management about performance metrics that shows how they align with the metrics of higher-level business and process improvements, as well as to financial outcomes.

RPA's business value must be understood and relied upon in the same way that enterprises depend on financial and other types of analytics-based reporting. RPA metrics are important for additional reasons:

» Real-time operating intelligence is needed to monitor the health of the RPA system.

- » Operating metrics about the accuracy of artificial intelligence (AI) models provide a mechanism to continuously improve levels of automation. However, as confidence grows in the accuracy of the models and their automation levels, there is a need to measure rates of rework to ensure the models continue to perform well.
- » RPA evolves further with the ability to collect business data that can be incorporated into the measurement system. While useful for spotting trends, harnessing business data also provides the opportunity to build higher-value digital workers aimed at detecting and predicting problems that, if found early enough, can be fixed driving down operating costs while supporting customer success. In this case, digital workers would be doing something on a regular basis that typically happens on an expensive, after-the-fact exception basis.

Establishing RPA metrics and ongoing performance measurements are so important that we believe 75% of RPA programs that do not demonstrate success through explicit reporting will either be dropped, absorbed into other programs, or minimally funded within 24 months of initiation. As RPA teams evolve beyond reporting and monitoring, metrics become the near-real-time layer on top of processes that add another level of performance improvement, supporting use cases beyond the initial automation.

# **Building a Measurement Foundation**

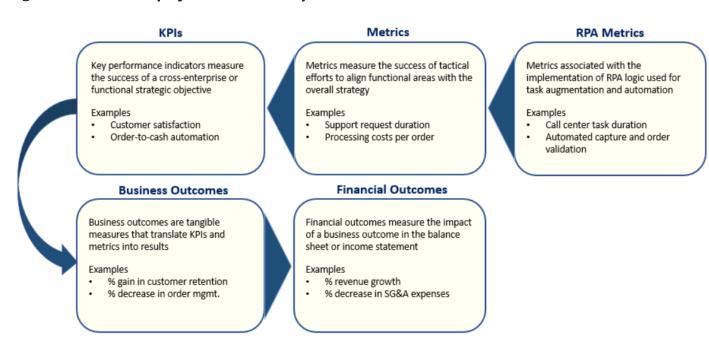
The team implementing and managing RPA projects may know that what it achieved in a project is important, but that information doesn't bubble up directly to the analytics systems used for business reporting. Success is often conveyed to the process owner or senior executive by word of mouth. This informal style of communication and proof of results makes it harder for an enterprise to become repetitively successful with RPA specifically and automation in general.

Today, no business runs without financial reporting and no large business operates without business analytics capabilities. For an RPA team to operate successfully, either within an RPA COE or a program office, the same principles apply. Reporting — not word of mouth — is essential for RPA planning and for credible communications to stakeholders.

There are different systems of measurement in an enterprise, and each system should be related to another. Key performance indicators (KPIs) measure strategic objectives, while underlying functional metrics feed into KPIs. KPIs need to translate into measurable business outcomes, which in turn are tallied in the general ledger of a business. RPA measurement feeds into this flow (see Figure 1).



Figure 1: Relationship of Measurement Systems to Outcomes



Source: IDC, 2019

The most common use of analytics software is for reporting and dashboards that help executives and managers understand how well the business is performing. Planning is required when analytics identifies subpar performance or when teams must improve performance to align with strategic objectives, such as a digital transformation initiative. RPA is used under both conditions. The automation can take out costs and be used to set new performance milestones for a business function or larger process.

In the process world, key metrics-based trendlines tend to evaluate:

- » Decreasing process costs
- » Higher throughput
- » Increasing accuracy

Examples of RPA alignment with process improvement metrics include:

- » Net decrease in cost of labor (net of total cost of [direct staff and professional services to support RPA program] + cost of digital worker automation + ongoing technology costs + costs of change management)
- » Decreased time in task
- » Decreased percentage of rework



## » Decreased backlog of work

Ideally, the dashboards and reports show both the current baseline performance and the performance over time. They are also useful for building ROI models associated with the types of programs aligned with specific metrics. The easiest ROI model to build is labor cost reduction. Other RPA metrics are less direct. For example, decreasing time in task is associated with higher throughput. That means the ROI model should be associated with the business value of increased throughput, which is tied to business outcomes such as improving order to cash or selling more to grow revenue.

# Identify Success Measures in Planning Stage of Project

COE teams often express concern about managing the demand for RPA projects and investing in the right ones to achieve the best overall outcome for the business. Identifying projects that will achieve a positive outcome involves preliminary evaluations and planning. Part of the evaluation should involve discussions with process or business leaders about costs, metrics, and performance trendlines. If the discussion is more closely aligned with a front-office project, revenue goals should be included.

Process and business leaders know their numbers, including where they are operating at subpar and the potential benefits if performance problems were fixed. An important goal of the RPA COE is to isolate where subpar performance can be improved by replacing manual efforts with digital workers.

Before the RPA team advances into a discovery phase, there should be a reasonable understanding of as-is performance and the benefits of performance improvement and how those will be expressed as metrics. If the automation outcome has enough value to clear business case hurdles, the team can then shift to discovery to determine where to add digital workers to the process.

The COE should be able to build a business case with an ROI and a timeline for achieving it. In other words, the COE must operate its program like a business and make investment decisions in RPA projects accordingly. Business outcome planning doesn't add much time to a project if a scoping call to look at performance and discuss metrics is a required step in discovery.

Common useful RPA metrics include:

- » Work backlog:
  - Time in queue
  - Age of backlog
- » Tasks:
- Costs per task
- Task duration
- Percentage of rework
- » Process:
- Hours saved by process



- Labor costs by process
- Money saved in process
- Percentage of digital worker capacity in production (average, time of day, day of week)
- Uptime performance of digital worker

# Evolving Measurement to Use Digital Workers to Predict and Solve Preventable Business Problems

As RPA teams automate the collection of process data for their metrics, they also can collect business data that is captured using bots. Business data can be used in near real time to monitor performance to predict business problems that will have a negative outcome. For example, a primary KPI is days sales outstanding and a related metric is perfect order. Perfect order is also a digital transformation metric that ties back-office performance to customer experience, measuring how well an enterprise fulfills its commitment after a customer places an order.

As a metric within a larger measurement system, perfect order describes past performance. But when metrics can be continuously measured in near real time, they can be used to drive performance, effectively reengineering processes away from managing complaints and toward preventing bad outcomes.

To see how this works, consider the efforts to improve inbound call centers through increasing levels of automation. Today, enterprises are adding technology into call centers and customer self-service portals to make an inbound call as pleasant as possible, especially when customers call in with a complaint. RPA is used in different ways in call centers to replace human labor with digital workers. Prescriptive analytics is also used to suggest next best actions. Those best actions often kick off a human-led investigation to verify what went wrong and a remediation to fix or mitigate the harm to the customer relationship.

An investigator is often assigned to validate the complaint, which involves looking through applications and talking to the internal workers and partners involved with the problem. Another place where the complaint shows up is when the customer calls to cancel, asks for a billing adjustment, or fails to pay at all. Investigations involve a worker talking with other workers inside the organizations and with partners to determine what went wrong and how to fix it.

The RPA team can insert itself into this process by using bots to collect data from all systems touching order fulfillment. These systems are built by creating an entity and properties of a perfect order that include the order date, line items in the order, order volumes, delivery commitment dates, and terms of the order. Other properties of the entity capture the dates of each stage of order changes, packaging, shipping, and delivery along with information about what is being shipped and shipment volumes.

These details are matched to identify line item and order volume inaccuracies, discrepancies between committed and actual dates, and whether the discrepancy will cause a late delivery. All this capture, retrieval, and matching is repetitive and perfect for a digital worker to monitor.

capture business data created by bots that can be used to monitor business performance and predict problems.

RPA teams can



The perfect order example is one of many problems that occur as different applications and teams handle stages of a larger process. Applying RPA to this style of work is transformational, and the benefits drop immediately to an organization's bottom line.

None of this can happen without establishing a measurement best practice inside the RPA COE and using this to expand to other areas of improvement.

# **Benefits**

Digital transformation enables organizations to shift from being reactive to becoming situationally aware and increasingly predictive. Performance measurement and its accompanying metrics are needed to shift gears. This shift to becoming situationally aware requires basic performance measurement as well as tools that provide operating intelligence about the health of the RPA system. Immediate benefits of adding performance measurement to RPA include the abilities to:

- » Build digital workers that align with business objectives, with performance benefits communicated with the same style of dashboards and reporting pervasive across an enterprise.
- » Be first at rapidly identifying and fixing system performance issues as well as problems with existing automations.
- » Evolve the collection of metrics to include business data that can be leveraged to build new digital workers with advanced capabilities to drive greater business value.
- » Associate directly with digital transformation the proven capabilities that will grow investments in automation across the enterprise over time.

# **Considering Automation Anywhere**

Automation Anywhere is a market leader in the fast-growing RPA market. The privately held company grew in triple digits in 2017 and through the first half of 2018. Automation Anywhere also raised more than \$500 million in private equity in 2018 to expand its ability to sell to and support customers as well as its overall software capabilities.

Product capabilities provide a simple path to get started in RPA and then evolve to the enterprise version as customers expand their RPA footprint. Automation Anywhere Enterprise helps supports bot life cycles, runtime workload elasticity, load balancing, and security. The platform was extended with the introduction of the Bot Store in mid-2018 as a marketplace to provide customers with prebuilt bots along with partner-provided assets that broaden and speed up adoption of RPA.

In 2019, Automation Anywhere delivered a mobile app that interacts with bots in production to start and stop them as well as providing a COE dashboard that tracks the business value of bots in production, including money saved by activity type and hours saved by process.

The mobile monitoring is part of a broader strategy of embedding operational intelligence across Automation Anywhere. Its flagship monitoring product is Bot Insight. RPA teams use Bot Insight to build reports and dashboards and monitor health from the same environment they work in to build and manage their bots (see Figure 2).



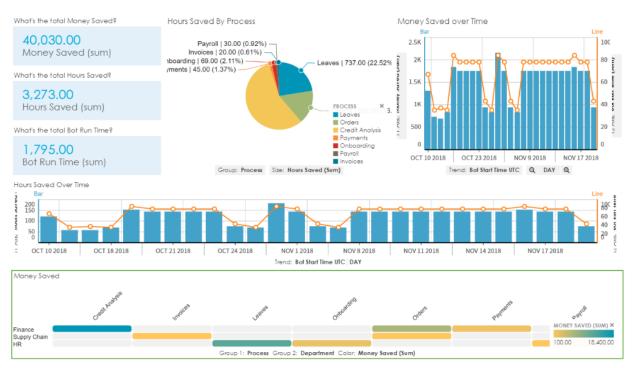


Figure 2: Bot Insight Dashboard

Source: Automation Anywhere

#### Bot Insight consists of capabilities to:

- » Make use of preconfigured dashboards that enable out-of-the-box reports on important common metrics.
- » Generate dashboards automatically from data attributes tagged inside bots.
- » Monitor key operating performance regarding RPA deployments.
- » Provide real-time business analytics about trends discovered via bots.
- » Make the analytics data available to third-party systems and applications via REST APIs.
- » Query the data, and use interactive drilldowns to discover new insights.
- » Calculate ROI automatically with the prebuilt COE dashboard.
- » Provide for central management of an entire program.
- » Display COE dashboard data using an RPA mobile app.

Bot Insight gathers and logs any tagged data handled by a TaskBot with no need to consider prebuilt models, schemas, or other systems. The underlying analytics engine analyzes and profiles the data being sent from the bot while it is being



logged. Dashboards are created automatically using the results of the data profiled. These can be used to drill down for further analysis and insights into the data presented.

All data related to measurement of the system's health, bot operations, and failures is automatically captured by the Automation Anywhere platform and stored in the Control Room database. This data does not require additional tagging or data capture. Operational analytics dashboards are available in every customer deployment and consumed through the RPA Control Room user interface (UI).

Dashboards are produced using JQuery, JavaScript, and embedded visualization components. Bot Insight UI is designed as a responsive and form factor—aware UI and can be rendered via a browser on any desktop or tablet. Bot Insight is deployed in Microsoft Azure or can be colocated with the Automation Anywhere platform.

## **Challenges**

Automation Anywhere does face challenges. While a leader in RPA, the market is crowded and all vendors are trying to gain competitive advantage through innovation and key partnerships. RPA is also one of many technologies used to automate processes, with many vendors competing to be identified as offering the best approach for automation. That is a major reason why it is so important for enterprises to measure the performance gains yielded through automation. Automation Anywhere will need to continue working with customers to improve its overall measurement capabilities to ensure that Bot Insight is interoperable with larger performance measurement systems. Bot Insight will also need to incorporate the performance improvement derived from its partners.

# **Conclusion**

Executives approving automation initiatives intuitively understand that automation will measurably improve business outcomes. They will expect to see tangible direct measures of benefit that tie into the process and business KPIs impacted by the automation in addition to the impact on financial performance.

Measuring RPA performance must be included in planning at the onset of an RPA project. The RPA COE should regularly show explicit performance improvements to process and business leaders impacted by the automation. These same metrics can be used by the RPA team to help build business cases, identify other successful opportunities, and manage the health of the RPA system and its digital workers.



#### MESSAGE FROM THE SPONSOR

Automation Anywhere is a leader in robotic process automation (RPA), the platform on which more organizations build world-class intelligent digital workforces. Automation Anywhere's enterprise-grade platform uses software bots that work side by side with people to do much of the repetitive work in many industries. The platform combines sophisticated RPA, cognitive, and embedded analytic technologies. Over 1,400 organizations use this Al-enabled solution to manage and scale business processes faster, with near-zero error rates, while dramatically reducing operational costs. Automation Anywhere provides automation technology to leading financial services, insurance, healthcare, technology, manufacturing, telecom, and logistics companies globally. For additional information, visit www.automationanywhere.com.

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In her role as Program Vice President for IDC's Intelligent Process Automation research area, Ms. Fleming examines the technologies, products, and architectures used to modernize, integrate, extend, automate, and build new applications and processes across an enterprise and its ecosystem.



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