Army Financial Management Workforce Transformation:
Show, Save, and Scale RPA

by Chase Levinson and Karl Agcaoili

In one form or another, most readers of this publication certainly have either direct experience with or awareness of Defense Financial Management Transformation. For the Office of the Deputy Assistant Secretary of the Army (Financial Information Management) (ODASA-FIM), it has been the pursuit of widespread business model changes – a mix of people, workplace, culture, and technology – that while disruptive in nature, are innovation-inducing measures to keep up with the demands of today's increasingly digital world.

The workforce drives transformation and technology enables it. End users, service providers, and leadership work together under a common framework to accelerate transformational change across the enterprise. This framework is composed of three steps: 1) **Show** the technology is trustworthy; 2) **Save** and demonstrate return on investment; and 3) **Scale** solutions and integrate new capabilities to meet user need. One of the key tools FIM is currently deploying for the Army financial management community is robotic process automation (RPA), a common private industry capability. However, this framework is transferable to other technologies, such as machine learning, that expand on RPA.

Show: Trustworthy Technology

Chief Financial Officer Act agencies and comptroller entities alike continue to deploy emerging technologies to reduce errors, improve compliance, and focus the workforce on higher-value work.[1] RPA is one of these tools expanding in use across the Department of Defense (DoD). As of June 2020, there were 121 deployed bots in use in the DoD financial management community.[2]

RPA is a flexible technology that automates business processes and performs tasks just like a human. It can log into systems, enter data into fields, generate reports, and other activities that humans would normally perform. Because of the unique flexibilities offered by RPA, apprehension about its adoption is common in the workforce. To overcome this, FIM's RPA program pursued training and educational initiatives to assist end users as well as interested command leadership in understanding and applying the technology to potential use cases and pilots. Members of the program addressed not only RPA benefits, but also associated concerns and limitations. Members also reviewed the different roles in a typical project (process owner, business analyst, developer), and phases within the automation lifecycle (ideation to sustainment), to establish areas of responsibilities. The team then began automation development, starting with

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simple report generation for individual commands such as Installation Management Command. Following the agile methodology, the RPA program quickly deployed a steady stream of projects,[3] including automations that conduct financial transactions on an enterprise scale.
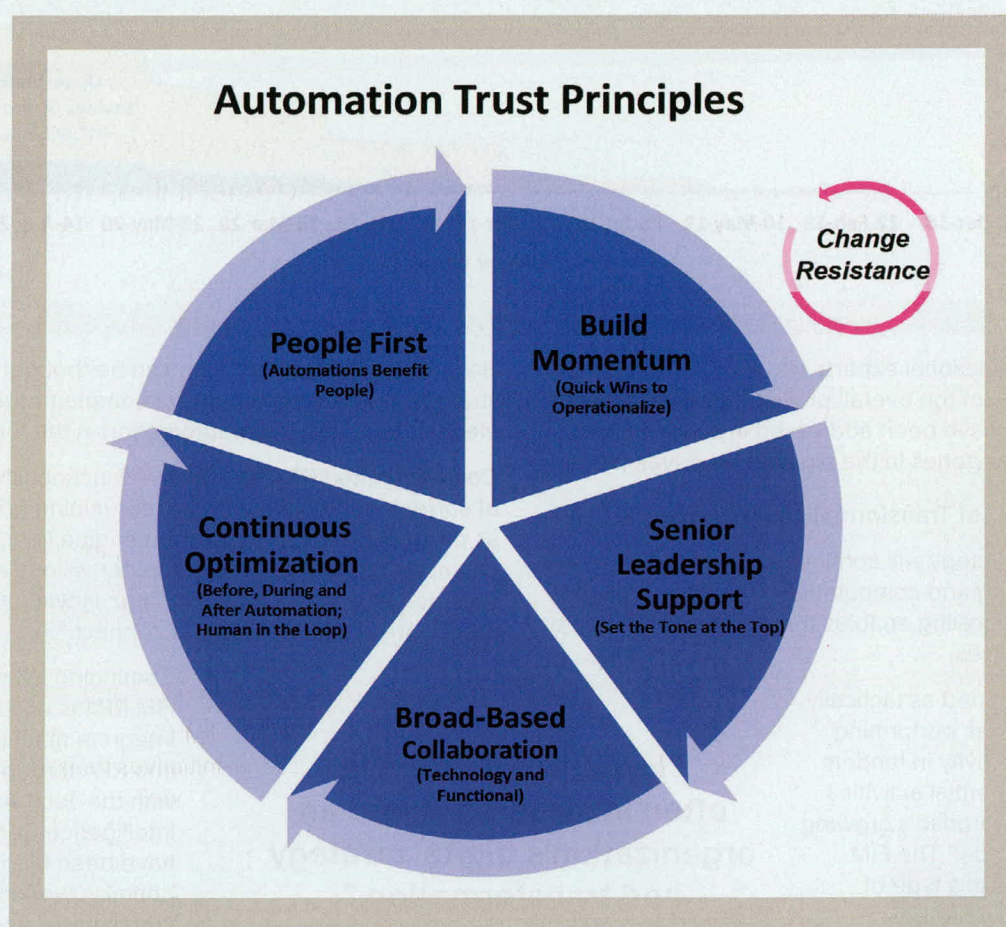
The accompanying graphic *(below)* illustrates reinforcing automation trust principles that initialize RPA program transformation momentum.

Save: Produce Value

Over the last two years, automations at FIM have grown 233 percent (15 bots in FY19 to 50+ bots in FY20). New requirements pushed the RPA program transformation to new levels of cutting-edge technical capabilities such as unattended automation and integrated machine learning, and expansion to enterprise-scale end-user mission support. Cumulatively, the program has saved end users approximately 1.2 million minutes, or 20,000 hours. The accompanying chart visualizes weekly metrics going back to the very first automation deployed in December 2018 to projected deployments in September 2020, including both machine run time and human time savings. The difference between the two is opportunity savings of running attended robots.

Additionally, the multi-phase RPA support for the Army Joint Reconciliation Program (JRP) inaugurated RPA's inclusion to

Automation Trust Principles

People First (Automations Benefit People)

Build Momentum (Quick Wins to Operationalize)

Continuous Optimization (Before, During and After Automation; Human in the Loop)

Senior Leadership Support (Set the Tone at the Top)

Broad-Based Collaboration (Technology and Functional)

Change Resistance

official Army Financial Management Policy.[4] Each of JRP's phases is observable from the chart as spikes in time savings. These milestones in time savings underscore the importance of focusing implementation efforts toward maximizing end-user support and thus expanding RPA adoption instead of the reverse.

During FY 2020, the program targeted larger, more complex (i.e. multiple commands or Army-wide) processes with the goal of serving more end users. In general, more complex processes are harder to automate.[5] However, these complex processes can be broken into standardized, less complex components that are easily automated. One of the FIM RPA team's major projects focuses on automating the resolution and clearing of unmatched transactions in the Army's main accounting system. The project is complex, spanning dozens of categories across every command and office.

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[3] Army Workforce Innovation: Robot Help Wanted (2019) *Armed Forces Comptroller* Volume 65, Number 1 Winter 2020
[4] Joint Reconciliation Program (JRP) Standard Operating Procedure (SOP) Dec 2019
[5] Army Workforce Innovation: Robot Help Wanted (2019) *Armed Forces Comptroller* Volume 65, Number 1 Winter 2020

Forecast Time Savings & Run Time Hours, December 2018 - September 2020
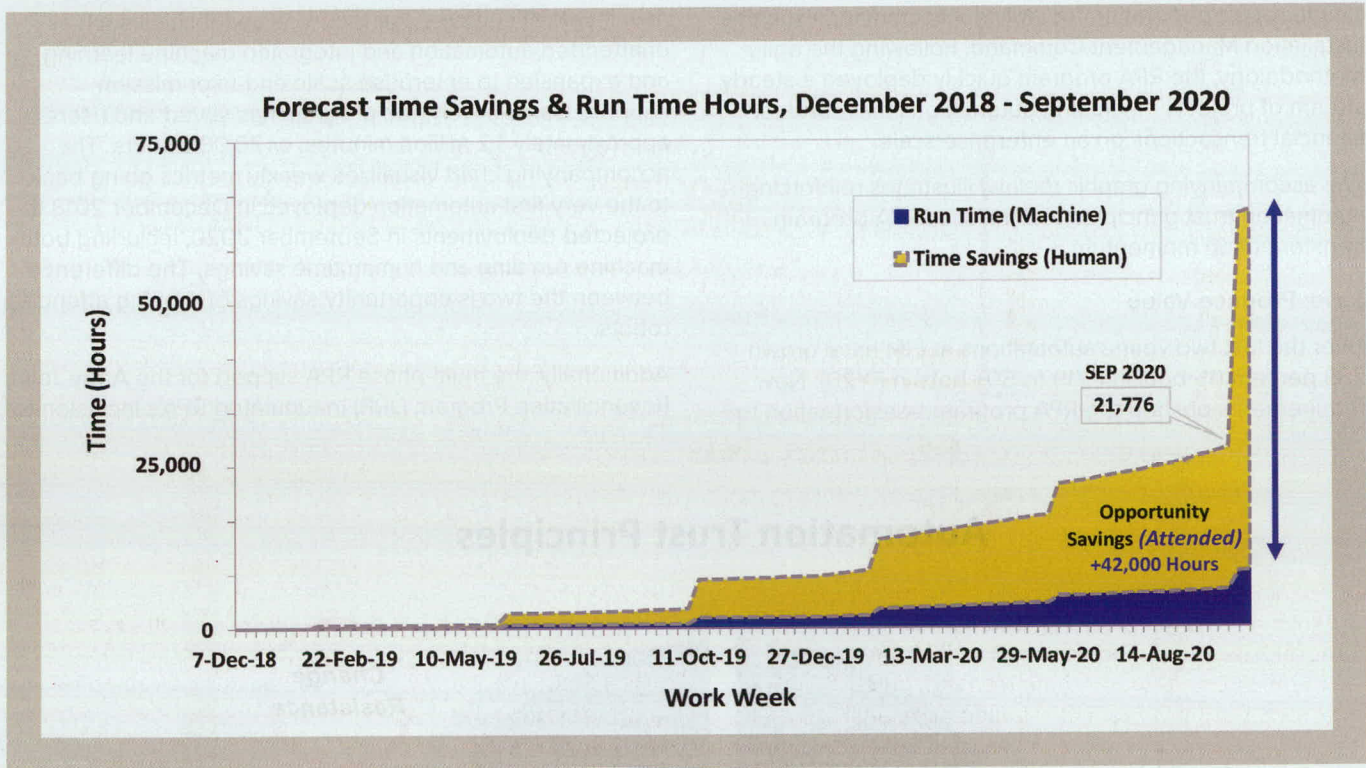
By working with functional experts and focusing on component pieces of the overall project, twelve categories of financial errors have been addressed in some manner, with additional categories in the pipeline for development.

Scale: As a Matter of Transformation Necessity

Advances in technology will continue to drastically increase the data processing and computational needs of organizations. Automation scaling enables the workforce to keep up with these challenges.

Scaling can be defined as tactically as multiple machines performing either the same activity in tandem or a series of sequential activities to address the enterprise's growing computational needs.[6] The FIM RPA team enables this type of automation scaling through the deployment of virtual machines (VMs), unattended robots with their own credentials, and centralized management of the RPA environment. Army currently deploys twenty VMs to support automations at an enterprise scale when local resources are insufficient. Combined with non-person entity credentials, the VM environment enables automations to run without the need for granular human management, allowing for the rapid scaling of new automations.

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However, scaling automation can be thought of more strategically through the use of **complemented RPA** in the medium term and **hyperautomation** in the long term.

Complemented RPA is collective functionality in five areas of current market interest: process mining (also referred to as process discovery), ingestion engine (e.g., optical character recognition and computer vision), analytics, user experience, and machine learning.[7] However, these puzzle pieces are not always easy to connect.[8]

Continuing its transformation, FIM RPA is piloting efforts to integrate machine learning into RPA through a partnership with the Joint Artificial Intelligence Center. Use cases have been identified to both optimize workloads across automations and to replace decision points that relied on human judgment. This combination of technologies represents a new step for the Army financial management community, enabling the automation of more complicated processes and reducing the manual effort needed for low value activities.

The most sophisticated automated scaling, **hyperautomation**, refers to an approach in which organizations rapidly

[6] Army Workforce Innovation: Robot Help Wanted (2019) *Armed Forces Comptroller* Volume 65, Number 1 Winter 2020
[7] Predicts 2020: RPA Renaissance Driven by Morphing Offerings and Zeal for Operational Excellence, Gartner 10 DEC 2019.
[8] Predicts 2020: RPA Renaissance Driven by Morphing Offerings and Zeal for Operational Excellence, Gartner 10 DEC 2019.
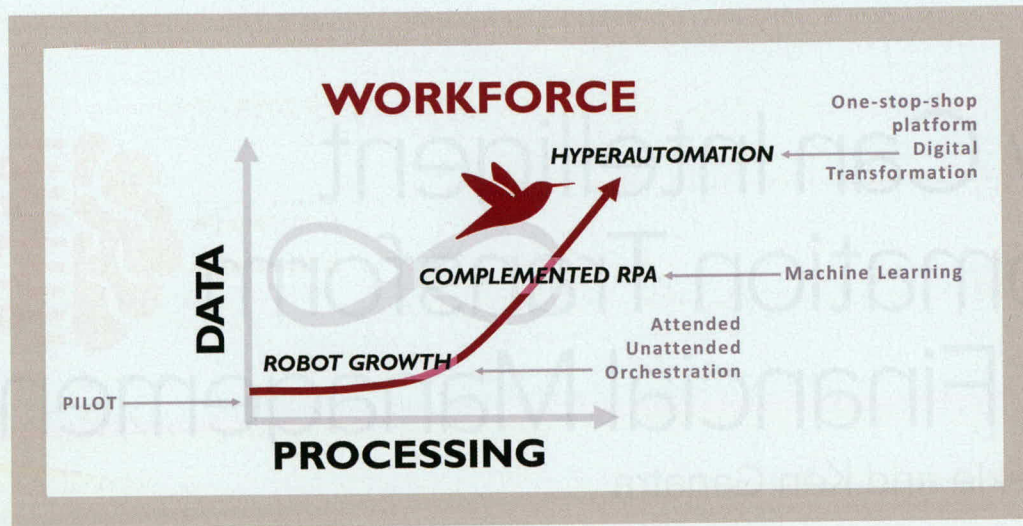
identify and automate as many business processes as possible. Hyperautomation is often incorporated into an organization's digital strategy and transformation. It integrates key technologies such as RPA, integration platform as a service, machine learning, process mining, analytics, business process management, artificial intelligence, and chat bots into a unified, one-stop-shop platform for all transformational needs. As part of the Army's financial transformation, modern enterprise resource planning systems are prioritizing the availability of automation tools and reengineering processes to leverage this new capability.

Resilient Workforce Transformation

The Army's current operational environment has accelerated digital transformation across the enterprise.

Through technology, we have overcome isolation and stayed productively connected and collaborative with our peers – our **resilient workforce transformation**. Robotic process automation, now a proven technology, is a vital tool that can be used at a scale that enables more effective and efficient financial management. At 245 years old, the US Army has adopted centuries worth of innovations into its operations, and its 35,000 strong financial management workforce continues the tradition of resilience and transformation.

Contributors
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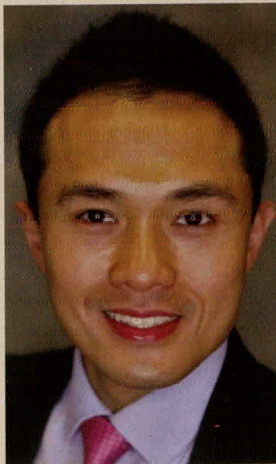
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