The notion of work is rapidly changing, driven by access to an astounding array of emerging technology. Change is already visible — from the now-inexpensive access to cloud computing previously reserved for things like outer space exploration to the practical application of algorithms for machine learning to perform basic tasks. Intelligent automation (IA) is an agent for change with profound implications for the way work will be done in the future. In light of tight budgets and discerning citizens, what better way for agencies to redirect their most valuable assets, their people, to deliver on missions better than ever before.

By James Hickman and Joseph K. Swisher
Simply put, IA is the use of software tools, such as robotic process automation (RPA) to perform repetitive tasks, such as data entry or validation. The compiled information can then be used to make important decisions based on rules, characteristics or past behavior. While no actual robots are involved, IA sits atop existing applications to automate manual, time-consuming, rules-based office tasks. Think of it as high-performance computing delivered at the desktop level.

For every automated process in which an activity is removed or changed, a wide range of impacts reaches the individuals who had been completing these activities. While there will always be a need for thoughtful analysis and actions that require human finesse, many jobs we once considered central to employees’ roles and responsibilities will change fundamentally. The effect will be felt by a large number of people as well as overall organizations when these technologies are deployed at scale.

Understanding How People Respond to Change: Behavioral Economics and Psychology

Behavioral economics brings together insights from the study of psychology, neuroscience, and culture to explain human behavior and the economic decision-making of individuals and organizations. In 2002, psychologist Daniel Kahneman

Meet Paige, an analyst in a large finance office who is responsible for closing out contracts for her organization. Every day is a little different for Paige, because of the thousands of reasons she considers for closing out a contract when she conducts her reviews. For example, the period of performance could be complete, funds may have expired or need to be de-obligated, or requirements may have changed. Paige’s office was selected for a pilot of an RPA tool to automate the contract closeout process. Paige and her colleagues had never heard of RPA, and its impact on their jobs was unclear; however, the organization utilized strategies to manage this change initiative.

First, the organization set goals for the automation initiative and communicated its impact to everyone, not just the offices affected initially. The message included foundational basics about the technology, what RPA is and is not, and a promise to share the results of the pilot. The implementation team collaborated with current employees directly involved in contract closeout to map out the existing process, then designed a set of potential process options to leverage the automation. Perhaps most importantly, the team established a range of possible outcomes for roles and responsibilities in the finance office as parts of the process became automated.

Following the clearly defined objectives, leadership set up and documented the range of potential impacts to frame the project. Throughout the initiative to automate the contract closeout process, the implementation team often referred to this framed reference point for the finance team — meaning, before any technology was introduced, Paige and her colleagues clearly understood the way automation would affect their jobs.

Lastly, the organization tried techniques that could enhance the finance team’s reference points with optional training on using the RPA tools and learning how to make Tableau dashboards.

At the end of the six-month pilot, Paige’s job was a little different than before. She spent less time on the manual repetitive process and more time dealing with anomalies and following up with other offices to research resolutions for the finance office. Some parts of the altered job were not for everyone; some moved on to other offices, some transferred, some even retired. Despite these shifts, the finance office as a whole was able to review a significantly larger number of contracts for closeout and keep a changing workforce engaged and productive.
was awarded a Nobel Memorial Prize in Economic Sciences for his groundbreaking work (with colleague Amos Tversky, who died in 1996) in creating this new field of study in which he applied psychological insights to economic theory, particularly in the areas of judgment and decision-making in times of uncertainty.

An increasing body of behavioral economics research can be applied to manage the extensive adoption of IA tools. Key concepts in this area relate to questions facing the modern financial management workforce: will individuals embrace the changing nature of work and new tools available, or will they oppose it?

Using the following techniques from behavioral economics, organizations can identify ways to address change.

► **Anchoring, Reference Points, and Unrealistic Expectations.** People make decisions by comparing and contrasting different options. They display a preference for the status quo, typically using it as the baseline or reference point. Employees become anchored to their job reference points and may perceive any change as a loss. They may also have unrealistic expectations about the future, particularly about the vulnerability to automation of their tasks, roles or functions compared to others.

► **Editing.** During the initial introduction of IA to a job, the impact can be framed around alternatives and outcomes. The term “editing” can be applied to describe the way an individual orders the outcome of a decision according to a certain heuristic. In the absence of information, editing is done in isolation. For example, an accountant may ask herself, “Will I lose my job?” Without guidance on how her job will look in the future, she may perceive a significant threat. During the editing phase, individuals decide which outcomes they consider equivalent, set a reference point, and then judge lesser outcomes as losses and greater ones as gains.

► **Cognitive Ease.** Straightforward information that feels familiar is easier to absorb and believe than new information. Material that is easy to understand also delivers a sense of cognitive ease. Information that is difficult to understand requires more cognitive effort to process, and the brain’s preference is to take it easy.

► **Affect Bias.** Human behavior is often influenced by cues that work subconsciously and prime us to behave or choose in certain ways. If a person thinks about or experiences something he feels negatively about, he is more likely to respond negatively or defensively in subsequent decisions.

► **Framing and Choice Architecture.** Although new initiatives from the management of an organization may be an imperative, employees truly face a decision — either embrace or oppose change. The description, or frame, in which their choices are presented highlights different factors that can draw the decision-makers’ attention. Seemingly small changes in the way choices are communicated can have a big impact on the resulting decisions. The “architecture” of choice for participation in new workforce initiatives can be designed to encourage adoption without mandating or forcing employees into action.

The mental math individuals go through when evaluating their job prospects and the perceived impact IA may have on their positions informs the establishment of a theory on the way individuals make these decisions and how leaders in a financial organization can manage and communicate change in a practical way when an individual or organization faces the automation of parts or all of a job category.

**STRAATEGIES AND INTERVENTION DURING CHANGE**

Individuals own their career choices and benefit from understanding the impact of change on their jobs. The choice to embrace change will vary by job type as well as by demographics and the different personas who complete various job functions.1 Take the case of the “technophobe.” This individual is averse to change when it comes to using technology and wants to stick to the desktop application he knows.

Six effective strategies can help organizational leaders focus on employee decision-making during change.

1. **Understand workforce dynamics.**
   - Identify and define the heuristics or cognitive biases most prevalent in your workforce.
When agencies develop annual budgets, they call upon numerous stakeholders and systems (financial, budget formulation, HR, etc.) to put together a request. Often, employees manually extract information from numerous systems and compile justifications and tables with this financial data. Now, some agencies use software robotics to pull data automatically, extract relevant historical information, reconcile current records to historical data, and coordinate input from many stakeholders.

Clearly, these accountants are no longer processors but analysts who perform bona fide, value-added data analytics. With newly acquired data, they not only perform deeper analysis than before, but also help shape future budget priorities. They train on and work with the latest software visualization and analysis tools, perform ad hoc deep-dive analysis, and create management dashboards.

In the most successful cases of automation implementation, the financial management leaders frame and measure outcomes. Teams see themselves correctly as leading important efforts, a notion reinforced by management’s recognition of their successes. In the end, the automation of manual data extraction, coordination and manipulation freed up the budget analysts to focus on their work and explain how their agencies’ budgets support management agendas and agency missions.

1. Use best practices and lessons learned from industry on specific financial management job types and functions.

2. Appeal to human desire for cognitive ease.

   - With thoughtful messaging and transparency during change management, the editing phase can alleviate most framing effects.
   - Define a common language and set of terms for automation that mean the same thing to everyone in the organization about the process, tools and technology.
   - Explain what IA and RPA are (and aren’t) early and often.
   - Continue to communicate, even after implementations, and share information throughout the organization. Engage the people most affected by implementations as future messengers, using appropriate communication channels.
   - Offer examples of test cases and quantified results in ways people can understand and relate.

3. Create a default path.

   - Sign up employees for automation training but allow them to opt out.

4. Frame the outcomes.

   - Help people define or “frame” their reference point during the editing phase so they have a basis for judging the way automation will impact their jobs.
   - Share examples of other changes that influenced jobs in the past, such as videoconferencing, teleworking, email and business intelligence.

5. Enhance the reference point.

   - Even small changes in the way individuals perceive their reference points can have significant impacts on their reactions (positive or negative) to change resulting from automation. Information, tools and context can enhance an individual’s beginning reference point.
   - Help employees understand that a simple status quo in which their jobs will not change is not a possible outcome, and give them default opportunities for training and being part of the automation effort as “process experts.”

6. Pick a champion and identify influencers.

   - Get the desired halo effect by choosing the right messenger. For example, a trusted manager should introduce a new initiative to influence receptivity.
   - Prime the participants with this haloed messenger.
   - Socialize change with influencers in the organization.

7. Measure outcomes.

   - After incorporating these concepts, the consequent transparency will deliver results that can be measured in terms of the success of an individual, organizational job retention, and employee satisfaction and productivity into the future.

RESILIENT ORGANIZATIONS ARE ALREADY PREPARING FOR THE FUTURE.

As emphasized above, no “one size fits all” strategy for change management exists, especially for implementing IA initiatives. As a result, it is important that support activities gather data for a set of measures to establish a common view and communicate the impact of change on an organization. With this data, it is possible to model
the intersection of increases in job automation with employees’ behavior in adapting and upskilling for them.

Designing an approach in automation implementation aimed at creating shared understanding and behavioral nudges can have lasting effects on an organization. When they are included in an organization’s workload analysis, deployment strategies and training plans, employees can feel empowered and confident of support to make career decisions in light of imminent technology. Creating customized strategies for user-centered change throughout an organization will develop a more resilient workforce that is ready for the future.  

Endnote

1. Much of this discussion is limited to a generalized ‘individual employee.’ Not all suggested strategies will work for everyone. The concept requires further exploration of their application to specific job types and personas.

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