

AI Implementation: Where Do We Go From Here?

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BY REBECCA WALZAK

The previous two articles published have attempted to raise awareness of what Artificial Intelligence (AI) is and isn't as well as the associated risks and opportunities. This third article really describes how the implementation of these technologies can change the way we operate and how, from an operational perspective, using the tools and the benefits can expand business and reduce costs.



One fact that we have to acknowledge is that AI is in flux and will most likely continue that way for some time. For example, a recent article I read claimed that RPA (robotic process automation) is dead. It doesn't mean that this type of AI is no longer useful, but that when the individual types of AI such as expert systems, robotic automation for individual processes as well as the disintegration of siloed processes and programs is addressed, it will result in a comprehensive integrated program that utilizes the appropriate method for the task at hand.

Another area that has come to the forefront of AI is what is known as IoT or the Internet of Things. In this instance, data on the internet can be incorporated into databases as needed, to complete tasks through the use of AI. A step further in this approach is what is known as AIoT or artificial intelligence data of things. In other words, if by using the internet to create data, that data then becomes available for others to use in their AI efforts we have effectively created an internet of AI "things".

Of course, this is not going to be the final product or program for the use of AI. As we know from just listening to the news or reading articles on the technology, the future uses of AI are seen as unlimited.

Today the mortgage industry is trailing behind other industries in the use of AI in their workflow. While

there are numerous reasons for this, one of the most basic is that organizations continue to run processes exactly as they were run 40 years ago. There have been multitudes of new technology products that can be purchased and added to make the process cleaner with fewer errors, but the fundamental changes necessary to realize the intrinsic benefits of many have not been made.

Way back in 1979, loan applications were taken by Loan Officers and handed off to Processors, who put together the documentation that supported the application, including required regulatory disclosures, and handed it off to an Underwriter to evaluate for acceptability. If approved the loan was handed off to a Closer, who made sure the title was acceptable and prepared the documents and funding. Once the loan was closed, it was sent to Post-Closing, where it was reviewed, corrections made, documents sorted, MI filed, and the loan was then delivered to an investor. The technological support we have today was non-existent and management dealt with only people and processes.

This linear process is still in place today although we now have multiple systems in these siloed functions to manage the data that was previously on paper. The process also has more documents and more people working on these tasks. Despite these individual and in some cases co-joined systems, the process is still

dependent on having people in place to connect the data and documentation. Add to this the maintenance of system upkeep, the struggle to ensure the continuity of the data and process as well as the implementation of on-going updated systems and requirements and we get a view of the process that can best be described as organized chaos and makes it near impossible to streamline the costs or effectively provide "quality" customer service.

As a result of these Operational Risk issues (people, process & technology), the cost of producing a loan has now surged to around \$8800, much of which involves manual reviews and rework. Why? A recent survey of the industry found that on average 62.5% or \$5500 of the total \$8800 is for personnel costs. Another 11% or \$1,000 covers general expenses and approximately the same amount is dedicated to secondary marketing expenses. Eight percent, or \$704 is spent to support the technology used by the organization. The remainder is spent on other various necessary expenditures. In other words, we have not made any of the transformational transitions that have been promised by technology for years, just added more costs. This lack of vision and the resulting failure to redesign and manage effective change is definitely a roadblock to not only the use of AI, but the ability to run a profitable

organization.

Another roadblock we face is the inability to collect, comprehend and utilize data. Collectively data is the foundation of the products produced and the driver of the processes and people we employ. The process begins with data collection and proceeds to add additional information throughout. Yet the systems in use today do not allow us to utilize data from disparate programs to assist in the analytic process of acceptable loans and associated profitability. As I noted in an earlier article, in addition to each individual company's data, the industry does not share any data. This results in the inability to utilize comprehensive industry data to develop artificial intelligence. While Fannie Mae frequently utilizes its data to develop "tools" for lenders, in reality it is only a very small piece of the total data set that could/should be used. Having a tool biased by the use of a segregated population of loans does not provide legitimate results to the total populations.

Organizational culture can be a roadblock to success. The culture of an organization actually holds back any company from improving their processes as management and staff adopt a "we have always done it this way" attitude. In fact, a survey of 590 G2000 leaders by HFS Research found that 51% of the highest performing enterprises see their cultures as holding them back in their technological

transformation process. From an Operational Risk perspective, the redesign of processes and corresponding people skills significantly lags technology implementation in organizations. The only way to address this roadblock is by radically rethinking existing process which will ultimately drive the greatest benefits to the company. The three pillars of operational performance (people, process, technology) no matter what form the tasks take are fundamental to the ability of the company to produce what has been promised.

A true transition of the lending process begins with understanding what AI technology can do. Once this awareness has taken place, a strong change management team needs to be identified and concepts, no matter how "off the wall" they seem, need to be identified. This envisioning process must include not only how the process will be designed, but the necessary skill sets as well.

One of the most frequent questions asked when an AI discussion is held, is "Will I lose my job?" This fear of losing a job is one of the most pervasive concerns by the staff of all industries. While skill sets will change, most individuals will continue to work in the same profession. In other words, the tasks will change, but people will work. Recent studies have begun to reorganize common types of tasks performed and

reorganized them into potential skill set requirements.

One example is found in the book by Paul Daugherty and H. James Wilson entitled Human + Machine, Reimagining Work in the Age of AI, where tasks are divided into three groups. Those that involve human-only activity include leadership, creative activities and evaluative or judging skills. Those skills seen as primarily using the AI technology involve transactions, iterations, predictions and adaptations. However, there are a series of hybrid tasks that involve both human and technology efforts. The human efforts within this hybrid set include communicating with applicants and borrowers to explain and educate them, much as we do now. There will also be the need for individuals who train the technology. For example, newer flexible robotic systems that work along with humans need to be trained to handle different tasks, just as we do now when machine learning is required. There will also be those who sustain the processes and programs by incorporating the company's risk profile, such as setting limits or allowable override decisions on profitability or legal and ethical compliance.

In the end they do this by ensuring the quality of the data, flag errors and poor machine results, design interfaces for the AI expanded workforce.

Within each of these groupings are a variety of tasks and corresponding skill sets, but one important factor is that the individuals fulfilling these jobs must understand the when, where and how of every action included in the lending and servicing processes. Currently, the knowledge and skills necessary to work within the industry are siloed similar to the processes. For example, underwriters today have a far different knowledge base than those who began working in the industry prior to automated systems. More experienced underwriters understand why something is required, what the impact is if not and whether or not there are potential ways to address any problems. That knowledge is quickly being lost. In addition, because we have bifurcated the origination and servicing processes, few individuals in the production area can explain what and how servicing does and would not be able to explain why a payment was not processed. For future work within the industry, employees must understand it all.

Another area that is critical to lenders is regulatory issues. In November, 2018, Lael Brainard of the Board of Governors of the Federal Reserve System presented remarks on *What Are We Learning about Artificial Intelligence in Financial Services*. In these remarks, he stated that “AI... is not immune from fair lending and other consumer

protection risks...” and alerted lenders to the challenges in the areas of opacity as well as the ability to explain how the system complies with these requirements. Since this area is so critical to lenders it is important that there are individuals with the skill sets to provide this information if requested.

The development and maintenance of credit policy is therefore critical to lenders, and in conjunction with affordable housing initiatives, artificial intelligence, through its data sets and analytics can provide more rationalization for lending parameters. One chief executive of a financial services company recently stated that what artificial intelligence and machine learning allows is the ability to get much broader perspectives on consumers thanks to additional data, shedding light on their creditworthiness.

Other processes in the business appear to be ripe for implementation of AI. Two prominent ones that come to mind are quality control and post-closing. Using expert systems and RPA, the post-closing review processes can be developed to scrub data, identify missing documents or those that need correction and notify the individual responsible. Of course, staff

will be needed to address those loans that fall outside the parameters of the review program.

Today quality control consists of reviewing loans to identify errors in all facets of the loan process. Using artificial intelligence tools such as expert systems, machine learning and electronic verifications ordered and controlled by the technology, QC could be done automatically throughout the origination process on 100% of the loans. Using collected data from other reviews, a more comprehensive analysis of the workflow can be conducted, and opportunities and risks identified. Rather than the paper intensive manual process that we employ today, executives can have results as frequently as desired while significantly reducing or eliminating many of the costs included in the \$8800 that is problematic today.

Whether or not the industry surges ahead with the adaption of artificial intelligence, it is coming. For those lenders who eagerly take on the job of redesigning their people and processes in conjunction with its implementation, the opportunity to increase business while cutting costs are unlimited. ❖

ABOUT THE AUTHOR

rjbWalzak Consulting, Inc. was founded and is led by Rebecca Walzak, a leader in operational risk management programs. In addition to consulting experience in mortgage banking, student lending and other types of consumer lending, she has hands on practical experience in these organizations for over 25 years.

