



# Hyperautomation

## The next step in the automation journey

### Intelligent Automation: Integrating RPA & AI

With complex and dynamic business processes occurring simultaneously, assigning one technology as a one-size-fits-all solution is not scalable and does not maximize efficiency. MIL has identified emerging AI and ML technologies which can be used in tandem with RPA to extend the scope of automation. Intelligent automation is not a technology, rather it is a suite of technologies combined to deliver improved quality, speed, and reliability of government services and processes.

ML is an application of artificial intelligence which allows systems to learn and improve from experience rather than explicit programming. A subset of machine learning, deep learning, allows computer systems to learn and improve through the analysis of large sets of unstructured or unlabeled data—providing analytics which would be not be possible otherwise. These two technologies used in combination with RPA greatly increase the scope of what is possible with automation.

**“RPA creates the foundation, but the next phase is to evolve to intelligent digital workers” – Horses for Sources**

### Smart Data Capture

Structured data is comprised of clearly defined data types with patterns that make them easily searchable, whereas unstructured data can be thought of as everything else. Government’s unstructured data lakes deepen daily; experts estimate that 80% of any organization’s data is unstructured. The intake, organizing, and tracking of this data is a growing challenge. Smart data capture applications work through a combination of optical character recognition (OCR) and ML to extract the required data points from semi-structured and unstructured sources.

MIL’s partnerships with the leading smart capture service providers allows the for the intake and automation of processes which work with semi-structured or differently structured form types—such as processing invoices from hundred of vendors– all with their own format.

The advancements in intelligent character recognition (ICR), a subset of OCR, now allows even handwritten documents to increasingly be successfully processed. This ICR functionality also greatly increases the scope of what is possible with automation.

### Natural Language Processing

Natural language processing (NLP) technologies such as speech-to-text, natural language understanding (NLU), and natural language generation are also being used as part of government intelligent automation efforts. Both citizens and government employees have a growing expectation to be able to access government services via the channel of their choice. These channels include conversational applications, including virtual customer assistants (VCAs), virtual personal assistants (VPAs), and chatbots.

MIL has identified several use cases where NLP can be leveraged with RPA to enhance customer and client support, improving the citizen experience while reducing cost to deliver reliable services. This is accomplished by leveraging RPA’s capability of interacting with back-end applications through the user interface, something VCAs and VPAs cannot do.

