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## How Advances in Machine Intelligence Will Benefit Banks



Over the past two years, banks have enthusiastically embraced robotic process automation (RPA), and for good reason. Offloading mundane work to bots (apps that perform automated tasks) can help banks improve efficiency and allow employees to focus on high-value work requiring human judgement and skills, all of which can help increase productivity, profitability, and customer and employee satisfaction.

At the same time, scientists have been making tremendous progress in big data analytics and artificial intelligence (AI). It's been an era of amazing innovation and research acceleration, with many technologies maturing in parallel. The stage is now set for the third strand of automation in banking: AI (also known as cognitive computing) and machine intelligence.

## **AI, Machine Intelligence and Your Bank**

Broadly speaking, AI and machine intelligence are computer systems that mimic human intelligence. AI is used for performing human tasks, whereas machine intelligence is an umbrella term for a broader collection of cognitive tools that have evolved significantly in recent years: machine learning, deep learning, advanced cognitive analytics, robotics process automation and bots, to name a few. They have been around (and evolving) for decades but innovations and new capabilities are enabling banks to apply them to a rapidly expanding set of business problems.

For example, banks are improving customer service by using AI to learn from customer behavior and deliver more precisely on customer preferences, tailor the customer journey and streamline product and credit acquisition. Using AI on repetitive tasks is helping banks find new ways to increase productivity and reduce costs—carefully selecting the next best action or responding efficiently to customers via cognitive call centers, for example. And AI is helping banks lower the risk of human error by reducing human involvement in cyber, credit, fraud, compliance, internal audit and employee retention.

Bots and RPA have demonstrated their value and reliability on straightforward tasks, building confidence and interest in more sophisticated uses of AI machine intelligence such as:

- Robots that answer complex financial questions posed in plain English.
- Cloud-based software that can potentially answer more the 65 million questions by scanning drug approvals, economic reports, monetary policy changes and political events and their impact on nearly every financial asset on the planet.
- AI to help organize customer data and create customized packages of personalized advice, delivered to bank customers via their mobile phone.
- Linguistic analysis and trading compliance technology to help monitor and prevent trade malpractice.

We're far from peak adoption, but banks are quickly moving past pilot stage as they discover powerful ways AI and machine intelligence can improve multiple areas of business.

### **Machine Intelligence is Not Just the Ability to Do, it's the Ability to Learn**

In addition to making some things easier, faster, more accurate and more reliable, AI and machine intelligence enable you to do things that simply weren't possible before.

For example, say your bank needs to review every contract to confirm compliance with new regulations. An AI system can search all contracts and insert specific language if it's missing, saving considerable time and resources.

AI also enables the use of intelligent systems where, for example, employees can check in with HR on payroll, vacation time, professional development credits and so on. The system translates queries from written text to actual meaning and returns results in plain narrative. If it can't answer a question, an HR specialist can pick up the conversation from the transcript while the AI watches, listens and learns. Gradually, the AI becomes as effective as the trained HR professional, who can now focus on other, more complicated tasks.

And computers can analyze data in an unlimited number of dimensions—a much more powerful view than the human limitation of three or four dimensions. If your bank is trying to understand which clients are more likely to engage in fraud, you can use AI software to look for suspicious behavior, a far superior alternative to reliance on people and older types of technology. This is of incredible value: Banks are obligated to pursue alerts but the vast majority are irrelevant. AI can eliminate false positives, reducing the amount of unnecessary activity significantly.

### **AI is Ready for Banking, but is Your Bank Ready for AI?**

Right now, AI bolts onto a robotics environment, providing capability that enables robots to interact with humans or computer systems with more intelligence. Building these systems requires people with experience in the different technologies, but they have

become relatively easy to implement: Nothing is out of the box—yet—but the enabling components are in the marketplace. The systems are cost effective, in large part because of the basic benefits they provide—fewer errors, faster throughput and greater productivity (24×7, no vacations).

Bottom line: If your bank is ready for AI, AI is ready for your bank.

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