**What will it take for AI to become mainstream in business? The convergence of different research approaches—and lots of human intelligence.**

We’re in the midst of a breakthrough decade for artificial intelligence (AI): More sophisticated neural networks paired with sufficient voice recognition training data brought Amazon Echo and Google Home into scores of households. Deep learning’s improved accuracy in image, voice, and other pattern recognition have made Bing Translator and Google Translate go-to services. And enhancements in image recognition have made Facebook Picture Search and the AI in Google Photos possible. Collectively, these have put machine recognition capabilities in the hands of consumers in a big way.

What will it take to make similar inroads in business? Quality training data, digital data processing, and data science expertise. It will also require a lot of human intelligence, such as language-savvy domain experts who refine computable, logically consistent business context to allow logical reasoning. Business leaders will have to take the time to teach machines and incorporate machine intelligence into more processes, starting with narrow domains.

Some in the statistically oriented machine learning research “tribes”—the Connectionists, the Bayesians and the Analogizers, for example —will worry that “human-in-the-loop” methods advocated by the Symbolists aren’t scalable. However, we expect these human-to-machine feedback loops, that blend methods of several tribes, will become a lot more common inside the enterprise over the next few years.

See what that evolution might look like below. For an overview of machine learning, see [the first infographic in our series](http://usblogs.pwc.com/emerging-technology/a-look-at-machine-learning-infographic/). And for a better understanding of how its algorithms are used, see our [machine learning methods infographic](http://usblogs.pwc.com/emerging-technology/machine-learning-methods-infographic).





