Deloitte.

Bionic brains

The convergence of machine and human intelligence is disrupting traditional decision-making by equipping people with knowledge that was almost unimaginable just a few years ago. The connections between people and machines are becoming both more natural and more familiar, creating better and faster decisions throughout the value chain.

With the rise of big data and machine-to-machine communications, analytical models and algorithms are increasingly being embedded into complex event processing (CEP) and other automated workflow environments. Automated decision-making is probably here to stay, enhanced by a host of cognitive analytics applications.

In practical terms, cognitive analytics is an extension of cognitive computing, which is made up of three main components: machine learning, natural language processing, and an advanced analytics infrastructure. Cognitive analytics is the application of these technologies to enhance human decisions. It takes advantage of cognitive computing's vast data-processing power and adds channels for data collection (such as sensing applications) and environmental context to provide practical business insights. If cognitive computing has changed the way in which information is processed, cognitive analytics is changing the way information is applied.

Cognitive analytics is still in its early stages, and it is by no means a replacement for traditional information and analytics programs. However, industries wrestling with massive amounts of unstructured data or struggling to meet growing demand for real-time visibility are taking a closer look.

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The So What:
Cognitive computing and analytics appear to be capable of improving virtually any knowledge-intensive domain to which they are applied. The entire phenomenon, however, raises questions about the respective roles of humans and knowledge workers. No large-scale replacement of highly trained employees is on the immediate horizon. But as cognitive systems move from chess and TV game shows to real business applications, knowledge workers are justifiably anxious about their futures. Both individual workers and organizations need to learn how these systems can augment the work of talented humans rather than fully automating it.