

Cognitive Computing, Part II: Commercial Cognitive Platforms and Services

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[Part I](#) of this *Executive Report* series covered the rise of cognitive computing, the underlying technologies enabling cognitive platform functionality, and cognitive applications and development trends. Several companies now offer products based on cognitive technology, and the number is growing. Here in Part II, we dive into the commercial cognitive products, including cognitive development platforms, domain- and industry-specific cognitive platforms, and cognitive-powered solutions:

- **Cognitive development platforms** — cloud-based services and software tools for building cognitive-powered applications and for adding cognitive capabilities to corporate and consumer applications and other products
- **Domain- and industry-specific cognitive platforms** — cloud-based development environments and software tools tailored for building cognitive applications for specific domains and industries
- **Cognitive-powered solutions** — commercial applications that derive a significant amount of their functionality from embedded or built-in cognitive computing techniques

Cognitive Development Platforms

Cognitive development platforms are your more “generic” cognitive application development environments and services. Some cognitive development platforms are available for on-premise deployment; however, the trend is for providers to offer their cognitive products in the form of cloud-based environments that give companies the opportunity to license various API-based cognitive services for use in their own enterprise applications or commercial products.

Such cognitive services, in the form of APIs, software development kits, and Web services, are designed to help developers add cognitive features and advanced functionality, such as emotion detection, video analytics, facial recognition, visioning, speech, and various natural language understanding capabilities to their applications.

Cloud-based cognitive development platforms and API-based services have made cognitive technology more accessible to both enterprise and commercial software developers, allowing them to build their own cognitive cloud applications and services. And vendors like IBM, Microsoft, and others are pushing their cognitive cloud development platforms to spur innovation and fuel new markets for software/service providers. These range from startups and emerging, venture capital-backed businesses to established enterprise players.

Domain- and Industry-Specific Cognitive Platforms

Domain- and industry-specific cognitive platforms provide cognitive APIs and services like the more generic cognitive development environments, upon which many are built, but also feature analytical models and frameworks and supporting infrastructure that organizations can customize to create their own cognitive applications. This typically includes prebuilt models previously trained on cross-industry and domain content to simplify the development and training processes required for building cognitive applications for client companies. They also feature APIs, Web services, systems/data integration facilities, and other capabilities for integrating cognitive applications with an organization's enterprise systems.

Cognitive-Powered Solutions

Cognitive-powered solutions, in the form of commercial applications and API-based services, feature prebuilt analytical models and content tailored to specific domains and industries, which can be employed to deliver advanced analytics and intelligent reasoning and decision support functionality that organizations can license or embed within their existing enterprise systems or their own commercial software offerings.

Cognitive solutions are available for a range of industries and domains, including banking and finance; business process management/business process analytics; communications, marketing, and advertising; contact center/help desk and customer support; customer engagement/customer experience; healthcare and medicine; insurance; intelligence, law enforcement, and emergency response; intelligent video analytics and processing; Internet of Things/smart equipment and smart buildings/smart cities/smart homes; IT security; legal; sports; and travel and hospitality. These solutions comprise the largest group of cognitive products in the market today. The development of such solutions is an accelerating trend that enables firms to implement cognitive capabilities into their decision support, operational, and customer-facing applications.

Cognitive solutions increase the practicality of organizations using cognitive systems by reducing some of the need to maintain staff experienced in cognitive systems development. Moreover, like other software-as-a-service offerings, they help alleviate the need to utilize high-end hardware on-premise because application processing takes place, to a large degree, in the cloud platform. Most enterprises will probably opt to go with cognitive-based solutions tailored to their particular industry, rather than try to develop their own applications from scratch.

Conclusion

The market for cognitive products is evolving, and we are seeing an increasing number of offerings appear on a regular basis. These range from cloud-based cognitive development environments and platforms for building applications for specific domains and industries to prebuilt, commercial cognitive solutions. It is in this latter group of products where we are seeing lots of innovation, with providers introducing cognitive solutions for use in almost every industry. This trend will likely continue for the foreseeable future. The accompanying report features a comprehensive sampling of various commercial cognitive product offerings on the market today.