

Microsoft Project Cortex

Founded 1975 | HQ Redmond, WA | 144,000 employees | \$125.8B revenue (2018)

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The Company

Microsoft is one of the world's largest software companies. Founded in 1975, the company is headquartered in Redmond, Washington, with revenues of \$125.8 billion in 2018 and 144,000 employees. Microsoft Office, one of the firm's core product offerings, was launched in 1990 and has gone through many evolutions including the 2011 release of its cloud version, Office 365, a part of the broader Microsoft 365. SharePoint (released in 2001) is another key offering from Microsoft and provides enterprise content management (ECM) functionality. At its 2019 Ignite Conference, Microsoft announced a limited preview of its March 2020 launch of Project Cortex, the focus of this report.



The Technology

Project Cortex is due for release in early 2020 and is described as a knowledge network that runs inside Microsoft 365. Project Cortex builds on the existing content services within SharePoint to deliver knowledge and actionable

insights and alerts to users within their day-to-day applications, such as Office and Teams. The original intent of SharePoint when it was launched in 2001 was to provide publishing and knowledge management (KM) capabilities, but like similar systems of that era it rapidly became a repository or silo of information, rather than pushing out actionable insights. The idea was right, but the technology at the time was incapable of delivering on the promise. Fast forward to 2019 and Microsoft is planning to leverage machine learning (ML) and AI through Project Cortex to automate knowledge management for its customers.

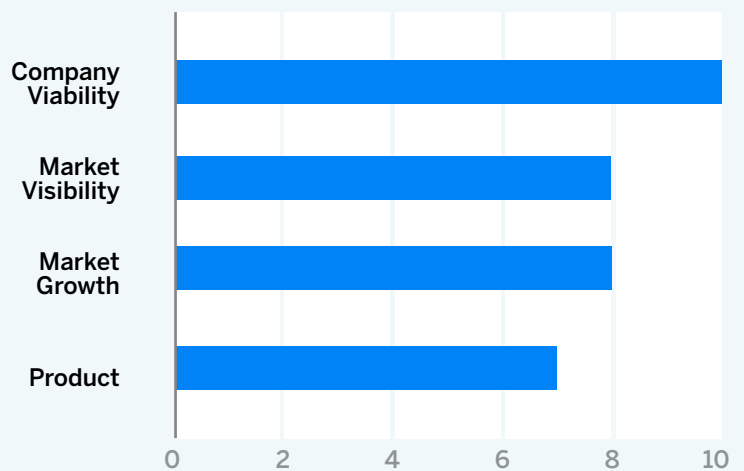
In architectural terms, Cortex makes extensive use of Microsoft Graphs, a unified module that provides access (via an API and set of connectors) to the data within Microsoft 365. The data and data sets accessed can then be leveraged for ML and AI. In fact, it should be noted that Microsoft 365 leverages some highly advanced AI techniques, such as machine teaching (to design optimal training data). But at a practical level, this means pulling and building out profile data relating to calendars, location, and relevant data and documents

to enable predictive personalization. Cortex takes this core functionality a step further by essentially templating core KM tasks, such as automatically classifying data and access rights and pushing relevant data to end users. Further, Microsoft is able to do this at scale, something that has eluded similar attempts in the past. The company is careful to note that it does not aggregate and mine its customers' data, a key concern in any such situation. Rather, each customer securely mines its own data. From an end-user perspective, the embedded AI will create "topic pages" and a personalized "knowledge center" that will integrate into a SharePoint intranet.

One refreshing point of note with Cortex is that Microsoft acknowledges that much, if not most, of the actionable knowledge users require is stored in unstructured data. Therefore, though not totally abandoning traditional OCR capture technologies, it is moving ahead with its own ML capture functionality that uses processing engines to analyze both images and text and gives a nod to the fact that knowledge also needs to be mined from chats, email, and video; Microsoft claims this functionality is significantly ahead of third-party specialist solutions.

This is an ambitious shift for Microsoft, one that acknowledges the vast sprawl, complexity, and volume of content across the customer's footprint and in turn provides a unified approach to analyzing and categorizing relevant knowledge, and ultimately pushing it in real time to end users.

Figure 1
Microsoft Cortex Assessment



Our Opinion

Project Cortex is a significant move by Microsoft to essentially pivot its content management functionality into a knowledge management application. Though only time will tell how successful this shift is, in our opinion it's a good move for the company. That being said, the scale of ambition will need to navigate the reality of its customers' expectations and present-day challenges. On the plus side, long-term customers of Microsoft will be reluctant – or frankly unable – to migrate to alternate systems. Cortex provides them with some order to what can be chaos in many organizations. On the flip side, Microsoft will need to be careful not to empower users too broadly and too quickly. Rather than bringing order to chaos, more libraries and more silos could rapidly sprout up, worsening content sprawl rather than improving it. That said, in our discussions with Microsoft they seem aware of the dangers, and the rollout through 2020 will likely put some limitations on the use of Cortex.

Figure 1 shows our assessment of Microsoft Cortex across four categories.

Advice to Buyers

Cortex makes sense, and intellectually we like the route Microsoft is taking. If you have a large install of Microsoft 365 applications, you will likely want to take a look and potentially try out Cortex in 2020. But any move to embrace Cortex should be taken in a phased manner, as the move from inaccessible and redundant silos of information to an empowered network of relevant knowledge is a big step. Every company will be different, all content may not reside in Microsoft applications, much of it may be in a mess, and figuring out specific user requirements is something that will need to be undertaken thoroughly. Cortex has great potential, but like any such new use of AI, its value comes from a thorough understanding of business needs first and the implementation of the technology second.

SOAR Analysis

Strengths

- Near-unlimited resources for R&D
- Huge customer base to leverage

Opportunities

- Deepen and expand the use of Microsoft 365

Aspirations

- To reinvent knowledge management
- To intelligently automate Microsoft 365

Results

- Over 100 million SharePoint customers
- Cortex release as private preview

About Deep Analysis

Deep Analysis is an advisory firm that helps organizations understand and address the challenges of innovative and disruptive technologies in the enterprise software marketplace.

Its work is built on decades of experience in advising and consulting to global technology firms large and small, from IBM, Oracle, and HP to countless start-ups.

Led by Alan Pelz-Sharpe, the firm focuses on Information Management and the business application of Cloud, Artificial Intelligence, and Blockchain. Deep Analysis recently published the book "Practical Artificial Intelligence: An Enterprise Playbook," co-authored by Alan and Kashyap Kompella, outlining strategies for organizations to avoid pitfalls and successfully deploy AI.

Deep Analysis works with technology vendors to improve their understanding and provide actionable guidance on current and future market opportunities.

Yet, unlike traditional analyst firms, Deep Analysis takes a buyer-centric approach to its research and understands real-world buyer and market needs versus the "echo chamber" of the technology industry.

Contact us:

info@deep-analysis.net

+1 978 877 7915



About the Author

Alan Pelz-Sharpe is the founder of Deep Analysis. He has over 25 years of experience in the IT industry, working with a wide variety of end-user organizations like FedEx, The Mayo Clinic, and Allstate, and vendors ranging from Oracle and IBM to start-ups around the world. Alan was formerly a Partner at The Real Story Group, Consulting Director at Indian Services firm Wipro, Research Director at 451, and VP for North America at industry analyst firm Ovum. He is regularly quoted in the press, including the *Wall Street Journal* and *The Guardian*, and has appeared on the BBC, CNBC, and ABC as an expert guest.