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Dresner Advisory Services, LLC

2017 Edition

Advanced and Predictive Analytics Market Study (Excerpt)

Wisdom of Crowds® Series

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Executive Summary

- Advanced/predictive analytics ranks seventh among 35 initiatives studied.
- In 2017, perceived criticality of advanced and predictive analytics declined slightly compared to both 2016 and the prior year. Almost 90 percent of respondents attach, at minimum, some importance to advanced and predictive analytics. Industry respondent sentiment toward APA grew strongly in 2017, well ahead of user sentiment.
- Only 23 percent of users currently deploy advanced/predictive analytics, down 1 percent from 2016. Most users are deferring deployment and 26 percent have no plans for use. Large and small organizations are the most likely adopters.
- Regression models, textbook statistic functions, and clustering are the most important analytic user features/functions. Feature interest is increasing year over year. Industry support is strong and ahead of user expectations.
- Organizations view advanced/predictive analytics as building on existing BI efforts; users are also confident in their BI execution and ability to act on data.
- Business intelligence experts, business analysts, and statisticians / data scientists are the greatest early adopters of advanced and predictive analytics. Hybrid roles are also evident. Frequency of APA use is flat year over year but grew compared to 2015. Small and very large organizations are the most constant users.
- A range of data preparation features, led by set operations, de-duplication, and complex filtering are very important to users; but overall interest is similar to 2016. Small and very large organizations are the most interested. Industry support well exceeds user requirements.
- Several usability features, led by support for easy iteration, are uniformly important to users today and over time. Current industry support for usability features is good and improving.
- In-memory analytics and in-database analytics are the most important scalability requirements to respondents, followed distantly by in-Hadoop, MPP architecture, and PMML support. Sentiment over time is sustained or growing. Industry support for scalability is well in line with user requirements.
- Eighty-four percent of vendors offer a single product with all features proprietary. Sixty-eight percent offer a single product with some or all features sourced from a third party. Fewer than 10 percent of vendors polled offer "multiple products" from any source, and only 5 percent offer open source.

Importance of Advanced and Predictive Analytics

Fundamental business intelligence technologies—reporting, dashboards, end-user self-service, and advanced visualization—perennially top our lists of technologies and initiatives strategic to business intelligence, and 2017 is no exception. Advanced and predictive analytics—at number seven—retains high importance among priorities, well ahead of topics including mobile, enterprise planning, governance, cloud, and big data (fig. 1).

Figure 1 – Technologies and initiatives strategic to business intelligence

Adoption Plans for Advanced and Predictive Analytics

Deployment Plans for Advanced and Predictive Analytics

Despite widespread regard for analytic proficiency and pockets of strong interest, we observe that organizations are not broadly clamoring to adopt advanced and predictive analytics in the current time frame. Penetration and use of advanced and predictive analytic tools remains low, with current users accounting for just 23 percent of our sample (organizations reporting current use of APA declined 1 percent year over year). Thirty-nine percent of organizations are either using or evaluating the technologies, but 35 percent are only considering advanced analytics. Twenty-six percent have no plans for use (up 3 percent from 2016) (fig. 2).

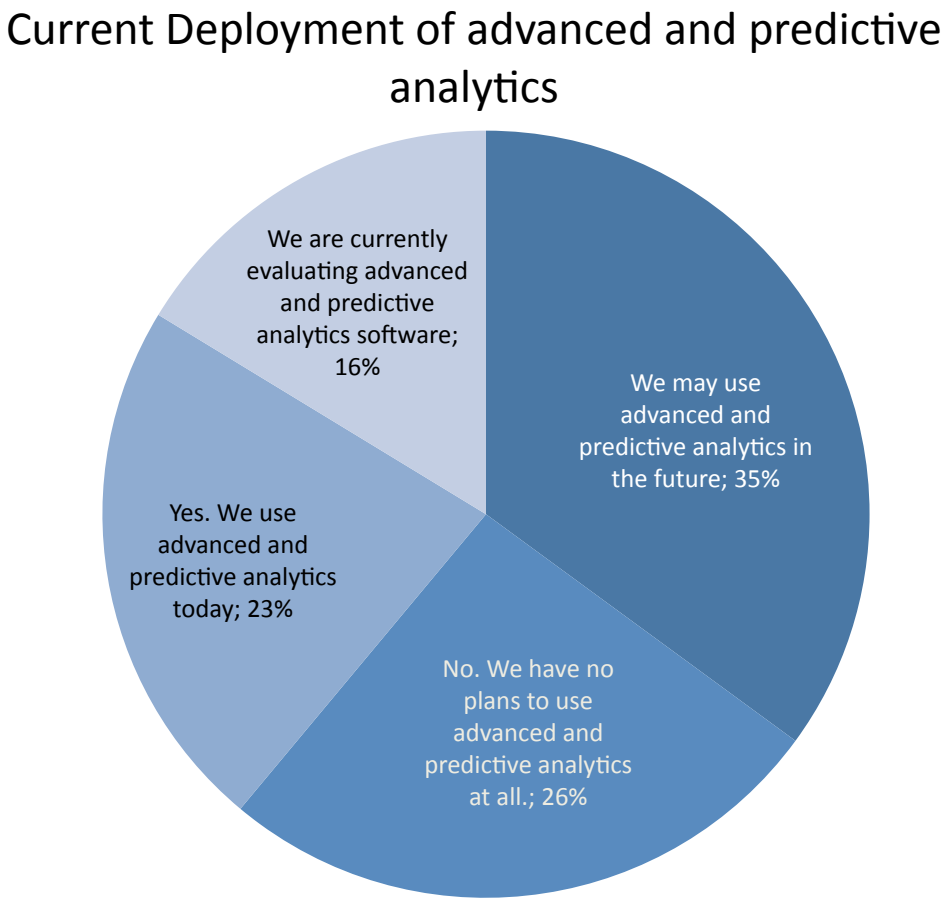

Figure 2 – Current deployment of advanced and predictive analytics

Feature Requirements of Advanced and Predictive Analytics

Respondents expressed interest in a broad range of feature requirements for advanced and predictive analytics (fig. 3). The most popular among these support traditional statistical methods: regression models, textbook statistical functions, and hierarchical clustering. These three leading features are, at minimum, "somewhat important" to well more than 90 percent of 2017 respondents. Geospatial analysis (highly associated with mapping, populations, demographics, and other Web-generated data) and recommendation engines, Bayesian methods, and automatic feature selection are the next most required features.

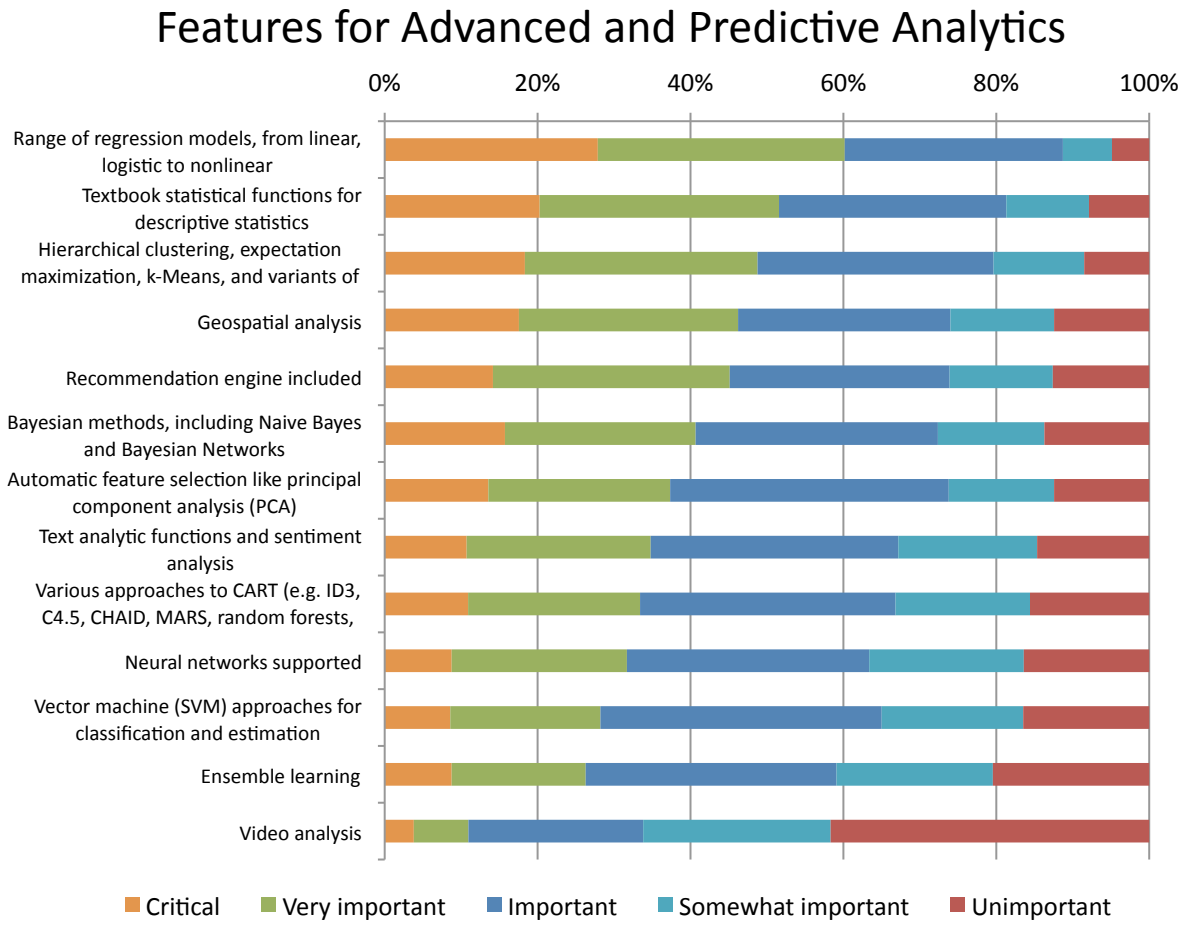

Figure 3 – Features for advanced and predictive analytics

Data Preparation Plans for Advanced and Predictive Analytics

For a fourth year, our study addresses a detailed set of data preparation features that support advanced and predictive analytic activities and processes.

As in our previous studies, all six data preparation features earned very respectable attention, led only slightly in 2017 by the simplest: set operations and detection of duplicates (fig. 4). But 60-69 percent of respondents say every feature measured is, at minimum, "very important," a reflection of the criticality of preparing and manipulating data in the context of applying advanced and predictive analytics.

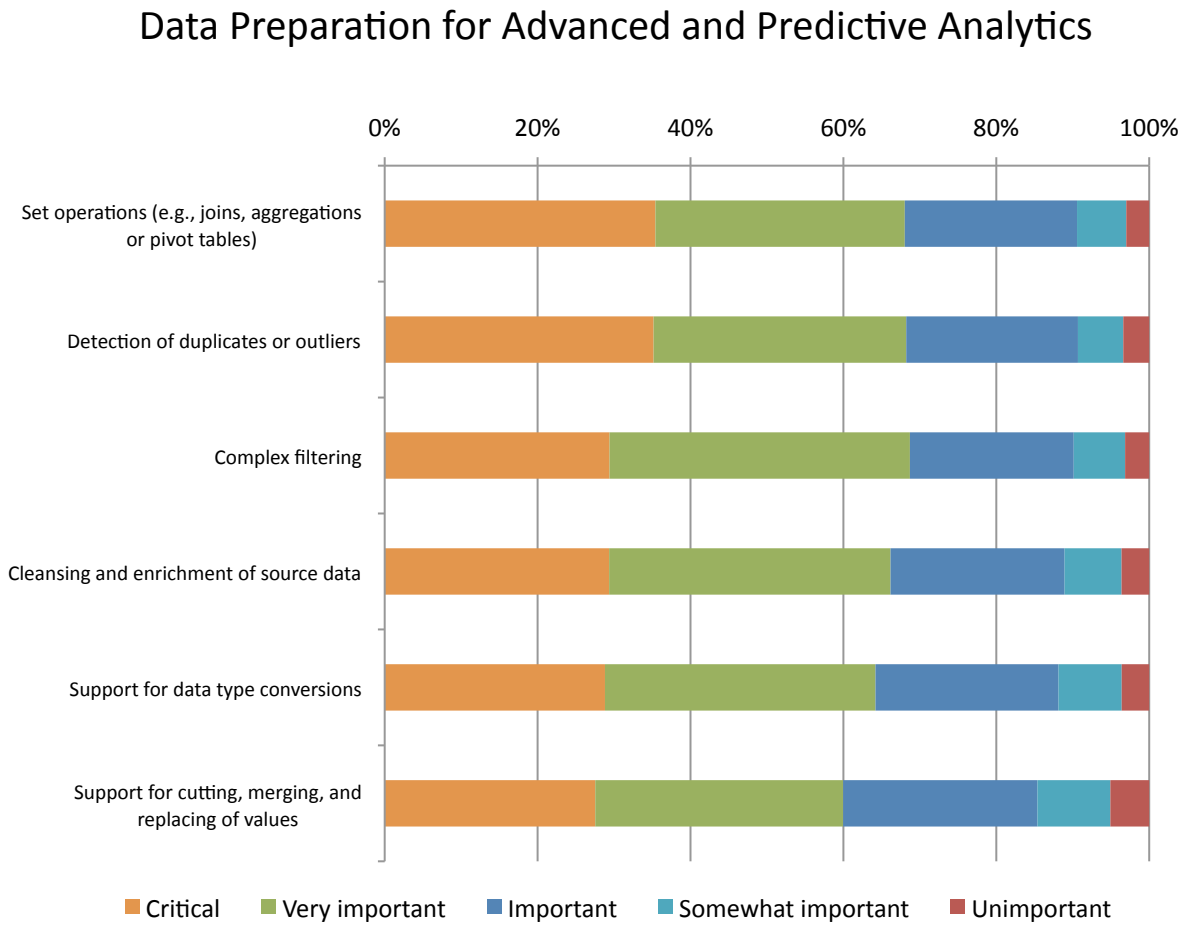

Figure 4 – Data preparation for advanced and predictive analytics

Usability for Advanced and Predictive Analytics

Our study addresses a detailed set of usability benefits that support APA activities and processes. Based on our specified criteria, we expect our respondent audience to be fairly sophisticated in their usability criteria compared to a mainstream business intelligence audience.

Usability features generally address process or activity automation and streamlining. Across nine usability criteria sampled, all but one are at least "important" to 80 percent or more of respondents (fig. 5). Thus, at the bottom of this list, "specialist not required" is important, but less so than access other features that are led by support for "easy iteration," "simple process for continuous modification of models," and "access to advanced analytics for predictive and temporal analysis."

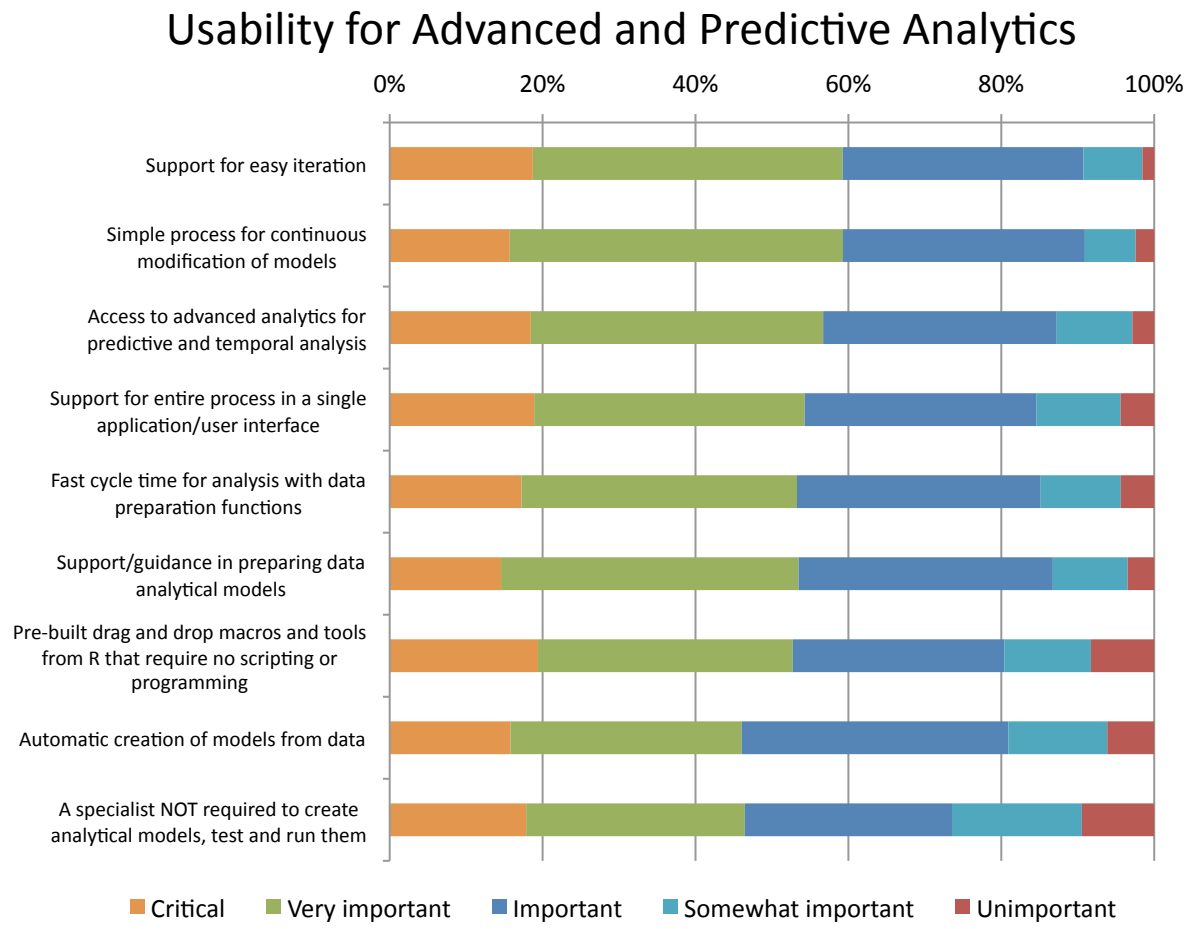

Figure 5 – Usability for advanced and predictive analytics

Scalability of Advanced and Predictive Analytics

Our study addresses respondents' interest in a set of scalable technologies and architectures that support advanced and predictive analytics.

In 2017, two features, in-memory analytics and in-database analytics, stand out most sharply to respondents, after which interest notably declines (fig. 6). Both technologies attract the highest "critical" and "very important" scores in our study and are, at minimum, "somewhat important" to more than 90 percent of respondents. In-Hadoop analytics are the third most cited scalable analytic platform, followed by support for massively parallel processing architecture and PMML support.

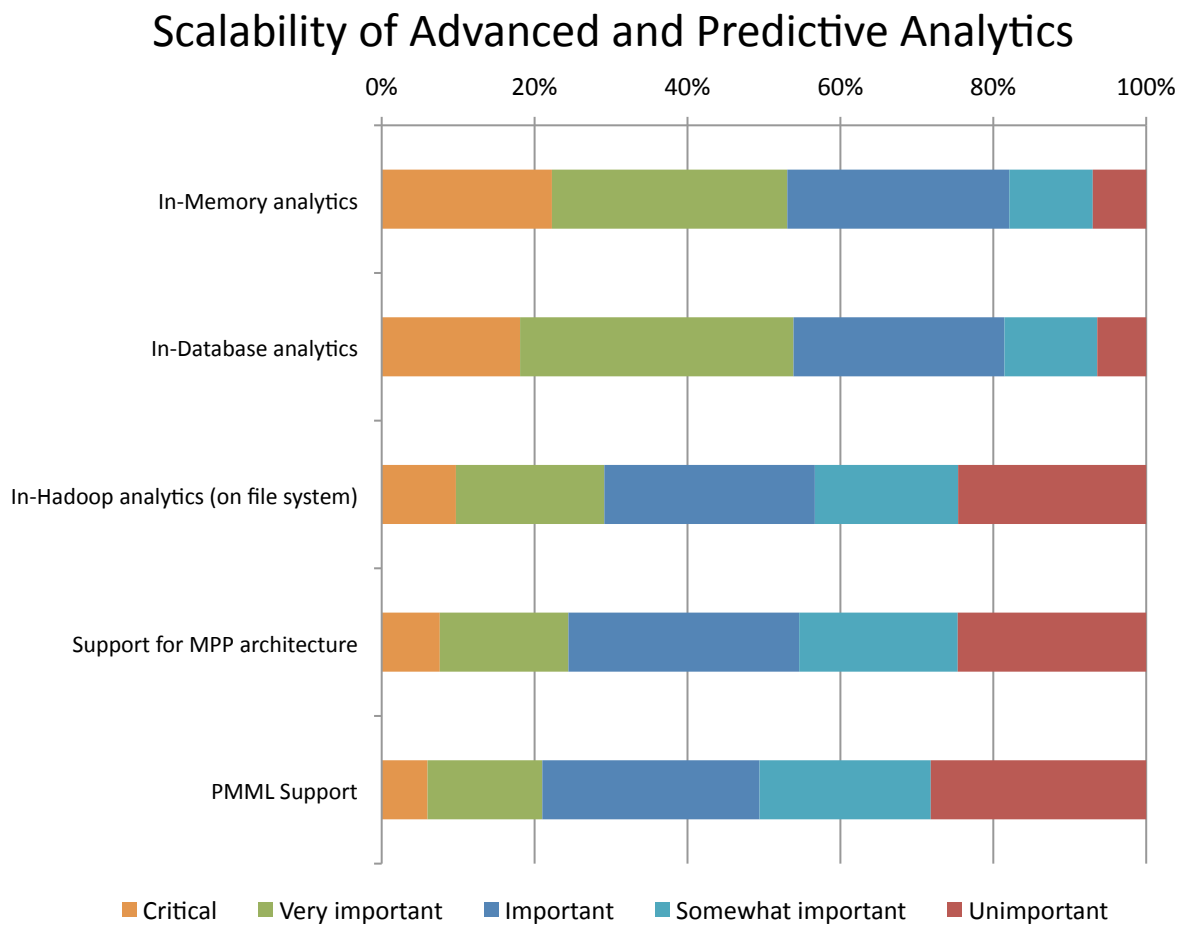

Figure 6 – Scalability of advanced and predictive analytics

Advanced and Predictive Vendor Ratings

In rating the vendors, we considered core advanced and predictive features, data preparation, usability, scalability, and integration. To be ranked, we required a minimum score of 17/32. As a result, we ranked 17 vendors.

The top vendors for advanced and predictive analytics in 2017 include RapidMiner, SAP, and TIBCO, which are tied for first place. Oracle is in second place. IBM and Information Builders are tied for third place. Pentaho and Salesforce are tied for fourth place, and GoodData and MicroStrategy are tied for fifth place (fig. 62).

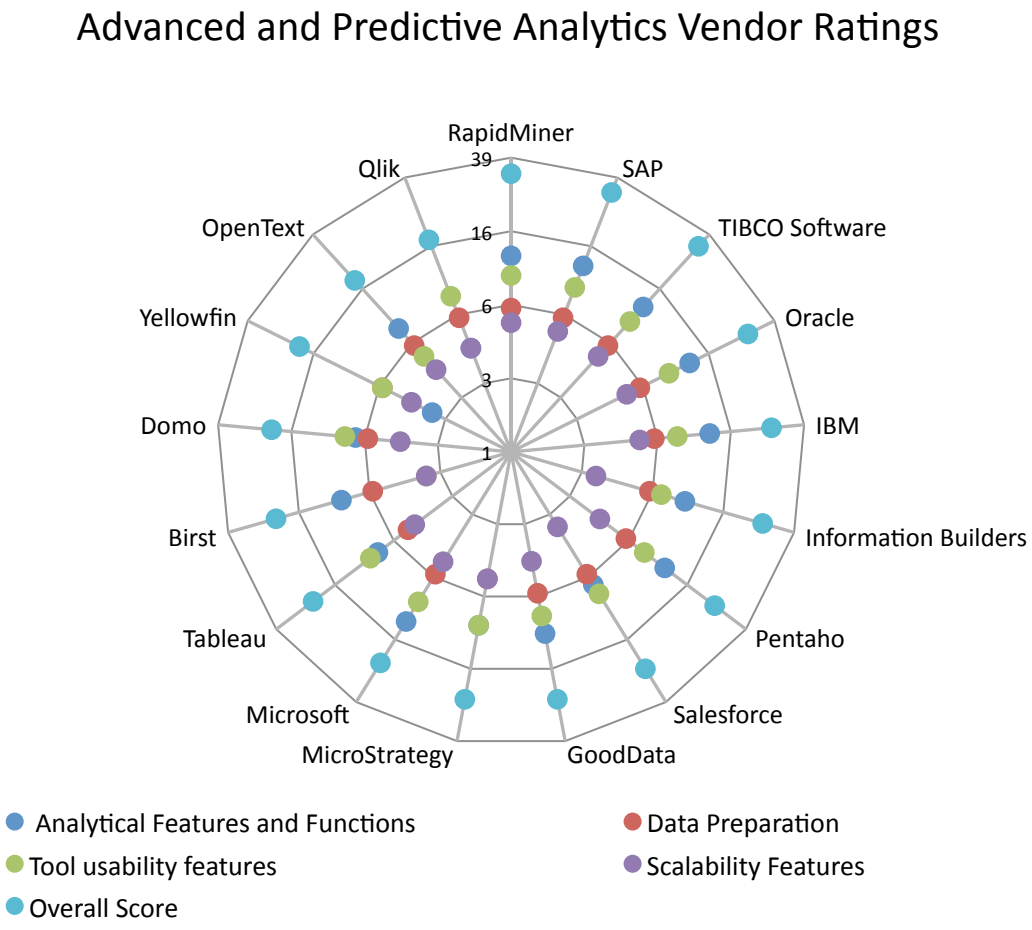

Figure 7 – Advanced and predictive analytics vendor ratings