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# Managed Analytics as a Service

## **Delivering Digital Insights to the Business**

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This report analyzes the state of the market for managed analytics as a service (MAaaS), a capability provided by IT service providers that brings together advanced analytics technologies with cloud delivery and professional service skills to provide actionable business insights. It discusses different types of offerings available in the market and assesses market development issues such as market sizing, market drivers and deal sizes. Finally, the report makes recommendations for consultancies, managed service providers (MSPs), technology vendors, investors and enterprise buyers.



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# Key Findings

Delivering a data-driven organization is not as easy as provisioning IaaS, and most enterprises do not have the skills in house to support the advanced analytics requirement that it necessitates.

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To support a data-driven organization enterprises need to have access to a mix of hybrid delivery options and external IT service providers to help create a total data integration scenario bringing together both structured and unstructured data.

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MAaaS is a data analytics offering from professional service organizations that supports total data integration using diverse data sets, real-time analysis, and advanced technology skills and tools.

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MAaaS is enabled by cloud delivery so that a customer can send data to a private hosted environment or to a public cloud managed by the service provider and then pay per algorithm or per data items returned in answer to a question.

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Capabilities of MAaaS need to be set up and run in an ad-hoc way to get a faster time to value with the insight produced. IT service providers have been investing in the creation of 'platforms' to provide the types of quick self-service insight that buyers require. These form the backbone of the MAaaS offerings available today.

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The opportunity for as-a-service (-aaS) delivery is growing quickly as data-driven strategies provide a way for organizations that are not net-native (as well as those that are) to better compete in the digital economy. We expect revenue from -aaS offerings to climb at a CAGR of 46% to reach \$19bn, and 14.4% of the total data platforms and analytics market, in 2020.

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To date among IT service suppliers the capability to help customers monetize their data is not widely promoted, or considered part of the mainstream commercial agenda for MAaaS offerings.

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# Executive Summary

## INTRODUCTION

Managed analytics as a service (MAaaS) combines the on-demand aspects of cloud computing with the democratization of information enabled by big data. 451 Research defines 'big data' as BI driven by storing, processing and analyzing data that was previously ignored due to the cost and functional limitations of traditional data management technologies to handle one or more of three factors: volume, velocity and variety.

Recent years have seen an explosion in the number of different platforms and approaches for storing, processing and analyzing data in multiple formats from multiple sources. The problem for database and analytics professionals today is, if anything, an abundance of choices in terms of both the data platform (relational and non-relational databases, NoSQL, NewSQL, Hadoop, database as a service, etc.) and analytics approaches (traditional BI reporting and analysis tools, visualization, in-database analytics, machine-learning algorithms, statistical and predictive analysis, etc.).

At the moment, demand for big-data projects is largely driven by enterprise analytics, as organizations are able to look at old questions that have never been answered and integrate this capability with data they have never had.

Having started as a stand-alone capability focused on the Hadoop technology ecosystem in 2006-2007 and used to address specific business challenges or opportunities, big data is now just beginning to be seen as part of an overall enterprise data management strategy. As such, it is poised to become part of mainstream enterprise IT.

Like SaaS, the value proposition of 'advanced analytics as a service' enables both LOB and IT professionals to get direct access to actionable insights, while still helping to ensure enforcement of security, privacy and compliance controls. In this report we examine the new types of services that are coming to market, the emerging competitive landscape and assess how the market is likely to develop.

## METHODOLOGY

This report is based on a series of in-depth interviews with a variety of stakeholders in the industry, including consultancies and buyers in end-user organizations across multiple sectors in both the US and Europe. This research was supplemented with additional primary research, including attendance at a number of trade shows and industry events.

Reports such as this one represent a holistic perspective on key emerging markets in the enterprise IT space. These markets evolve quickly, though, so 451 Research offers additional services that provide critical marketplace updates. These updated reports and perspectives are presented on a daily basis via the company's core intelligence service, 451 Research Market Insight. Forward-looking M&A analysis and perspectives on strategic acquisitions and the liquidity environment for technology companies are also updated regularly via Market Insight, which is backed by the industry-leading 451 Research M&A KnowledgeBase.

Emerging technologies and markets are covered in 451 Research channels including Business Applications; Cloud Transformation; Data Platforms and Analytics; Datacenter Technologies; Development, DevOps and IT Ops; Enterprise Mobility; European Services; Information Security; Internet of Things; Mobile Telecom; Multi-Tenant Datacenters; Networking; Service Providers; Storage; and Systems and Software Infrastructure.

Beyond that, 451 Research has a robust set of quantitative insights covered in products such as Voice of the Enterprise, Voice of the Connected User Landscape, Market Monitor, the M&A KnowledgeBase and the Datacenter KnowledgeBase.

All of these 451 Research services, which are accessible via the Web, provide critical and timely analysis specifically focused on the business of enterprise IT innovation.

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# 1. Market Drivers

Big data and analytics have climbed to the top of the corporate agenda as organizations seek to become more nimble by applying data-driven decision-making techniques to the senior management toolkit. The promise is the insights gained from big data and analytics will transform the way companies do business, delivering the kind of performance gains last seen in the 1990s, when organizations redesigned their core processes. Data-driven strategies provide a way for organizations that are not net-native, as well as those that are, to better compete in the digital economy by being able to develop more responsive business processes.

This means IT departments are being asked not just to store data in warehouses and data lakes, but to provide the infrastructure to perform analytics on it as well as to create the algorithms and models that agile business requires. For organizations that don't have idle servers to throw at big data workloads, the public cloud, courtesy of providers such as AWS, Microsoft, Google and IBM, is proving a valid alternative to maintaining costly internal infrastructure.

A lot of analytics requirements are not predictable. Once a question is answered, the infrastructure is not necessarily needed again, which is why many public cloud providers offer templates for popular big data platforms such as Hadoop. Those platforms make it easier for administrators to set up the infrastructure for the analytics model to run to answer ad hoc questions.

Of course if delivering a data-driven organization were as easy as provisioning IaaS, there would be a very limited opportunity for professional service organizations. However, it is not that simple. For example, depending on the configuration required, it may be cheaper to use internal infrastructure than go out to the public cloud. And as data sets grow larger, the cost of moving them to and from the cloud as they are used in production apps is growing, making use of internal virtualized infrastructure more attractive.

Security also remains an issue as do physical constraints around data movement and latency. And then there is the challenge of having skilled people internally who can pose advanced analytics questions, work effectively with the data and present insights back to the business. Tooling is coming into the market to help with this, but it is an immature and fast-moving market area.

So how does the IT department enable business users to look for insight and follow hunches? The answer, as with so many current IT challenges, lies with a mix of hybrid delivery options and external service providers. Offerings that can be grouped into MAaaS capability have been launched by a range of IT service providers to help different types of knowledge workers get personalized access to managed information sets, so that they can glean insights from the data more rapidly.

Furthermore, because technology is changing so rapidly in the open source data platform and analytics market, customer investments are typically obsolete before any ROI can be realized. For these reasons buyers are looking for external providers to take the entire technology stack off their hands and simply deliver the insightful service.

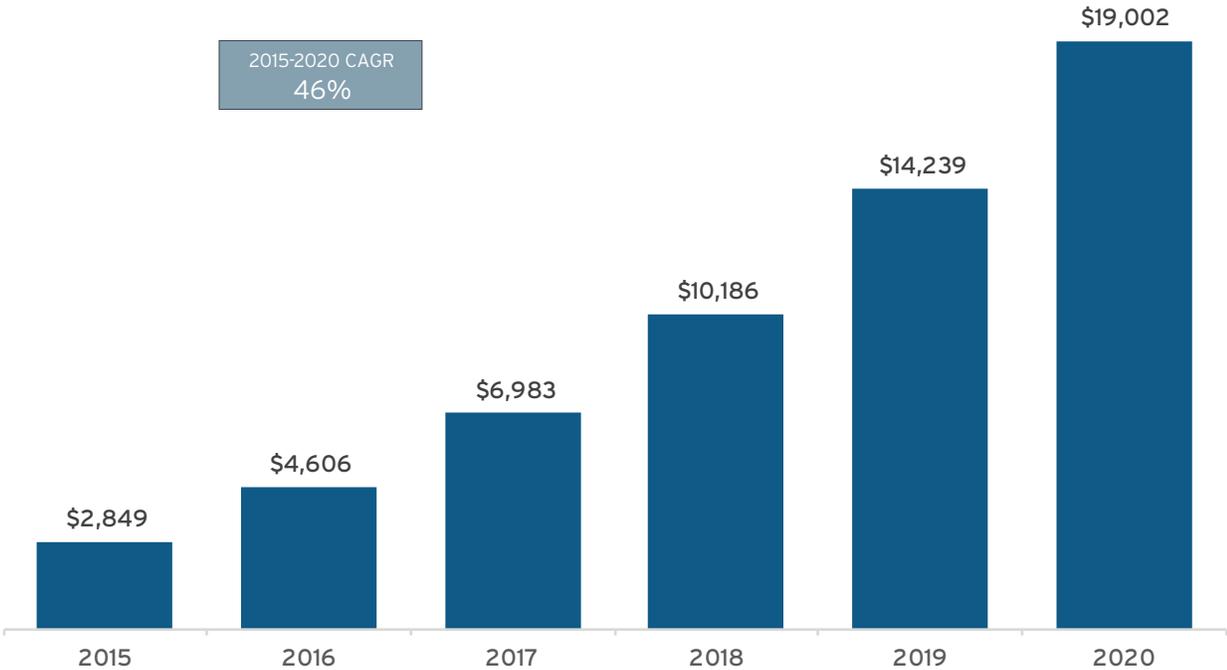
However, this form of data analytics is not traditional BI used to confirm decisions in a 'once and done' manner that is reliant on enterprise data warehouses. The use of structured data, tracking the past to create static reports is not the endgame here. Rather, MAaaS enshrines a more exploratory approach to using data to change minds and generate new ideas. It is an advanced form of data analytics using diverse data sets, real-time analysis, and requires different skills and tools. It also needs to be set up and run in an ad hoc way to get a faster time to value with the insight produced. Consequently, many IT service providers have been investing in the creation of 'platforms' from which to provide the types of self-service insight that buyers require.

# 2. Market Sizing

The market-sizing estimates provided in Total Data Market Monitor Q1 2016 are indicative of the levels of adoption we are seeing for database and analytics as a service. 451 Research estimates \$2.8bn was generated by vendors from data platforms and analytics delivered as a service in 2015, which equates to just 4.1% of the overall data platforms and analytics market. However, revenue from -aaS offerings is expected to climb at a CAGR of 46% to reach \$19bn, and 14.4% of the total market, in 2020 (see Figure 1).

**Figure 1: The Growing TDaaS Market 2015-2020**

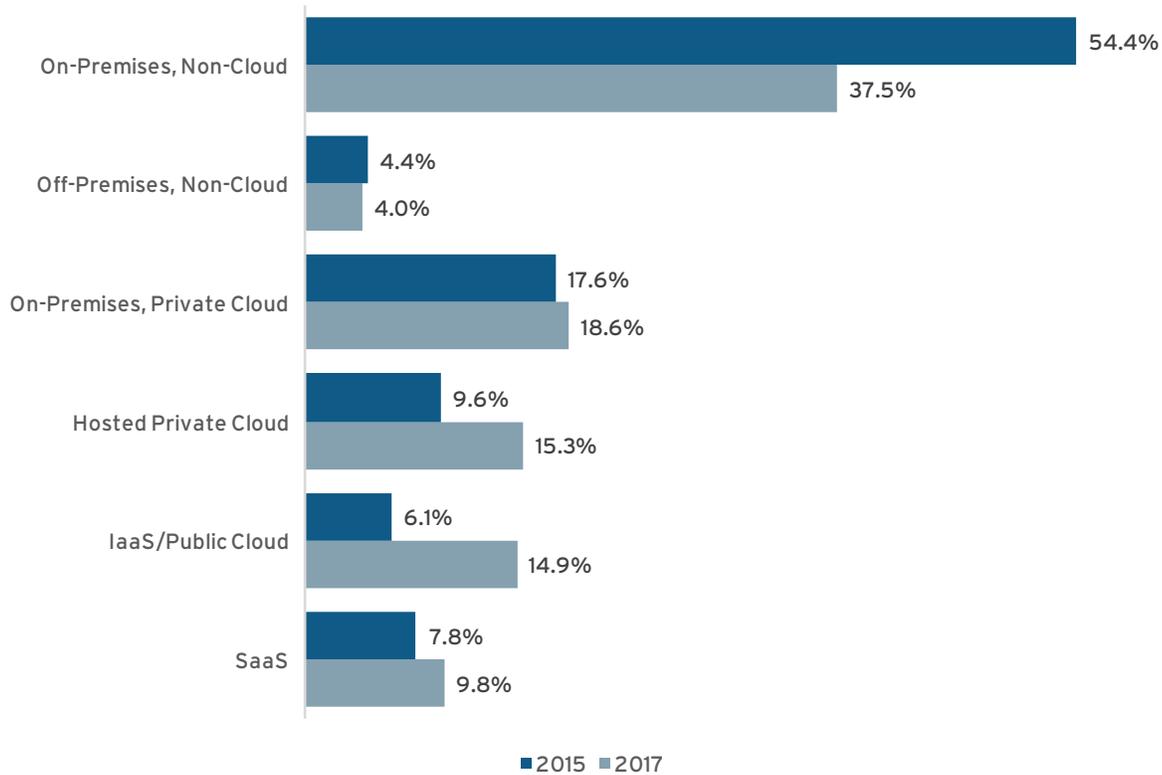
Source: 451 Research's M&A KnowledgeBase, 2016



The use of IaaS for data analytics/business intelligence workloads is also expected to grow faster than SaaS deployment through 2017. In our Voice of the Enterprise (VoTE) Cloud Computing survey for Q2 2015, we see data analytics/business intelligence software on IaaS growing from 6.1% to 14.9% and SaaS analytic deployments growing from 7.8% of respondents to 9.8%. Again, on-premises non-cloud deployment is expected to decline from 54.4% to 37.5% of respondents. On-premises private cloud is expected to grow from 17.6% of respondents to 18.6%. Meanwhile, hosted private cloud usage will grow from 9.6% to 15.3%, and off-premises non-cloud will decline from 4.4% to 4.0% of respondents (see Figure 2).

**Figure 2: Expected Big Data Analytics Infrastructure Deployments**

Source: 451 Research's Voice of the Enterprise: Cloud Computing, Q2 2015

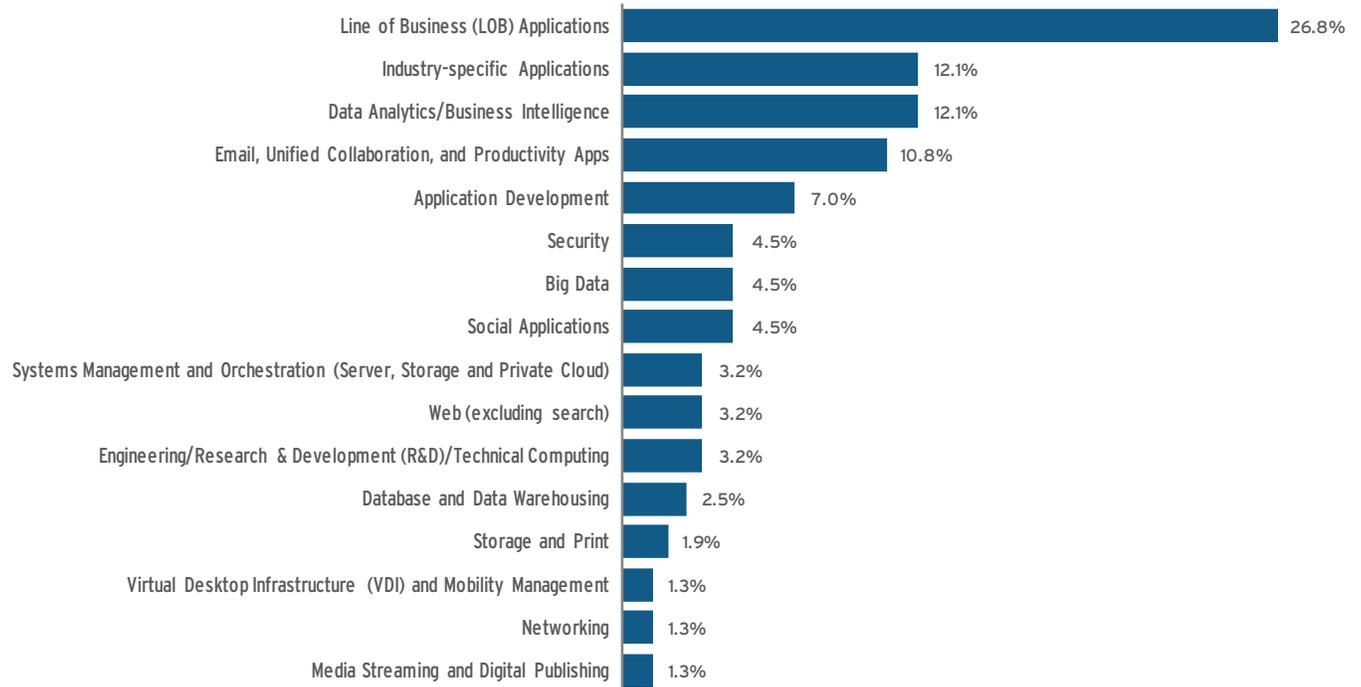


Further evidence of this growth of analytics on cloud infrastructure is revealed in our VoTE Cloud Computing survey for Q4 2015, where more than 16% of most recently deployed applications on cloud are categorized as data analytics/business intelligence or big data (see Figure 3).

**Figure 3: The Rise of Big Data Application Deployment on Cloud**

Source: 451 Research's Voice of the Enterprise: Cloud Computing: Q4 2015

How would you categorize the most recently deployed new application at your organization?



n = 157

# 3. Types of MAaaS Available To Support the Total Data Analytics Approach

Many IT service providers have been delivering managed analytics for many years on site for customers, developing analytics processes delivered on-premises. They would develop the processes and then either hand them off to a customer to run or the service provider would manage and maintain them on an ongoing basis. This was a managed service, but with the introduction of cloud technology the model is changing.

MAaaS is the new ability for a customer to send data to a private hosted environment or to a public cloud managed by the service provider and then pay per algorithm or per structured data items returned to answer a question.

At one level MAaaS is a new delivery mechanism rather than a different analytics model. The data and the method is the same – it is the location of the data and the processing that changes along with the cost model. With MAaaS, the customer is paying a single subscription price that covers people, time and technology and in return the customer gets the service for a set price each month by logging into websites.

However, at another level MAaaS is also about advanced analytics models. Cloud delivery can be used to provide descriptive analytics where the model is more analogous to traditional BI. For example, Google Analytics can be used to see what happened when a marketing campaign was running. Additional tools can also provide diagnostic analytics to dig deeper into data collected from, say, website users. But typically when IT service providers talk about MAaaS, they are referring to predictive analytics where the service provider helps the customer collect contextual data and correlate it with other user behavior datasets, as well as expand user data beyond what the customer can get from its own web servers. The ultimate goal is not only to predict outcomes but also to use that insight to influence the outcome or prescribe actions. This moves into the world of cognition and prescriptive analytics, where big data is synthesized with structured corporate data and business rules to make predictions and then prescribe actions to take advantage of those predictions.

Consequently, although there is no inevitable correlation between cloud delivery and advanced analytics, the latter is enabled by the former. Most IT service providers are using the development of MAaaS offerings to move into the emerging area of total data analytics – a concept coined by 451 Research to refer to the integration of and analysis of structured and unstructured data.

In order to provide these total data analytics capabilities, service providers need to:

- Provide uniform access, manage data of all types, and facilitate the processes and workflows that turn raw data into actionable information.
- Aggregate users' separate data silos into a unified environment where they can transparently and securely access the data they are authorized to use, regardless of where it resides.
- Enhance sharing and workflow with search and audit capabilities to tag, classify and report on the data in on-premise and cloud stores.
- Intelligently connect users with the right data for their needs, transforming it from a passive resource to be accessed into a proactive driver of value.

The favored IT service provider approach to developing these capabilities is to create a total data analytics 'platform' from which specific services can be quickly composed.

## THE IT SERVICE PROVIDER PLATFORM APPROACH TO TOTAL DATA ANALYTICS

Since this report is focused on IT service providers, the platforms referred to are usually not available as stand-alone products. They are delivered as accelerator assets within the projects involving the IT service provider. However, some providers, such as Accenture, are also experimenting with making their platforms (in this case, Accenture Insights Platform) available as a product; of course, IBM and Teradata both have product divisions as well as services arms and so platforms such as IBM's BigInsights and Teradata's UDA appliance, with Aster Analytics running on the Hadoop nodes, are commercially available without professional service engagements.

For the majority of IT service providers, however, the 'platform' to which they refer is more literally an architectural framework that can use various cloud IaaS options, Hadoop distributions, different open source storage and analytics tools or support industry-specific, or horizontal process-specific, analytic models that the service provider has developed (see Figure 4).

Because new technologies in the open source area are moving so fast and there are so many new entrants in the market, the purpose of the architecture is to enable technology components to be switched in and out as required. This also supports customer choice, which remains an important part of the IT services ethic, even if the direction of travel is to take technology choices out of the buyer requirement for outcomes. Part of the value the service provider is delivering via these platforms is to ensure that the moving parts of the technology stack work with each other, even though it is perpetually changing as new Hadoop components come out.

This framework technology stack response is the only sensible one in a world where fixed total data architectures rarely have a life beyond a year because of the rate of technology change.

**Figure 4: The MAaaS 'Platform' Process Driven by Workflow**

Source: 451 Research, 2016



## APPS

In much the same way that IT service providers typically don't provide stand-alone data analytics platforms, they don't offer packaged SaaS analytics products because deliverables are ultimately a custom implementation for each customer, provided with custom analytics dashboards.

However, because speed is of the essence in delivering data-driven insights, service providers are increasingly developing core generic analytics templates, which are then tweaked for different industry segments before delivering specific scenarios and dashboards to each customer. In this way they can support a fast start to both their own consultants working on projects and customers wanting a quick business impact. Typically, a customer can expect the provider to deliver an app in six to eight weeks, where 50-60% of the base code already exists.

This is made much easier in the -aaS model because the core base code is easily accessible and can be reused quickly, making it easier and faster for providers to deliver custom outcomes. For MAaaS each offering will share common components and then the provider's data engineering team ensures the data is in the right formats and designs the specific solutions using the algorithms available in the engine to create various outputs, some of which will be pre-built. Having established the use case and the data points required, the service provider then collects the data from the customer's internal systems and external data sets. The data model is then created and mapped back to the data and the dashboard is designed for the customer to see its app. Customers then log in to see their app and the platforms typically offer two views: a data scientist workbench so that the customer organization can build up and further develop the app (using the provider's data product libraries to access the insights), or a customer dashboard where they can get the results.

## INSIGHT AS A SERVICE

To differentiate their offerings from more traditional managed analytics capabilities, many service providers are using the noun 'insights' to describe what they deliver and will talk about themselves as 'insight partners.' Although a little pompous, the nomenclature is meant to convey the distinction between descriptive and prescriptive analytics. And because the provision of insight is not typically a once-and-done proposition, the service is offered in two ways. A subscription means customers can continuously access the scenario that has been created for them or updates are issued regularly. Updates can also be paid for individually via an upfront contractual agreement.

To get the true benefit of insight, the insights need to be embedded in the buy-side organization's business processes. For example, having the ability to generate output for specific roles and disseminate knowledge internally means information needs to pass in and out of the firewall. This makes the managed service approach to external delivery by a provider with strong enterprise security credentials particularly appealing.

## MONETIZING THE DATA

Although the ability to make better decisions, create stickier customer relationships and generally outmaneuver the competition is attractive, many companies are also interested in generating money from their data. Among IT service suppliers, the capability to help customers monetize their data is not widely promoted or considered part of their mainstream agenda. This is because for it to work, it requires either a joint venture agreement or a risk and reward contract. Getting the process in place around such agreements typically slows, stalls or kills the sales cycle, so while most service providers are happy to discuss the possibility they know that it rarely turns into a commercial reality.

During our research for this report, only two providers talked about offering data monetization capabilities for customers: Atos (which has a joint venture in place with Siemens) and CenturyLink, which is exploring ways to set up a data marketplace for clients.

The idea of setting up a data marketplace is an intriguing one, since the global IT service providers sit in the middle of many Fortune 500 customers whose internal, anonymized data sets in, say, the manufacturing or healthcare sectors might prove useful to other companies that have also signed up to the data marketplace. The marketplace operator could manage this data that is a byproduct of their customers' business activities and sell it under 'non-competitive use' governance rules to others. This creates a new revenue stream for the original customer. Whether that revenue stream would be attractive enough to overcome corporate anxiety about data management and protection is the key question for this type of initiative.

## 4. Vendors with MAaaS Offerings

The table in Figure 5 is not an exhaustive list of vendors and their offerings in the emerging MAaaS market area. It represents the companies that have participated in forming this report.

**Figure 5: Table of MAaaS Offerings**

Source: 451 Research, 2016

COMPANY	MAAAS OFFERING	CUSTOMERS (ALL 451 ESTIMATES)	TARGETED SECTORS
Accenture	Accenture Insights Platform (AIP)	Launched 2015, more than 100 customers	Insurance, pharmaceutical, utilities
Atos	Codex	Launched April 2016 – half a dozen customers including Siemens	Financial services via Atos Worldline, retail, pharmaceutical, utilities
Bell Techlogix	BEAM BI Manager	100 US mid-market companies	IT, retail and education
Capgemini	Insights as a Service; Insights 360°	Launched 2015, around 30 customers	Financial services, utilities
CenturyLink	Packaged advanced analytics services	Around half a dozen customers	Healthcare, financial services
Cloudwick	Cloudwick One	Around a dozen customers	IT, retail
Cognizant	BigDecisions	Available since 2012, more than 100 customers	Healthcare, financial services, retail, auto
Data Intensity	Analytics1	Launched 2015, around 30 customers	FMCG, healthcare
Dell Services	IntelliDesk, Single Score, Express Insight	Around 20 customers	IT, healthcare, insurance, education
EY	Synapse	Launched 2016, around 30 customers	Financial services, pharma, healthcare, retail, auto
IBM	BigInsights	Launched 2014, more than 100 customers	Financial services, transport
Teradata	AppCenter on Aster	Around half a dozen customers	Financial services, retail, healthcare
Unisys	Data products library	Around 30 customers	IT, financial services, transport, healthcare, federal
Wipro	Data Discovery Platform	Available since 2014 – half a dozen customers	Banking, retail

These vendors typically create generic cross-industry models to address certain issues such as mapping the customer journey or tracking fraudulent activity. Then they tweak these models to apply them specifically to a given industry sector. Consequently, if a vendor operates in your sector, it may well already have the majority of the code ready to deploy to solve your particular issue using advanced analytics.

This is an emerging market area, which means that the offerings will bestow competitive advantage because the customers are early adopters. But it also means that there is a lack of maturity in the market, especially around delivery of ongoing managed services for the apps and scenarios.

## MARKET DEVELOPMENT ISSUES

There are many market development issues facing providers of MAaaS. The market opportunity, while clearly growing, is not so easily defined, spanning BI, analytics, application services and digital transformation projects. Consequently, MAaaS providers need to help both customers and their sales teams by providing offerings with a branded identity that can be easily recognized and explained in these multiple sales contexts. Aside from this sales and marketing challenge, which at this early stage in market development is largely about education, there are other issues to consider, such as:

- Who is the key decision-maker within the buy-side organization?
- What kinds of information should be used?
- Does the buyer need an internal total data analytics skills and tools legacy after the project?
- What is the exit strategy for the buyer?

### WHO IS THE KEY DECISION-MAKER?

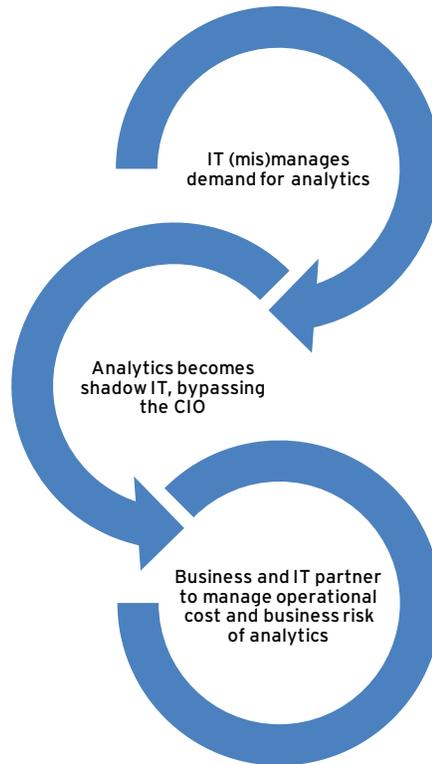
In the past stakeholders for data platforms and analytics tools would have either been BI professionals, IT professionals or line of business executives. It is more common to see a shared, holistic approach to analytics, because the business world is becoming more comfortable with the technology.

Initially, the member of a customer team most likely to see the need for total data analytics is someone with responsibilities and training directly related to business intelligence and data management. For the more foundational 'platform' components of the MAaaS offering the customer is usually the chief data officer (a role most often found in financial services) or the chief analytics officer (a role most often found in healthcare) or the CIO, or business architects working in a functional process area such as supply chain. The CIO and business architect are most interested in creating a backbone for operational models, while the CDO and CAO are more often focused on governance issues. For the delivery of insights, the customer will typically be the chief marketing officer or the chief risk officer.

Irrespective of which roles are involved with the decision to contract with an external service provider, the internal maturity model within the buy-side organization is seen in in Figure 6.

**Figure 6: The IT/Business Advanced Analytics Journey**

Source: 451 Research, 2016



**Stage 1:** In most organizations, the internal IT capability is not geared up for the increasing number of requests for analytic insights and cannot respond quickly enough for internal business lines. This often leads to internal business users gaming the system to draw down more data than required and keep it locally for future reference, creating a growing cost and risk management profile for the IT department, which further exacerbates the situation. At this stage the CIO can work with the business to engage with a MAaaS provider to reduce the level of shadow IT or they can struggle on – in which case we move to stage 2.

**Stage 2:** The business lines then look externally for providers to work with to achieve their business goals in a more timely fashion and often cut IT out of the request cycle completely. Service providers report that the conversation begins with ‘can you solve this business problem for me?’ More often than not there is no defined requirement and the direction is more strategic looking at the impact of something on the organization and the change management required to operate better. With MAaaS business buyers do not need capital budget to execute a strategic objective as they do not have to worry about the hardware and software involved – the buyer simply builds the service requirement into their operational budget. In this way business users get more direct access to frame out business analyses by buying a service and using outside firms, bypassing the IT function.

**Stage 3:** As the use of advanced analytics increases, enterprises wake up to the fact that it would make sense both financially and in terms of governance to consolidate many of the disparate analytics platforms and models that are being used by their employees. A period of partnership between IT and business ensues, working collaboratively with MAaaS providers.

Most organizations are somewhere between stage 1 and stage 2 of this journey.

## EXTENSION OF EXISTING TEAM

Although the -aaS model suggests a highly packaged productized way of delivering services, when it comes to MAaaS, the emphasis is on the professional service wrapper. There is an important consultative component to the engagement where the service provider can demonstrate how it uses its platform to access data and move it back and forth while beginning to develop the partnering relationship with the customer. Ideally, by stage 3 of the total data analytics journey, the capabilities of the service provider will extend the ability of the existing internal team.

Typically MAaaS engagements begin with a data workshop (often provided as part of the cost of sale by the service provider) where the CIO and the business unit leaders can come together to discuss data rationalization and the data sources to be used in the future. Once a use case has been established, the proof-of-value project can be undertaken and will usually involve a data scientist as the leader of the project, and one or two data analysts, an ETL engineer to bring the data from the source to the Hadoop cluster, and then a Hadoop engineer to ensure that data remains private in a multi-tenant environment.

## LAB ON DEMAND

Another offering available for customers from MAaaS providers is the 'lab on demand' capability where customers can hire lab facilities in an on-demand model. In this way customers can get access to a fixed number of technology parts and a team of skilled resources including developers, technologists and data scientists. Usually the commitment is for a three- or six-month period and costs several hundred thousand dollars depending on requirements. For the lab environment the pricing tends to be a monthly fixed fee based on the configuration of the lab – size and scale of infrastructure and number of users. This type of offering typically appeals to large customers, often in the financial services sector, that have sophisticated analytics requirements and do not want off-the-shelf provision.

## PRICING AND DEAL SIZE

For MAaaS commercial agreements are usually paid on a monthly subscription basis and determined by the data platform and connectors required as well as the level of users in the target landscape. Added to this will be the price for the IT app, as well as the services component involved for builds, as each individual solution will be designed by an architect and run for as long as the customer requires. Several service providers are offering a Small, Medium or Large pricing matrix based on processing power, adoption and delivery requirements. Payments per month tend to range from \$10,000 to \$25,000 for a small or simple app up to \$50,000 to \$120,000+ for large or complex apps. Some providers charge a fixed price or T&M fee for the analytics services, while offering the infrastructure on a subscription model. Others are charging a nominal fee per data item accessed in the data set.

In the current early stage market environment buyers tend to use MAaaS for test and development projects prior to production and so may run the service for three months and then shut down before restarting another proof of value at a later date. Because of this, many MAaaS contracts are tending to run in 12-week cycles. Indeed over the past year anecdotal evidence suggests that the market is moving toward total data analytics based on fixed-price, regular outputs rather than outcome-based commercial arrangements.

## EXIT

For insight as a service, the customer has typically given the data to the service provider in order for the service provider to give the customer back the answer. In this model the customer never owns the logic or the algorithm; consequently, when the customer exits, all that is owned is the data and the recommendations, not the models, approaches, framework or configuration.

Most IT service providers also offer other types of total data analytics contracts where customers own the data products and the predictive models. Should they want to exit, they could simply buy the analytics tools themselves, take the data out of Hadoop on AWS or Azure and transfer onto their environment. In this type of agreement models are transferable and can be used on another platform so that pilots or production systems can be off-boarded to run with a different provider.

## INVESTMENTS

As larger service providers develop their MAaaS capabilities, they are looking to add point service skills and software assets to their portfolios. Figure 7 highlights some of the notable deals transacted in the industry in this area over the past 18 months.

These deals reflect the commercial intent of existing IT service providers to build MAaaS practices of scale, as enterprises seek to integrate specialized advanced analytics capabilities with their existing BI offerings. In summary, this is a fast-changing, high-growth marketplace with many more acquisitions and investments to come over the next 18 months.

**Figure 7: Table of Notable M&A Deals in the MAaaS Space**

Source: 451 Research's M&A KnowledgeBase, 2016

ACQUIRER	TARGET	TARGET DESCRIPTION
QueBIT Consulting LLC	Applied Analytix Inc.	IBM BI systems integrator
Telefónica	Synergic Partners	Big data consultancy
WebbMason Inc. [dba WebbMason Marketing]	Spry Inc.	Hadoop data analytics integration
Perficient Inc.	Market Street Solutions Inc.	IBM Analytics software VAR
Digital Journal Group	SqueezeCMM Inc.	Customer analytics SaaS
Edgewater Technology Inc.	Branchbird LLC (assets)	Big data systems integrator
Innova Solutions	Nalgan	Data management software and services
IBM Corporation	Explorys	Healthcare data analytics SaaS
CenturyLink	Cognilytics	Big data consultancy
Brillio	Marketelligent	BI analytics services
Sirius Computer Solutions [Thoma Bravo]	BrightLight Consulting (assets)	BI integration services
Teradata	Think Big Consulting	Big data consultancy

# 5. Conclusions & Recommendations

The delivery of digital insights is becoming a new business normal, especially around customer-facing activities. The idea is that digital insights will enable enterprises to develop more responsive business processes and thus be better able to adapt to changing market conditions. The business mantra is that change needs to be driven by data rather than tribal knowledge. This is creating a growing opportunity for MAaaS capabilities.

The majority of internal IT departments cannot effectively support this shift toward total data analytics without external support from consultancies and IT service providers, which can augment internal skills, provide pre-built accelerators and help with access to external datasets. The ultimate goal for the data-driven organization is not only to predict outcomes but also to use that insight to influence the outcome or prescribe actions, which moves into the fast-changing world of cognition and prescriptive analytics. That is why IT service providers are constantly looking for new partners and acquisition targets in these areas.

As IT service providers do this they are shielding buyers from some of the risks associated with immature, fast-moving technology areas and this is to be welcomed. Total data analytics creates a sticky, iterative relationship with service providers as the algorithmic models set up by the provider to support decision-making and continuously ease pain points. Consequently, buy-side organizations need to make careful partner selections even at the proof of value phase to get the best from the model over time.

## RECOMMENDATIONS FOR CSIS

- Create an easily identified branded portfolio for MAaaS, because as it spans BI, analytics, application services and digital transformation projects, customers and sales teams need to recognize capability in multiple sales contexts.
- Invest in topic evangelists to support account teams and train those teams to spot the opportunities for MAaaS.
- Those CSIs without a managed service arm need to put time and effort in the unglamorous side of 'product lifecycle management' for templates, models and algorithms.

## RECOMMENDATIONS FOR MSPS

- To create market momentum for MAaaS offerings, MSPs must either offer their own business and data science experts to assist customers, or partner with CSIs that can provide this expertise around the offering.
- Offer a hosted standard MAaaS platform with apps that provide self-service analytics by buying niche providers and/or partnering with asset-light players looking for hosting partners.
- Provide lab-on-demand facilities for sectors such as financial services where large enterprises have significant internal data science capabilities.

## RECOMMENDATIONS FOR TECHNOLOGY VENDORS

- New disruptive entrants should focus on getting an anchor blue chip client and then using that client to build partnerships within its CSI ecosystem.
- All technology vendors should put effort into making it easy for IT service providers to work with them by offering both product support and training as well as joint pre-sales capabilities.
- Smaller vendors should not overreach with IT service partnerships. Manage one or two relationships well, rather than a dozen badly.

## RECOMMENDATIONS FOR INVESTORS

- Look for boutique consultancies taking a MAaaS approach because they will have assets that will be attractive to the wider market.
- Because the larger global CSIs are looking to buy skills and assets in the advanced analytics area, investing in smaller players in this area makes sense.
- Search for consultancies with experience and assets in regulated sectors that generate data such as financial services, healthcare and the utilities.

## RECOMMENDATIONS FOR ENTERPRISES

- MAaaS is not a DIY area. Even organizations with internal data science expertise need some external support. For most organizations the most important recommendation is to not try to do this all in-house.
- Choose to work with one or more external service providers acceptable to both IT and line of business stakeholders.
- For building long-term relationships, look for service providers with more of an architectural open technology stack approach that can keep up with the pace of technology change, rather than those with more fixed platform preferences.

## 6. Further Reading

*Total Data: Platforms & Analytics Market Monitor*

*Data Platforms and Analytics Market Map 2016*, April 2016

*Total Data as a Service*, December 2015

*For Teradata, managed analytics as a service is business as usual*, February 2016

*Dell Digital Business Services showcases its 'managed analytics as a service' offerings*, April 2016

*Total Data Analytics 2016*, February 2016

# 7. Index of Companies

Accenture 6, 8

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