



BIG DATA REPORT

ARE SMALL CONSULTANCIES BEST FOR BIG DATA PROJECTS?

Big data is attracting the attention of all types of buy-side organizations. But because the technologies involved are immature and there is a lack of market understanding, it is an area where buyers are seeking help from professional services companies. This report assesses the types of help available for different projects.

KEY FINDINGS

- There is consensus among suppliers and early adopters that often the most successful projects in the big data area occur when the customer sets up a digital unit or center of excellence to oversee skills development within the organization and works jointly with the consultancy around knowledge transfer.
- Most organizations do not have the skills in-house to understand the different types of big data sources available, or to use the different data mining technologies in the market. This is offering a real, growing opportunity for consultancies and SIs to help customers get a tailored system that provides them with the analysis they want.
- The majority of existing early adopter projects are now moving on from proofs of concept to the production phase, with that transition taking months rather than years.
- Consultancies and SIs have much deeper capabilities in the more traditional areas of BI and data warehousing using technologies from SAP, Oracle, IBM, Informatica and Teradata. They are quickly training up people in Hadoop distributions such as Cloudera and Hortonworks, but in truth no one is likely to have more than a few years of experience in these technologies.

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ABOUT SYNERGIC PARTNERS

Synergic Partners is a privately owned company founded in 2007. With corporate offices in Madrid and Barcelona, our clients range from medium-sized to large global corporations in Banking, Insurance, Retail, Pharmaceuticals, Travel, Manufacturing and Government, as well as other industry sectors.

Synergic Partners is a specialized Big Data, Data Science and Data Engineering consultancy firm committed to delivering solutions and services that enable companies to leverage the business value of their enterprise data. We help our clients to gain competitive advantages in areas such as Customer Insight, Fraud prevention, Risk and Compliance, Financial governance or Mergers and Acquisitions, among other business challenges.

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The following is an excerpt from an independently published 451 Research report, "Are Small Consultancies Best for Big Data Projects?" released in February 2015.

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SECTION 1

Executive Summary

1.1 INTRODUCTION

This report analyzes the state of the market for big data consultancy projects, offering an explanation of the main drivers for these projects from an enterprise IT perspective. It assesses the market landscape in terms of contract sizes, industry sector demand and skills. The report then analyzes different types of project and consultancy offerings to provide answers to the question of whether small consultancies are best for big data projects. Finally, the report makes recommendations for consultancies, managed service providers (MSPs), technology vendors, investors and enterprise buyers.

1.2 KEY FINDINGS

- There is consensus among suppliers and early adopters that often the most successful projects in the big data area occur when the customer sets up a digital unit or center of excellence (CoE) to oversee skills development within the organization and works jointly with the consultancy around knowledge transfer.
- The search for the ideal data scientist is a myth and enterprises are wasting time and resources searching for a single employee to fulfill the role. Rather, a team combining a range of disciplines, including members of the consultancy and the client organization, should be created.
- The financial services and insurance sector is providing the majority of opportunities for consultancies and is widely perceived to be the most advanced sector for big data projects.
- Having started as a stand-alone capability focused on the Hadoop technology ecosystem 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.
- Most organizations do not have the skills in-house to understand the different types of big data sources available, or to use the different data mining technologies in the market. This is offering a real, growing opportunity for consultancies and SIs (CSIs) to help customers get a tailored system that provides them with the analysis they want.

- The majority of existing early adopter projects are now moving on from proofs of concept (POCs) to the production phase, with that transition taking months rather than years.
- CSIs have much deeper capabilities in the more traditional areas of BI and data warehousing using technologies from SAP, Oracle, IBM, Informatica and Teradata. They are quickly training up people in Hadoop distributions such as Cloudera and Hortonworks, but in truth no one is likely to have more than a few years of experience in these technologies.

1.3 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. Because these markets evolve quickly, 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 Market Insight.

Dr. Katy Ring, Research Director, Global IT Services, wrote this report with help from Matthew Aslett, Research Director, Data Platforms and Analytics. Any questions about the methodology should be addressed to Katy Ring at katy.ring@451research.com.

SECTION 2

What Is Big Data and Why Is It a Consultancy Opportunity?

For decades, traditional data management approaches have put significant constraints on how enterprises use data for competitive advantage. These constraints include the high costs of data storage and the performance limitations of analytics technologies. New big data approaches such as Hadoop free organizations from these constraints by making data storage very low cost, while dramatically improving analytic performance.

This means that the c-suite decision-makers in every organization are starting to open their minds to new ways of thinking about how to analyze and monetize data. As they do so, they are turning to external advisors for help. There is a wide range of consultancies to work with, including many small new entrants – which begs the question: Are small consultancies best for big data projects?

2.1 WHAT IS 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.

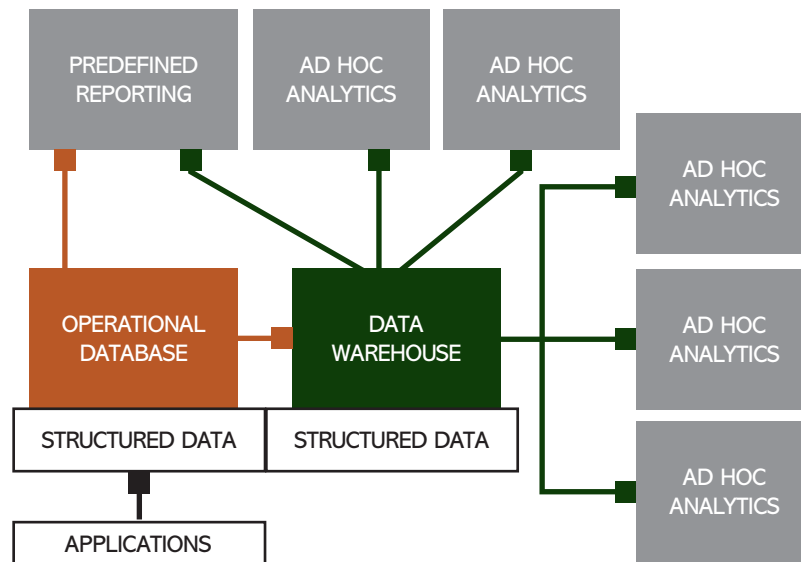
2.2 WHY IS BIG DATA A CHALLENGE FOR ENTERPRISE IT?

Enterprises are looking at what Web-native, Web-scale companies such as Amazon and PayPal are doing and are seeking to emulate them. However, these Web giants can use relatively simple data models because they are new, Web-native businesses. For established businesses, the data model is a lot more complex, as many more IT processes are involved and there are multiple technologies in play (batch, real time, etc.). This means that for most companies there is a traditional analytics stack with seven or eight components that need to be integrated and managed (see Figure 1).

To do this effectively, 451 Research believes it is necessary to create a methodology we've termed Total Data Integration, which envelops semi-structured information sources that have been around for a while in isolated silos (such as emails and documents), new sources of big data, and the information that has long been the lifeblood of a corporation that is held in transactional applications, data warehouses and other types of repositories.

FIGURE 1: TRADITIONAL ANALYTICS STACK (SIMPLIFIED)

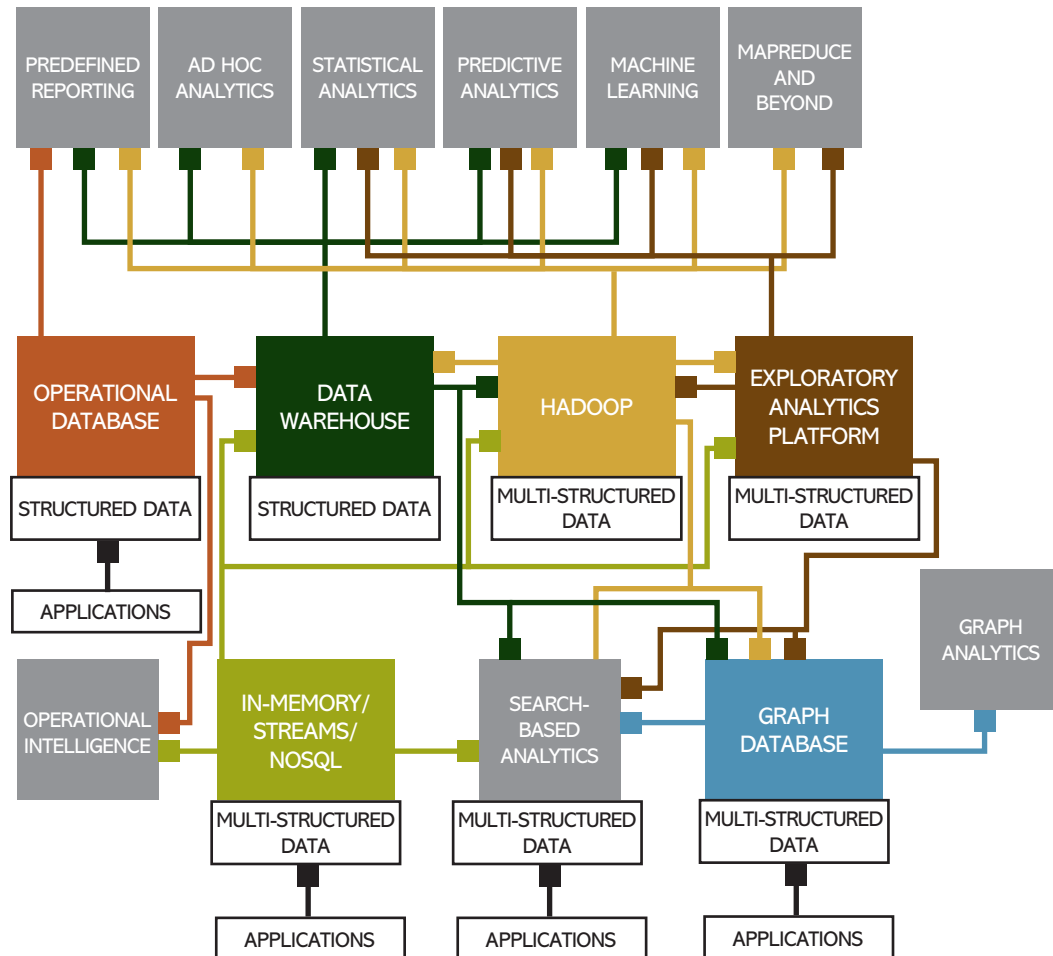
Source: 451 Research, 2015



Big data technologies are expanding this traditional analytics stack to offer the potential for greater BI by providing more – and more varied – opportunities for analyzing data for potential business insight. However, as illustrated in Figure 2, the total data analytics stack is clearly also more complex, highlighting the importance of data integration to keep the various data sources in sync, as well as data governance to ensure analysts can trust that the data they are analyzing is fit for purpose.

FIGURE 2: TOTAL DATA ANALYTICS STACK (SIMPLIFIED)

Source: 451 Research, 2015



2.3 WHY IS BIG DATA A CONSULTANCY OPPORTUNITY?

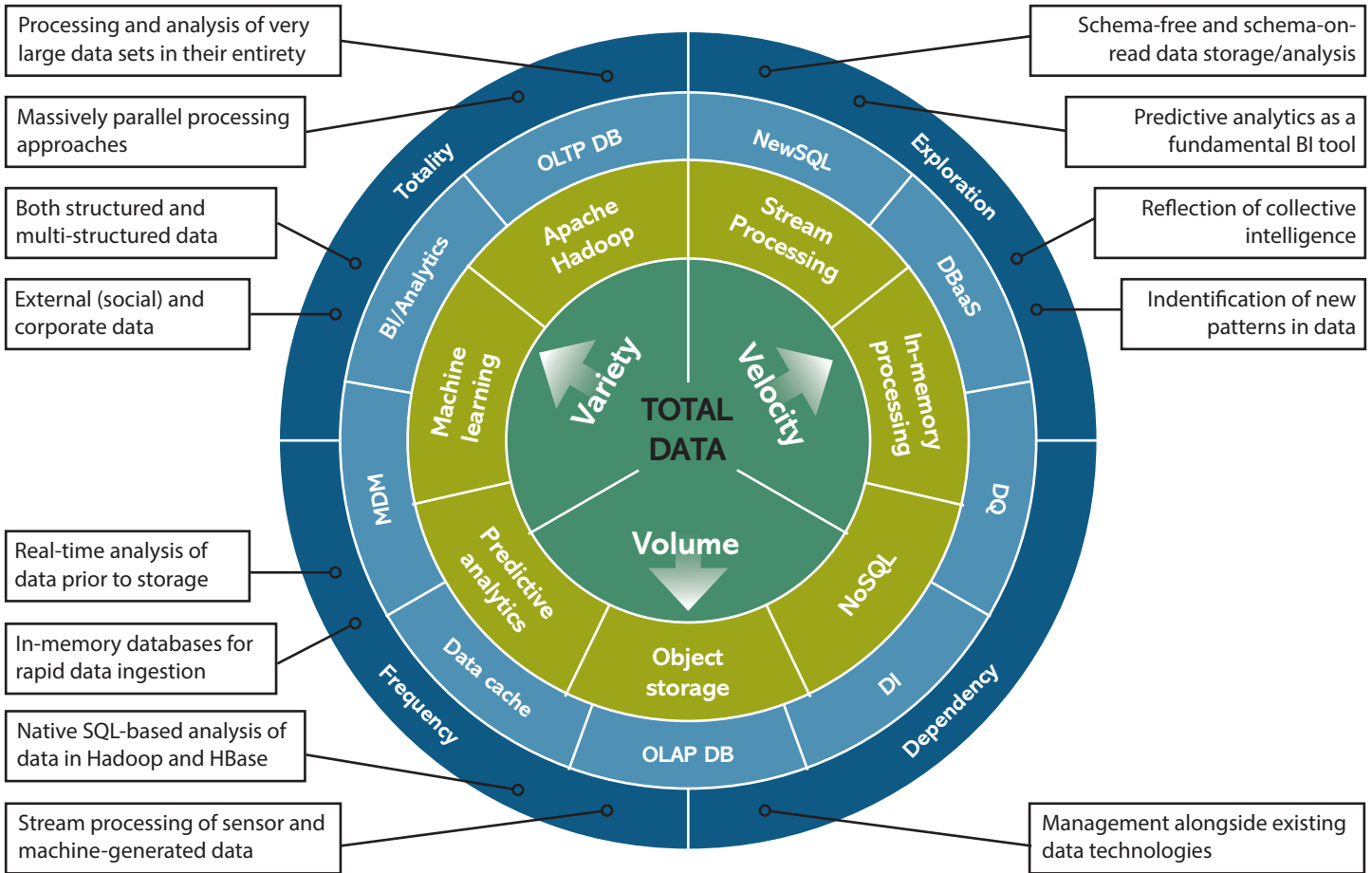
The evolution of mobile technology and the massive amount of data it creates is occurring faster than most IT organizations can digest. Additionally, big data technologies and product offerings are sprouting up everywhere and it is difficult for IT organizations to adequately evaluate them all. Moreover, some IT organizations have invested so heavily in structured data warehouses that they are in denial about the inability of their past investments to handle the problems of today's more agile and massive data environment.

This embarrassment of riches creates two key problems: confusion about the correct platform and/or analytic approach, and a complex data management landscape that relies on the integration of multiple interdependent platforms and analysis tools (see Figure 3).

Companies today know they have data issues, but they are unsure and uncomfortable about how to address them.

FIGURE 3: THE BIG DATA TECHNOLOGY WHEEL

Source: 451 Research, 2015



Most organizations do not have the skills in-house to understand the different types of big data sources available, or to use the different data mining technologies in the market. Furthermore because people with such skills are in high demand, salaries have escalated quickly, making them difficult to recruit and retain. This is offering a real, growing opportunity for CSIs to help customers get a tailored system that provides them with the analysis that they want.

As demand builds, a range of different vendors have stepped forward, from startup boutique consultancies through established SIs to the global management consultancies to address these enterprise requirements.

SECTION 5

Vendor Profiles

The burgeoning consulting opportunity around big data technologies is proving irresistible to a wide range of players from the huge global management consultants, from global technology service providers to small, niche consultancies.

What follows in this section is not intended as an exhaustive representation of all consultancies operating in the big data area. Rather, it should be considered as providing a menu of a variety of consultancies and their capabilities from the broad range of service providers operating in this part of the consulting market today.

5.16 SYNERGIC PARTNERS

Synergic Partners was set up in 2007 in Spain and is 100% privately owned by original founders. The company is a consultancy that initially focused on data management and governance and later evolved to specialize on data engineering, big data and data science. It has offices in Madrid (where it is headquartered) and Barcelona, as well as a sales office in Zurich, Switzerland. Synergic Partners' customers are typically European multinationals. It has 50 employees and revenue of €5m (US\$5.7m) but expects to reach €8m in 2015, with the growth coming from big data and data science projects.

Synergic Partners helps its client companies in all industry sectors by solving business problems via its main cross-industry competencies:

- Customer insight/analytics
- Operational analytics
- Risk and fraud prevention
- IoT
- Mergers and acquisitions
- Innovation
- Financial governance and compliance

The company provides consulting services and solutions, such as advanced customer segmentation, churn prevention, retail behavior analytics, dynamic pricing solutions and predictive risk scoring.

The company has IP in its data models and algorithms (for example, in buying propensity predictive models) and also has accelerators that support the deployment of complex analytics projects. The company is conscious that it is developing a new discipline and so offers customers a big data program and roadmap around the client's business priorities:

- Deployment of big data architecture, including definition of reference architecture and deployment of Hadoop distributions and components (Cloudera, Hortonworks, MapR, Spark, etc.)
- Big data provisioning to deploy a data lake environment
- Data science analytics services to develop advanced analytics services in-client or as a service
- Big data governance
- In-company training with a 'from data miner to data scientist' training program to help the customer organization develop its internal skills.

The company has its own cloud for big data infrastructure to use for testbeds or to develop services as part of the company's own R&D investment, including a big data lab. Synergic Partners also uses the cloud to provide analytics as a service for clients, offered in partnership with infrastructure providers that can support all elements of the data stack (big data, data science, data visualization and data engineering) either on-premises or from the cloud.

Traditionally Synergic Partners has partnered with technology vendors such as Oracle, Informatica or IBM. For big data the main partners are Cloudera, Pivotal, Talend and Tableau, among others, but the company is technology-independent. It prides itself on mastering disciplines, not products, so each consultant is familiar with up to 10 technologies.

Partnering is important to the company, not only with technology providers but also for priority access to knowledge. Proof of this is its strategic alliance as Industry Affiliate with the Institute for Data Science and Engineering at Columbia University in NYC.

Synergic Partners' staff is predominantly based in Spain and its contracts per customer range from €150,000-€1m per year.

451 Take

Synergic Partners has a complete services and solution portfolio around data engineering, big data and data science. The company focuses on business use case projects for large multinationals in Europe, for example undertaking projects around customer insight, operational analytics, fraud prevention and IoT for smart cities. Within Europe the company is a compelling competitor with its strength of experience and its fast time to market delivery.

SECTION 6

Conclusions and Recommendations

The main constraint for market development of the data-driven organization enabled by a total data integration strategy is the pace at which enterprises can digest the technical capabilities available to them as big data is integrated with their traditional analytics capabilities. At the moment, organizations are reaching out to consultancies for help understanding the new technologies involved, and to try out use cases and get a feel for the new opportunities that technology spend in this area will deliver.

In this context, the answer to the question, 'Are small consultancies best for big data projects?' deserves a qualified 'yes.' We are still at the early adopter phase of market development, and in terms of technical skills and development of POC use cases for organizations, there are some excellent small consultancies in both the US and Europe that have as much project experience as (and in some cases more than) larger global players and that can deliver great projects at lower cost. However, one qualification is this: As demand matures and factors such as global reach, industrial scale and labor arbitrage become more important, the answer to the question will change to the benefit of the large global players. A second qualification is that a data-driven organization will look and act quite differently, which means that there is a lot of associated change management required to make the most of the technology internally. Enterprises that are beginning to consider this seriously are strongly advised to seek management consultancy support, and this is not provided by niche technical consultancies.

Because internal change is very difficult to lead successfully, however, it is likely that many very large organizations will opt to monetize data by making it available to others, rather than using insight from analytics to restructure themselves. And that stand-alone business-domain-led type of project remains an opportunity for both large and small consultancies.

As the opportunity for big data projects moves to larger-scale production requirements, large consultancies will face increasing pressure to rapidly grow their capabilities. This will accelerate the trend for acquiring smaller consultancies that will enable a larger volume of projects to be executed by the global players. Typically acquisitions will be driven by the need for skills acquisition in targeted geographies and technologies, as well as the ability to buy accelerators and continuous delivery experience. For example, both EY and IBM continue to add point acquisitions to expand their capabilities in these areas, while both HP and CSC have significantly bolstered their portfolios by buying analytics technology platforms.

6.1 RECOMMENDATIONS FOR CSIS

- Position your capability to help clients by having an easily understood portfolio of offerings and sanity-check it with external analysts and advisors. Because the market is immature, buyers are often not clear about the type of project they want. CSIs are keen to build experience and, consequently, are not always as sharp as they could be about their capabilities. This leads to frustration on both sides.
- As this is a technology-driven consultancy opportunity, partnering with key technology vendors is highly advisable in terms of getting priority access to technical support, but also as a way to develop more reusable assets with chosen technology partners.
- Because this is a consulting opportunity using cloud-delivered platforms (public, private, hybrid), it is feasible for consultancies of all sizes to provide annuity services, managing platforms and applications for customers on an ongoing basis in partnership with IaaS providers.
- The development and delivery of packaged data-driven applications is open to consultancies by making use of PaaS technologies and is another growth opportunity.
- Hosting of development testbeds is a growing requirement that consultancies can either accommodate internally as an offshoot of their own R&D activity, or provide via partnerships.

6.2 RECOMMENDATIONS FOR MSPS

- Consider providing Hadoop as a service to help customers only pay for what they get and thus help reduce the costs and risk of POC projects.
- Re-sell Hadoop and other big data engines as a compliment to raw compute and storage.
- Use 'data gravity' around raw data storage services to sell data processing where it rests instead of transferring data to where it's processed.
- Provide data integration services.
- Consider developing data visualization technology partnerships and services to help clients interpret data.

6.3 RECOMMENDATIONS FOR TECHNOLOGY VENDORS

- Make an effort to partner with CSIs to ensure that your technology is understood and thus more likely to gain enterprise acceptance. Give those partners prioritized technical support as part of the agreement.
- Discuss the possibility of collaborating at an engineering level, as CSIs will quickly build implementation experience of huge benefit to your product development teams.
- Consider developing packaged offerings with CSIs to help them build ongoing as-a-service offerings using your technology. See whether they will act as formal resellers for your technology.

6.4 RECOMMENDATIONS FOR INVESTORS

- Invest in small big data consultancies. The big data consultancy market is a rapidly growing opportunity and the large consultancies are clear that they are shopping for skills and assets, while MSPs are also beginning to look for ways to continue to add value to their services by adding big data technology and expertise.
- Do not be put off by the fact that the market opportunity is driven by low- or no-cost open source technology, as service companies will have a strong multiplier effect on building market size.
- Do not get blinkered into overlooking opportunities because of a lack of IP assets. For the next few years the value of niche big data consultancies lies more with human resources (skill ownership) than with IP assets.
- Look for companies with expertise in the collection of data from device sensors, as the healthcare and life sciences sector is likely to prove a key growth sector for this type of project.

6.5 RECOMMENDATIONS FOR ENTERPRISES

- Build multi-stakeholder ownership into projects from the start. The consensus is growing that no matter where you sit in the organization, multiple stakeholders from your organization must be involved in big data projects to achieve more than an interesting data silo.
- Be realistic about the skills and experience you are demanding from a consultancy partner. Nobody has 10 years of experience in these technologies. Look for pragmatic, multi-skilled technical teams and ensure you source internal team members for the project as well.
- Be clear on what knowledge transfer you require as part of the project's deliverables and ask about the consultancy's capabilities and experience in this area.
- To get the most value from projects, think about the ongoing legacy you want to create. Early adopter organizations are finding the development of internal centers of excellence created in partnership with consultancies are a good vehicle for this. Such centers are often operating self-sufficiently within 18 months or so.

