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Talent analytics and big data – the challenge for HR

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Championing better work and working lives

The CIPD's purpose is to **champion better work and working lives** by improving practices in people and organisation development, for the benefit of individuals, businesses, economies and society. Our research work plays a critical role – providing the content and credibility for us to drive practice, raise standards and offer advice, guidance and practical support to the profession. Our research also informs our advocacy and engagement with policy-makers and other opinion-formers on behalf of the profession we represent.

To increase our impact, in service of our purpose, we're focusing our research agenda on three core themes: the future of **work**, the diverse and changing nature of the **workforce**, and the culture and organisation of the **workplace**.

WORK

Our focus on work includes what work is and where, when and how work takes place, as well as trends and changes in skills and job needs, changing career patterns, global mobility, technological developments and new ways of working.

WORKFORCE

Our focus on the workforce includes demographics, generational shifts, attitudes and expectations, the changing skills base and trends in learning and education.

WORKPLACE

Our focus on the workplace includes how organisations are evolving and adapting, understanding of culture, trust and engagement, and how people are best organised, developed, managed, motivated and rewarded to perform at their best.

About us

The CIPD is the professional body for HR and people development. We have over 130,000 members internationally – working in HR, learning and development, people management and consulting across private businesses and organisations in the public and voluntary sectors. We are an independent and not-for-profit organisation, guided in our work by the evidence and the front-line experience of our members.

Talent analytics and big data – the challenge for HR

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Executive summary

Talent analytics and big data are now must-have capabilities in HR. As the business world is transformed by the sheer volume, speed and availability of data, and as the search for competitive advantage intensifies, data about people and performance becomes ever more critical. Much has been written on the issue of talent analytics, but most of this debate has focused around three key dimensions:

Technology
What systems, processes and infrastructure drive data and talent analytics? What platforms are being used and how can we use systems such as Oracle, Hadoop and the like to develop a coherent data strategy?

Techniques
How should we develop an approach to talent analytics? How should we define, store and share data? How should it be analysed? This aspect covers everything from defining employee turnover to predicting patterns of employee behaviour.

Talent
Who should deliver our analytics capability? Should we develop new talent pools and, if so, what types? How do we recruit the scarce talent to resource this growing capability need?

There seems to be less focus on what is actually happening. What is the appetite on the ground for talent analytics and big data? What are the barriers and enablers to developing this capability and what is happening within organisations?

Using our extensive research on the state of practice in the HR profession and key interviews with organisations embarking on the talent analytics journey, we are able to shed some light on this question. Generally, the capacity and engagement for analytics and big data is affected by three key dimensions:

Silos
Silos are the structural and systems obstacles to timely and efficient access to data and the ability to use and share it. This is caused by a combination of structural barriers within both HR and the business which impede the sharing of data. The system silos are those pertaining to infrastructure around data analysis with issues such as systems incompatibility, security and hosting concerns, and IT skills issues.

Skills and smarts
This includes the essential capability to define, analyse and model people analytics essential to a data-driven approach. This involves deciding whether to make or buy capability, what kinds of capability are required and how it is developed.

Suspicion and scepticism
These are the cultural and professional obstacles to integrating and embedding an analytical approach within HR. This includes the biases and beliefs around intuition and expertise within HR, and feeling that data might reduce human beings to units of measurement. It's also bound up with the skills and capability issue.

In order to help HR develop a coherent approach we develop some strategies and solutions around balancing the strategic and tactical requirements of developing a data-driven strategy.

Solutions

Strategic
Our survey research shows that these are considerable challenges, but practice we discovered among organisations undertaking the challenge shows that there are solutions. These are based on developing a strategic and tactical mindset which:

- develops analytics as a continuous improvement strategy
- puts people analytics at the centre of business priorities
- accelerates the requirement for analytic bandwidth up the HR capability agenda.

Tactical
- Identify and promote the skills necessary as part of the overall HR talent and capability agenda.
- Source more key talent from subjects such as occupational psychology, economics and other social sciences to supplement the normal reliance on natural scientists and engineers.
- Develop aligned analysts who understand and connect with the people agenda and are capable of translating data into actionable insight.

Finally, by looking at the emerging state of practice, both through our survey research and by interviewing practitioners, the CIPD and Oracle have put the analytics challenge at the centre of HR, adding to the excellent insight already developed by leading consultancies, academics and HR networks such as the City HR Association. We recognise that the challenge is to get value from analytics. And we hope this report will bring value to those seeking to engage with this crucial agenda.

Introduction

You won't go far these days without someone analysing your data. Whether it's a supermarket using your passion for chocolate or driving magazines to make sure you pick one up on your next order or a council wanting to improve its understanding of its 'citizen base' through surveys, everyone wants to analyse you. Many of the organisations we work in operate on the principles of advanced analytics. For example, banks generate a whole array of data about where people live, their credit history and spending patterns, as well as lifestyle decisions such as birth, marriage and death. Similarly, companies in the retail sector use predictive analytics to estimate how to stock up on sausages for a barbecue weekend and how to upskill their staff to sell the latest smartphone.

The idea of data as a business prediction tool is not new or novel, but the intensity and sophistication with which it's now being used is quite new. Business departments such as marketing and logistics and specialised agencies operating in many 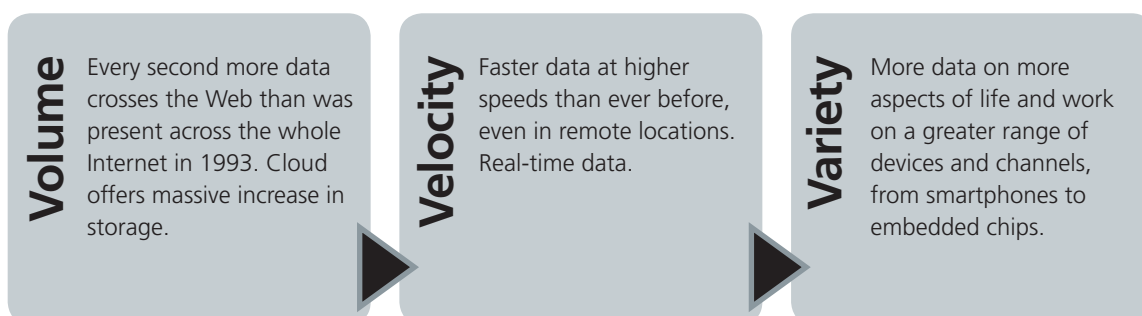different sectors from healthcare to education pore over metrics and data trying to sort and categorise what it shows. Data is everywhere and its volume has recently been supersized by the rise of 'big data' with its volume, velocity and variety (McAfee and Brynjolffson 2012).

We would add a further V – that of value. In other words, what is the value of data to the organisation? The evidence suggests that it is potentially limitless. Mining the data for insights and combing it for connections is a critical opportunity for HR and L&D (see Manyika et al 2011). Big data is essential to HR and L&D because it allows the conversations and connections which have tended to be in the realm of the immeasurable to be captured and leveraged. It allows us to build a compelling case of interventions, for example when we are proposing change and transformation. It gives us a new set of insights, around the deep and complex organisational issues such as culture, change and learning, and it helps us to optimise the way in which we deliver and monitor the transactional elements of HR.

> *'Big data is essential to HR and L&D because it allows the conversations and connections which have tended to be in the realm of the immeasurable to be captured and leveraged.'*

Figure 1: Gartner's three 'V's of big data

Clear and present challenge: big data

| Volume	Velocity	Variety
Every second more data crosses the Web than was present across the whole Internet in 1993. Cloud offers massive increase in storage.	Faster data at higher speeds than ever before, even in remote locations. Real-time data.	More data on more aspects of life and work on a greater range of devices and channels, from smartphones to embedded chips.

'...there is still a significant gap in our ability as HR professionals to be data-driven and evidence-based in our decisions.'

However, the evidence suggests that HR may be less ready than it needs to be in order to take advantage of that opportunity. For example, there is still a significant gap in our ability as HR professionals to be data-driven and evidence-based in our decisions (for example, our *HR Outlook* data for winter 2012–13 indicate that while 63% of HR leaders think they draw insight from data, only about a fifth of their non-HR business counterparts share that confidence). For many reasons our skill sets tend towards the less analytical side of the skills divide. We have both valued and felt more comfortable with the ability to interpret ambiguity and context, interpreting the shifting cultures of organisations and the interactions of their people

(see Pfeffer and Sutton 2006). Professor John Boudreau, a leading US-based advocate of a more analytical HR function, sees HR's inability to step out of service delivery towards a decision science approach as being about skills and behaviours. Boudreau believes that the flakiness and variety of approaches to measurement in HR can be contrasted with the rigorous consistency of areas such as finance and logistics and even marketing. HR, he argues, does not adopt a decision science framework, with an absence of logical data and evidence-based decision-making across the profession (Boudreau and Ramstad 2007).

Let's be clear – there is real value in these skills and the insights around people and they are valued

Figure 2: HR draws insight from data to stimulate change and improvement in the organisation (% agreeing)

HR leaders
63%

Business leaders
21%
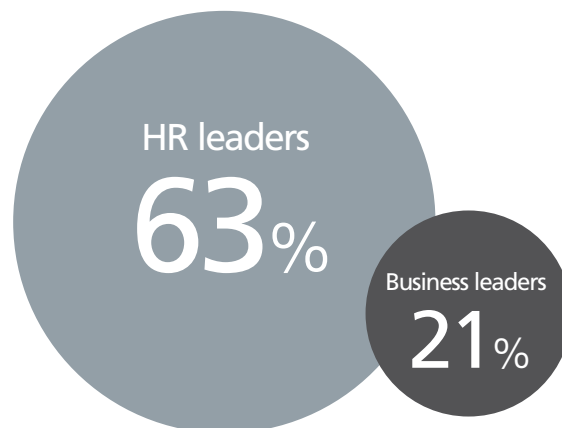
Source: CIPD *HR Outlook* winter 2012–13, A variety of leader perspectives. Appendix; survey results.
Base: HR Leaders: 107; Business leaders: 369

by leaders. However, without the ability to have disciplined data and consistent analysis, such insight becomes marginalised.

HR has a long way to go to alter these perceptions of a lack of engagement and aptitude for analytics. However, as we will explain, this isn't necessarily attributable to a lack of enthusiasm and commitment. Significant barriers exist to HR's ability to both explore and exploit talent analytics and big data for value-adding people insight.

In addition to the absence of consistent data, another argument as to why HR do not adopt a decision science and human capital focus concerns a perceived lack of skills within HR to analyse the data. Many HR people are reluctant to engage with numbers or are passive towards them. Indeed, developing the ability to use data to inform organisational decisions was identified by HR leaders as a priority area for building HR capability, according to the CIPD *HR Outlook* survey cited above.

Where HR people do use metrics they tend to rely on tried and trusted metrics generally around the workforce size, how it gets paid and how it learns. These numbers are often generated by HR and are specific to HR. Boudreau and Jesuthasan (2011) suggest that this need for a home-grown specific solution creates a lack of reliability and inconsistency in data itself.

Separately, these HR-specific measures tend to focus on past performance. How many people have we employed and how much do they earn? What numbers have been trained in the last year and

how much time did it take? How many people left last year and what are the associated ratios? This kind of approach tends to build a rear-view mirror mindset. It distracts and constrains us, just as a driver focusing on the rear-view is unable to see an opportunity to overtake and could be in danger from oncoming traffic. Vance Kearney of Oracle is clear on the danger of being backward-focused:

Looking for talent market intelligence is a big part of my job and, I suggest, every capable HRD. Yet we are still doing salary surveys to drive those benchmarks. It is the bluntest possible approach. Do we ask: are the job matches correct, do they capture the emerging trends?

Kearney certainly does not believe that we do operate in this forward-focused manner.

Figure 3: HR links its data to business and financial data (%)
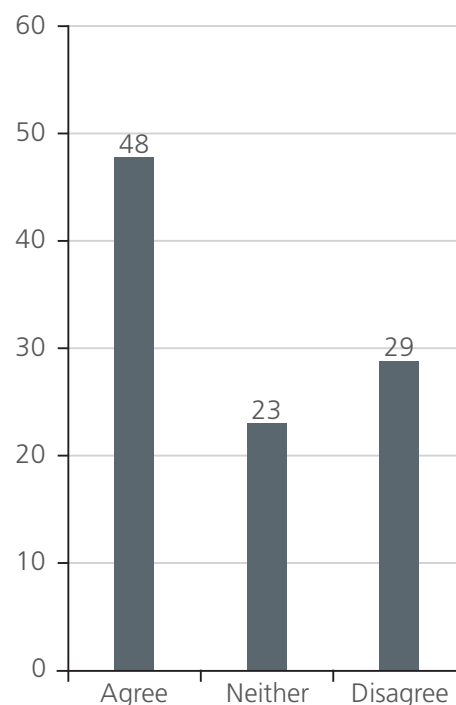
Source: *HR Outlook* autumn 2013, Survey data.

'Many HR people are reluctant to engage with numbers or are passive towards them.'

'The promise of talent analytics and big data is that they almost certainly will move HR forward in terms of analysis and insight.'

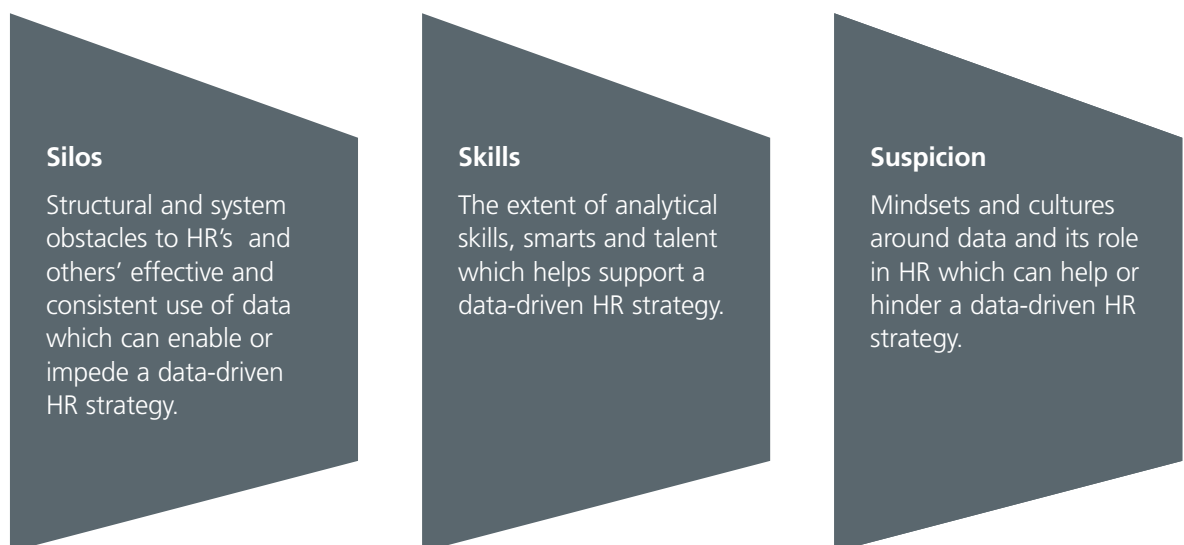A PWC survey (2012) shows how CEOs and business unit leaders value the people metrics around talent, retention, succession, productivity, and so on, at about 70% in terms of importance. But, they believe these are delivered consistently only about one-quarter of the time.

The promise of talent analytics and big data is that they almost certainly will move HR forward in terms of analysis and insight. As Figure 3 shows, only half of senior HR leaders actually think they link their data to key business and financial data. So there is a long way to go. The possibilities in linking different data sources together to generate actionable insights will be perhaps the biggest challenge and opportunity for HR in decades to come. This is why the CIPD, in collaboration with Oracle, is exploring in this current research exactly how we can build our capability within HR to be driven by analytics and to exploit the full potential of data to deliver insight around people and performance. Our research has included interviews with individuals from ten different organisations, survey data from two time periods and a review of the extensive literature. This has confirmed that talent analytics and the big data revolution have the potential to propel HR into the future. However, in reality the ability to be forward-focused with a data- and evidence-driven approach is constrained by several issues. In this report we address each of these issues in depth, providing suggestions and solutions where appropriate. The issues are outlined in Figure 4 below.

We begin by looking at silos.

Figure 4: The three 'S's of talent analytics and big data in HR

Silos

Structural and system obstacles to HR's and others' effective and consistent use of data which can enable or impede a data-driven HR strategy.

Skills

The extent of analytical skills, smarts and talent which helps support a data-driven HR strategy.

Suspicion

Mindsets and cultures around data and its role in HR which can help or hinder a data-driven HR strategy.

1 Silos: what's getting in the way?

When organisations seek to develop a talent analytics perspective, they face a number of issues. The first and foremost is whether they can put their hands on the data they need: data that is systematic, reliable and defined. This exercise needs involvement of a number of different key players. As a recent report by Bersin (2012) highlights, this data generally falls into three categories:

- **people data**, such as demographics, skills, reward, engagement, and so on
- **programme data**, such as attendance, adoption, participation in programmes ranging from training and development and leadership programmes to talent management and key projects and assignments
- **performance data** – performance ratings and data captured from the use of instruments such as 360, goal attainment, talent, succession programmes and talent and assessment.

The problem is that this data is often diffuse and difficult to access. This is often because of what we term 'silos'. Figure 5 highlights the two different types of silos that exist: structures and systems.
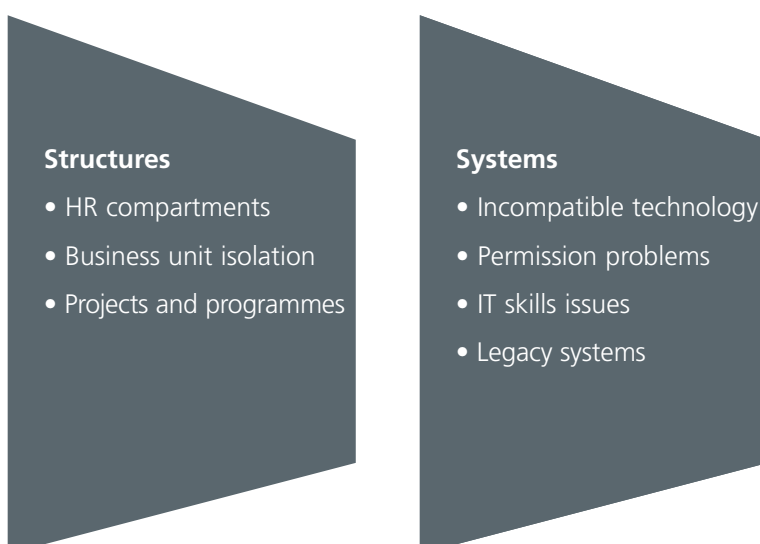
Structural silos
The first of these silos are structural: in other words, structural barriers between HR functions and the relevant people and performance operations. Some examples of the ways to break down these specific silos are described by one analyst close to the issue in a major energy company.

Liam Bennett-Murray, HR analyst from EDF Energy, explains:

At the moment our data is held within different areas. The majority of it is extracted from SAP into Excel and we use basic charts and tables to look at the summary data. We do monthly reporting and I am doing a lot bringing that back into the central employee function to look at that data. The issue with this data is getting the most useful information from it to provide the business insight desired.

Within HR teams there is often a solid separation between HR functions and a lack of productive collaboration. For example, learning often operates in a silo of its own, as does reward. In larger organisations, areas such as performance management and engagement act as cross-cutting functions that can erode the barriers. However, data silos are common and often each individual HR compartment will have its own stock of data. Active sharing is important and access to data is a great reason for collaborating. The opportunity for this is shown below in data taken from our autumn 2013 *HR Outlook* survey. Senior HR leaders surveyed in our panel said it's not clear that data produced in different HR silos is being actively integrated.

Figure 5: HR, talent analytics and big data: silos

Structures
- HR compartments
- Business unit isolation
- Projects and programmes

Systems
- Incompatible technology
- Permission problems
- IT skills issues
- Legacy systems

'Within HR teams there is often a solid separation between HR functions and a lack of productive collaboration.'

This problem is amplified when separate HR teams are operating across business units. In a major retail organisation or in large banking and financial operations, data often becomes the glue which bonds together the wider mission and purpose.

This problem can become even more granular in programmes and projects, which can be quite large and which have their own reporting requirements according to the programme management criteria.

The solution is to share data and turn it into usable insight as a decision-making/business improvement tool. The question of dashboards and scoreboards came up frequently in this regard in our research:

Yes, we are using data more to get insight; the analysts aren't the only people who can use that insight. We have a talent dashboard and we have a really good set of indicators and get more out of that (an HR manager at an asset management firm).

So we can see at least three levels of structural silo in terms of the functional boundaries within HR itself, especially in larger organisations, the lack of integrated people and performance data approaches across business units, and the problem of a shared data approach across projects and programmes. This is compounded by management structures, organisation charts and reporting lines, all of which disrupt the free flow of data, spoiling an effective analytics approach.

The particular problem of learning data

Learning analytics should provide a great deal of insight into how people become more effective and more productive. Presumably when people learn new things they change and adapt. It should be straightforward to prove that impact. Yet learning analytics are for the most part in suspended animation, focused as they are on proving internal efficiency of delivery and seldom, if ever, able to demonstrate business value. Our 2013 *Learning and Talent Development* survey canvassed the view of L&D practitioners on how they used data around learning, with some interesting results. The numbers vary according to the different sizes of organisation, as described below in Table 1. Smaller organisations are much less likely to agree that it is a problem across a range of issues. However, skills to analyse and manipulate data are more common in larger organisations.

Table 1: Difficulties encountered in analysing learning and development data (by organisation size) (%)

	Small and medium <50 and 50–249	Medium/ large 250–999	Large/very large 1,000–4,999 and >5,000
Managers and leaders don't prioritise.	45/61	68	67/69
It's difficult to access the data consistently in our organisation.	43/57	52	66/65
We don't really have the skill internally to develop these metrics.	46/53	45	37/37
Business information from other departments such as finance and marketing isn't always easy to access.	23/27	28	37/44
There is no consistent standard we can aim for.	34/32	31	30/37
We have difficulty accessing timely data from our available systems.	22/24	36	34/36

Source: CIPD *Learning and Talent Development* survey 2013 (sample size: 1,004; base: 742)

Systems silos
The other type of silo can be described as systems silos – in other words, having systems which are incompatible and poorly integrated. Many organisations operate with either hybrid data systems or have linked systems together inappropriately. This can lead to systems which can't 'talk' to each other.

Separately, concerns about data security can also cause silos. Sometimes the smooth flow of access is impeded by permission problems which plague everything from social media access to critical information. It's understandable in a business world nervous about hacking and security concerns, but sometimes these obstacles can stifle the collaborative approaches needed. Generally for talent analytics to take off and for big data to be harvested, the approach needs robust but permissive security. Restricting access to just a few limits insight. Solutions already exist to help overcome these problems in many of the integrated human capital management programmes available.

IT and database skills issues can also get in the way, with the ability to use database query languages and an ability to programme often prerequisite to run some fairly basic data enquiries. This can provide skills problems often requiring the resourcing of extra capability. Linked to this are the legacy systems issues and the systems transition problems evident when organisations inherit older systems and need to integrate and use them alongside newer technology. Coupled with that challenge is the transition from one system to another, such as the migration from SAS to Oracle and vice versa. Many of our organisations were going through this difficult migration challenge as we conducted our research.

For whatever reason the systems silos arise, they need to be tackled. Some examples of how this can be done include:

- having integrated HR and IT systems which allow the data to be stored consistently and allow everyone who needs and warrants access to the data to be able to do so with appropriate safeguards for integrity
- choosing the appropriate software and tools for analysis, allocating permissions/access for all who need them; these tools should also be integrated with wider systems for both HR and general management information systems.

There is evidence from our research demonstrating that if these systematic approaches are undertaken, silos relating to sharing data and evidence can be broken down.

Our research emphasises the importance of having a level of senior sponsorship and a commitment to drive the talent analytics and big data initiative with a systematic programme-managed focus which helps to address the issue of silos. This sounds self-evident but is something many of our case studies reflected they could have done better and/or sooner.

Peter Turner of Ricoh considers how he sought to build a talent analytics approach. Reflecting on how systems silos deflect Ricoh from analysing big data, he explains:

In fact we have a big data approach but don't use it in the people analytics. We are not really employing it; we don't have an HCM [human capital management] model and that's even before we talk about analytics. We need to get this data platform in place and get that into a common format and link people data to business data. When we do that we can bring in a real analytics approach.

Similarly, an HR manager at an asset management firm explains:

You can't just introduce talent analytics like a normal project because you are messing about with data which everyone relies upon so you have to make sure everyone is on the same page before you can move forward.

So within systems silos are a whole range of issues. These can sap the will of HR practitioners and others to persist with the analytical transformation required. Overcoming such obstacles requires both focus and persistence, in particular high-level ownership of the problem and a systematic approach to it.

Having looked at silos, we now move on to consider the second challenge area we've identified: skills. Arguably, having the right skills at the right time and ensuring that the capability exists to service an analytical approach is within HR's zone of expertise. We will find out exactly how HR is tackling this challenge in the next section.

2 Skills: rocket scientists or aligned analysts?

'...there is a long-standing perception both within and outside of HR that people within the function do not have enough of the analytical skills needed to develop a coherent and credible approach to analytics.'
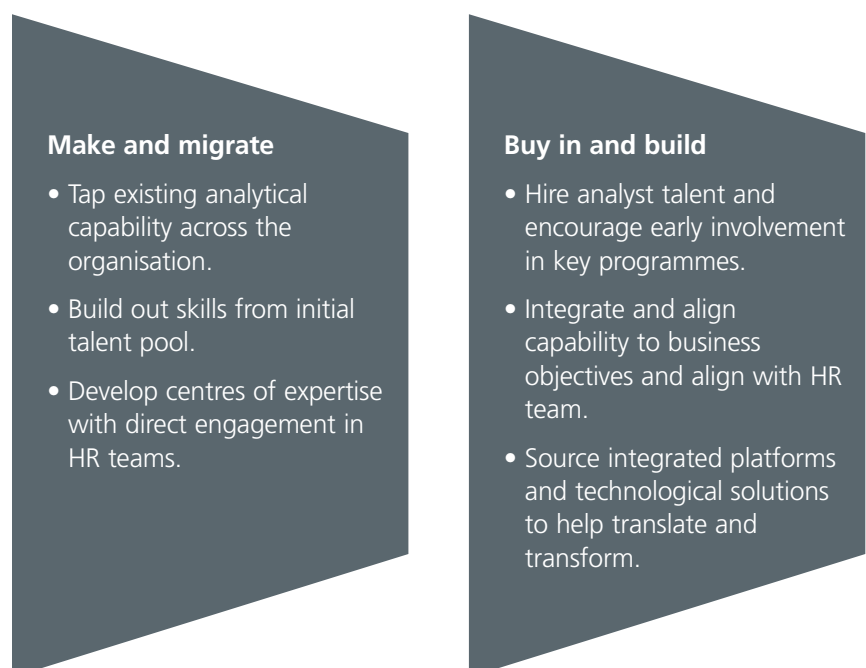
The skills to take full advantage of the talent analytics and big data opportunity are a hot issue currently. As we discussed earlier in respect of the work of Pfeffer and Boudreau, and in our *HR Outlook* data, there is a long-standing perception both within and outside of HR that people within the function do not have enough of the analytical skills needed to develop a coherent and credible approach to analytics. This is attributed to the fact that many HR professionals lack a consistent training in data and analytics, feel less comfortable with numbers and data and have a bias towards more qualitative approaches. There is also a continuing tension between leaders seeking richer insight about people and culture (something which, as we shall see, is resolvable through analytic approaches) versus solving business challenges. Talent analytics is more usually associated with solving business challenges, whereas HR can rely on their intuition and inductive reasoning skills to address the former, without the need to use analytics.

Peter Turner of Ricoh explains it as follows:

The challenge for HR is that analytical people don't live in HR. HR people are better at managing ambiguity than analysis. The challenge is to bring in more business-like people who have that approach.

Figure 6: Skills and smarts in talent analytics and big data for HR

Make and migrate

- Tap existing analytical capability across the organisation.

- Build out skills from initial talent pool.

- Develop centres of expertise with direct engagement in HR teams.

Buy in and build

- Hire analyst talent and encourage early involvement in key programmes.

- Integrate and align capability to business objectives and align with HR team.

- Source integrated platforms and technological solutions to help translate and transform.

The key issue for HR is how to develop these skills within the HR function. Figure 6 shows that there are two principal strategies that can be adopted for this. We outline each of these below.

Make and migrate
Make and migrate is the improvisational early-stage approach where organisations seek to find a few analytical individuals within the existing HR team or wider business. For example, these individuals are most likely to come from a reward or workforce planning background, or might be business analysts tasked with tracking sales and market opportunities in, say, the marketing function. They tend to be analytical and used to dealing with numbers, and some have advanced skills, for example using spreadsheets and databases and possibly writing queries and coding programmes.

Building out capability from this initial talent pool is a feasible next step as the demand for good-quality data analysis and actionable insights will grow. This is an opportunity to exploit and explore talent, to ensure that recruitment and talent planning are aligned to the need, to build links and connections with key players and

for lead analysts to tap expert knowledge and insight.

This can then lead to a small centre of expertise which can help build the skills elsewhere. Skills, however, require smarts on behalf of the users of data, whether or not they generate it. So the ability to understand key issues around how data links to business improvement and a readiness with questions and queries can help the in-house team go further. Being passive recipients of data isn't a viable approach even at this level for HR professionals.

For a smaller organisation or business unit, 'make and migrate' is an adequate response to building the core analytics capability. Initially, such individuals can be working part-time on the analytics issues while still providing the reward or business analysis, but there comes a tipping point where the organisation notices the growing value and migrates the individuals over into a dedicated analytics team. This then becomes the core around which capability is shaped. Peter Turner of Ricoh reflects on how his organisation is building its capability:

Building from where we are at the moment from having an integrated HR information systems approach

(HRIS) and then employing an analyst and eventually employing heavy-hitting analysts who are using mathematical and modelling approaches with patterns in space as their focus. Looking at how we can link the HR info and the pattern, seeking and identifying patterns between customer people and competitor data, that's where we want to get to.

It may well be the case that, as in Ricoh, the capability has to be grown from within, usually with the appointment of a senior analytics adviser/consultant, who then develops the capability required.

Buy in and build
In some organisations analytics capability needs to be launched fast. This may be because the business drivers for people and performance data have become more acute or because a senior executive puts a renewed priority on the issue. It could simply be because existing capability has not been able to fulfil the need. Sometimes it's due to an organisational shock, where exposure of inadequate data insight has been identified as an issue in competitive disadvantage, or in local authority and NHS reorganisations, where failings in the central operation of the

Patient and employees in the NHS: The critical care link

To really access the insight, however, HR has to be prepared to look beyond internal resource and collaborate with external experts whose high-level research can provide real insight. An example of the compelling (and sobering) impact of big data and how it adds new light to the indispensable nature of good people management is the work of Michael West and his team at Lancaster University. Extensive

analysis of the data over ten years shows that employee experience of the workplace is a strong predictor of better patient care and lower mortality.

West has been charting the link between staff engagement and performance and patient mortality in a wide range of NHS hospitals. Patient perceptions of being poorly and insensitively treated rise in tandem with survey evidence that

staff feel harried, undermined and disengaged. His work also reveals a fascinating insight into the functioning of teams with wider insights for people and performance. Teams which operate as 'pseudo teams' are inefficient in a patient care context. Only properly coherent teams where members really connect and collaborate have a positive impact on patient care, resulting in lower rates of clinical error and injury.

organisation have been attributed partly to poor data and evidence on people and performance. This can start off with the appointment of highly qualified analysts/modellers, or the use of external consultants with these skills. That can mean a more tactical approach to capability which may fit with the urgent business need. Generally, these individuals are from natural science backgrounds and are known as data scientists. As HR starts to get access to good data that can be used to develop real insight to support the organisation, this can be the catalyst to establish a dedicated team.

As the capability starts to build, the organisation will need to think about developing a coherent strategy to consolidate the approach, although our case studies suggest this often happens in an emergent way. Sometimes for good reasons people insight has been integrated with marketing and finance data simply because these areas are where the analytical skills reside. However, as the scale and the possibilities of people analytics become apparent, there is a move towards alignment and integration with HR.

Julian Alzueta from Telefonica describes their approach:

We have a centralised analytics team that works exclusively on analytics and BI reporting for Telefonica Europe. We work closely with the operating businesses and with the business to understand their needs and requirements. We are very approachable and projects can be started very quickly.

This focus on building capability for analytics can mean that inevitably the demand goes up, as managers seek new data and insight. The analytical teams need to be organised in how they respond as they can end up being drawn into tactical fire-fighting solutions and taking less of the long-term view that Telefonica and Ricoh have taken, for example.

This can mean a need for better technology or for a new approach to HR information systems (HRIS) and other data solutions. The move towards a specific HR approach can mean migrating technology skills as well. Then the ability to resource key talent with ability to programme and code systems and to support them is another key consideration of the skills and smarts dimension.

Many leading consultancies are recognising this tension between the strategic and tactical development of analytics capability within HR and are providing guidance and insight on how to develop that. The Bersin by Deloitte approach is typical.

Having looked in Part 1 at the silos and at how HR develops the key skills and smarts of analysis and insight, in Part 2 this has been very much around the current ground of metrics and analytics. Big data has become a buzzword around HR and other business functions; this is another challenge which HR faces. We discuss why in Part 3.

The Bersin approach to building skills

This gradual build-up of analytical capability is in line with the advice from the Bersin research report. They suggest developing a four-level approach, with the first level devoted to developing junior analysts' capability focused on defining metrics and ensuring that the key data is cleaned and collated. That also requires the development of a data dictionary.

This is the reactive stage or operational reporting element. Second is the advanced reporting function, where key HR information is linked to business objectives and comparative data with competitors, trends and visualisation through dashboards and presentations. The ability to persuade and convince senior levels is key here. The next level is the strategic analytics

working on understanding issues such as segmentation and optimisation of talent. This requires deep modelling and statistical tools. Finally, the pinnacle of capability is defined as the advanced analytics and predictive skills – the ability to model scenarios, account for and forecast risks and design predictive programmes and models such as algorithms.

3 Big data: a big ask for HR?

Big data

The issue of big data and HR has caught fire recently with a welter of reports, books and commentary. Generally it is felt that HR data will be revolutionised by big data. A report by information consultants Gartner (Laney 2001) published a decade ago described the challenge of big data in terms of three 'V's. A recent *Harvard Business Review* article (McAfee and Brynjolffson 2012) revisited them. The 'V's of volume, velocity and variety are indicated below in Figure 7. These dimensions can be put very simply as:

- There is much more data around and its volume is expanding.
- It's getting faster and spreading everywhere.
- It's available through more channels and on more devices than ever before.

Volume is the sheer size of data transiting across systems taken from every conceivable channel and waiting to be analysed. The unit of measurement has become mind-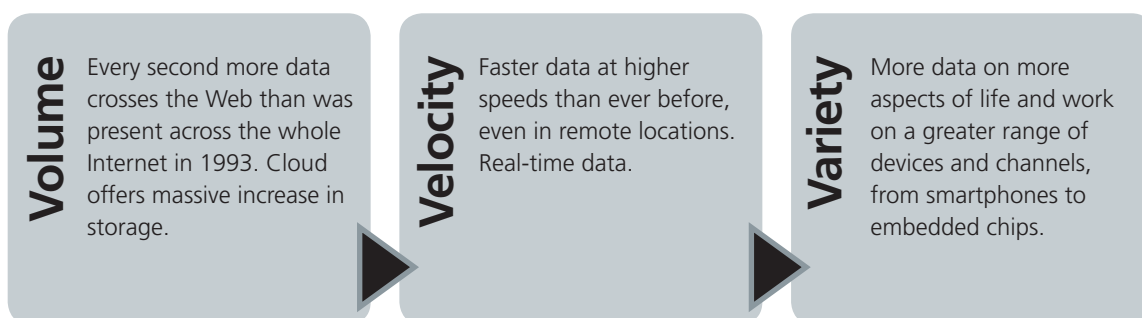boggling. Just 1 petabyte accounts for more data than crossed the entire Internet just two decades ago, for example, and 2.5 of these monster data streams are created every day. Cloud computing – a fairly recent phenomenon allied with smart devices – means that if data can be collected, it can be analysed and, more importantly, visualised and storified.

HR's use of big data, however, is very much in its infancy. Less than a third of HR leaders use big data to look at key trends. Nearly half do not use big data, and about a fifth are neutral about it. We can assume that about two-thirds either don't have a strategy on big data or are not thinking seriously about it.

It's quite clear that HR is still in many cases grappling with the need to provide analytics from the raw data that is often held within HR departments but within structural and system silos. This capability takes a lot of time to develop and we found that many of the leading analytical thinkers we talked to in our research are clear that it is a

'The issue of big data and HR has caught fire recently with a welter of reports, books and commentary.'

Figure 7: Gartner's three 'V's of big data derived from McAfee and Brynjolffson

Volume
Every second more data crosses the Web than was present across the whole Internet in 1993. Cloud offers massive increase in storage.

Velocity
Faster data at higher speeds than ever before, even in remote locations. Real-time data.

Variety
More data on more aspects of life and work on a greater range of devices and channels, from smartphones to embedded chips.

stretch capability. Even the most enthused analysts, such as Julian Alzueta from Telefonica and Peter Turner from Ricoh, are sceptical about the extent to which HR is grappling with big data. Even the largest organisations are cagey about their capacity to make big data work in an HR context. Data-driven companies, which use reams of customer data to run their businesses, are clear HR is not yet developing a big data mindset. Most of our informants focus on the need to deliver trusted and robust metrics rather than playing with the possibilities of big data. This is the case whether the respondents are analysts or HR business partners.

We detected debate amongst the analyst community around whether HR is generating big enough streams of data to use big data and predictive analytics. Some think that the challenge is around the nature of HR data. With the exception of reward data, few sources are composed of the type of numbers which can be crunched and mined without extensive coding and tweaking. The opportunity to do that is limited by the availability of skills and the nature of the structural and system silos. Much more promising is the use of unstructured data. The massive amount of data piping in from smart devices and from social networking can all be tracked, tagged and explored. The exploration of this data is often made easier by proprietary analytics from major web service providers such as Google and Facebook, who make reports available. With skilled manipulation, these provide a whole new area of employee insight. With the advancement of

textual analysis software it is now possible to measure static data and provide insight, but with an additional flow of communications the potential is huge.

Big data also promises to unleash new insight around learning. Learning and development has traditionally relied upon legacy measurement approaches such as the Kirkpatrick evaluation method. However, with big data and smart technology, the potential for a learning value chain, with interactive assessment from training or 'delivery', through smart devices capturing interactive learning such as conversations, reading material, webinars, and so on, it will be possible to measure right down to the point of impact and use.

There is a healthy debate about the potential of big data in HR. Some make big claims: Thomas Davenport, Harvard analytics guru, suggests that 'data driven' organisations are 6% more productive and 5% more profitable (Davenport et al 2012). These are very big numbers if set against revenues. An airline which delivered increased utilisation and therefore productivity from using a big data solution to early arrival is cited. Retailers who use big data to customise offers to consumers are also discussed. The potential is enormous.

However, there is some scepticism about big data among key analytical thinkers within HR.

An HR director at a large financial services firm is sceptical about big data:

For me it's just a buzzword that people are using to make themselves feel clever. Everyone else is just wanting to get on the bandwagon. The issue is what kind of stuff? You don't always need to push the envelope and be ahead of the curve. People misunderstand the challenge: what's the operational talent data? For a start you need a clean definition of talent which is clear. The unstructured [data] issue is promising, but what's the incremental value? How is it going to drive my business in a leading-edge way? Not sure it [big data] can add real value…

One analyst at a major FMCG has described how his team helped to analyse a socially networked conversation (a company-specific form of micro-blogging). Using analytics and text identification software, they were able to gauge the mood and disposition of a key team towards ongoing change. They also identified leader interaction and engagement as absolutely critical to the involvement of others.

For our FMCG analytics director, the issue with what is called big data is that it's commonplace for scientists like him:

HR data is unstructured data; the fact that you can code people and crude structured data is a fact. HR surveys have some structure if you consider the variety of the information you could have about an employee; if you really want a holistic view of the employee it's immense. You will need to blend data. The data we are using is being used in the marketing

context – nothing specifically. The data is out there. For me data exists somewhere. The purpose of analytics is to close the gap between data and business needs. The most successful data analysts are business-focused. It's about delivering the objective.

This question of value is central to both talent analytics and big data. It's easy to be overwhelmed by the hype around big data and it is certainly a growing feature of our lives. But the real challenge is for HR to get value from it. Figure 8 adapts the Gartner model to develop some HR issues and extends to the question of value.

The often astounding insight which can be gained is exemplified in global IT company Oracle, who also sponsored this research. HR Director Vance Kearney takes up the story of measuring sales effectiveness with an analytical lens:
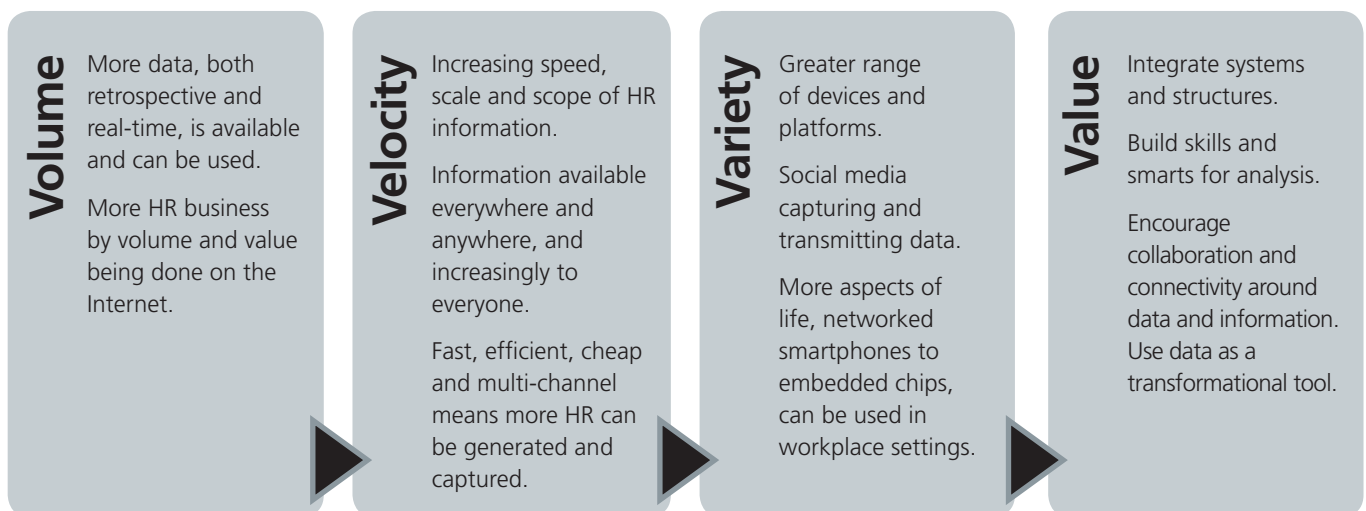
We did an experiment with top sales management. We asked top leaders 'tell us who are your top performers. Just tell us who they are… if you left this business tomorrow who would you take with you?' They came up with a list of between 10 and 20% of the overall sales leaders. We then took and compared against actual results over the last three years in terms of meeting and exceeding targets. The two did not correlate. Why are they different, we asked? We got into a lot of interesting discussions and the data helped us see it. People who might win a mega sale in one year but not the year after were seen as more effective. On the other hand, the sales people meeting and exceeding the targets were ones with smaller targets.

To gain value from HR meeting business objectives, we need to:

- tackle systems and structures and understand that they are a central obstacle to the development of a data- and evidence-driven approach to HR
- develop the skills, smarts and talent pools which help HR exploit the promise of talent analytics and big data
- encourage collaboration and connectedness with the idea of data and information as a key part of the transformational toolkit of HR.

The third aspect has not yet been discussed but arguably it's the biggest challenge. It's the need to overcome some of the suspicion and scepticism which characterises HR's approach to analytical issues. Sometimes this is down to skills but often it goes deeper. We look next at these cultural and behavioural obstacles.

Figure 8: The four 'V's for HR

Volume	**Velocity**	**Variety**	**Value**
More data, both retrospective and real-time, is available and can be used.	Increasing speed, scale and scope of HR information.	Greater range of devices and platforms.	Integrate systems and structures.
More HR business by volume and value being done on the Internet.	Information available everywhere and anywhere, and increasingly to everyone.	Social media capturing and transmitting data.	Build skills and smarts for analysis.
	Fast, efficient, cheap and multi-channel means more HR can be generated and captured.	More aspects of life, networked smartphones to embedded chips, can be used in workplace settings.	Encourage collaboration and connectivity around data and information. Use data as a transformational tool.

4 Suspicion and scepticism about data and evidence

'...no amount of planned and careful silo-smashing or strategic skills development on people analytics will suffice if we cannot resolve the problem of suspicion and scepticism.'
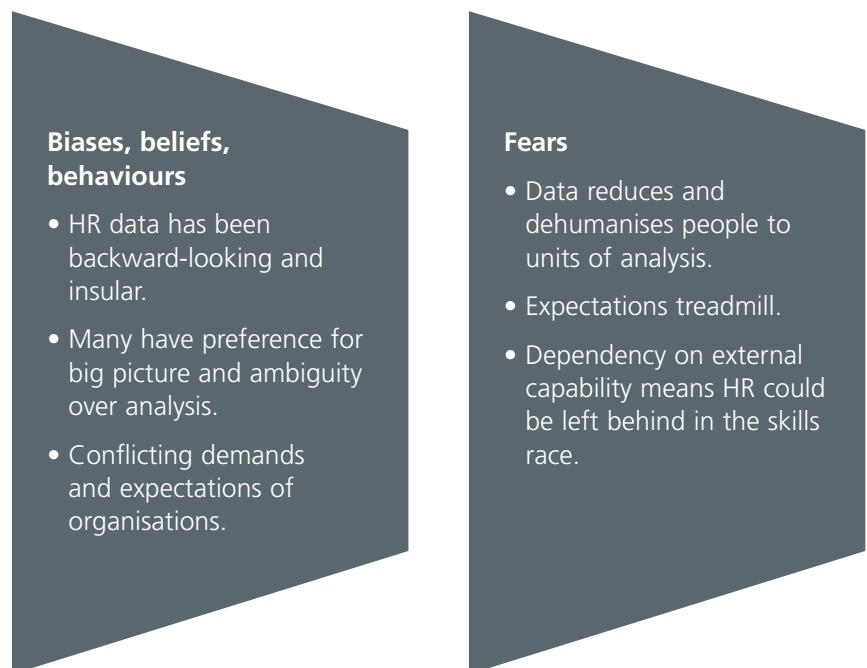
If, as an oft-repeated management mantra states, 'culture eats strategy for breakfast', no amount of planned and careful silo-smashing or strategic skills development on people analytics will suffice if we cannot resolve the problem of suspicion and scepticism. This cultural issue is a significant impediment to HR becoming a data-driven and analytical function.

In our *Business Savvy* research (CIPD 2012) we identified four quadrants of capability which HR people should work on based upon survey evidence and deep case studies. The top two quadrants of understanding the business model at depth and generating insight from data and evidence are the two most analytical and business-focused skills. The lower quadrants are about understanding organisational development, design and politics as well as culture, leadership, conflict and ethics. We believe that a focus on the top two quadrants, especially the data and evidence aspect, should be the most important focus. HR has to overcome in the majority of cases an in-built reluctance to be driven by data.

Generally, measurement in HR has tended to be around fairly routine aspects. The collation of single-

Figure 9: Suspicion and scepticism in HR's approach to talent analytics and big data

Biases, beliefs, behaviours

- HR data has been backward-looking and insular.
- Many have preference for big picture and ambiguity over analysis.
- Conflicting demands and expectations of organisations.

Fears

- Data reduces and dehumanises people to units of analysis.
- Expectations treadmill.
- Dependency on external capability means HR could be left behind in the skills race.

point numbers such as turnover and retention, the collection of course feedback or the routine processing of payroll are of course necessary but have tended to be backward-looking indicators. One global analytics leader tells us:

We are looking to bring HR leadership talent, learning performance and recruitment into a platform which we can compare. We are also including revenue, customer information and sales, etc. This needs to be about solving the business problem and not the HR problem. We think that is not happening at the moment. HR generally should be forward-looking. Helping the business find solutions to talent and performance, strategy, learning and reward, etc, to drive revenue and value, right? But most of the data we collect is backward-looking. We can do some trending, etc, but that doesn't take us forward. We need information which helps do things which add value in the future.
(Key HRD at a leading financial services company)

HR data is generally messy, difficult and not easy to collect. Contrast this with the marketing profession's insight boost from customer data allowing segmentation, targeting and optimisation. By contrast, HR data tends to be diffuse and, as we explained in Part 1, much of the data is still stored in silos.

One business partner working for a major utility reflects on both the pitfalls and promise of HR data:

Culturally within HR we produce and publish metrics which aren't necessarily on the right issues. When we get that delivered we feel a sense of achievement, but we don't know if the businesses even use it. When you get some predictive analytics and put them out there, well, they are literally bashing your doors down.

HR people generally prefer solving big picture problems and working on relationships and context. They are comfortable with ambiguity but less comfortable with analysis.

Quantification always has consequence for old and trusted ways of doing things. Leading analyst Julian Alzueta explains the challenge:

HR is a function that has traditionally functioned through intuition and, I feel, a people analytics team brings the possibility to communicate trends and results with an objective approach. In Telefonica, HR is welcoming more and more the data-based recommendations we provide and the demand for these analyses is growing. The fact that HR wants to move into the space is good as it complements and balances the gut-feel approach.

An analogy can be seen with football and other professional sports, where coaches and scouts were trusted as the keepers of knowledge and wisdom until data-driven approaches began to undermine that wisdom.

Thinking outside the penalty box

The *Moneyball* phenomenon (Lewis 2004), which showed how statistics and predictive analytics could make a better job of judging talent than the expert intuition and gut feel of coaches and scouts, is relevant here. This is mirrored in the latest analysis on football by Anderson and Sally (2013). For example, in football the focus is on strikers and goals, but the biggest performance boost comes when teams address their weakest links, normally in defensive positions. Not conceding goals is more performance-enhancing than scoring goals. That effectively inverts much of the previous logic around the sport. Already analytical HR professionals in football, such as Robert Ordered at Fulham and Mike Forde at Chelsea, are making the connection between the players on the pitch and the employees who support them. A whole range of areas of HR from learning and development, employee relations and engagement, as well as team interaction and organisational development, will be severely challenged by the analytical approach. This is only really starting to take place and its impact will be massive. For example, learning professionals are already seeking data coming from learning management systems to give more insight than could be delivered by traditional forms of learning evaluation. E-learning programmes are replete with data around completion, duration and aptitude. Psychometrics and engagement data exist in huge pools and can be linked to the key HR metrics such as those on turnover and retention to provide real insight. The point is, will HR people use it or will they rail against it?

'Even in cases where business leaders haven't required HR to be analytical and evidence-based, that will certainly change.'

Even the most data-driven and analytical HR leaders know that the real value will come from identifying patterns in data around how people feel and behave. The availability of data on these areas is already quite abundant through psychometrics normally designed for recruitment purposes and in learning and development settings. A key HR director at a large financial services firm reflects:

What about resilience and what about the people who have characteristics which make those people successful and able to help others through change? The behaviours of that type of person are key. You need to capture what the issues are and what drives that behaviour.

Even in cases where business leaders haven't required HR to be analytical and evidence-based, that will certainly change. When data is at the centre of practice, it creates a demand for more and better information; this exposes HR to continual challenge to be on the ball and up to speed. Aware and insightful HR professionals will seek to solve these problems before they are asked. An LDP programme manager at an online retailer reflects on their leadership development programme:

The thing is we need to start reporting out to our stakeholders and talent managers. We have done everything around that. The business isn't demanding that at the moment and we need to be proactive. We need to do what we can and look at the learning interventions and, while the growth is there and we are not going to get the challenge, we need to start spending some time looking at the issue of value.

This data-driven company, whose entire business model is driven by an analytical mindset, is a case in point. Such organisations, including those in areas such as retail and banking and finance, have a big data focus in their product and are operationally governed by data and evidence; however, the approach may not be fully integrated with HR and other support areas. So, even in a numbers-driven business, HR might not be on the grid and needs to make sure that it is.

Many in HR see the business partner as the essential conduit in the data revolution. Business partners, although they can be aligned to an area such as learning or reward, tend to be impatient with silos, are thirsty for genuine insight to engage with managers and employees, and are generally business savvy and amenable to data.

Fear
While it's clear that HR is engaging with the challenge of big data, it's also clear that this is not in the comfort zone of many. Some feel that the advent of analytics compromises a more thoughtful and grounded HR practice. Few articulate this openly, but there is unease. The term 'big data' is sometimes associated with 'big brother' surveillance, control and an ICT and technology focus. The idea that this approach dehumanises and disempowers people is one strand of thinking commonly encountered in the learning and coaching space.

One problem with this unease is that it can impede engagement with the talent analytics challenge. According to one leading human capital thinker, HR professionals are more comfortable building relationships and working on people-centred issues (Pease et al

2012). This can be seen in the top priority objectives for HR leaders (figure 10 on page 20) outlined in our autumn 2013 *HR Outlook* survey. The biggest priority is identified as 'building relationships with colleagues and understanding their priorities'. This is a sign of an open and collaborative HR function, but it is also a sign that HR is still operating in that area of relationships and organisation-building. Developing the ability to use data to inform decisions comes fifth. A recent Deloitte report on HR identified a similar focus (Bersin by Deloitte 2013).

In our *Business Savvy* research we identified relative strengths in the bottom two quadrants of 'connecting with curiosity' and 'leading with integrity' but the top quadrants for business savvy of 'understanding the business model at depth' and 'generating insight from data and evidence' remain lower priority. Both our *Business Savvy* and people analytics research suggest this is not because the capability to analyse data is a lower priority, because it's now widespread, but rather it's because there is a certain comfort in sticking to our strengths. Reaching for the stretch capabilities is a less common behaviour amongst all business professionals, and for HR the analytical skills are the stretch skills. Many will already be taking an analytical view of talent, leadership, learning and performance, but for many it's simpler to stick to what they know. Peter Turner of Ricoh explains:
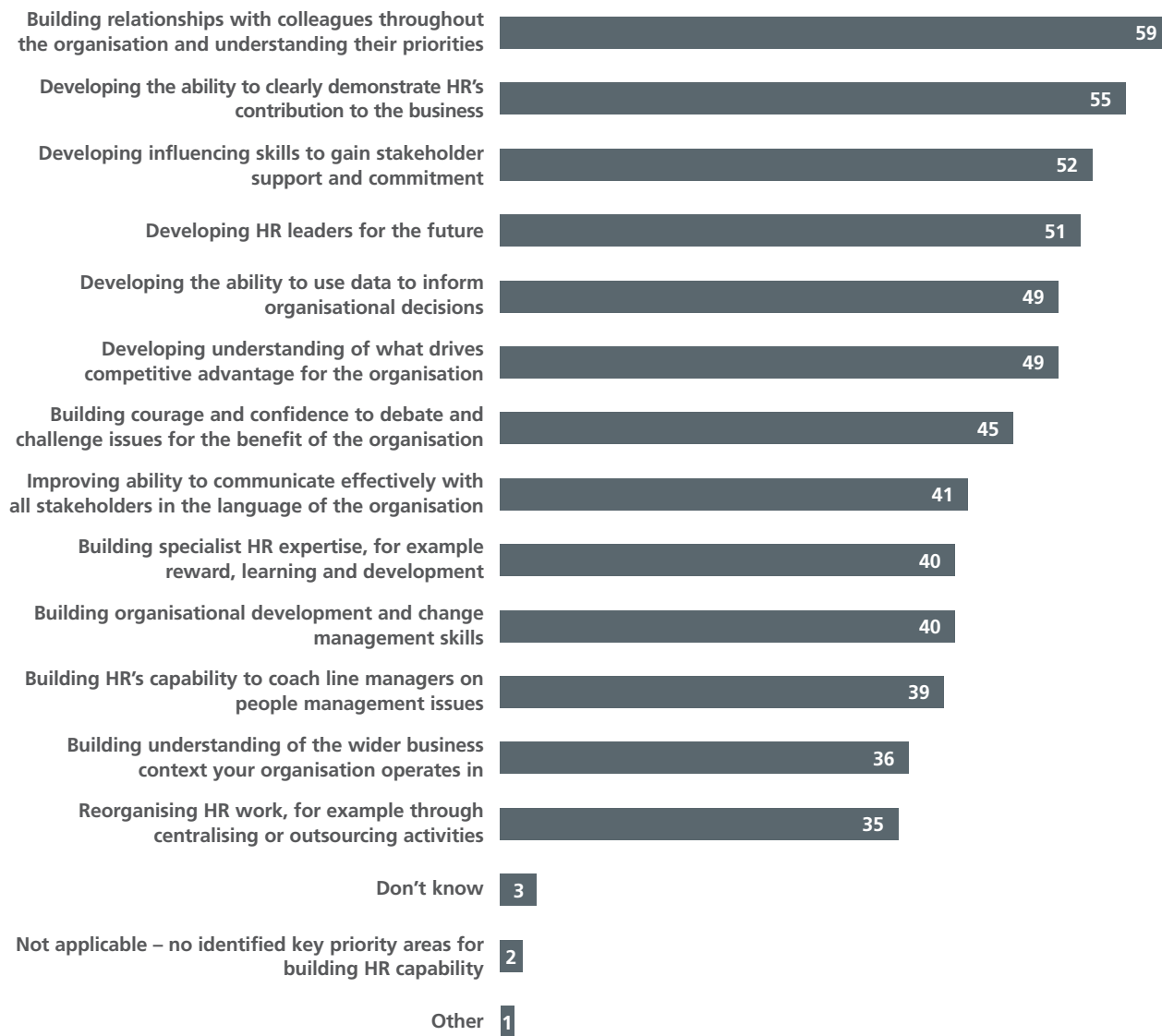
Huge amounts of suspicion [within HR]. The instant reaction is to try and disprove the number rather than working with it. We did work with HR ratios and created a huge amount of debate but some of the ways in which HR systems have been implemented with errors and with too much customisation doesn't help.

It's also clear that once we start pursuing a data-driven approach we build expectations and increased demands. Managers and employees like to see data and get real value from it. That can put HR on an expectations treadmill, which some think might lead to too much focus on delivering data and 'reporting' rather than 'advising, consulting and reflecting'.

There is also a fear outlined in our skills and smarts section that, since the capability to do this is not within HR, external specialists without the insight and nuance of HR will drive the approach. HR might be sidelined and kept out of the loop. There is also a perception that the insight generated might be less nuanced and more focused upon performance and productivity, with questions about the sustainability of such an approach. These concerns will need to be addressed along with the other issues of silos and skills if HR is to engage fully with this compelling opportunity. This is the focus of our final section on solutions.

'It's also clear that once we start pursuing a data-driven approach we build expectations and increased demands.'

Figure 10: Priority objectives for HR leaders with their teams (%)

Objective	%
Building relationships with colleagues throughout the organisation and understanding their priorities	59
Developing the ability to clearly demonstrate HR's contribution to the business	55
Developing influencing skills to gain stakeholder support and commitment	52
Developing HR leaders for the future	51
Developing the ability to use data to inform organisational decisions	49
Developing understanding of what drives competitive advantage for the organisation	49
Building courage and confidence to debate and challenge issues for the benefit of the organisation	45
Improving ability to communicate effectively with all stakeholders in the language of the organisation	41
Building specialist HR expertise, for example reward, learning and development	40
Building organisational development and change management skills	40
Building HR's capability to coach line managers on people management issues	39
Building understanding of the wider business context your organisation operates in	36
Reorganising HR work, for example through centralising or outsourcing activities	35
Don't know	3
Not applicable – no identified key priority areas for building HR capability	2
Other	1

Source: CIPD *HR Outlook*, autumn 2013: a variety of leader perspectives.
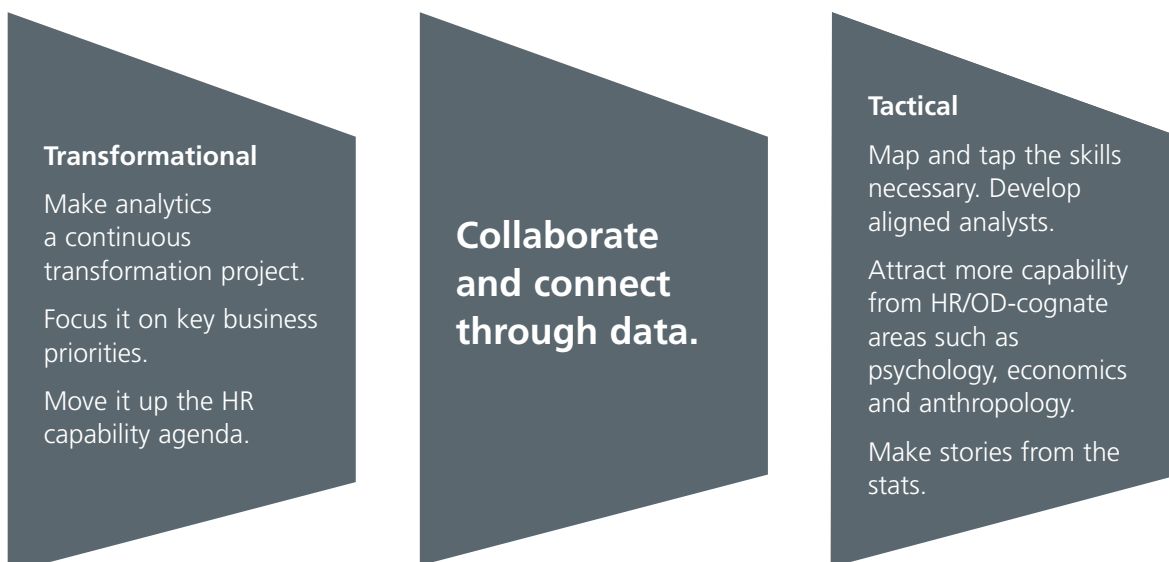
5 Strategies and solutions

Having addressed some of the key issues driving the emerging state of practice in HR, namely the silos, skills, suspicion and scepticism around data and analytics, we are now ready to look at some of the solutions. Our organisations present some rich and varied approaches to the people analytics challenge and they have expertise to share. The first and foremost lesson of successful people analytics is to get the balance right between being transformational and tactical. Figure 11 indicates how this can be envisaged.

Transformational approaches

Make analytics a continuous transformational project
If people analytics and data-driven approaches are to take off, they should be driven as transformational projects with full executive team ownership and enthusiastic and driven day-to-day management. The transformation is likely to be incremental and celebrated by the victory of small wins and continuous review. Where were we? Where have we got to? Where do we go next? The

'If people analytics and data-driven approaches are to take off, they should be driven as transformational projects with full executive team ownership.'

Figure 11: Strategies and solutions for managing talent analytics and big data in HR

Transformational

Make analytics a continuous transformation project.

Focus it on key business priorities.

Move it up the HR capability agenda.

Collaborate and connect through data.

Tactical

Map and tap the skills necessary. Develop aligned analysts.

Attract more capability from HR/OD-cognate areas such as psychology, economics and anthropology.

Make stories from the stats.

'The ability to ask better questions and harness more data to their own rich and deep insights should benefit all HR professionals.'

transformational effort should have a focus on the various blockers: namely silos, skills and suspicion. How is this being addressed and who's doing it? Julian Alzueta from Telefonica explains:

In one of the projects we have worked on, because of the fragmented approach to reporting in Europe, the European HR Leadership Team had asked for one report that could provide a single vision of the most relevant metrics. After building a virtual European team of HR analysts from each operating business and in the space of three months, we established a report that focuses on Telefónica key HR strategic drivers. These strategic drivers change over time, and we make sure to review the measures included regularly and keep them up to date.

Focus on key business projects
It seems that there are a few key business projects in every organisation which focus the attention and enthusiasm of leaders, employees and customers. These are precisely the projects which should be the focus of people analytics efforts. The support and sponsorship will be obvious, and a smart alignment with these projects will pay dividends for HR.

One major utility uses talent analytics to help the organisation address some key technical talent headaches as the business environment shifts:

The whole industry has come to a realisation that retirement of skilled technical talent is our biggest challenge. Yet the whole industry makes an assumption about cliff-edge retirement. But increasingly as we survey staff people are choosing to retire and when to shift down

in hours so there is an opportunity for mentoring, etc, on energy networks resourcing programme. That's going to help us keep talent in that business. Putting together various bits of data and having lots of conversations across the business helped us to get there.

Move analytics up the capability agenda
It's clear that analytics is a capability challenge for HR. We have many conflicting priorities, but a focus on ensuring that people can productively engage with numbers and metrics must be a key one. The ability to ask better questions and harness more data to their own rich and deep insights should benefit all HR professionals. Allowing analytics to become a skills silo will mean we cannot benefit. The drivers to this capability will differ, for example, in retail, banking and finance and the airline industry, where data is a central part of the culture, but as the City HR Forum shows, capability cannot be taken for granted; it has to be developed.

Tactical approaches

Map and tap the skills
Whether your skills strategy is 'make and migrate' or 'buy in and build', the analytics capability you work with needs to be integrated and understood. We have seen a few examples of isolated analysts who spend time generating output but not necessarily getting out and putting forward the case for the data. One HR leader in a global business services firm put it bluntly:

No matter how brilliant people are, if they don't build capability they will not strengthen your analytics effort. Playing with what interests them and failing to generate usable value for the business was a challenge for me when I

encountered one leading analyst. It's a difficult challenge for a leader.

Like any other organisational learning or design development issue, we should be able to develop structures which increase the chance of collaboration and knowledge-sharing.

Work with social scientists as well as rocket scientists
That said, on this project and in our interactions with seniors, it's clear that many organisations overlook HR's biggest source of informed analytical insight, namely behavioural scientists. Psychologists with occupational and business backgrounds, as well as those coming from an experimental background, have an affinity with measurement statistics and data. Some are skilled in designing and analysing psychometric tests, analysing surveys and developing workforce planning forecasts. In some ways they are more aligned to HR than other data scientists. Many of these are motivated to analyse people and performance, but psychologists, economists with labour market backgrounds and quantitatively trained sociologists and anthropologists can also add depth to analysis. In particular, anthropologists can provide new insights into team interaction and dynamics, as well as being able to understand customer affiliation and behaviour. When it comes to really high-level skills such as the ability to develop algorithms and conduct more mathematically orientated modelling, the natural scientists have an advantage, but we need a mix of analytical capability.

Collaborate and connect through data
Data makes a great nexus for collaboration and connection. By building meetings, events and reporting cycles around key data, and making the data a feature, with explanation from resident analysts and both questions and interpretation from the HR team, we can really break down the silos. Demonstrations of systems and explanation of features and reports help end-users understand the infrastructure used to support data. Key learning events around, for example, understanding statistics and probability or building a data dictionary can all practically embed the data awareness required. Sometimes even asking people to bring the data they have can encourage a focus on data and metrics. Senior buy-in and involvement ensures that people will get involved and be incentivised.

An HR manager at an asset management firm explains the value of being aligned to these key business priorities:

It drives the activity and helps you in a way to show your impact and to provide the ROI. We are a collaborative company. We can show that the people are working. We also have a high talent need and data can help us help leaders to understand the challenge. For example, we tend to have lengthy recruitment cycles, yet there is a correlation between a short acceptance period and retention of talent. It helps you as an HR team to understand that.

Tell stories from the stats
Nobody likes dry statistics, especially when they are stripped of context and their results or significance are not explained. One of the ways in which we can overcome this is to develop stories from the stats or, to put it another way, generate a narrative around the numbers. Advanced visualisation tools exist to create information graphics. Dashboards and scoreboards help to keep data in tune. Simple stories illustrated by key numbers can help to build an approach where analytics become part of the weft and weave of the workplace. When numbers are, for example, used by a leading train operator around performance and targets with informative and sometimes humorous graphics, employees engage. They actually begin to look for the numbers and they get disappointed when these numbers fail to appear. This can be achieved around every dimension of people performance and productivity. When we get to that stage, what can be called addictive analytics, we will know we have made a step-change.

Conclusion

When we started this research we scoped our research questions to take in the emerging agenda for HR of engaging with talent analytics and big data. What we found is that the pursuit of HR capability in both of these areas is at a fairly basic stage. We asked practitioners to identify themselves as aspiring-edge or leading-edge in their approach towards people analytics issues. We wanted to deliberately sense-check where practitioners place themselves on the analytics spectrum. Most are happy to be seen as aspiring, but the surprise is that even those that we consider to be at an advanced level of capability are reluctant to say they are pushing the boundaries.

Most are very much defining an approach towards data or, to be more precise, metrics. They are ensuring that the numbers add up and have credibility. They want their key HR data to be reliable and consistent on key business driver/cost issues such as recruitment, turnover and engagement. This issue of data reliability is the driving concern for many at the aspiring level.

At the more advanced level – where data reliability is, if not established, at least a major priority – the focus is on credibility. How can the data they are collecting help to inform business decisions by demonstrating the impact of people and performance? How does this data fit with other key business data streams? Is this data reliable enough to be mined for predictive insight?

Many are addressing the issues around talent analytics in terms of the three broad themes we have outlined:

Silos
These are the structural and systems obstacles and excuses for not getting access to sharing or refreshing key data on time and on track.

Skills
The need to power up the analytical capability is shared by all we spoke to, with some going for an incremental build on skills and others going for the buy-in approach. All options have their benefits and pitfalls, but generally the development of pockets of capability could unwittingly lead to groups of rocket scientists or highly advanced analysts working perhaps in a fragmented and non-collaborative way.

Suspicion and scepticism
Suspicion and scepticism is hard to identify, but behaviour and priorities can sometimes give us more insight than what people tell us in surveys or interviews. This is because there is anxiety and concern that HR is being asked effectively to jump the talent analytics and big data hoop when the issues of silos and skills are working against the ability to do that. Scepticism about whether a data-driven world would be better than the one we are in also abounds. The fact that a number of organisations we talked to for this project refused to be quoted is instructive. We believe and could see they are making real progress; however, they were concerned that their approach might not be 'that interesting' or 'cutting-edge' enough. We also saw some tensions between the HR leaders and business partners and the analysts charged with the main role. Some feel that analysts are not sharing enough insight or data; some analysts feel that HR people are not asking enough questions or are fixated on big novel issues when the 'housekeeping' issues around reliability should be their main concern. The highly skilled data analysts are perhaps working with less of a steer on the purpose of analysing HR data and with less clarity on how HR data differs from any other data except that it relates to people. Some people management professionals imply that the measurement of people is being treated like the counting of widgets.

This is a healthy tension and one which will be resolved only slowly because the capability is growing. The insight about people is important, which is why we think aligned analysts are a better bet than rocket scientists.

The ability to grow capability helps organisations make the transitions and gauge the capability curve as they progress. Sometimes buying in capability and capacity means people skip these stages or outsource them. We think that HR professionals need to fully embrace the challenge of talent analytics and meet the impending challenge of big data. That's because this is already a key part of the business conversation and, as with any conversations, we don't wish to be hovering awkwardly around the edges.

References

ACCENTURE. (2013) How well do you know your workforce? [online] *Accenture Outlook*. No 3. Available at: http://www.accenture.com/us-en/outlook/Pages/outlook-journal-2013-how-well-do-you-know-your-workforce-analytics.aspx [Accessed 1 November 2013].

ANDERSON, C. and SALLY, D. (2013) *The numbers game: why everything you know about football is wrong*. Harlow: Penguin Books.

BERSIN BY DELOITTE. (2013) *High impact talent analytics: building a world class HR measurement and analytics function* [online]. Oakland, CA: Bersin by Deloitte. Available at: http://marketing.bersin.com/high-impact-talent-analytics.html [Accessed 1 November 2013]

BERSIN, J. (2012) *Big data in HR: building a competitive talent analytics function – the four stages of maturity* [online]. Oakland, CA: Bersin by Deloitte. Available at: http://www.bersin.com/Practice/Detail.aspx?docid=15430&mode=search&p=Human-Resources [Accessed 1 November 2013].

BOUDREAU, J. and JESUTHASAN, R. (2011) *Transformative HR: how great companies use evidence-based change for sustainable advantage*. San Francisco: Jossey Bass.

BOUDREAU, J. and RAMSTAD, P. (2007) *Beyond HR: the new science of human capital*. Boston: Harvard Business School Press.

CHARTERED INSTITUTE OF PERSONNEL AND DEVELOPMENT. (2012) *Business savvy: giving HR the edge* [online]. London: CIPD. Available at: http://www.cipd.co.uk/hr-resources/research/business-savvy-giving-hr-edge.aspx [Accessed 1 November 2013].

CHARTERED INSTITUTE OF PERSONNEL AND DEVELOPMENT. (2013) *HR outlook: winter 2012–13: a variety of leader perspectives.* Appendix: survey results [online]. London: CIPD. Available at: http://www.cipd.co.uk/hr-resources/survey-reports/hr-outlook-winter-2012-13-leader-perspectives.aspx [Accessed 1 November 2013]

CHARTERED INSTITUTE OF PERSONNEL AND DEVELOPMENT. (2013) *Learning and talent development: annual survey report 2013* [online]. London: CIPD Available at: http://www.cipd.co.uk/hr-resources/survey-reports/learning-talent-development-2013.aspx [Accessed 1 November 2013].

CITY HR ASSOCIATION and ORACLE CORPORATION. (2012) *Measuring up: a guide to people metrics and performance for the City.* London: City HR Association.

DAVENPORT, T., BARTH, P. and BEAN, R. (2012) How big data is different. MIT *Sloan Management Review*. Vol 54, No 1, Fall.

LANCASTER UNIVERSITY MANAGEMENT SCHOOL. (2011) *Keeping body and soul together: why NHS teamwork is critical to patient outcomes*. Lancaster: Lancaster University Management School.

LANEY, D. (2001) *3D data management: controlling data volume, velocity and variety.* Stamford, CT: META Group (now part of Gartner).

LEWIS, M. (2004) *Moneyball: the art of winning an unfair game*. New York: W. W. Norton and Company.

MANYIKA, J., CHUI, M. and BROWN, B. (2011) *Big data; the next frontier for innovation, competition and productivity* [online]. Mckinsey Global Institute. Available at: http://www.mckinsey.com/insights/business_technology/big_data_the_next_frontier_for_innovation [Accessed 1 November 2013].

MAYER-SCHONBERGER, V. and CUKIER, K. (2013) *Big data: a revolution that will transform how we work, live and think*. John Murray.

MCAFEE, A. and BRYNJOLFSSON, E. (2012). Big data: the management revolution. *Harvard Business Review*. Vol 90, No 10, October. pp60–68.

PEASE, G., BYERLY, B. and FITZ- ENZ, J. (2012) *Human capital analytics: how to harness the potential of your organization's greatest asset*. New York: Wiley.

PFEFFER, J. and SUTTON, R. (2006) Evidence-based management. *Harvard Business Review*. Vol 84, No 1, January. Pp62–74.

PRICEWATERHOUSECOOPERS. (2012) *Key trends in human capital in 2012: a global perspective* [online]. London: PWC. Available at: http://www.pwc.com/gx/en/hr-management-services/key-trends-in-human-capital-2012-a-global-perspective.jhtml [Accessed 1 November 2013].

WROE, N. (2012) Innovations in talent analytics. *T+D*. Vol 66, No 8, August. pp33–40.