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CORPORATE RESEARCH FORUM

STRATEGIC WORKFORCE ANALYTICS

" *The wider HR function plays a critical role in terms of the impact of workforce analytics on business outcomes. We can produce the best insights in the world, but unless business partners use these insights to drive change in the business, ultimately we will not be able to deliver the potential value that analytics offers.* "

Olly Britnell, Global Head of Workforce Analytics, Experian

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STRATEGIC WORKFORCE ANALYTICS

Alec Levenson and Gillian Pillans

CONTENTS

FOREWORD

It is now more than two years since we published our IBM Smarter Workforce Institute white paper *Starting the Workforce Analytics Journey: The First 100 Days.* The excitement and interest generated by that paper encouraged me, along with my colleagues Nigel Guenole and Jonathan Ferrar, to research and write an entire book on the topic of workforce analytics. Based on interviews with more than 60 experts across multiple industries and countries, as well as our own experience as analytics practitioners, our goal for the book was to create a practical guide to help people succeed in bringing analytics to the HR function. Our book, *The Power of People,* was published in May 2017, and the feedback and reviews suggest we have achieved our objectives. Content from the book is referenced throughout this report, and we hope you find the insights and guidance helpful as you progress on your analytics journey. Reader reactions to our original white paper and now the book, as well as conversations at conferences and in social media, are indicative of the growing desire among HR to benefit from workforce analytics.

While interest is strong, it appears that many organisations are struggling with certain aspects of adoption. Our own recent research among HR professionals reveals that while more than three quarters (78%) have stakeholders who want to solve business problems with analytics, just about one third have the right mix of skills (38%) in their department, the right technology (34%) and the right data (36%). This gap between demand and capability needs to be addressed in order to capitalise on the momentum and realise the potential.

Using workforce analytics to drive business-relevant insights does not have to be complicated, as this report confirms. I would summarise four critical success factors:

1. Identify a quick win – start with one well-defined challenge to solve, ensure it's important to the business (and not just to HR), and that the benefit of solving it will be realised quickly.

2. Secure the right sponsorship – identify an influential business sponsor to champion the project from start to finish, nurture your relationship, and engage your sponsor at all critical junctures in the process.

3. Don't wait for perfect data – no dataset is perfect, but this shouldn't stop you from moving forward. Understand data fundamentals and ensure your data are 'good enough' (rely on expert advice, as needed), and remember that sometimes a traditional 'small' dataset will serve your needs just fine.

4. Analytics doesn't stop with the analysis – it's essential to 'tell your story,' that is, communicate with impact to your various audiences while staying true to the data and analysis. Your ultimate goal with any analytics project is to drive action, to make a difference.

Above all, take a look at the practical, expert guidance in this report and you'll be well on your way to workforce analytics success.

Dr Sheri Feinzig, Director, IBM Talent Management Consulting and Smarter Workforce Institute

ABOUT THE AUTHORS

Alec Levenson

Alec Levenson is an Economist and Senior Research Scientist at the Center for Effective Organizations, Marshall School of Business, University of Southern California (USC). His action research and consulting work with global companies aims to optimise job and organisation performance and HR systems. This work combines the best elements of scientific research and practical, actionable knowledge that companies can use to improve performance, drawing on a number of disciplines. Alec has also trained HR professionals in human capital analytics. He is the author of *Strategic Analytics: Advancing Strategy Execution and Organizational Effectiveness.*

Gillian Pillans

Gillian Pillans has worked as a senior HR practitioner and OD specialist for several organisations including Swiss Re, Vodafone and BAA. Prior to her HR career, she was a management consultant with Deloitte Consulting and is also a qualified solicitor. Gillian has written various CRF reports on subjects including HR strategy, organisation design and development, leadership development, talent management, coaching and diversity.

ACKNOWLEDGEMENTS

ABOUT CRF

Founded in 1994, Corporate Research Forum (CRF) is a membership organisation whose international focus is on research, discussion and the practical application of contemporary topics arising from people management, learning and organisation development. CRF has become a highly influential focal point and network for 200 members representing a cross-section of private and public sector organisations.

- Its annual programme of research, events and publications fully reflects members' interests, in addition to the annual international conference. Side meetings and interest groups are also initiated to meet challenges that members might have.

- Contributors are acknowledged experts in their field with a worldwide reputation as leaders and innovators in management thinking and practice.

- Sharing and collaboration among members is a key feature of CRF's activities. We actively encourage networking at all events, and especially through member lunches and HR director dinners.

- CRF is led and managed by highly-regarded former HR professionals who have a passion for delivering excellence in the leadership and development of organisations and people.

CRF's goal is to be valued for excellence, rigour, relationship building and providing an independent view which, together, lead to measurable improvement in members' people and organisation performance.

For more details on how your organisation can benefit from CRF membership please contact Richard Hargreaves, Commercial Director, on +44 (0) 20 3457 2640 or at richard@crforum.co.uk. Alternatively, please visit our website at www.crforum.co.uk.

EXECUTIVE SUMMARY

"ON THE ONE HAND, WE HAVE AT OUR FINGERTIPS ACCESS TO THE MOST POWERFUL COMPUTERS, THE LARGEST DATABASES ON ORGANISATIONAL PROCESSES, AND EVER-EXPANDING INFORMATION ON CONSUMER BEHAVIOUR AND THE WAY COMMERCE IS CONDUCTED WORLDWIDE. ON THE OTHER HAND, ORGANISATIONS STRUGGLE AS MUCH AS EVER TO ACHIEVE STRATEGIC OBJECTIVES AND IMPROVE ORGANISATIONAL EFFECTIVENESS."
Levenson, 2015

1. Workforce analytics is generating a buzz in the business world today, but does the reality live up to the hype? This report explores how organisations are using workforce analytics and how the emerging tools and techniques in this field can be successfully deployed to address the most pressing workforce-related business issues and improve organisational performance.

2. Workforce analytics is the process of discovering, interpreting and communicating meaningful patterns in workforce-related data to inform decision making and improve performance. It is not only about data analysis but also about change management – generating meaningful insights to drive behaviour change and increase organisational effectiveness.

3. Before embarking on workforce analytics it's important to understand how people-related factors such as employee engagement or turnover actually drive tangible business outcomes such as reducing costs, increasing productivity or improving quality or innovation. Analytics projects often start in the wrong place – they focus on the insights that can be gleaned from the data that's available. A more business-oriented approach starts by identifying the elements that determine an organisation's unique position in its market – its competitive advantage. The next step is to build up a wider picture of the organisation as a system, looking at how organisational factors, such as team dynamics or job design, and people factors, such as the performance of individual employees, contribute to creating and sustaining competitive advantage. Workforce analytics should focus on identifying opportunities for improvement in those elements of the organisation model that have the greatest impact on successful strategy execution.

4. To avoid falling into the trap of wasting resource by analysing issues that have little impact on organisational outcomes, each step in the analytics process has to be tackled in the correct order. Having a clear methodology can help ensure that analytics interventions are focused on the most pressing business questions, that key stakeholders are identified and engaged, and that the conditions are created for successfully implementing recommendations. We share an eight-step methodology in Chapter 2.

5. Many claims are being made for the potential of workforce analytics to help achieve business goals, but for most organisations this is still an emerging field. Many organisations are struggling with poor quality data and a lack of analytical capability within HR. There is often too much focus on HR for its own sake, and insufficient emphasis on business outcomes. Organisations frequently start by building a statistical model to predict turnover, but while this may be strategically relevant for some businesses, many start here because it is more straightforward than other types of analysis and the data are readily available. Other common applications of workforce analytics we've seen include data-driven strategic workforce planning, examining the connection between employee engagement and business performance, and reviewing the effectiveness of compensation and reward practices. Chapter 3 contains some examples from our research.

6. Our research has identified some key conditions for success in deploying workforce analytics.

   a. Start with the business strategy to identify where analytics interventions are likely to add the greatest value to business outcomes.

   b. Focus on generating actionable insights, not just crunching data.

"THERE'S A SHIFT IN MINDSET NEEDED IN HR. THE FUTURE OF HR WILL BE ABOUT USING DATA AND TECHNOLOGY TO IMPROVE THE PERFORMANCE OF THE WORKFORCE. OUR ORGANISATIONS ARE EMBRACING DATA IN EVERY ASPECT OF WHAT THEY DO. AS A FUNCTION, WE CAN'T AFFORD TO BE LEFT BEHIND."

Dave Millner, Executive Consulting Partner, IBM Workforce Science

This means having an agreed set of business issues to analyse, and clear hypotheses to test.

c. Use existing scientific research to guide the questions to explore in the analysis – relying on previous research can help shortcut the process of developing hypotheses.

d. Be clear at the outset what actions the organisation would be prepared to take as a result of what the data analysis reveals. There's no point undertaking workforce analytics unless there is appetite in the business to do something with it.

e. Engage key stakeholders to increase the chances that analysis is followed through with actions that lead to desired changes in behaviour, systems and processes. Critical stakeholders for workforce analytics include the HR Director, who plays a vital role in creating the context for a commercially-oriented, data-driven HR function, HR business partners, who can act as advocates for analytics in the business, and business leaders, who are ultimately accountable for implementing recommendations.

f. The most successful workforce analytics interventions typically combine business, people and organisational data. Workforce analytics teams rarely have all the data or expertise they need, so they have to collaborate with other business analytics teams across the organisation.

g. It's easy to get so caught up in sorting and cleaning existing data that you lose sight of the bigger picture. The right data strategy may also include generating new data, combining internal and external data sources, or analysing both qualitative and quantitative data.

h. It's necessary to build appropriate governance and prioritisation processes to ensure that decisions about where to focus workforce analytics effort have a clear line of sight to the business strategy.

7. Historically, HR has not enjoyed a strong reputation for analytical and data-driven practice. It needs to invest in building both skills and a more data-driven culture and mindset. This is a key challenge for the future of HR.

COMMENTARY ON CRF'S RESEARCH FINDINGS

Workforce analytics will only reach its full potential by combining workforce and business perspectives, and this is clearly reflected in CRF's Strategic Workforce Analytics report. Effort is often too focused on 'HR for HR's sake', with emphasis on metrics with little actionable insight. By operating in an HR data silo, organisations will never be able to make meaningful connections between the workforce and the business – and this will limit workforce analytics from ever gaining traction or achieving tangible results. Disappointingly, it appears from the report that organisations have a long way to go until these data silos are broken down; less than a quarter of respondents see collaboration to any great extent between their HR analytics teams and the rest of the business.

Considering the rapidly shifting nature of work and the evolution of the workforce, it is now even more critical that organisations take a collaborative approach to analytics. For example, automation and machine learning will give business leaders opportunities to reinvent their operating models and enter new markets, but they will need to rework their processes, systems and workforce. Analytics is key to understanding where the workforce can be reconfigured most effectively. Equally, political forces like the UK's upcoming exit from the European Union will continue to affect talent strategy at an enterprise level. Examining the labour implications of Brexit on an organisation requires data from across a multitude of departments, combining growth plans with turnover rates and demographic data.

Of course, the success of workforce analytics is not just reliant on breaking down data silos. Insights are only valuable if they lead to action, and this requires collaboration between HR and business leaders to deliver tangible change. But what is striking in reading the results from the report is that organisations are still in the very early stages of deploying workforce analytics to improve performance; only 14% of businesses have used analytics to successfully predict outcomes and take action to a great extent. In my experience, leadership is the ultimate bridge between workforce analytics and actual execution. Without the ownership and sponsorship of the entire executive team, insights remain worthless.

So how can businesses start to close the gap between the rhetoric and the reality of workforce analytics? At Concentra, we believe that organisations should begin by identifying what analysis is likely to add the greatest value to business outcomes. To do this, we help our clients use scenario modelling and other techniques to help companies better understand the relationship between their strategy, work and workforce. The result is unparalleled visibility across the organisation and auditable, data-driven decision-making.

CRF asks if the reality of workforce analytics lives up to the hype. My answer is "Not yet". It's clear that many organisations are a long way from realising the true value of analytics. But by connecting workforce to business strategy, and by building capability through collaboration, workplace analytics can and will make a significant impact on business performance.

Julian Holmes, Director, OrgVue

01

WORKFORCE ANALYTICS – KEY ENABLER OF STRATEGY EXECUTION OR MANAGEMENT FAD?

In this chapter we introduce the concept of workforce analytics and chart its increasing use in organisations. We consider whether it is a force that can help HR to fulfil its role in supporting strategy execution and optimising business performance, or whether it's just a passing fad.

TOPICS COVERED

01

WORKFORCE ANALYTICS – KEY ENABLER OF STRATEGY EXECUTION OR MANAGEMENT FAD?

"AT A TIME WHEN DATA ARE MORE READILY AVAILABLE THAN EVER, HR IS BEING ASKED FOR MORE INFORMATION, BETTER INSIGHTS, AND MORE PRECISE RECOMMENDATIONS TO HELP EXECUTIVES AND MANAGERS RUN THEIR BUSINESSES."

Guenole, Ferrar & Feinzig, 2017

1.1

THE RISE OF WORKFORCE ANALYTICS

Workforce analytics has become a hot topic over recent years. Analytics is a fast-growing discipline in HR, with companies making significant investments in systems, tools and people.

• IBM's 2016 CHRO report found that the number of CHROs using predictive analytics to make more informed workforce decisions had increased by approximately 40% over the previous two years.

• A 2015 KPMG/EIU report showed a large majority of executives (91% in the IT/technology sector, 81% in biotechnology, and 70% in financial services) expected the growing use of data-driven insights in their HR function to lead to increased profits over the subsequent three years.

• Stratistics MRC estimated the value of the global market for workforce analytics at $439m in 2015, and predicted it would grow at 16.7% a year over the next seven years to reach $1.29 billion by 2022.

Figure 1 shows how global interest in the terms 'HR analytics', 'people analytics', 'workforce analytics' and 'talent analytics' has increased over the past decade (measured by the number of Google searches).

The principles behind analytics are not new – many of the underpinning statistical techniques have been around for decades. What has changed, however, is the volume of data available (from sources such as wearable devices as well as more traditional corporate systems) and the variety of tools available to store, access and analyse both structured and unstructured data.
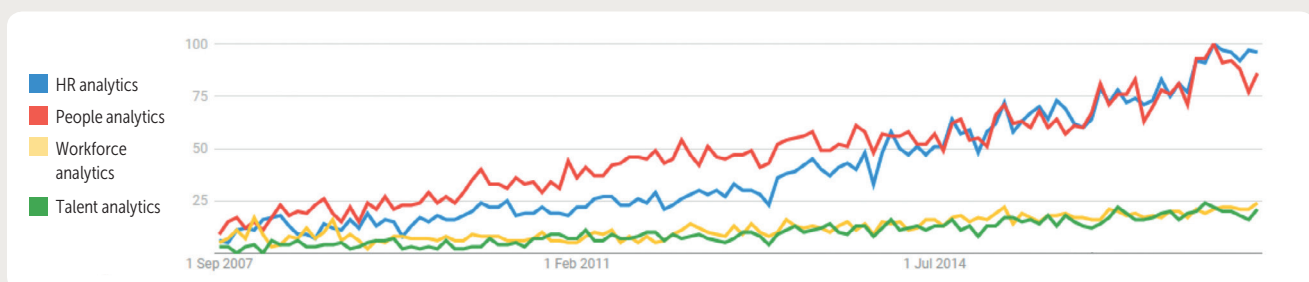
A number of factors are driving the increasing level of interest in workforce analytics.

• Analytics is seen as a potential source of competitive advantage. Research by Andrew McAfee and Erik Brynjolfsson of MIT found that companies that characterised themselves as data-driven were more successful than those that didn't.

Companies in the top one-third in their industry in terms of their use of data-driven decision making were, on average, 5% more productive and 6% more profitable than their competitors.

• Demand is being driven by boards and executive teams, who increasingly see the benefit of using analytics to improve performance. According to Guenole, Ferrar and Feinzig (2017): "Generally, boards are paying much greater attention to their fiduciary obligations, and they are realising that the people in their businesses represent an asset at risk that needs to be actively managed. They see human capital as a topic worthy of board attention." Several of our interviewees report an increased demand from their executive teams for data-driven people insights. Phil Pringle, Head of Insight and Engagement at Whitbread, said: "We're seeing a real hunger for data from the executive team, and a demand for better insights into the workforce."

Figure 1: **Number of Google searches for HR, people, workforce and talent analytics globally, 2007-2017**

■ HR analytics
■ People analytics
■ Workforce analytics
■ Talent analytics

Source: Google Trends

01

WORKFORCE ANALYTICS – KEY ENABLER OF STRATEGY EXECUTION OR MANAGEMENT FAD?

"IF WE CAN GET INCREMENTALLY BETTER AT MAKING PEOPLE-RELATED DECISIONS WITH DATA; IF WE CAN INCREASE THE LIKELIHOOD OF PUTTING THE RIGHT PEOPLE IN THE RIGHT ROLES AT THE RIGHT PRICE POINT, WITH THE RIGHT TEAM AND LEADERSHIP, WE THINK WE CAN HELP THE ORGANISATION BE BETTER AT A GLOBAL SCALE, AND HELP DELIVER PROFITABLE GROWTH."

Ian O'Keefe, Managing Director Workforce Analytics, JPMorgan Chase

- The proliferation of analytics in functions such as marketing, finance and customer insight is driving a wider understanding of what businesses can learn from data – including in HR. One interviewee commented: "Every other business function has analytics at the centre of how they run their business; in HR we are playing catch-up."

- There is a growing expectation that analytics can provide useful insights to help improve performance.

- The availability and affordability of increasingly sophisticated and user-friendly analytics tools, combined with the proliferation of the latest generation of HR systems, is making it easier for HR to identify and analyse data and present the findings in a visual, comprehensible way.

- There is growing interest in personalising the employee experience. In Chapter 3 we explore some applications of analytics – for example, using machine learning to recommend learning programmes or stretch assignments to an employee looking to build a specific skill-set.

Workforce analytics seems to have the greatest impact in large organisations that can afford to invest in the technology and expertise required to deliver on the promise of analytics. For example, a 2016 study by the Society for Human Resource Management (SHRM) found that 79% of organisations with 10,000 employees or more now have data analysis roles within HR. What's more, the best examples typically come from sectors with a strong technical, scientific or data orientation, such as hi-tech, biotechnology and retail.

The purpose of this report is to explore the following questions.

- What do we mean by 'workforce analytics', what are its potential applications and how are organisations applying it?

- How can organisations deploy analytics to improve strategy execution and business performance?

- What conditions are required for the deployment of workforce analytics to be successful, and what are the pitfalls to avoid?

- Where should organisations focus their effort in order to maximise the return on their investment?

RESEARCH METHOD

This report is based on the following data sources.

- A focus group with 21 senior HR and workforce analytics practitioners to identify current issues and establish areas of focus for the research.

- Interviews with 42 practitioners, experts and academics. We list the interviewees in the Appendix.

- An online CRF survey, completed by 228 respondents in August and September 2017. Respondents were predominantly HR directors, heads of workforce analytics, senior HR generalists and workforce analytics specialists. Respondents covered a broad range of industries, and were slightly skewed towards business-to-business (B2B). Nearly one-third (32%) were predominantly B2B, 23% were predominantly business-to-consumer (B2C), 35% were both B2B and B2C and 10% were public sector/ government. Just under half (49%) worked for organisations with 10,000 employees or more. Over two-thirds (68%) were based in the UK, 17% in Europe, 10% in North America, and the remainder in the rest of the world.

- An extensive literature review, covering academic and practitioner studies, books and articles. The Reading List in the Appendix contains relevant references.

01

WORKFORCE ANALYTICS – KEY ENABLER OF STRATEGY EXECUTION OR MANAGEMENT FAD?

"THE EXPECTATIONS OF BUSINESS LEADERS WITH REGARD TO PEOPLE DATA HAVE HISTORICALLY BEEN QUITE LOW, BUT EXPECTATIONS ARE RAPIDLY RISING."

Dave Millner, Executive Consulting Partner, IBM Workforce Science

1.2
DEFINITIONS

Despite the growing popularity of analytics there is confusion about what the term actually means. The perception that analytics is a 'good' thing has led to almost anything that is related to numbers being labelled 'analytics'. We think it is important to distinguish between reporting, metrics and analytics, because much of what is described as 'analytics' is actually one of the other two.

Fink and Sturman (2017) make the distinction as follows.

- **HR reporting** captures basic facts about an organisation or team and helps managers and leaders track and manage their teams and workforces. It quantifies the current state.

- **HR metrics** help HR and the organisation evaluate the efficiency, effectiveness and impact of their HR systems, programmes and processes. They help evaluate how well HR is performing.

- The underlying goal of **analytics** is to identify patterns that can inform strategic decisions.

For example, in considering diversity and inclusion these three different elements might work as follows. An organisation might **report** the proportion of women at each level of seniority. It might use **metrics** to monitor the effectiveness of actions taken to improve diversity, such as the proportion of female hires for different business units over the previous six months, or the proportion of women promoted at each level during the previous year. **Analytics** might mean comparing data from the HR system, such as exit interviews, performance management and talent data, with demographic data and data from external sources such as LinkedIn, to identify the 'leakiest' parts of the promotion pipeline for women, the common factors among women who leave the organisation (such as not having been promoted for three years), and where they go. These insights might help drive changes in policy.

We've found that different organisations also use a variety of terms to describe the analytics they use in HR, including HR analytics, people analytics, talent analytics, human capital analytics and workforce analytics. While all these terms are in common use, for the purposes of this research we have focused on 'workforce analytics', for the following reasons.

- It is more business focused, in that it is concerned with the contribution of the workforce as a whole to the performance of the business.

- The workforce may include other forms of labour as well as employees; for example, organisations are using analytics to investigate the extent to which machines and robots will replace humans in the workplace.

- It avoids a narrow focus on the activities of the HR function ('HR for HR').

- It supports the notion that insights come from combining business and people data, rather than relying solely on data from HR systems.

- It is broad enough to encompass organisation and work design, as well as individual performance. Analytics often yield insights about how to restructure the organisation or redesign jobs to improve individual and organisational performance.

Guenole *et al*. believe that 'workforce analytics' is the most appropriate term: "The term HR analytics implies that HR focuses only on analytics for the HR function (that is, using analytics to affect and inform the policies, practices and processes that HR as a function manages – or 'HR for HR,' as it is sometimes described). Workforce analytics […] best describes the broadest set of workers that contribute to organisational success and the fullest responsibilities of the function both now and in the future."

In this report we are adopting Guenole *et al.'s* definition of workforce analytics.

"Workforce analytics is the discovery, interpretation, and communication of meaningful patterns in workforce-related data to inform decision making and improve performance." Guenole *et al*., 2017

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01
WORKFORCE ANALYTICS – KEY ENABLER OF STRATEGY EXECUTION OR MANAGEMENT FAD?

"THE POPULAR LITERATURE ON HR ANALYTICS CURRENTLY RESEMBLES MORE HYPE THAN SUBSTANCE, AND CONSULTANCIES AND SOFTWARE SUPPLIERS HAVE SPOTTED THE COMMERCIAL OPPORTUNITY, MORE OFTEN THAN NOT AMPLIFYING THE NOISE RATHER THAN CLARIFYING THE PURPOSE. IT IS AT RISK OF BECOMING A FAD."
Van der Togt and Rasmussen, 2017

1.3
IS WORKFORCE ANALYTICS JUST ANOTHER MANAGEMENT FAD?

The history of HR is littered with initiatives, tools and 'best practices' that over-promised and under-delivered. HR 'solutions' that fail to take account of the organisation context and strategic priorities are at risk of being fads that generate substantial interest without improving organisational performance. So far, the rapid advances in the analytics tools available to business leaders and HR professionals are outstripping their ability to use them to solve the most pressing business challenges.

We've seen some examples of improved performance through analytics, but there are many others that, while interesting, aren't necessarily focused on key business issues. For example, analytics that focus on the performance of the HR department are largely irrelevant to people outside HR. We've found that many organisations begin their analytics journey by building models that can predict attrition – but unless high turnover is a key risk or substantial handicap to business performance, this may not be the best place to focus effort. According to Lorenzo Canlas, formerly Head of Talent Analytics at LinkedIn: "Predicting attrition is interesting, but what do we do with it? Is there anything we can do to reduce the risk of those people leaving? Are they in business critical roles? Without additional information, predicting who will leave next year is merely informative."

As we discuss in the rest of this report, workforce analytics has to be focused if it is to avoid being a fad.

- Start with the key business priorities and pressing business problems that have the potential to be addressed through data. These might include how to improve performance or productivity, reduce costs or build the organisation's capacity to innovate.

- Avoid analysing data for its own sake. "Analytics too often starts with data, when it should start with business challenges (hence all the analytics cases linking survey data to turnover because the data is readily available). HR succeeds by adding value to business decisions – by informing how to make business decisions that intervene and create business success." (Rasmussen and Ulrich, 2015).

- Analysis is only one step in the process. Insights are valuable only if they lead to action, which requires not only strong analytics capability, but also a commitment by key stakeholders in the business to act on those insights and see them through. "[Workforce analytics] offers the promise to be a game changer in the long term for companies and organisations that have the stamina to invest in, and are willing to act on, the insights, leading to better business decisions." (Van der Togt and Rasmussen, 2017).

01

WORKFORCE ANALYTICS – KEY ENABLER OF STRATEGY EXECUTION OR MANAGEMENT FAD?

"ULTIMATELY, HR ANALYTICS IS IN DANGER OF HANGING IN A BUBBLE UNLESS YOU ATTACH IT TO SPECIFIC BUSINESS OUTCOMES. THE QUESTION YOU SHOULD ASK IS: 'WHY SHOULD WE CARE? FOR EXAMPLE, IF I CAN REDUCE ATTRITION FROM 5% TO 4%, WHAT VALUE WILL THAT ADD TO THE BUSINESS, AND IS IT WORTH IT?'"

Chris Barkataki, Principal Consultant and Workforce Intelligence Lead, KPMG

HR AND 'BIG DATA'

Think about analytics, and the term 'big data' often follows close behind. But what is big data, and what does it mean for workforce analytics?

The term 'big data' refers to data sets that are so large or complex that traditional data processing systems are unable to deal with them. Gartner defines big data as high-volume, high-velocity and/or high-variety information assets that demand cost-effective, innovative forms of information processing, which enable enhanced insight, decision making and process automation. Big data analysis tools and techniques are helping companies to, among other things, better understand consumer behaviour and improve their business processes. For example, Google is able to mine the data generated by someone's search history to deliver relevant targeted advertising to them. And aeroplane engines are now equipped with an array of internet-enabled sensors that send a constant stream of data to the manufacturer, allowing maintenance to be scheduled exactly when it's needed.

But are we seeing a big data revolution in workforce analytics and, if so, what implications does this have for the capabilities we need to build in HR and the tools we need to invest in? Workforce analytics does sometimes involve manipulating big data sets – for example, when analysing posts on internal social media networks – but for the most part HR data is fairly static, in some cases changing annually or even less frequently. Most organisations have far fewer employees than they do customers, so the HR data sets they deal with are relatively small. According to Professor Peter Cappelli of the Wharton School: "HR does not actually have big data, or more precisely, almost never does. Most companies have thousands of employees, not millions, and the observations on those employees are for the most part annual. In a company of this size, there is almost no reason for HR to use the special software and tools associated with big data." (Cappelli, 2017).

This means the technologies being developed in other fields to manipulate and analyse big data are not always transferable to HR data. Rather than needing to correlate a number of different data points at a single point in time, HR needs to be able to track the same data points over a period of time – often several years. Julia Howes, Principal, Strategic Workforce Planning & Analytics Lead, Europe & UK at Mercer, said: "With workforce data, you need to be able to build a picture over time, to see how trends emerge and evolve. The big data technology we have today is not really set up to do this kind of analysis. For example, I can see how many top performers I have at different points in time. However, what it doesn't tell me is whether it's the same people who are top performers over several years. Or, I don't just want to know how many people are 'engaged', but how many remain engaged from one year to the next, and how that correlates with business performance. We need long data, not just big data."

This brings us back to one of the core findings of this research – you have to ask the right business questions to extract meaningful insights from the data. The choice of questions to focus on should be driven not by the data and tools available to us, but by the business issues we want to solve.

02

BUILDING A METHODOLOGY FOR ANALYTICS WITH STRATEGIC IMPACT AT ITS HEART

In this chapter we explore how to connect business strategy and workforce analytics in practice, to ensure that analytics focuses on business-relevant issues. We also set out a methodology for workforce analytics that follows eight steps in sequence, starting with identifying the key business questions to tackle through workforce analytics, and ending with operational implementation of recommendations arising from data-driven insights.

TOPICS COVERED

"THERE ARE A THOUSAND THINGS YOU CAN FIX, BUT ONLY A HANDFUL OF THESE ARE TRULY STRATEGIC."

Levenson, 2015

Organisations are awash with data. Over the past few years, a proliferation of tools has made it easier and cheaper to do detailed analysis of the data and present the results in a story-driven, visually compelling way. There are thousands of projects we could undertake, from improving HR processes to reducing turnover, to improving safety or sales force performance. But just because we can improve people-related factors such as employee engagement and performance management, doesn't necessarily mean we should prioritise them as a top business issue.

The problem with most approaches to workforce analytics is that there is too much data and analysis, and not enough modelling and business insight. "There is a misconception that doing more measurement of HR activities and human capital will necessarily lead to actionable insights; there is too much focus on incremental improvement of existing HR processes, detracting from diagnosing the problems with business performance; too much time is spent on mining existing data, to the detriment of model building and testing, including collecting new, more appropriate data." (Levenson and Fink, 2017).

To deploy analytics successfully, as well as conducting high quality analytics, we need to do two things.

1. Determine and prioritise what's important.

2. Make sure analysis leads to measurable improvements in business performance.

To do this we first need to build a model that describes the key drivers underlying the organisational outcomes we observe (for example, customer satisfaction has dropped due to high turnover in the sales force), and use this to define hypotheses to test (for example, this is because we are not promoting our top performers fast enough, or our sales incentive plan is not rewarding the best account managers highly enough) using analytics. We then need a methodology for connecting the critical business issues with appropriate techniques for gathering and analysing relevant data, which will lead to actionable business insights.

2.1
ANALYTICS NEEDS TO START WITH THE BUSINESS STRATEGY

Often, organisations' starting point for analytics is: 'What data do we have and what can we do with it?' This approach might unearth some 'interesting' insights that we can share with the business, but Rasmussen and Ulrich liken it to "shooting a gun in the air and hoping a bird flies over." A better approach is to start with a clear end goal. Why are we undertaking the project, what difference do we expect it to make to business outcomes, and what actions is the organisation prepared to take as a result of the findings? According to Guenole *et al*.: "Unless you know why you are undertaking an analytics project, you will find it almost impossible to bring any meaningful value to the business. When it comes to workforce analytics, people often start with the data, but starting with the end in mind is a better approach. In other words, first define what you are trying to change and why." Missing out this step compromises HR's credibility as a true strategic partner that provides insights where the organisation needs them most.

A similar perspective comes from the change management field: starting with the end in mind is a fundamental tenet of any change management exercise. If you don't know how the information you uncover will be used to help effect change and improve the business, then it's unwise to proceed – particularly if the goal is to improve productivity and/or profitability. Just learning something 'interesting' about people and processes doesn't justify the investment of time, energy and analytic resources that is required for such a project. Finding something actionable that can drive better business results is a far more valuable objective.

"LOTS OF ORGANISATIONS STRUGGLE TO SHOW HOW DIFFERENT HR ACTIVITIES COME TOGETHER – HOW THEY ARE INTERCONNECTED, AND WHAT ARE THE INTERDEPENDENCIES. ANALYTICS OFFERS THE OPPORTUNITY TO BRING ALL THESE VIEWPOINTS TOGETHER. FOR EXAMPLE, YOU MIGHT BE ANALYSING AN ATTRITION ISSUE, BUT CHANGES TO TRAINING, ORGANISATION DESIGN AND COMPENSATION WILL ALL HAVE A BEARING ON THE ISSUE YOU'RE TRYING TO RESOLVE."
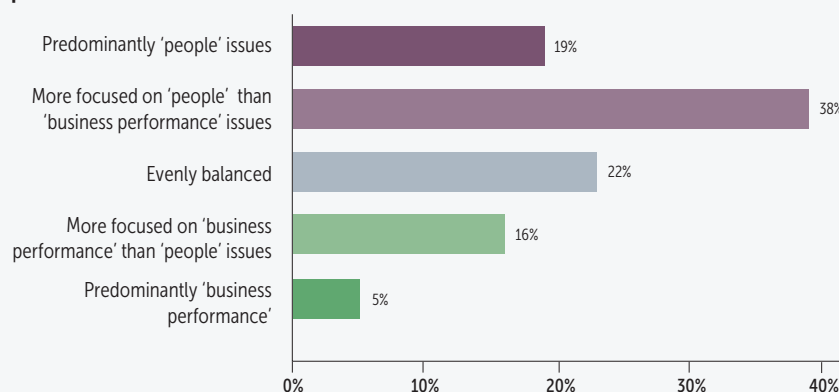
Chris Barkataki, Principal Consultant and Workforce Intelligence Lead, KPMG

In practice, what is required is the following.

1. **Start with the business strategy:** identify key organisational priorities and determine where any analytics intervention is likely to have greatest payoff.

2. **Take an integrated approach that looks at the whole system:** the strategic objectives, how work is organised and carried out to deliver those objectives, and how business and people processes interact. This will help determine the root cause of problems and properly diagnose the drivers of behaviour and motivation.

3. **Build a causal model that clearly defines the problem and identifies the most likely causes:** which is the starting point for building a set of hypotheses to explore through data analysis. It enables you to build a comprehensive picture of what's driving business performance and the bottlenecks that get in the way. The causal model describes key drivers of employee behaviour, team effectiveness, and strategic performance for the organisation. An example of a causal model is shown in Figure 4 on page 22.

It's important to look at people and business processes together, but in practice most organisations doing workforce analytics look predominantly or exclusively at people data. The CRF survey asked respondents whether the issues tackled using HR analytics were largely 'people' concerns, such as employee turnover or engagement, as opposed to 'business performance' problems, such as increasing sales, reducing costs or improving profitability. Over half (57%) of respondents focused more on 'people' than 'business performance' issues, 21% focused more

on 'business performance' and 22% said they were evenly split between the two.

To differentiate between all the improvements you could make, such as investing in training, improving screening of external job candidates, and so on, and identifying those that matter most to business outcomes, Levenson (2015) suggests turning the typical analysis on its head. Most workforce analytics projects start with individual job-level issues such as turnover risk or the impact of training programmes on performance ratings. However, before getting to this level of detail, Levenson says you need to be clear about the organisational capabilities needed to deliver the business strategy. This requires a three-step approach, as set out in Figure 3.

Figure 2: **When you look at the types of issues tackled in your organisation using HR analytics, to what extent are they 'people' concerns as opposed to 'business performance' problems?**

Predominantly 'people' issues	19%
More focused on 'people' than 'business performance' issues	38%
Evenly balanced	22%
More focused on 'business performance' than 'people' issues	16%
Predominantly 'business performance'	5%

Source: CRF member survey, 2017

Figure 3: **Strategic analytics roadmap**

COMPETITIVE ADVANTAGE ANALYTICS

STEP 1

Identify organisation capability strengths & weaknesses and gaps in strategy execution

ENTERPRISE ANALYTICS

STEP 2

Diagnostics at the enterprise, business unit, and/or business process level

HUMAN CAPITAL ANALYTICS

STEP 3

Diagnostics at the role, individual, and/or process levels

Source: Levenson, 2015

1. Competitive advantage analytics

This stage focuses on the sources of competitive advantage for your organisation – how do you make money and preserve your position in the marketplace? Competitive advantage derives from the organisational capabilities that enable strategic goals to be achieved – things like brand strength, superior products or distribution, price competitiveness or capacity for innovation.

The analysis involves (a) identifying the organisational strengths and weaknesses that define competitive advantage; (b) building a causal model that lays out the details; and (c) aligning key stakeholders behind the need for analysis. This allows you to identify where strategy execution can best be improved. Is it better customer retention? Improved innovation? Increased market share? Competitive advantage analysis helps organisations choose between interventions likely to deliver the greatest return on investment.

Complex statistical analysis is almost never used at this stage. Qualitative analysis, based on interviews with key stakeholders, is likely to be sufficient.

Key questions for competitive advantage analytics

- What problems are you trying to solve with your analysis?

- How would the analysis results help improve strategy execution?

- What organisational barriers to the successful execution of strategy do key stakeholders perceive?

- What new or existing data do you need about people and processes to diagnose the strategy execution problems?

- What roles and business processes contribute to building and maintaining competitive advantage?

- Where do organisational capability weaknesses make you vulnerable to competitive threats?

- Do your HR metrics contribute to competitive advantage?

2. Enterprise analytics

We argue above that interventions at an individual level – such as implementing a training programme or changing sales incentives – need to be considered within the context of the wider organisation system. Most workforce analytics focuses on the individual, and ignores what's happening at team and organisational level. However, in most organisations there is huge scope to improve team and organisation performance, and there is substantial insight, both from academic research and decades of practice in organisations and consultancies on how to build and run effective teams and design effective organisations.

This step focuses on the organisational barriers to delivering on strategic objectives. It considers organisation design issues, such as organisation structure, decision rights, team configuration, interfaces between different parts of the business, and how key business processes operate. Any intervention aimed at the individual job level, such as better training, different recruitment methods or tweaking incentives, for example, is more likely to be successful if it is aligned with these structural issues.

3. Human capital analytics

This is where the more typical workforce analytics kicks in. Here, we are looking to understand the human capital factors that drive the business problems that need fixing. This might include doing diagnostics at the role, individual and/or HR process levels. Whereas the analytics undertaken at stages 1 and 2 tends to be more qualitative – predominantly interviews with key stakeholders and team members – analytics at this step can include advanced statistics if the data is available and that type of analysis is relevant. It is important to complete steps 1 and 2 first, because you need to understand how individual jobs fit into the overall work system. Human capital analytics is only helpful where the issue is related to the productivity or performance of different people in the same role.

Step 1 – competitive advantage analytics – is the most important, and in some ways is the most straightforward from the point of view of data analysis. You can find out most of what you need to know from qualitative interviews with key stakeholders, rather than having to build highly sophisticated mathematical models. However, this is also the stage that is most often skipped. But if you jump straight into either enterprise or human capital analysis, you can easily miss the critical link between business and people issues. You need step 1 to be able to distinguish between insights that offer only marginal improvements in operations and those that truly advance strategy (Levenson, 2015).

Key questions for enterprise analytics

- How effectively does the organisation design support the capabilities required to build and sustain competitive advantage?

- Where do breakdowns in communication and collaboration occur?

- Does resource allocation support strategy execution?

- Are teams designed, resourced and managed effectively?

- Do the teams collaborate and integrate well enough to accomplish the business objectives?

- Where does the culture enhance the organisation's ability to execute the strategy and where does it get in the way?

- How does the performance of individuals contribute to group performance?

- What is the correct balance between individual-level and group-level metrics and performance?

- What role do leaders play in enabling the group to perform?

Key questions for human capital analytics

- Is the job designed appropriately to justify the performance expectations you have of it?

- Is the role paid well enough?

- Could you improve productivity by enriching or enlarging the role?

- How interdependent is this role with others in the organisation?

- Do the people in the roles have the appropriate capabilities?

- What are the respective costs of developing the competencies inside the organisation and hiring from outside?

- Are people motivated to do the work and perform at the levels required by the design?

- What attracts people to and retains them in the organisation?

"THE MOST EFFECTIVE ORGANISATIONS BEGIN EVERY ANALYTICS PROJECT WITH A KEY QUESTION OR INVESTMENT DECISION AS THE FOCUS. THEY DESIGN THE RESEARCH PROCESS AND MEASUREMENT TO GENERATE DATA THAT ARE USEFUL SPECIFICALLY FOR ANSWERING THE QUESTIONS OR INFORMING THE NEEDED DECISIONS. THIS APPROACH AVOIDS THE DREADED 'THAT'S INTERESTING' RESPONSE TO ANALYTIC RESULTS WHERE THE DATA ARE VALID, BUT DO NOT BRING DECISION MAKERS ANY CLOSER TO KNOWING WHAT TO DO."

Levenson and Fink, 2017

Building the causal model

In addition to introducing a different way of ordering the analytics, Levenson (2015) also emphasises the importance of building a causal model that describes key drivers of employee behaviour, team effectiveness, and organisation strategic performance. An example of a causal model is shown in Figure 4. A fully specified causal model includes elements from all three types of analytics:

- **Competitive advantage analytics:** what business/strategy execution objectives need to be addressed?
- **Enterprise analytics:** what group-level issues (business unit, function or team) issues might be contributing to the problem?
- **Human capital analytics:** what individual-level people or role issues might need to be tackled?

Building the causal model involves identifying the different parts of the organisational system to analyse in order to identify the underlying drivers of the business issues you are trying to fix. It is an iterative process that happens early on in an analytics project, typically before you begin any detailed data analysis. In the initial stages, you interview a small number of key stakeholders to define the scope of the investigation, and compile an initial list of factors/hypotheses to investigate. Next, you conduct a wider investigation, interviewing a broader set of stakeholders to test out and narrow down the hypotheses that will form the basis of your analysis. In some cases, qualitative interviews alone will provide enough data to diagnose the problems and identify potential solutions. Where further data or statistical analysis is required, the hypotheses determined at this stage form the basis for data gathering and analysis.

EXAMPLE OF A CAUSAL MODEL

This example from Levenson (2015) describes the drivers of business unit performance for a business services company.

Figure 4: Causal model for business unit representation
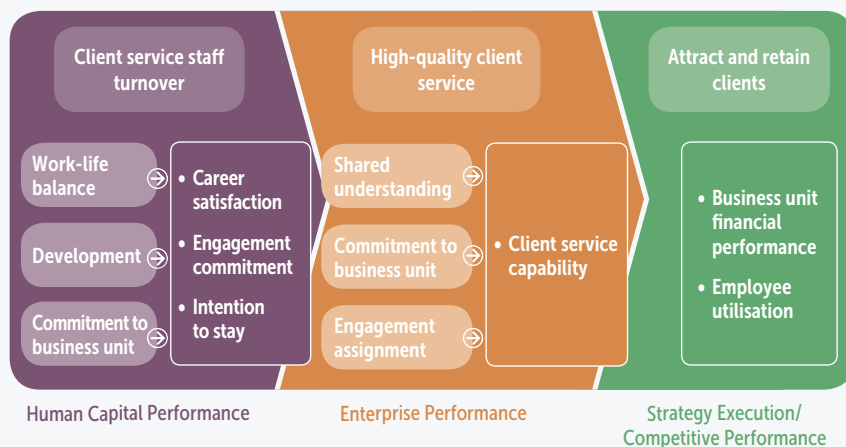
Source: Levenson, 2015, Strategic Analytics: Advancing Strategy Execution and Organizational Effectiveness

Competitive advantage/strategy execution. A business services company needs to deploy its people more effectively ('employee utilisation') to meet its financial objectives.

Enterprise/business unit/function/team issues. The company's intermediate objective is to improve client service, because that's what drives its long-term financial performance. Good client service happens when (a) the company's client service teams have the right mix of client engagement assignments; (b) the teams understand their own and each others' objectives and how to accomplish them; and (c) the team members are committed to supporting their business unit's objectives.

People/role issues. Employees are pushed to provide the highest possible client service while minimising the fixed cost per employee. This means increasing employees' commitment to their teams as far as is possible. On the negative side, this inevitably pushes up the number of hours employees are expected to work, which affects their work-life balance and willingness to stay with the organisation. On the positive side, the company recognises the importance of employee development and career satisfaction as retention tools.

"DON'T JUST GIVE PEOPLE THE DATA THEY ASK FOR – AND THINK THEY WANT. YOU NEED TO ASK LOTS OF QUESTIONS TO GET UNDER THE SKIN OF WHAT ISSUE THEY ARE REALLY LOOKING TO SOLVE."

David Creelman, CEO, Creelman Research

2.2
A METHODOLOGY FOR DEPLOYING ANALYTICS

Having determined the critical strategic questions to address, it's important to tackle each stage in the analytics process in the correct order. It may be tempting to dive straight into gathering and analysing data, but if you don't have a clear set of hypotheses to test, or haven't correctly lined up key business stakeholders so they are receptive to implementing the recommendations arising from the analysis, you are unlikely to reap a return on your investment.

Guenole *et al.* argue that many organisations fail to gain benefits from workforce analytics projects because they don't approach them in a way that allows them to improve measurable business outcomes. And this is often because they start in the wrong place. The authors suggest that a way of avoiding this trap is to have a methodology for structuring analytics work. They propose an Eight Step Model for Purposeful Analytics (see Figure 5). Their approach begins by deciding why to undertake the work – so, again, beginning with the end in mind.

The results of the CRF survey confirm that having a standard approach or methodology for analytics is a key gap for most organisations. Two-thirds (66%) of respondents report that they don't have a methodology or standardised approach for HR analytics projects (see Figure 6).

Figure 5: The Eight Step Model for Purposeful Analytics

Why undertake the project?

Step 1	Step 2
Frame Business Questions	Build Hypotheses

How should the project be carried out?

Step 3	Step 4	Step 5	Step 6
Gather Data	Conduct Analyses	Reveal Insights	Determine Recommendations

What will result from the project?

| Step 7	Step 8
Get your point across	Implement and Evaluate

Source: Guenole et al., 2017

Step 1: Frame business questions

This stage involves clarifying the business problem to be tackled, and ensures that the analytics work in question is actually necessary. The groundwork strategic analysis described in the previous section should provide clear direction about what business questions are likely to yield greatest benefit for the organisation.

At this stage it is also critical to engage the key stakeholders who will make or break the success of the initiative. Getting their buy-in is important for the following reasons.

- Securing agreement that the business questions to be tackled are indeed a high priority for the business.

Figure 6: Do you have a methodology or standardised approach for undertaking HR analytics projects?

- 14%
- 20%
- 66%

- Yes
- No
- Don't know
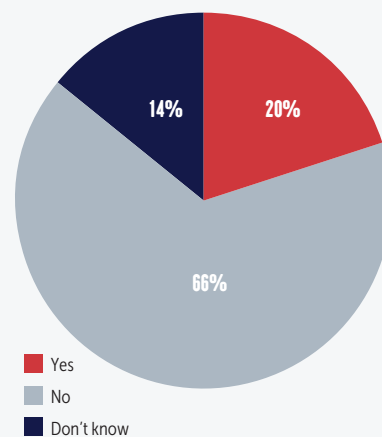
Source: CRF member survey, 2017

"EXTERNAL SCIENTIFIC RESEARCH CAN BE VERY USEFUL IN HELPING YOU POPULATE YOUR HYPOTHESIS TREE."

Julia Howes, Principal, Strategic Workforce Planning & Analytics Lead, Europe & UK, Mercer

- Managing stakeholders' expectations. This is an opportunity to discuss possible outcomes with stakeholders before the analysis begins. Ian O'Keefe, Managing Director of Workforce Analytics at JPMorgan Chase, said: "You need to ask the question: what would you do differently if you knew the answer to this? If there is no clear answer, you may find you are wasting your time."

- Being clear about what changes the organisation might be prepared to contemplate, and whether the resources are available to implement the recommendations. For example, if you are asked to identify the causes of high turnover, would the organisation be prepared to change the compensation model if necessary? Is there sufficient budget to solve the problem? If leadership quality is an issue, is the organisation prepared to invest in hiring and developing higher quality staff? "Thinking through these possible scenarios and building commitment and willingness to act increases the probability that the organisation will actually implement the necessary actions." (Guenole *et al.*, 2017).

Step 2: Build hypotheses

Hypotheses allow you to test beliefs about the causes of business issues. They determine the data you need to gather and the most appropriate types of analysis for the problem at hand.

The Oxford English Dictionary defines a hypothesis as "a supposition or proposed explanation made on the basis of limited evidence as a starting point for further investigation." An example might be: "Graduates are higher performers than non-graduates." Hypotheses can be tested to discover what's underlying the

issue – for example, "We are losing our best people because we are paying less than competitors" – or to test the effect of a policy change – for example, "If we provide all employees with a fitness tracker, we will reduce our healthcare bill."

One of the biggest risks in analytics projects is being tempted to dive straight into the data before having a really clear list of the critical business issues and developing a comprehensive list of hypotheses around those business issues.

You can use existing research to determine which hypotheses to analyse. "The questions that really matter have been under investigation longer than most other business topics. What determines a good hire, for example, has been studied in almost the same way since WWI" (Cappelli, 2017). It is therefore extremely important that those responsible for analytics are aware of relevant research in organisational psychology and other fields that might have a bearing on the business questions they are testing.

Nigel Guenole, Executive Consultant at IBM and one of the authors of *The Power of People* (2017), said: "Developments in behavioural science should be playing an important role in this field. For example, the correlation between personality dimensions such as conscientiousness and performance has been shown to be more or less the same across similar roles in different organisations. If you don't have a strong research design, there's little point trying to test relationships like this that have already been shown to exist again and again by occupational psychologists – you're better off building on what we already know. You might choose to check whether what's reported in the scientific literature plays out in your

organisation, but you should always start with what the science says. If you get a different result, it probably means your study is flawed."

Some organisations have built links with university psychology departments to provide insights on the academic theory underpinning key issues being explored by the analytics function. For example, Unilever has built a partnership with University College London, and ING has a PhD student in occupational psychology working within the people analytics team.

Step 3: Gather data

You can't complete an analysis without data, but which data do you need? Each project will require different sets of data, depending on the nature of the issue that's being analysed. The following questions can help determine how to approach data gathering.

- Existing or new data? Our interviewees for this research said that one of the main barriers to deploying analytics effectively in their organisation is the quality of data available. Indeed, 51% of respondents to the CRF survey said quality of HR data was a 'reasonably' or 'highly significant' barrier to their analytics efforts, and 43% said lack of access to, or poor quality of, business data was a 'reasonably' or 'highly significant' barrier. However, the data required to shed light on the issues identified in the causal model may not always be available, so sometimes it is more effective to generate new data. This might mean interviewing stakeholders, conducting pulse surveys, or running experiments, for example. Nigel Guenole said: "We often see a preoccupation with exploring existing data, when to really answer questions you sometimes need to go out and source new data."

"THE REAL VALUE COMES WHEN YOU CAN CROSS REFERENCE PEOPLE AND BUSINESS DATA. IT JUST MAKES SENSE – IF YOU WANT TO KNOW WHAT DIFFERENTIATES YOUR TOP-PERFORMING CALL CENTRE PEOPLE, FOR EXAMPLE, YOU HAVE TO LOOK AT BUSINESS PERFORMANCE DATA."

Brydie Lear, Global Head HR Intelligence & Analytics, ING Bank

- **HR data or data from other internal business systems?** HR systems alone will rarely yield the breadth of perspectives and data needed to identify and overcome the barriers to strategy execution. To build a complete model of the various motivations and behaviours behind the outcomes you see in the business, you will usually need to combine data from a number of different data sources, including, for example, finance, business performance and sales data as well as employee and organisation data. Julia Howes, Principal, Strategic Workforce Planning & Analytics Lead, Europe & UK at Mercer, said: "When people think about workforce analytics they tend to think in silos. The more successful projects I've seen bring in a range of different quantitative and qualitative data – that might be focus group data, engagement survey data, business data, or interviews. Looking at a single set of data in isolation – an engagement survey, say – makes it hard to interpret what's going on, or easy to misinterpret. Once you build some context by combining quantitative and qualitative data, that's when you start getting deeper insights." The CRF survey suggested this is a challenge for the HR function. Only 40% agreed with the statement: "HR in my organisation is good at analysing a wide range of both HR and business data (from a range of different functions) before making decisions," and 45% disagreed. See Figure 7.

- **Internal only, or internal and external data sources?** External data sources such as demographic and economic data, business surveys, LinkedIn data or published scientific research, can be extremely valuable.

Figure 7: HR in my organisation is good at analysing a wide range of both HR and business data (from a range of different functions) before making decisions.
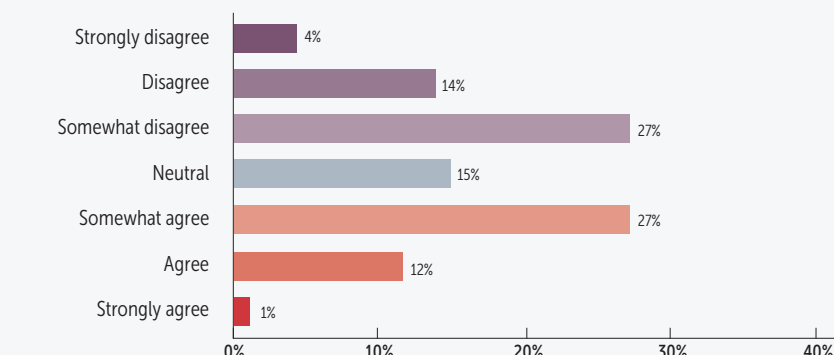
Source: CRF member survey, 2017

- **Perfect or 'good enough' data?** It's easy to get caught in a never-ending cycle of cleaning data, without moving on to meaningful analysis. "A good data scientist understands when data cleaning reaches the point of diminishing returns, at which point it's time to get on with the analysis". (Levenson and Fink, 2017). Dave Millner, Executive Consulting Partner at IBM Workforce Science, said: "Often, HR people think the data need to be 100% right. While that's true for some types of people data, when it comes to workforce analytics, 80% right is usually good enough. You need enough good quality data to be able to make meaningful connections and tell a coherent story."

- **Quantitative or qualitative data?** Analytics does not always require crunching together large data sets using complicated mathematical formulae or sophisticated statistics software packages. Sometimes the opinions of key stakeholders can be as valuable as 'big data'. Alexis Fink, General Manager, Talent Intelligence & Analytics at Intel, said: "It's tying together quantitative and qualitative data that usually leads to better insights. Qualitative data tells you the story behind what you observe in the quantitative data. When you are diagnosing issues within a work

The key to getting the data-gathering approach right is to start with the business question, and build a picture of what data may help shed light on the problem, rather than starting with what data is already available. Alexis Fink said: "Simply relying on the data at hand is a bit like the old parable of the gentleman looking for his keys under the streetlamp. Others helpfully join, but can't find the keys, and eventually ask if he's sure this is where he lost them, to which he replies, 'No, I lost them over there, but this is where the light is!' Examining convenient data will get you started quickly, but in the end is unlikely to yield what you are looking for."

"THE DATA YOU NEED TO MAKE STRATEGIC DECISIONS DOESN'T HAVE TO BE PERFECT."

Julian Holmes, Director, OrgVue

DATA GATHERING – ETHICAL AND LEGAL CONSIDERATIONS

Workforce data is often highly sensitive, and organisations need to exercise great care in deciding what data to collect and what to do with it. For example, it is possible to monitor the content of people's emails, but most organisations would shy away from what they would consider to be a highly intrusive practice. Increasing amounts of data are available from sensitive sources such as wearable technology and mobile phone records, placing an even greater responsibility on employers to exercise discretion.

Legal standards differ country to country, and organisations with employees in different regions will need to take account of this when determining data policies. In the US, data generated by employees at work is judged to be the company's property, but in Europe, the balance of control is more in favour of the employee. That balance will shift further towards employees when the General Data Protection Regulation (GDPR) comes into force on 28th May 2018. The requirement to consult with employee representatives or works councils in some countries puts even greater onus on the employer to be clear about the purpose of gathering data, and the potential benefits to the employee of doing so.

Many of the companies we interviewed found that seeking consent from employee representative groups helped clarify their thinking about the purpose of gathering data – and whether collecting data was even necessary. For example, IBM had to get sign-off from the HR Director and employee representative groups in each country before it could roll out its Social Pulse employee sentiment analysis tool (see Chapter 3). David Green, People Analytics Leader, said: "The good thing about going through that process is you really have to think about what benefit it brings to employees; if you can't clearly answer that question, you need to rethink why you are doing it."

However, seeking consent can be challenging. Phil Pringle, Head of Insight and Engagement at Whitbread, said: "The challenge is, when you ask for the employee's consent, you're not necessarily sure at that point of all the questions you may want answers to, so you can end up only being able to gather incomplete data."

HR needs to tread a careful line between acting as an employee advocate and driving better business performance. Ethical employers need to be transparent about the data they gather and what they use it for.

system, qualitative data gathered from interviews will give you around three-quarters of what you need to know. The qualitative analysis helps you identify the issue, and you can then use quantitative data to prove or disprove the hypotheses you want to test. The reverse can also be true: quantitative data can help identify where there is a problem, and qualitative work can help pinpoint the nature and nuances of the problem so you can go about solving it."

Step 4: Conduct analyses

This is the part many people consider to be the essence of analytics. In this step, you analyse data to test the hypotheses. The analysis provides the basis for insights which, in turn, drive actions. Success at this stage depends on having completed the preceding steps – and by 'success' we mean that you are able to act on the insights gained in a way that leads to improved organisational performance.

Choosing the right method of analysis is key, because this determines the validity of the results. It is at this stage that expertise in data science and statistical methods is critical.

However, not all projects will require the application of sophisticated data analysis techniques, such as regression analysis. Sometimes it's sufficient to simply present the data available in a way that's easy to understand and visually compelling. According to Van der Togt and Rasmussen (2017): "Decent management information often already generates 80% of the value without sophisticated analytics because it allows fact-based diagnostics and decisions."

Even in cases where high-powered statistics are called for, you need to be able to explain the results in a simple

and straightforward way. The results of any sophisticated statistical analysis have to be explained by showing simple data comparisons. For example, rather than showing a regression analysis explaining why one group of employees is more likely than others to leave the organisation, you have to tell the same story in a simple summary table. For example, 'this group is likely to feel less happy than others about their jobs, their supervisors, their career prospects and so on'. You might need a high-powered regression analysis to validate the model of employee turnover, but you can and should illustrate the results using more basic comparisons that the audience can easily understand.

Step 5: Reveal insights

The results of the analysis may be interesting, but it has to deliver clear and relevant insights that you can act on for it to be of value. Raw data or analysis without interpretation will not be helpful to business leaders. You need to interpret the analysis for them in a way that they can then act on.

Guenole *et al.* suggest testing the importance of insights by asking the following questions.

- What does the insight tell me? Does it matter?

- Does this insight relate to the business question?

- Is this insight unique or just another twist on a familiar topic?

- Is the insight clear?

- What actions might result from this insight?

Source: Adapted from Guenole *et al.*, 2017

"ONE OF THE FIRST THINGS YOU HAVE TO DO IS AGREE A COMMON LANGUAGE, SO YOU KNOW YOU ARE ANALYSING THE SAME THINGS CONSISTENTLY ACROSS DIFFERENT PARTS OF THE ORGANISATION. FOR EXAMPLE, WHAT DO WE MEAN BY 'HEADCOUNT'? IS IT FTE'S? DO WE INCLUDE TEMPORARY WORKERS? WHAT DO WE MEAN BY 'CRITICAL TALENT'?"

Alessandra Cavalcante, Global Talent & Performance Management, LafargeHolcim

Step 6: Determine recommendations

However useful the insights revealed by the analysis, business leaders and project sponsors need guidance on what actions to take to drive change within the business. Guenole *et al.* suggest the key question to ask here is: "If my insight is important enough to highlight, then what should the business do about it?" Analytics projects are not complete until they result in a decision. That decision may be to implement a change or maintain the status quo – but in either case it is an informed decision. As we highlight in Chapter 4, the skill sets of the data scientists and other specialists who work on analytics projects are a critical success factor. It is not enough to be an expert statistician or Python programmer; analytics professionals need good business acumen and political awareness to understand not only what actions might be appropriate, but also how feasible they are in their particular organisation. They also need strong consulting and influencing skills in order to win the backing of senior sponsors to implement the proposed actions.

Step 7: Get your point across

The analysis obviously has to be correct and accurate, but you need to present the results in a compelling way if you are to persuade those in the organisation who are in a position to initiate change of the need for action. You need to communicate the findings to key stakeholders in a way that allows them to quickly get to the nub of the issue and understand what their options are. Otherwise you run the risk that valuable, business-enhancing analysis will sink without trace.

Therefore, the ability to visualise and present data in a way that tells a compelling and coherent story is as important a skill in successfully deploying analytics as the ability to conduct statistical analysis or run pivot tables in Excel.

The ability to tell a story with data is an important capability for translating data and analysis into something that business leaders can act on, and creates an impetus for change. CRF's 2014 research report *Storytelling: Getting the message across,* explores in more detail how to use storytelling effectively in organisations.

Step 8: Implement and evaluate

Analysis that does not drive decision making is of little value. However, making sure the recommendations are followed through with action is a significant challenge for many analytics initiatives. This is especially true where projects are led by analytics experts who sit in a silo within the HR function, without business sponsorship or direct accountability.

Our research highlighted some practical ways of addressing this challenge.

- **Implementation begins at project set-up.** Identify a project sponsor in the business and make sure they are engaged all the way through. Engage with key stakeholders regularly throughout the project. Build links with HR business partners so they act as a bridge between the workforce analytics and business teams. Make sure the project has input from change management experts throughout, not just at implementation stage. Determine at the outset what decisions/actions the business might be prepared to take as a result of the analysis. Be clear from the start who will be accountable for implementation.

- **Build links to the business planning and budgeting processes.** Feeding in data-driven insights at the right time will improve the likelihood that the resources required for implementation are made available.

- **Use insights to drive HR policy decisions.** One way to ensure that insights have a business impact is to use them to redesign policies that have a broader application across the organisation. For example, Unilever investigated the return on investment in its expatriate programme. It looked at factors such as expat performance before, during and after assignments, promotion rates and tenure, and compared these across two different groups: longer-term assignments, which normally involve relocating family members and are more expensive, and shorter-term assignments. The analysis has allowed the company to develop much clearer guidance around which type of engagements are most suitable for particular circumstances. "What this has enabled us to do is make significant policy changes to target our expat investment to the circumstances where we are more likely to see a higher return," said Nicky Clement, Vice-President HR, Organisation Effectiveness, Performance & Analytics at Unilever.

- **Follow up to ask business sponsors what they have done with the recommendations.** Some of our interviews with heads of analytics included comments along the lines of: "I've no idea what the business did with my work once it was completed." Simply throwing the results over the fence is not good enough. Heads of analytics should also be responsible for demonstrating that their recommendations resulted in positive business outcomes. This also requires them to monitor how models are working, and whether the predictions they are making are correct.

"JUST FINDING RELATIONSHIPS IS NOT NEARLY ENOUGH; YOU NEED TO FIGURE OUT WHAT TO DO WITH THE RESULTS YOU FIND – AND THIS MAY BE THE HARDEST PART OF ALL."

Josh Bersin, Principal, Bersin by Deloitte

- **Demonstrate the implications of doing nothing.** Ian O'Keefe, Managing Director of Workforce Analytics at JPMorgan Chase, uses statistical models to predict what the outcomes would be if the organisation didn't act on the recommendations, and shows these to stakeholders. "This way we can show them that there's a pain in the business that they don't have to live with."

- **Launch experiments.** Many organisations choose to test new ideas on a limited scale before rolling them out further, rather than taking a risk on a 'big bang' approach. For example, companies in the retail sector typically pilot new ways of organising work, designing jobs and/or paying people in a limited number of retail store outlets, and compare the results to a control group of sites where no changes are implemented. Companies with multiple manufacturing sites, warehouses and/or, distribution centres will do the same, as will companies with geographically dispersed business-to-business sales teams. More unusually, it's also possible to do pilots at a smaller scale within a site, such as when Google experimented with ways to get its employees to eat more healthily. The company determined that shrinking the plate size in some of its employee restaurants, where free food is served, lowered food consumption by 5% and waste by 18%.

- **Communicate successes.** It's important to share stories of the positive impact of workforce analytics initiatives in order to encourage others. For example, in Microsoft, all communication on workforce analytics is tagged with #datadrivenHR, making it easy for people to look up and share success stories.

It's important to pay attention to the possibility of change overload. "The organisation cannot [successfully] absorb more than a few interventions based on analytics-derived insights at the same time," say Van der Togt and Rasmussen (2017). "[At Shell] we regularly do a review of potential projects in terms of potential business value (operational, financial) and in terms of the likelihood of deriving actionable insights from the predictive analytics we do."

Evaluation

Another key element of implementation is to evaluate whether the predicted benefits of implementing the recommendations were actually realised. Key questions to focus on include the following.

1. Did the predicted outcomes actually happen? If they didn't, was the analysis wrong or did circumstances change?

2. Did the insights deliver the anticipated business value?

3. If you have built a model that will be used on an ongoing basis, such as a model that predicts attrition, how will you keep it up to date to reflect changing circumstances? Should you revise it annually, or more or less frequently?

You need to plan for evaluation at the start of the project, by answering a number of questions. How will we know whether the project has been a success? What measures do we need to track? Can we monitor control groups in order to compare what would have happened if we hadn't taken the action?

Nigel Guenole suggests that organisations should subject their analytics projects to a rigorous review by either internal or external experts to determine the validity of the methods used and the accuracy of the conclusions reached. "This review step really keeps you honest, it helps to work out how much faith you can have in your conclusions", he said.

Keeping models up to date

We hear a lot about organisations building models that predict the risk/likelihood of certain outcomes – the attrition of business-critical groups of employees being a typical example. As we discuss further in Chapter 3, predictive models only work where the conditions that were analysed in order to construct the model remain constant over time. Many organisations operate in fast-changing business contexts, so models may not hold true for long. It's important to monitor the accuracy of your predictions over time and take action where actual or expected outcomes are beginning to diverge substantially from what you originally predicted. Julia Howes said: "Typically we will find that a model becomes less accurate after a year or two. You need to compare the prediction to what actually occurred on a regular basis. Once there is too much divergence, then the model is no longer applicable. Unfortunately, not many organisations are sufficiently mature, or have the discipline, to put this in place."

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WHAT IS THE CURRENT STATE AND APPLICATION OF WORKFORCE ANALYTICS?

In this chapter we present the findings of the CRF survey conducted as part of this research. The survey explores the current state of workforce analytics, key challenges and opportunities. In the second part of the chapter we set out some case studies that give a flavour of how organisations are using workforce analytics to tackle key business issues.

TOPICS COVERED

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WHAT IS THE CURRENT STATE AND APPLICATION OF WORKFORCE ANALYTICS?

"YOU HAVE TO USE ANALYTICS TO MAKE CHANGE. WHERE IT TENDS TO FALL DOWN IS WHERE THE ANALYSIS ENDS UP SITTING IN SOMEONE'S DRAWER FOR MONTHS WHILE THEY THINK ABOUT WHAT IT ALL MEANS. THE ANALYTICS PROCESS NEEDS TO SHIFT ITS PERSPECTIVE FROM 'I'M GOING TO GIVE YOU SOME INSIGHTS' TO 'I'M GOING TO HELP YOU DECIDE WHAT ACTIONS TO TAKE'."

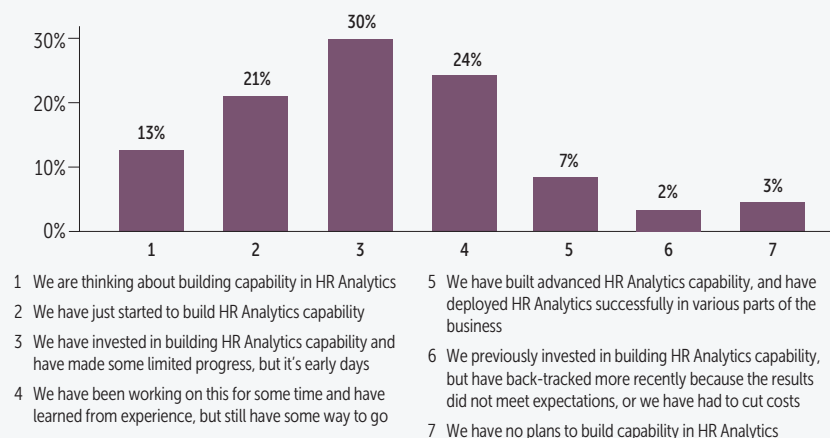Chris Barkataki, Principal Consultant and Workforce Intelligence Lead, KPMG

3.1
FINDINGS OF THE CRF SURVEY

In the second half of this chapter we highlight some stories about performance improvements organisations have made using workforce analytics. However, such stories are few and far between because most organisations are in the very early stages of developing their capability in this field. Our survey showed that it's early days for workforce analytics. 21% of respondents have just started to invest in building analytics capability in HR, a further 30% have made some investment, and 13% are only at the stage of thinking about building capability. Nearly one-quarter (24%) have made further progress but still have some way to go. A mere 7% judge their organisation to be reasonably advanced, having deployed workforce analytics successfully in various parts of the business. Interestingly, only 2% had

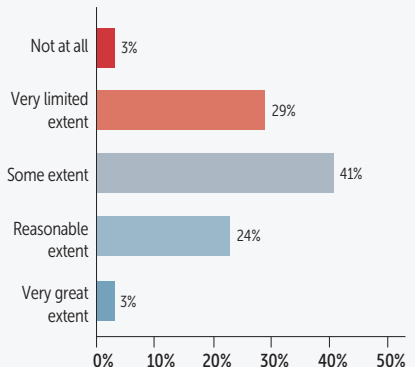backtracked on previous investments due to poor results or cost cutting. See Figure 8.

Organisations' lack of progress in deploying workforce analytics to improve performance is disappointing. Only one-quarter (27%) of respondents said their HR analytics capability allowed them to identify opportunities to improve business outcomes to a 'reasonable' or 'very great' extent, though a further 41% said they had achieved this 'to some extent' (see Figure 9). Similarly, only 14% said they had used HR analytics to successfully predict outcomes and take action to drive different outcomes to a 'reasonable' or 'very great' extent, and a further 32% had achieved this 'to some extent' (see Figure 10). Only 19% had been able to use HR analytics to demonstrate the relationship between

Figure 9: To what extent does your organisation's HR analytics capability allow you to identify opportunities to make decisions that result in improved business outcomes?

Source: CRF member survey, 2017

Figure 8: Which of the following most closely reflects your current situation with regard to progress made in your organisation so far in deploying HR analytics to improve organisational effectiveness?


1 We are thinking about building capability in HR Analytics

2 We have just started to build HR Analytics capability

3 We have invested in building HR Analytics capability and have made some limited progress, but it's early days

4 We have been working on this for some time and have learned from experience, but still have some way to go

5 We have built advanced HR Analytics capability, and have deployed HR Analytics successfully in various parts of the business

6 We previously invested in building HR Analytics capability, but have back-tracked more recently because the results did not meet expectations, or we have had to cut costs

7 We have no plans to build capability in HR Analytics

Source: CRF member survey, 2017

Figure 10: To what extent has your organisation been able to use HR analytics to successfully predict business outcomes and take action to drive different outcomes?

Source: CRF member survey, 2017

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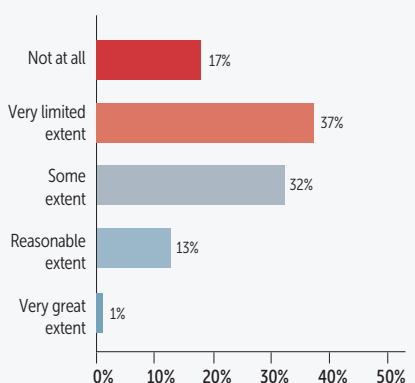
"IT'S A LONG JOURNEY TO GET TO A POINT OF USEFULNESS. FEW 'TRADITIONAL' HR PEOPLE HAVE AN ANALYTICAL OUTLOOK, INTEREST OR SKILLS TO USE THE INSIGHTS THAT WE CAN PROVIDE."
CRF survey respondent

HR programmes and business outcomes to a 'reasonable' or 'very great' extent, and a further 32% 'to some extent'.

When weighing up the costs and benefits of workforce analytics, our survey results suggest that a substantial proportion of organisations don't know whether they are getting a decent return on their investments. It's encouraging that 41% reported that the business benefits 'somewhat' or 'substantially' exceed the costs (compared with 14% who said the costs exceed the benefits), but 28% weren't able to determine whether or not their investment represents value for money (see Figure 11).

Our survey results indicate a gulf between the rhetoric and reality of workforce analytics. Organisations have some way to go before they are able to reap the promised benefits consistently.

Evidence suggests that larger organisations are further ahead. A report by the New Talent Management Network concluded: "Despite people analytics having the potential to revolutionise the field of human resources, very few organisations outside of the largest (>$100bn annual revenue) are measuring anything but the basics using basic tools." The CRF survey results support that conclusion, with larger organisations reporting as good or better results than smaller organisations with respect to the success of workforce analytics. For example, larger organisations (10,000 or more employees) are more likely to indicate they use analytics to identify opportunities to make decisions that result in improved business outcomes, and to demonstrate the relationship between HR programmes and business outcomes. Larger organisations also have invested more in upskilling HR generalists

and HR business partners in data and analytics, and are more likely to have an internal workforce analytics team.

Data quality

In Chapter 2 we discuss how to gather data and review some of the issues organisations are wrestling with when constructing the data sets they need to create effective analytics. Our survey suggests that data quality is a substantial barrier for many organisations. Only 36% of respondents said business leaders frequently or always trust HR data as being consistently accurate and reliable (see Figure 12), and the quality of HR data, and access to and quality of business data, were the second, third and fifth most commonly reported barriers (see Figure 13 on page 32).

The CRF survey asked respondents to report the extent to which a number of factors commonly reported as barriers to successful implementation of analytics play out in their organisation. Figure 13 on the following page sets out the full results. The principal barriers are grouped around two themes: the availability and depth of analytical capabilities, and the quality and availability of data.

Figure 11: **When you look at the cost of HR analytics vs the business benefits, which of the following statements most accurately reflects your experience so far?**
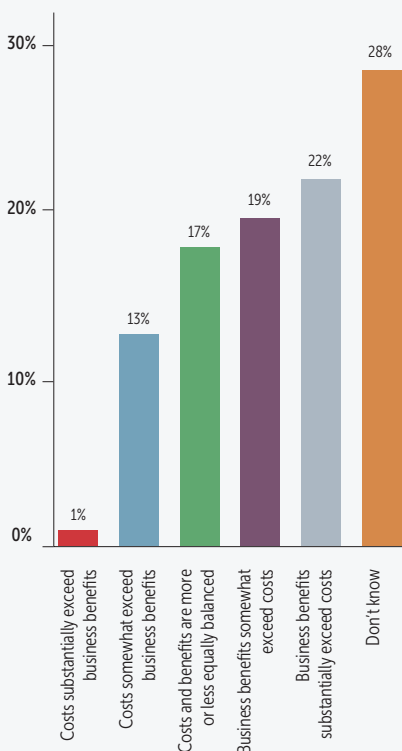
Source: CRF member survey, 2017

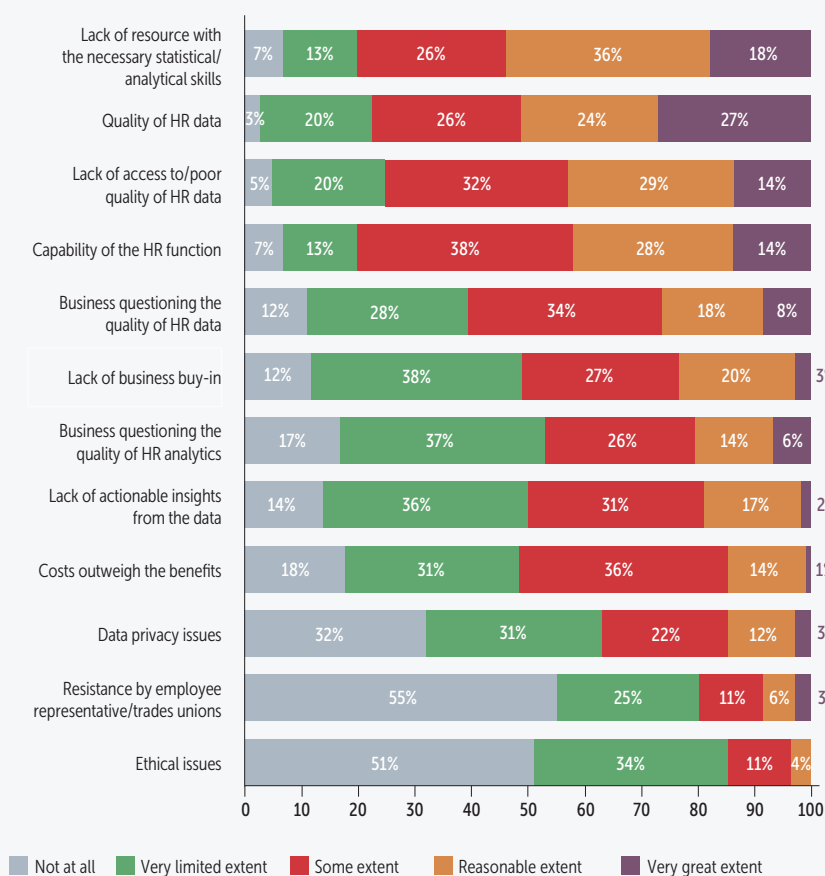**Figure 12**: **Business leaders trust HR data as being consistently accurate and reliable.**

Source: CRF member survey, 2017

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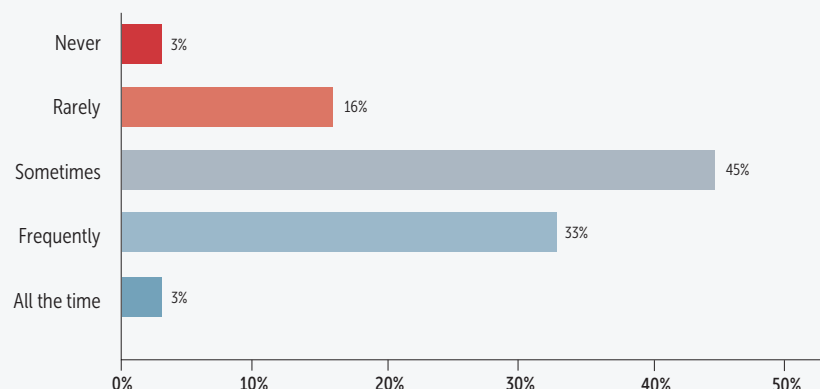
"ANY MODEL IS ONLY EVER AS GOOD AS THE PEOPLE WHO PUT IT TO USE IN THE BUSINESS. ANALYSIS WITHOUT ACTION IS NOT GOING TO MAKE ANY DIFFERENCE TO BUSINESS OUTCOMES."

Wendy Cunningham, HR Director, Global HR Strategy & Services, Experian

Figure 13: To what extent does each of the following create a barrier to deploying HR analytics to improve business outcomes in your organisation? Ordered by greatest to least significant barrier.

	Not at all	Very limited extent	Some extent	Reasonable extent	Very great extent
Lack of resource with the necessary statistical/analytical skills	7%	13%	26%	36%	18%
Quality of HR data	3%	20%	26%	24%	27%
Lack of access to/poor quality of HR data	5%	20%	32%	29%	14%
Capability of the HR function	7%	13%	38%	28%	14%
Business questioning the quality of HR data	12%	28%	34%	18%	8%
Lack of business buy-in	12%	38%	27%	20%	3%
Business questioning the quality of HR analytics	17%	37%	26%	14%	6%
Lack of actionable insights from the data	14%	36%	31%	17%	2%
Costs outweigh the benefits	18%	31%	36%	14%	1%
Data privacy issues	32%	31%	22%	12%	3%
Resistance by employee representative/trades unions	55%	25%	11%	6%	3%
Ethical issues	51%	34%	11%	4%	

Source: CRF member survey, 2017

We also asked respondents to share the limitations and disappointments they had encountered when implementing workforce analytics. The following common themes emerged.

- **Many organisations are falling at the first hurdle:** they are finding it hard to produce quality analysis due to outdated systems, poor quality data and poor access to data. In some cases there is a lack of joined-up thinking across organisation silos, which makes it difficult to combine data to extract meaningful insights into the factors that drive business outcomes. The workforce analytics function needs to pay attention to this: "There is a risk that the central analytics centre of excellence becomes an ivory tower and is disconnected from the business," said one CRF survey respondent.

- Some organisations are so focused on getting the basics right – such as getting data in good shape – that they lack bandwidth to tackle higher-order issues. In many cases this is compounded by HRIS implementations or HR 'transformation' programmes, which can lead to HR being introspective rather than supporting the business in executing strategy. One survey respondent said: "We are focused on HR transformation at the moment, so there is no time and capacity for analytics." It is ironic that the HR systems projects that you might expect to bring analytics capability into HR are instead distracting the function from building its ability to understand and respond to what the business needs.

- **It is harder for workforce analytics to gain traction in organisations that lack a data driven culture,** or where business leaders have no appetite for or appreciation of the value of analytics. In some organisations this is compounded by an HR function with low credibility as a business partner.

- Of those organisations that do manage to generate insights from data analysis, **many find it difficult to tie those insights back to clear actions that drive improvements in productivity and business performance.** One survey respondent observed: "There's a lack of follow-through on insights. Often the actions get put aside and attention turns to the new topic that's creating a buzz."

- Comments from workforce analytics professionals reflect the **challenges they face in making sure their work is used to drive change.** The following are typical: "We are often brought into the conversation too late" and "We end up producing information that gets ignored by the business."

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On the positive side, aside from the specific projects and examples discussed in the next section, there is evidence that investment in workforce analytics can help HR support the business in delivering its agenda, which is helping to build HR's credibility. One respondent commented: "Our use of analytics has helped improve HR's credibility with finance. Now we work much more closely with them on business planning." Another said: "Where analytics has had the greatest impact so far is in building the profile of HR as data driven, professional and in touch."
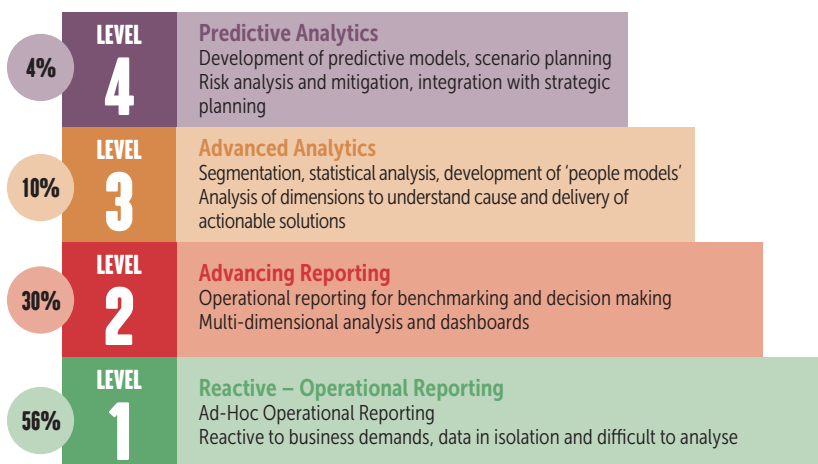
Can we really 'predict' outcomes with analytics?

When we talk about 'predictive' analytics, what we actually mean is using statistics to determine the probability of something happening in the future, based on what we have observed in the past. Obviously, predictions tend to be more accurate when the circumstances in which they are made remain the same in the future. However, the more dynamic the situation, the less accurate predictions are likely to be because prediction models can't anticipate the nature or extent of the changes ahead. "The problem is that prediction doesn't work when you are in the middle of industry disruption. Look at predicting turnover, which is where many people start: a predictive model might tell you who you are likely to lose, but it won't tell you who you should lose, or who you need more of," said Alexis Fink, General Manager, Talent Intelligence & Analytics at Intel.

A WORD ON MATURITY MODELS

Workforce analytics is a relatively new discipline, and many organisations are still in the very early stages of adopting analytics. Some consultancies have developed 'maturity models' that describe a typical journey that organisations follow as they implement analytics. Figure 14 shows one of the more commonly cited models, Bersin's Talent Analytics Maturity Model.

Figure 14: Talent Analytics Maturity Model

4%	**LEVEL 4**	**Predictive Analytics** Development of predictive models, scenario planning Risk analysis and mitigation, integration with strategic planning
10%	**LEVEL 3**	**Advanced Analytics** Segmentation, statistical analysis, development of 'people models' Analysis of dimensions to understand cause and delivery of actionable solutions
30%	**LEVEL 2**	**Advancing Reporting** Operational reporting for benchmarking and decision making Multi-dimensional analysis and dashboards
56%	**LEVEL 1**	**Reactive – Operational Reporting** Ad-Hoc Operational Reporting Reactive to business demands, data in isolation and difficult to analyse

Source: Adapted from Bersin by Deloitte, 2014

In most organisations, the implementation of analytics rarely follows such a neat progression. In fact, according to Nigel Guenole, most organisations are likely to need all forms of workforce analytics to work concurrently. "Organisations don't have to follow a linear progression through ever more sophisticated levels of capability. Instead, they should focus on developing the analytics capability they need to solve their most pressing business challenges, whether that involves reporting or predictive analytics", he said.

Indeed, fixating on getting one level right before progressing to the next can be counter-productive. "The desire to move through a maturity curve is a red herring," said Julia Howes. "The traditional advice of starting with a quick win and building the foundations before progressing to more sophisticated projects doesn't work. People say they will sort their data first, then build dashboards, then get to the most sophisticated analysis later, but they often get stuck on the first step. Cleaning data is an endless task with little added value. It's better to focus on the business issues you need to solve and build the data you need to answer those questions."

Lorenzo Canlas, formerly Head of Talent Analytics at LinkedIn, used a 'leapfrog' approach to do some meaningful analytics work without having to wait for a lengthy data centralisation and cleaning process to complete. He managed demand from the business by minimising ad-hoc and operational reporting, while building infrastructure to automate reporting dashboards. In parallel, he made sure each analyst dedicated 40% of their time to answering analytical questions that addressed specific business problems. "The result of our leapfrog strategy is that our maturity development has not been linear. At the same time, we are always working on some combination of manual reporting, automated dashboards, and predictive modelling."

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"YOU DON'T NEED TO EXPEND THE SAME DEGREE OF EFFORT ON RETENTION IN EVERY AREA OF THE BUSINESS. FOCUS ON IDENTIFYING THOSE PARTS OF THE WORKFORCE THAT HAVE GREATEST IMPACT ON THE BUSINESS, WHICH ARE MOST DIFFICULT TO HIRE, TRAIN, REPLACE OR RETAIN, AND FOCUS YOUR ENERGY THERE."

Julian Holmes, Director, OrgVue

3.2
CURRENT PRACTICES AND EXAMPLES

In this section we highlight some of the current applications of workforce analytics, illustrated by case examples from our research. The CRF survey asked respondents to describe how they were using workforce analytics to improve both business and people outcomes. The following themes emerged.

Business outcomes	People outcomes
• Building a more data-driven culture and supporting better decision-making and evaluation of outcomes	• Improving the quality of HR reporting
• Improving cost efficiency and operational performance through people	• Modelling the causes of turnover
• Enabling global expansion	• Organisation and work design – assessing spans of control etc.
• Understanding the drivers of higher sales performance, and improving sales force performance	• Assisting talent management and succession planning and assessing potential
• Improving relationships with customers/ customer satisfaction	• Workforce planning – analysing specific labour markets, helping with site location strategy
• Better workforce planning and strategic resourcing	• Linking engagement with performance, safety, quality, productivity etc.
• Driving innovation	• Supporting diversity programmes
• Understanding how work gets done in the organisation through informal networks	• Modelling policy changes such as use of expatriate assignments
• Desire to build a more agile organisation	• Building more data and evidence-driven recruitment processes
• Supporting the integration of mergers and acquisitions	• Supporting wellbeing initiatives
	• Reward – helping with equal pay reporting, modelling different pay practices, improving the effectiveness of sales incentive

3.3
ANALYSING TURNOVER

We find that many organisations start using workforce analytics to identify the causes of or predict staff turnover, so they can understand how to reduce it. Turnover is a business-critical issue in some organisations because it affects their ability to serve customers, manage operations or fill key roles. However, some companies analyse turnover simply because they can. Julia Howes said: "Often people focus on turnover because it's an area where the availability and quality of data is high, and you can achieve a quick win." However, it is more sensible to first determine whether there is a business case for looking at turnover, and embarking on analysis only if the case stacks up. And turnover is not always a bad thing. Haig Nalbantian, Senior Partner at Mercer, said: "Turnover can, in fact, help triage poor performers, open positions to enable career advancement or allow for better skills matching."

Before deciding whether to focus analytics resource on turnover, it's important to answer two key questions.

- Is turnover a strategically important issue?
- Is there anything the organisation can do to address the issue?

If the answer to either of these questions is no, it may be better to switch the focus of your analytics efforts onto more strategically critical issues.

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Experian

Two years ago, staff turnover was an issue that was attracting the attention of the executive team at Experian, the credit reporting company. "Attrition was 3-4% higher than the executive team wanted it to be, and there had been regular discussions about what actions we should take. We knew reducing turnover could add significant value to the bottom line," said Olly Britnell, Head of Global Workforce Analytics.

Britnell's team built a model that predicts turnover by analysing around 200 attributes that might drive 'flight risk', such as team size and structure, supervisor performance and distance/length of commute. Given Experian's core business capability in analytics, Britnell's team was able to work with the internal experts who were responsible for the company's credit scoring model, and they built the resulting employee turnover model using the same methodology. The model provides a risk score for every employee in the organisation, based on data from a wide range of sources – including the HR system and consumer profiling data. Managers can also use the model to test options for reducing the turnover risk for key individuals or groups, and to build retention plans accordingly – and they can do this at individual, team or unit level. For example, the model showed that being part of a team that comprises more than 10 or 12 people increased flight risk, and the business now uses this insight for organisation design.

Some of the insights that emerged weren't necessarily surprising, but they provided evidence to back up hunches. For example, if an employee had recently moved out of London, thereby significantly increasing their commute time, they were much more likely to leave. "The model has given us something tangible and evidence-based information to prompt action in the organisation," said Britnell. "What's powerful is being able to combine data to build an overall perspective on what's happening to any employee at any given time. This is what allows us to predict the outcomes we should expect if nothing changes."

The model is being rolled out globally by region, starting with the areas where turnover poses greatest business risk. The analysis showed that there were significant regional differences in the factors affecting turnover, so the model differs slightly between the UK, Asia Pacific and North America. "We learnt a one-size-fits-all approach doesn't work," said Britnell. "Each region is different and the types of actions you might take are different, depending on where you are." The model is refreshed every six months to check the predictions are still valid.

Over the past 18 months attrition has fallen by 2-3%, with a net saving to the business of $8-10m. It is difficult to attribute all of this directly to the predictive model, but it has undoubtedly had an impact.

Britnell believes the success of the roll-out so far comes down to two factors. One is strong business buy-in from senior leaders who value the potential contribution of analytics, combined with strong HR leadership to support the implementation. The other is that the analytics team see their role as being not just to produce a model, but also to make sure the benefits are realised in the business. "I see it as part of my team's role to keep the HR team's toes to the fire. We follow up with business partners to check what they are doing about those people who have been identified as high risk. We also find that the more accurate our predictions, the more that gives us permission to push a bit harder to make sure actions are being followed up," said Britnell.

IBM

IBM's Chief HR Officer commissioned IBM's workforce analytics team to identify the sources of high turnover in certain business critical roles. The team used IBM's Watson machine learning platform to build an algorithm to understand the attributes of people who were leaving. Watson pulled in data from a host of sources including recruitment, performance, tenure, promotion history, distance from the office and commute, role, salary, location, job role etc. The company also added in data from its internally developed employee sentiment analysis tool called Social Pulse, which monitors posts and comments made by employees on Connections (IBM's internal social media platform). Data from Social Pulse was included based on the hypothesis that an employee's engagement with social media might fall when they are thinking of leaving the firm.

David Green said: "Building the algorithm is only the first stage. It's helpful to understand what's driving people to leave, but it doesn't actually help resolve the problem." The next stage was to test whether it was possible to identify people at risk of resigning, with a reasonable degree of accuracy and reliability and far enough in advance to be able to do something about it. Green said: "Now we can not only identify those at risk six to nine months out, we also prescribe what the next best action will be. That might, for example, be a pay rise out of the usual cycle, career development or a lateral move."

IBM found one of the critical success factors is for HR to work with line managers to ensure a higher flight

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"WHEN WE KICK OFF A PROJECT, WE ARE STARTING TO IDENTIFY THE BUSINESS MEASURES WE WILL NEED TO TRACK TO DETERMINE THE VALUE OF THE INTERVENTION. THE PAYOFF CAN BE LONG – SOMETIMES IT'S MULTIPLE YEARS BEFORE THE FULL BENEFIT IS REALISED, SO WE HAVE TO BE DISCIPLINED TO SEE IT THROUGH."

Brydie Lear, Global Head HR Intelligence & Analytics, ING Bank

risk doesn't become a self-fulfilling prophecy. "Some managers might choose to devote their energies to people in the team who are more likely to stay. We have to work hard to educate managers that there are actions they can take to prevent the predicted outcome from happening."

So far, the investment has yielded a return of around $300m over four years, and turnover in critical roles has fallen by 25%. Productivity has improved and recruitment costs have fallen.

Unilever

A key lesson from our interviews is that a predictive model for turnover is only as useful as the actions the business takes to avoid the predicted attrition happening. Unilever now produces a list of the critical talent that its model suggests are at risk of leaving. "We take this list to the business. We ask who are the people we really wouldn't want to leave. And we work with the talent team and line managers to identify actions we can take," said Nicky Clement. In the past year, a much smaller proportion of the people on the list resigned than in previous years.

3.4
IMPROVING OPERATIONAL PERFORMANCE

Some organisations are combining business and workforce data to attempt to address key business issues, such as improving performance or productivity. In this section we describe some examples.

GSK

GSK's Global Manufacturing and Supply (GMS) division is deploying analytics to predict potential changes in manufacturing quality scores and taking action as a result to improve productivity. The HR analytics team has partnered with the GSK Production System (GPS) team (which has a similar remit to lean/six sigma teams in other organisations) to build a model that flags as early as possible when problems are likely to arise in the manufacturing systems.

The model looks at various workforce, manufacturing and quality data. It produces a quarterly risk score, and shows trends in the key indicators that have been found to indicate quality outputs. "The model is helping us build a better understanding of the drivers of process 'deviations' – i.e. when the correct manufacturing process is not being followed," said Natalie Woodford, SVP HR for GMS. "These can be both people and process related. For example, we now know that the timing and quality of training has a significant impact on quality outcomes. We have found that if any one of four scores drops, there is an 80% chance of a deterioration in the corresponding risk score over the next quarter."

The outputs of the model stimulate conversations in the quality council, where appropriate actions are agreed. "Now, we can have these conversations before a drop in scores translates into issues on site, so we have time to take action to avoid the predicted outcome," said Woodford.

According to Woodford, the collaboration between HR, GPS and Quality has been a key success factor: "It has been really helpful to bring together the quality and people analytics teams. It means the analytics cover a broader organisational systems perspective. It's allowed us to make sure the questions we tackle with analytics are more precise and grounded in key business needs."

E.ON

Workforce analytics has helped the energy company E.ON tackle absenteeism. Jan Arens, Head of People Analytics, said: "Absenteeism had risen above benchmark, so we needed to determine what was driving this change." Arens' team formulated 55 possible hypotheses, tested 21 and found 11 to be valid. "We were able to debunk certain myths," he said. For example, selling back untaken holiday did not increase the likelihood of someone going off sick. What was more important was the length and timing of holidays. "Taking only one long holiday a year increased the likelihood of sickness. Similarly, taking lots of short breaks without a longer break at some point in the year was another risk factor," said Arens. "The insights have allowed us to update guidance for managers on how to handle holiday requests. We can also model various policy changes to see what impact they are likely to have and whether there might be unforeseen consequences that might increase the cost of absenteeism."

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"WE CAN GET A BIT OBSESSED WITH ENGAGEMENT DATA IN HR. THERE'S OFTEN TOO MUCH ANALYSIS ABOUT WHAT LEVEL OF ENGAGEMENT WE HAVE, AND NOT ENOUGH ABOUT WHETHER HIGHER ENGAGEMENT IS WORTH IT, OR WHAT ACTION WE CAN REALISTICALLY TAKE TO IMPROVE IT."

Dave Millner, Executive Consulting Partner, IBM Workforce Science

3.5
CONNECTING EMPLOYEE ENGAGEMENT AND PERFORMANCE

Another area of focus for workforce analytics is the connection between employee engagement and performance. However, you have to handle employee engagement carefully. Social science has shown that when people are productive, accomplish their objectives, get good feedback on their performance and are rewarded for being productive, they are generally satisfied with their jobs. In short, high performance leads to high engagement. However, it's much more difficult to show empirically that causation also runs the other way – higher engagement leads to better performance. Employee engagement scores may in fact be most useful as a tool for internal benchmarking, allowing for comparison between similar groups in different parts of the organisation.

Just as a doctor would never fully diagnose an illness simply through taking the patient's temperature, nor should HR base an organisational intervention solely on the strength of employee engagement scores. "Even worse ... is when employee survey results are used as a performance management tool, whereby managers are penalised if their team's scores do not improve sufficiently from year to year. The innocent assumption is that any improvement in measured engagement should have a positive impact on the business. Yet such an assumption ignores the fact that there is not a one-to-one relationship between engagement and performance; there is an upper limit on what can reasonably be attained." (Levenson and Fink, 2017).

Clarks

Shoe retailer Clarks conducted an analysis in its UK retail operation to determine whether there is a connection between engagement and performance. Chief People Officer, Belinda Deery said the project analysed the following key questions.

- Is there a connection?

- If so, is engagement a lead or lag indicator – i.e. does higher engagement drive better performance, or do better performing units report higher engagement?

- What is the value to the business of increasing engagement?

- Is there a point where the cost of improving business engagement starts to outweigh the benefit?

Deery said: "We already had high levels of engagement in comparison with external benchmarks. I wanted to understand – if we increase by another percentage point, what is it worth to us, and is there a law of diminishing marginal returns at work?"

Deery's team worked with statisticians who run the retailer's distribution planning systems to compare business and people data. They looked at 450 business performance data points for each store over a number of years, including store productivity, customer conversion, sales, profit and customer satisfaction, and combined this with a suite of people data including the corresponding people survey results.

The results showed that every 1% improvement in engagement was worth an additional 0.4% in terms of improved business performance. The results also showed engagement was a lead indicator, so improving engagement was likely to improve retail performance.

Key to the analysis was to understand what differentiated stores with better results, in order to identify actionable insights that could be rolled out across the store network. Having a network of similar stores allowed the team to compare like with like and set up experiments to test and learn. The project team analysed the characteristics of the top 100 performing stores, by looking at data, doing qualitative analysis – interviews with store managers – and getting academic input about what drives followership. The analysis found:

- there was an optimum team size in the store

- the length of tenure of the store manager was statistically significant – moving a store manager too soon led to lower performance.

These insights allowed the retail team to develop a blueprint for high performing stores, and enabled HR to create a store management development programme to teach managers how to lead for high engagement. Deery's team also developed an engagement toolkit – a mix of learning modules and tools allowing managers to self-diagnose based on the employee survey results for their store – that managers can use to improve performance.

According to Deery, the results are evident: "The UK retail business has

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consistently out-performed both internal targets and external benchmarks, year on year. We've grown market share too."

Shell

Safety is one of the most important metrics in the oil industry. Longitudinal research conducted by Shell's workforce analytics team has shown that employee engagement is a key driver of safety performance, which in turn drives business performance. Analytics showed that a 1% increase in employee engagement results in a 4% drop in 'recordable case frequency', a key industry safety measure.

More generally, Shell's research has shown that employee engagement is the single biggest driver of individual performance, and it has established a causal link between engagement and sales in various parts of the business.

This insight is interesting but only becomes actionable when the drivers of engagement are established. The company has found that the main determinants of engagement are team and organisational leadership. "We know that better leaders drive higher engagement, and if we move lower-performing team leaders to another team, its engagement score goes down," said Esther Bongenaar, Shell's VP HR Data & Analytics.

Shell's leadership practices have changed as a result of these insights. "We provide annual actionable feedback to line leaders on how well they engage their teams, we make specific interventions – such as retraining – with low-scoring leaders, and we have revamped our leadership curriculum," said Bongenaar.

Network analysis

One application of workforce analytics that many organisations are exploring is network analysis. This involves analysing connections between employees to determine who are the most influential and effective contributors, and to identify where the organisation might choose to take action to strengthen networks or reinforce connections. Some organisations are doing this mainly through surveys and qualitative analysis (see the AB Sugar example below), but others are taking more of a 'big data' approach, analysing email traffic and social media data to determine who the key influencers are in the organisation.

AB Sugar

AB Sugar, which employs around 40,000 people across 29 plants in ten countries, has been using network analysis for four years to support collaboration among key specialist groups such as chemical engineers and agriculture managers. The company has created communities of practice that share expertise and insight both online and through face-to-face meetings, facilitated by HR.

It has used analytics both to set up the communities, and to assess how well they are working and the value they are creating. Initially, the company asked people via a survey who they connected to in the business, and this exercise produced both metrics and a visual map of the network. Quintin Heath, AB Sugar's Group HR Director, said: "We could see quite clearly who was on the periphery of each network and who was in the core. We analysed this by various factors including gender, length of service and geography to work out key patterns." Heath has a team of four people who do the analysis and facilitate the communities.

The company has continued to use regular surveys, qualitative interviews, and data on usage of the various online networks to ask people what value they get from the communities and to identify potential network holes. Heath said: "Our analysis told us that process engineers were better connected than mechanical engineers, for example, so that led us to provide extra resource and support for the mechanical engineers."

The benefit to the company derives from opportunities for specialists to learn from each other and improve their performance. Survey analysis showed the operations community ascribed £2.6m of value to their activities last year. In one example, a colleague in China was seeking a way to reprocess waste products. Within a week, he had received advice on different aspects of the process from across the network, which led him to conclude it was not worth proceeding further. He cancelled a planned experiment, with considerable savings of both time and money.

Employee sentiment analysis

Some companies are using analytics to conduct sentiment analysis to test the 'mood' of the workforce and detect early signals of potential issues. Typically, this means correlating public data such as postings on internal social media with other data.

- JPMorgan Chase can analyse unstructured data from internal social media platforms and employee surveys to come up with a view at any point in time of the sentiment among the workforce. Ian O'Keefe, Managing Director of Workforce Analytics, said: "We have a number of listening posts to understand what people are saying about different topics. This can help leaders understand the topics being

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"THERE HAS BEEN A SURGE IN INTEREST IN EVIDENCE-BASED WORKFORCE PLANNING IN LARGER GLOBAL ORGANISATIONS. WHAT'S DRIVING THIS IS THAT ORGANISATIONS ARE UNDER SO MUCH PRESSURE FROM TECHNOLOGICAL CHANGE, GLOBALISATION, NEW COMPETITORS ENTERING THEIR MARKETS AND SO ON, THAT THEY NEED TO BE SURE THAT THEY ARE BRINGING INTO THE ORGANISATION AND DEVELOPING INTERNALLY THE KINDS OF TALENT NEEDED TO DRIVE THE BUSINESS. WORKFORCE PLANNING IS NO LONGER JUST ABOUT BUDGETING – IT'S ESSENTIAL TO MAKING SURE THE BUSINESS IS EQUIPPED FOR THE FUTURE."

Haig Nalbantian, Senior Partner, Mercer

discussed, the tone, and how that is changing over time. We are beginning to link this listening data to other data such as promotions, internal mobility and culture indicators to act as an early warning system where leaders may need to take action to avoid bigger issues developing that harm employee engagement. We also correlate tens of thousands of data points of customer data every month (such as customer feedback and business performance data by branch, account openings and closings), with feedback and data on our people. This can help us to get in front of potential business situations before they become a larger problem."

- Unilever is beginning to conduct sentiment analysis by connecting data from internal surveys with other sources such as internal social media postings, and information posted by employees and candidates on Glassdoor (the website where current and former employees anonymously review companies and their management). For example, during Kraft Heinz's unsuccessful hostile takeover bid in 2017, the company was able to get a moment-by-moment 'read' on employees' reactions to Unilever's response.

- Hitachi Data Systems is exploring using machine learning to help understand employee reactions to its ongoing business transformation. "If we can better understand who the key champions of change are, and the nature of their conversations, that can help us figure out who we need to engage, how they are feeling about the change that's going on, and what we need to do differently," said Scott Kelly, CHRO.

3.6
STRATEGIC WORKFORCE PLANNING

Several organisations are using data analytics to build strategic workforce planning capability. Examples include identifying critical skills required to execute a change in strategic direction, identifying talent to deal with predicted attrition, and improving site selection for new office locations.

Whitbread

Some organisations are using analytics to support workforce planning as part of their preparations for Brexit. Whitbread has built a model that examines the potential labour implications of Brexit. It looks at both internal and external data, including growth plans, turnover rates, demographic data, unemployment data, information on high density populations, and potential labour sources that the company has traditionally left untapped. The analysis has allowed Whitbread to identify geographical hotspots where it relies on high numbers of EU nationals, and it has enabled the business to consider some creative hiring strategies, such as targeting older demographics or inactive parents looking for flexible working arrangements. The resourcing team can then use this model to tailor the employee value proposition to the respective demographic groups it wants to target. "This is helping us prepare for a major shift in our labour market," said Phil Pringle, Head of Insight and Engagement.

AstraZeneca

The pharmaceuticals firm recently relocated its headquarters from the north-west of England to Cambridgeshire, which affected 2,000 jobs. Workforce modelling was one of the key tasks of the project team that was set up to manage the relocation. Iain McKendrick, AstraZeneca's VP HR Strategy, Planning & Analytics, seconded one of his analytics team members to the project. The analysis included modelling different hypotheses around what retention targets to set, what relocation incentives to offer, implications for the company's diversity profile, and what financial provision to make for restructuring.

McKendrick said that predicting attrition doesn't necessarily mean that you should try to stop everyone leaving. "You may instead use a predictive attrition model as part of a more integrated workforce planning system. It can be useful in gearing up your hiring plan for those areas where you are expecting to see high attrition, so you already have a full pipeline with candidates you are keeping warm, ready to fill any vacancies that arise."

Cisco

Cisco has deployed data analytics to help it determine where to set up new offices. It was finding it difficult to hire the talent it needed in its San Francisco Bay offices because of competition for talent and the high cost of living. Combining various data, including current usage rates of office space, cost

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and availability of key talent in other locations, and quality of graduates from local universities, led it to consider locations where there were fewer large players competing for the same talent, such as Austin, Texas.

Similarly, Cisco's plans for opening a new regional office changed when data showed that the local talent pool was smaller than it had thought. "We ended up choosing a different location which had more of the capabilities required to execute Cisco's strategy for that region – a workforce with good English skills and experience of working for multinationals," said Ian Bailie, Senior Director – People Planning, Analytics and Tools. "Previously, we might have gone ahead with the original site, and the recruitment team would have taken the blame for not being able to fill roles. Talent mapping helped us avoid that scenario. Now, the business sees the value in what we can do, so they come to us much earlier in the site planning phase to ask for input."

3.7
RECRUITMENT

Rentokil Initial

Rentokil Initial was experiencing considerable variation in the performance of its sales teams in different geographies. The company analysed the behaviours of its highest-performing sales professionals, and used the data to develop automated assessment techniques to select future candidates based on those behaviours. It estimates this has increased sales by 40% and delivered a return on its investment in the project of more than 300%.

The project involved the following.

- Interviewing sales leaders in different regions around the world to identify hypotheses to test.

- Exploring three hypotheses through data analysis.

  - Effective sales training delivered at the right time would develop the technical confidence needed for successful sales performance.

  - Better recognition tools would increase motivation to deliver higher sales performance.

  - A globally consistent recruitment process for sales staff would deliver higher-performing sales people.

- Combining external research on sales force performance with analysis of internal data and a workforce survey.

The key finding was that the recruitment process was inefficient, and that the correlation between the most commonly used selection tools and sales performance was very low. The

team analysed data to identify the attributes of its best sales people, then found six selection tests that effectively predicted those attributes. It asked 270 of the UK sales force to complete all six tests and assessed their results against their sales performance. It found that one test had a particularly strong relationship with sales performance. The results of the study led the team to recommend that the business should implement the highest performing test globally for all sales recruitment, that it should redevelop and standardise the recruitment process globally, and that it should introduce new induction programmes and recruitment and induction training for sales managers. From start to finish the project took two years to complete.

Google

Google is well known for using analytics to help it make people decisions, and it has deployed analytics in various ways in its recruitment process.

- Google used to put candidates through 15 – 25 interviews before deciding whether to make an offer. The process could take months, and devoured management time. Laszlo Bock, formerly Google's Head of People Operations, estimated that for every 1,000 people Google recruited, it would take 125 people working full-time to complete the assessments. Google ran a study to analyse the assessment process, and this showed that the optimum number of interviews was four. This was enough

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"WE ARE NOW HEADING TOWARDS THE POINT WHERE IT'S BECOMING ACCEPTED THAT, WITH THE RIGHT ALGORITHM AND THE RIGHT SOURCES OF INPUT, A MACHINE CAN MAKE BETTER DECISIONS ON PEOPLE THAN A HUMAN CAN. YOU COULD MAKE THE ARGUMENT THAT BUSINESSES ARE BETTER SERVED AT THE VERY LEAST BY HAVING ACCESS TO MACHINE INFORMATION ON PEOPLE. BRINGING IN SOME SORT OF ALGORITHMIC UNDERSTANDING PROVIDES A COUNTERBALANCE TO THE NATURAL BIASES OF HUMANS."

Jessica Bigazzi Foster, Senior Partner, Global Practice Leader, Executive Development, RHR International

to predict, with 86% confidence, whether someone would be a good hire. Every further interview added only 1% more predictive power and therefore would result in diminishing marginal returns. Limiting the number of interviews to four reduced the median time to hire from 90 – 180 days to just 47 days, and slashed the amount of time Google employees spent on hiring by 75%.

- Interviewers receive feedback on their ability to predict whether someone should be hired. Each interviewer sees a record of the interview scores they have given in the past, whether the candidates were hired or not, and how the successful candidates performed after hiring.

- Google surveys each interviewee, whether successful or not, about their views on the process, and uses their feedback to make refinements.

- The applicant tracking system checks candidate CVs against the CVs of existing employees. If there is an overlap – they might have been on the same course at university, or worked at a company at the same time, for instance – the system can send an automated email to the Google employee asking them whether they knew the candidate and what they thought of them.

JPMorgan Chase

JPMorgan Chase evaluated the effectiveness of campus recruitment using data analytics. The bank discovered that graduates from public universities perform as well on the job as graduates from private universities. Ian O'Keefe said: "This has changed our graduate recruitment strategy in terms of the schools we target."

3.8
TALENT MANAGEMENT

Cisco

Some organisations are using analytics tools to help build the capabilities required to execute a new strategy. For example, Cisco is moving away from its traditional focus on hardware towards a cloud-based service-driven model, with the intention of becoming a key player in the 'Internet of Things'. To achieve this strategic shift, Cisco needs to hire and develop different skills, and it is using analytics in a number of different ways to help it do this.

- **Workforce planning.** Cisco has developed models of talent flows into and out of the organisation. It looks at the companies people were hired from and where they went when they left. Often the HR system doesn't capture this data, so Cisco uses external data too, such as from LinkedIn, to build a full picture. Ian Bailie, said: "This helps us determine if we are hiring from the companies we think we should be targeting to enable Cisco's transformation, and answer questions such as: 'Are we losing people to competitors in our new business space? Are we hiring people from new generation companies but then losing them soon afterwards because the work environment or career opportunities don't suit the profile of people we are hiring from these companies?' It helps better define the employee value proposition so we can hire the right people."

- **Talent management.** Cisco is developing a talent management platform, the 'Talent Cloud', with two key objectives: to give employees the tools to drive their own career progression, and to enable Cisco to do more agile talent planning by creating greater visibility of employees' skills and experience. As the system is being built, Cisco is mapping the critical skills required for every role in the company. Employees create their individual profile on the system – or can import their LinkedIn profile and other information such as their CV. The algorithms that drive the system compare the individual's skills profile against the skills map for their role in the system. They can assess their skills against the needs of their current role, and the algorithm will suggest training courses or project assignments to fill any gaps. Employees can identify a potential career map, and the system will identify what skills they need to develop to get there and suggest ways of acquiring them. Employees can map their current skills against those needed for any other role in the company to see where they need to develop if they wish to proceed down a particular career path, or to identify other adjacent roles that they may be qualified to fill. Managers can also search for key skills they need or post live assignments that employees can apply for. Ian Bailie said: "We can map the skills needed to deliver our future business model and push out to employees to encourage them to build those skills." The system uses natural language processing, so it

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can identify, for example, that if a CV contains the phrase 'I managed X project', then that the person's profile should include project management skills. The system can also suggest adjacent skills based on other people who have added their profile – in a similar way to Amazon's 'Frequently bought together' feature. The system can also recommend training based on courses that colleagues with similar skills have taken.

IBM

IBM has built a number of 'cognitive' talent applications based on the Watson machine learning platform. Watson Career Coach helps people make decisions around career development and career transitions. There's also a system – Blue Matching – that uses artificial intelligence to match the skills of individuals with internal job opportunities and development programmes. IBMers can upload their CV and create a skills profile. The system notifies an individual when internal opportunities arise that suit their skills profile and career aspirations. The algorithm can also spot opportunities that individuals may have overlooked, or felt they were not qualified to do. David Green, People Analytics Leader, said: "Someone may have a particular career path in mind, but the algorithm might suggest a parallel career path in another part of the business where equivalent skills are needed."

Tools such as Blue Matching are also helping IBM improve its workforce planning. People are motivated to keep their profiles up to date, and that gives the firm a more accurate view of the available skills base. IBM can also use the system to 'push' job opportunities or training programmes, thereby

encouraging people to develop skills that it knows it needs for future growth.

Diversity and Inclusion

BAE Systems

Analytics has helped BAE Systems better understand the effectiveness of its D&I strategy. Ahead of a CEO review of the D&I strategy, the company combined a wide range of talent, career, and engagement data to build a more detailed picture of where the strategy was working and where further action needed to be focused. "The analysis actually changed the narrative," said John Whelan, UK HR Director. "The analysis showed that the actions we had taken to improve talent management and succession planning for females were working. We found women were disproportionately more successful, less likely to leave, and more engaged. In the absence of richer data, we had assumed we had a gender problem, but our findings changed the dialogue. So rather than focusing on what was bad that we needed to fix, we could focus on what was working that we could build on. That is allowing us to send out positive messages about the success we've seen and also focus investment in the areas where the data showed there was more work to do."

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3.9
COMPENSATION AND BENEFITS

Clarks

Shoe retailer Clarks has used analytics to optimise the rewards package on offer to employees. The company surveyed employees using conjoint analysis, which requires respondents to express a preference between two different variables. It then ran focus groups to build a more detailed picture of what the analysis showed. By asking which benefits employees might be prepared to trade off, it built a much more granular view of what people truly valued, and adjusted the package accordingly. Belinda Deery, Chief People Officer, said that the analysis challenged a number of assumptions that the company might otherwise have made, and resulted in a reduction in the overall cost of benefits. "We found that satisfaction could be increased by 15 percentage points by taking actions such as giving people £500 to invest in their development, instead of offering a bonus. Employees also wanted to be able to buy holiday, which actually saves the company money. We would never have achieved this combination of increasing satisfaction while reducing cost if we had tried to work it out for ourselves."

Hitachi Data Systems

Over the past few years, HDS's Workforce Intelligence team has built a data warehouse – PANDA – which is a single repository for business and people data that enables the organisation to analyse data to understand what drives performance.

One application has been to improve the effectiveness of the sales force through better aligning sales compensation with desired business results. Replacing what used to be a lengthy manual process of allocating sales commission with an automated process, the company was able to analyse the links between sales commission and sales force performance. PANDA holds data from HDS's sales recording and finance systems, as well as workforce data. The analysis showed that the distribution of sales commission was skewed at both ends of the distribution curve – underachievers were being over-rewarded, while overachievers were being under-rewarded. "We found low achievers were costing the company too much money, and high achievers were leaving because their compensation was too low," said CHRO Scott Kelly.

The team combined internal sales and financial data with external market data on HDS's addressable market, market share and share of wallet for key customers, as well as competitors' sales figures. Sales managers can now set much more accurate targets. Kelly said: "We might have a client who's generating $50m of sales, which is clearly a huge spend. But if their overall IT spend is $2 billion per annum, we have only a small share of their total wallet. The analytics now allows us to see not only the absolute size of an account, but also the size of the opportunity with that client, so the sales manager has the data to set a much more appropriate target for that client. We can be much more confident that targets are based on a data-driven assessment of the market opportunity, not just a hunch." This has allowed HDS to refine the sales compensation plan, which has resulted in annual savings of $10m. Turnover of the highest performing sales staff has also reduced year-on-year.

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3.10
LEADERSHIP, CULTURE AND ORGANISATION CHANGE

We are also seeing examples of organisations using an analytics-driven approach to culture change, leadership transitions, organisation transformation and planning for mergers and acquisitions.

GSK

When GSK's new CEO, Emma Walmsley, took over in April 2017, she was keen to understand how the company's leadership style and behaviours affected the mood and performance of the business. Tim Haynes, Global Head of Organisation and People Analytics, worked with his team to provide a comprehensive set of data to GSK's executive team showing how their leadership was perceived in the organisation, both as individuals and collectively, and what leadership 'shadow' they were therefore casting across the company. The data included insights from employee surveys, 360-degree feedback each leader had received, and other employee feedback, going back over several years. Based on this information, the executive team had a series of conversations about how they are perceived, agreed actions to shift their collective behaviour to support a new strategic direction, and set clear expectations around how they should work together as a team.

Haynes' team is now working on a culture dashboard, which combines structured and unstructured data to take a temperature check of the culture. "If the CEO were to ask: 'What's the current mood of the workforce in GSK?', I think we are quite close to being able to answer that question," he said.

Unilever

When Kraft Heinz launched a hostile takeover bid for Unilever in early 2017, it was an opportunity to show not only that workforce analytics could be deployed to address medium- and long-term strategic issues, but also that it was an agile capability that could be deployed in response to a crisis. When the Kraft Heinz bid came out of the blue, Unilever's whole workforce analytics team joined the war room that the company set up to fend off the bid. Nicky Clement said: "It brought all the components of what we can do as a team together to support Unilever's defence." This included analysing the organisation structure, organisation networks and costs, and modelling scenarios to come up with recommendations for potential cost reductions. The team also conducted employee sentiment analysis to check how employees were responding to the company's defence strategy. "We were able to show that in a crisis we could really step up in terms of providing insights to help direct decision making. We didn't spend a fortune with consultants – we did it ourselves. The information we provided helped both in putting together cost reduction plans and providing information to back up the feasibility of our growth plans, so we could show that we were better placed to leverage the strengths of our business than Kraft Heinz. This helped convince investors that the bid significantly undervalued the company," said Clement.

04

BUILDING THE ORGANISATION CAPABILITY FOR ANALYTICS

This chapter sets out practical issues that need to be tackled in setting up a business-focused workforce analytics function.

TOPICS COVERED

"COMPARED TO OTHER FUNCTIONS, HR IS COMING LATE TO THE PARTY."

Dave Millner, Executive Consulting Partner, IBM Workforce Science

Building a strategically-oriented workforce analytics capability – focused on how to deploy people and organisation data to support business priorities such as improving profitability or growing market share – involves clarifying the purpose of workforce analytics in the organisation, getting the structure, capabilities and governance of the team right, and establishing links with key stakeholders. We explore these issues in this chapter.

4.1
CLARIFYING THE PURPOSE OF WORKFORCE ANALYTICS

One of the most pressing questions is: what is the purpose of workforce analytics in the organisation? This will drive many other decisions such as the capabilities required, team structure and reporting lines, and governance.

Clarifying the purpose of workforce analytics means answering the following questions.

- Is the focus to produce dashboards, models and metrics, and gather and process data – acting, in effect, as a service provider?

- Or is it about developing data- and evidence-driven solutions to strategic people-related business issues – thus acting as a partner working with the business to improve performance?

If the latter, not only does the analytics team require the technical skills to produce the required outputs, but it also needs strong business acumen to determine what to prioritise, and influencing skills to ensure that analysis drives decision making. In this scenario, the job is not done until insights have been developed into actions and rolled out in the business.

Having a clearly articulated vision and purpose for workforce analytics helps the organisation to set the direction of the analytics team and to communicate the aims and objectives of the team to other stakeholders.

4.2
IDENTIFYING AND ALIGNING KEY STAKEHOLDERS

The success of analytics is determined not by the quality of analysis, but by what gets implemented, and by the impact it has on measurable business (not HR) outcomes. Analytics staff can influence the final outcome but in most cases are not accountable for rolling out change within the business. Therefore, success relies on partnering with and working through different sets of stakeholders. Aligning effectively with each of the following is critical to success.

1. Chief Human Resources Officer and HR leadership team

A recurring theme from our interviews with practitioners is that what made the difference to the organisations that have been most successful in deploying analytics is having a CHRO who 'gets it'. A good CHRO can act as a sponsor, playing a critical role in championing the work and making sure it is followed through to implementation. To effectively champion the analytics agenda, the CHRO needs the following.

- Influence and strong relationships with the business leadership team to build momentum for workforce analytics, bring insights to the attention of the board, provide air cover when needed, and open doors to afford the team access to data held outside the HR function.

- A good understanding of the business strategy and strong business acumen, in order to provide clear direction on where workforce analytics can have significant business impact.

- An interest in and orientation towards data, so they can see the possibilities it affords.

One interviewee commented: "My CHRO has been really patient as we have been investing in this for several years but it's only in the last six months that we've started to see a return on that investment."

It's also helpful if the Head of Workforce Analytics is a member of the HR leadership team, as this can help to align the agenda for workforce analytics with the business and people strategies, and make sure plans for workforce analytics are linked with those of other specialist HR functions such as reward, learning and talent. Brydie Lear, Global Head HR Intelligence & Analytics at ING Bank, said: "Being part of the HR leadership team makes a big difference for me. It means I am much closer to strategic decision making, so I've got a better chance of setting the right priorities for my team. It also encourages the HR leaders to be more data-driven in their decision making."

"WE CAN'T JUST GIVE THE BUSINESS SOME INSIGHTS AND SAY 'OFF YOU GO'. MY TEAM HAS TO MAKE SURE WE GET THE RIGHT PEOPLE IN THE CONVERSATION SO WE CAN HELP THE BUSINESS GET BEST VALUE FROM THE INSIGHTS. IT'S MORE ABOUT HOW WE CAN LEVERAGE OTHERS IN THE BUSINESS RATHER THAN US DOING IT FOR THEM."

Tim Haynes, Global Head of Organisation and People Analytics, GSK

2. Board/leadership team

We see in Chapter 1 that interest in workforce analytics is partly driven by senior leaders' increased expectations of the HR function. In some of the more advanced organisations, the board and senior leadership is a key source of demand for workforce analytics. Engaging this stakeholder group helps:

- keep the analytics team focused on business matters
- set the tone and expectations for data and evidence in people- and organisation-related matters.

One of the key relationships that workforce analytics should seek to cultivate is with the head of strategy or equivalent. Alexis Fink, General Manager, Talent Intelligence & Analytics at Intel, said: "It's really important to nurture your relationship with the strategy office, as that will help you identify strategic projects and priorities to focus on, and will help you get involved in these projects in the early stages, when you can have most influence."

3. HR business partners (HRBPs)

For most of the practitioners we interviewed, HR business partners were one of the main channels for implementing data insights in the organisation. They are also often the route through which workforce analytics projects are initiated. The results of the survey showed HR was the main source of workforce analytics projects (see Figure 15), with only 2% saying projects predominantly originated directly from the business.

Figure 15: Where do HR analytics projects typically originate?
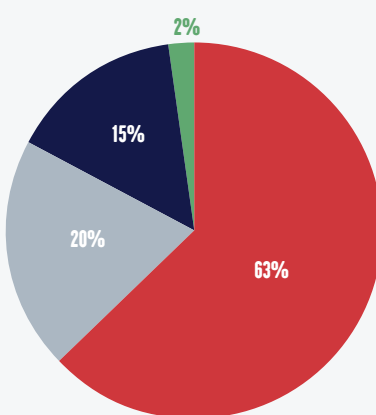
- 63% Predominantly within HR
- 20% Equally within HR and from the business
- 15% Predominantly within the business via HR business partners
- 2% Predominantly from the business directly

Source: CRF member survey, 2017

- HRBPs play a critical role in identifying the business issues to focus on and in helping to educate business leaders on the potential applications of analytics. "Business leaders aren't necessarily used to using data to make people decisions, so a partnership is needed between the business and HR to determine what HR measures actually drive business results," said Julia Howes.

- They are also a key partner in building hypotheses to test. "You need to go through a structured process with HR to determine all the different factors to test in building your model," said Howes. "And I often get the feedback that it's something HR is not used to doing and finds quite hard."

- Often, HR professionals need educating about how data can help them better support their business, and need help to improve their analytical and numerical skills. A typical comment from our interviews was: "Many of our HRBPs don't have an analytic background, and working with data-driven insights is not a core competency."

4. Business leaders

A useful approach to getting traction with analytics is to identify potential champions in the business – business leaders who 'get it' will be advocates for a data-driven approach and are probably willing to experiment.

- It's often necessary to educate the business so they know what can be achieved with workforce analytics. Brydie Lear said: "I would like to see business leaders increase their expectations of the HR function. We have invested in raising awareness, but business leaders can be quite sceptical. It's only when you have proved the concept by completing some projects that they start to become more curious, and business questions emerge that they would like to have answered."

- Relationships with other functions are also important. Nicky Clement at Unilever said: "For me, having a close relationship with finance has been particularly important."

Our survey showed that in only a minority of organisations do business people regularly ask HR to provide data to help solve business problems (see Figure 16).

"WE HAVE BUILT AN ECOSYSTEM OF ANALYTICS IN UNILEVER. WHEN WE WERE SET UP IT WAS MORE HR-FOCUSED; NOW WE ARE RECOGNISING WE NEED TO LOOK BEYOND HR AND IDENTIFY OTHER DATA SOURCES SUCH AS FINANCE AND MARKETING DATA. IF WE WANT TO FOCUS ON BUSINESS IMPACT, SIMPLY LOOKING AT HR DATA IS NOT ENOUGH."
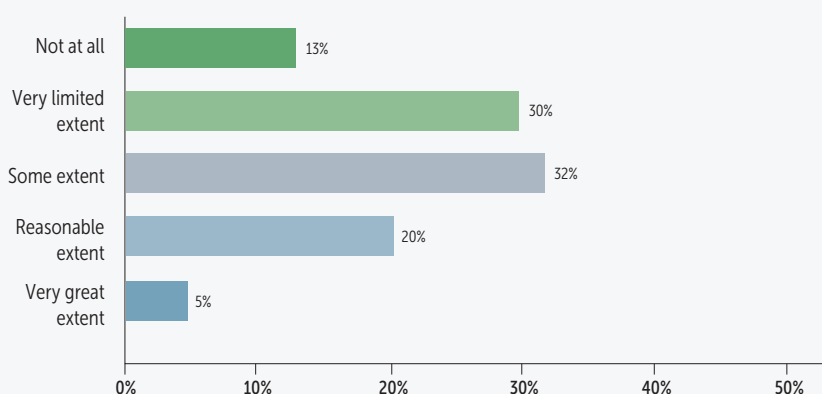
Nicky Clement, Vice-President HR, Organisation Effectiveness, Performance & Analytics, Unilever

Figure 16: In my organisation, the business proactively asks HR to provide data to help solve business problems.
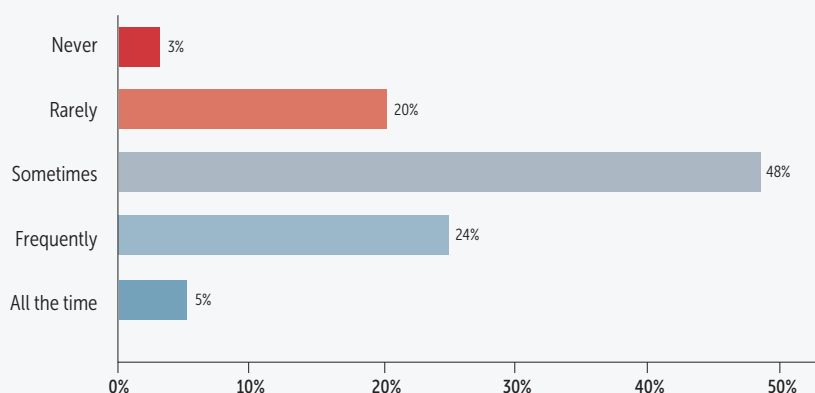
Source: CRF member survey, 2017

Figure 17: To what extent do HR analytics and other data/analytics teams in your organisation collaborate?

Source: CRF member survey, 2017

5. Other analytics teams within the organisation

In Chapter 2 we highlight that the deepest, most useful insights tend to come from an integrated process that brings together subject experts from the business and HR. Our survey results suggest that organisations are not yet exploiting this opportunity. One-quarter (25%) said their HR analytics team collaborates with other analytics teams to a 'reasonable' or 'very great' extent, and a further 32% said they collaborated 'to some extent' (see Figure 17).

- It's crucial to build strong connections with other analytics teams, particularly in finance, marketing, customer service and operations. Only by combining business and HR data is it possible to work out where improving the workforce can improve business results.

- Building these relationships will help HR gain access to the critical business data required for business-driven analytics.

- It's also an opportunity to tap into their expertise and piggy-back on technology already in place. For example, Nicky Clement's team at Unilever has used social listening techniques built in the consumer insight team to develop a better understanding of employee and market perceptions of the employer brand. David Green, People Analytics Leader at IBM, said: "HR is more or less the last function to engage with analytics. However, that can be an advantage because there will already be expertise in other parts of the organisation that you can benefit from."

- We found that few workforce analytics functions are successfully collaborating with other internal analytics functions. Many workforce

"STRATEGIC ANALYTICS IS A TEAM SPORT. YOU CAN'T GET TO THE DEEPEST INSIGHTS WITHOUT BOTH THE BUSINESS AND HR PERSPECTIVES ON THE TEAM DOING THE ANALYSIS TOGETHER."

Levenson, 2015

analytics specialists are struggling to break out of the HR silo, which is compromising their ability to influence business outcomes. One interviewee said: "Our business is very siloed, and this extends to the analytics teams in different functions. We are like ships passing in the night." One interviewee had only just met his colleagues from other analytics functions after more than a year in the organisation.

- It can, however, take time and effort to build credibility with other analytics experts. Brydie Lear said: "It took a couple of years to gain credibility with my peers in other business analytics teams. I had to establish a track record by delivering a number of projects first. Then they were more open to inviting my team to get involved with broader business projects."

While it is almost universally true that workforce analytics is less sophisticated than analytics in other parts of the business, there is room for improvement across the board. The lack of alignment between workforce analytics and business analytics groups is due, as much as anything, to the difficulties the latter have in understanding what drives employee motivation and behaviour.

True, workforce analytics groups often have a fundamental problem understanding and properly engaging in business issues. But, equally, business analytics groups seem reluctant to engage in understanding the people side of the equation, and even those that do have little or no expertise in that domain. This is why organisations need to take a holistic approach to analytics, that gives equal weight to business and people issues, and that therefore requires the combined expertise of workforce analytics and business analytics professionals.

## 6. Key external stakeholder

We have observed that, in addition to their strong internal networks, the most successful organisations in workforce analytics typically make judicious use of external providers too.

- **Consultants.** Several interviewees began their workforce analytics journey by engaging external consultants to deliver a number of discrete projects. This allowed them to test out the concept and gauge its potential value before investing in infrastructure and hiring a team. David Creelman, CEO of Creelman Research, said: "If the business benefit of undertaking analytics projects is so substantial, you could use that as an argument for hiring in specialist consultants to do the work, without having to build an in-house team."

- **Academics.** As we discuss in Chapter 2, many of the questions organisations wish to explore – such as what motivates employees and how to change behaviour – have been extensively researched in the academic sphere. Therefore, organisations can build on this body of knowledge and avoid, for example, having to build a complete set of hypotheses from scratch. Academics can also help direct investigations and highlight relevant research.
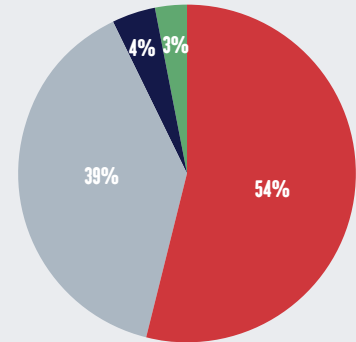
The CRF survey found that most workforce analytics work is delivered by a dedicated internal HR analytics team. The majority of respondents (92%) said some or all of their HR analytics work is delivered by an internal HR analytics team, and 49% said they use external consultants to deliver some or most of their HR analytics work (see Figure 18).
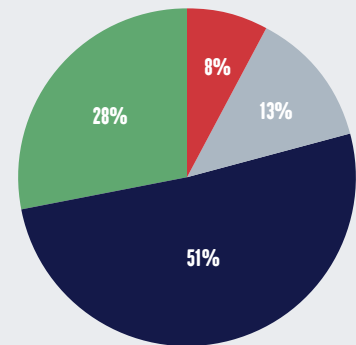
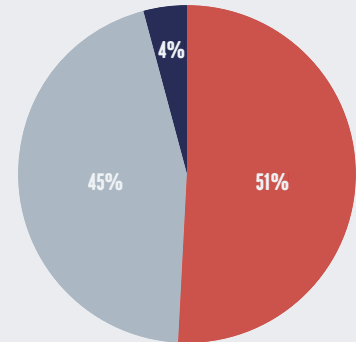**Figure 18**: How much of your HR analytics work is delivered by ...

Source: CRF member survey, 2017

"IN OUR VIEW, REPORTING DIRECTLY TO THE CHRO (OR AT LEAST HAVING DIRECT ACCESS TO THE CHRO) YIELDS THE BEST OUTCOMES FOR THE ANALYTICS TEAM AND THE ORGANISATION. THIS C-LEVEL REPORTING STRUCTURE KEEPS THE FOCUS OF THE TEAM CLOSELY ALIGNED WITH STRATEGIC BUSINESS PRIORITIES AND HAS THE GREATEST CHANCE OF INFORMING DECISION MAKING ABOUT IMPORTANT BUSINESS TOPICS."

Guenole *et al.*, 2017

4.3
DESIGNING THE ANALYTICS ORGANISATION

Organisations need to consider a number of questions when deciding on the structure and reporting lines of the workforce analytics team.

1. *Should there be a dedicated team within HR or should workforce analytics be part of a wider business analytics function?*

Most of the organisations we encountered in this research that have workforce analytics capability tend to site it within the HR function. Just over two-thirds (69%) of respondents to the CRF survey have a dedicated team within HR (see Figure 19).

There are advantages and disadvantages to having a specialist team within HR.

Figure 19: Do you have a dedicated HR analytics team/function within HR?

- Yes
- No
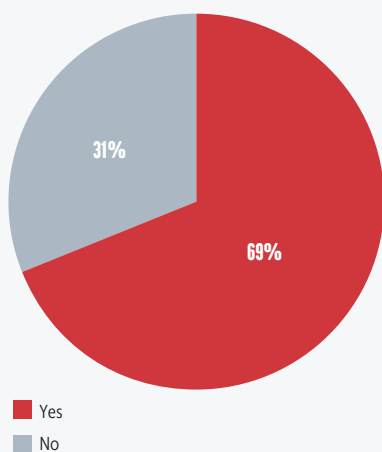
Source: CRF member survey, 2017

Pros

- It creates air cover/space to incubate what is for most organisations an emerging capability. If workforce analytics is part of a broader function, there is a risk that resources that should be focused on workforce analytics will be diverted to other projects.

- There is a highly technical body of academic knowledge, predominantly in the occupational psychology domain, that needs to be applied. Lack of domain knowledge could lead to incorrect interpretation of results.

Cons

- Activity can be too focused on 'HR for HR's sake', and end up being too far removed from the business. For example, we see that a lot of workforce analytics projects begin with identifying the factors that drive employee turnover. This may be a critical business issue, as some of the case examples in Chapter 3 show. However, often it isn't – it's merely something that you can measure in a reasonably straightforward way. This runs the risk that data availability and ease of analysis drive analytics decisions, rather than important business issues that need addressing.

- Extracting business insights usually requires linking multiple data sources from inside and outside HR systems. It can be easier to do this where workforce analytics is part of a wider business analytics function. Often, HR functions lack access to the business data they need to make meaningful connections between people and business data. Indeed, research by the

Organizational Intelligence Institute among 3,000 HR professionals in Fortune 1,000 companies (cited in the NTMN 2016 Talent Analytics Report) found that the effectiveness of "linking multiple data and information sources to predict, model and forecast individual, group and organisational behaviour performance outcomes" was low.

Some commentators think that once the analytics function within HR has become mature, it makes sense to make it part of the broader business analytics capability. According to Rasmussen and Ulrich (2015): "When HR analytics matures, it initially starts co-operating more with other departments' teams (in finance, operations, etc.) and eventually becomes part of cross-functional/end-to-end analytics – looking at human capital elements in the entire value chain. [...] Most HR analytics functions are some years away from this, and perhaps need to be matured [...] within the HR function first."

2. *Who should the team report to?*

One of the most consistent views expressed in our interviews was that the person responsible for workforce analytics should report directly to the CHRO. This helps ensure that analytics interventions that support delivery of the business and people strategy are prioritised. David Creelman said: "If they're two steps away from the CHRO they are unlikely to have the insights into business and people strategy needed to make a significant business contribution."

"IF REPORTING IS PART OF YOUR FUNCTION'S SCOPE, BE VERY CLEAR ABOUT THE DISTINCTION BETWEEN ANALYTICS AND REPORTING AND WHO IS RESPONSIBLE FOR EACH."

Guenole *et al.*, 2017

Reporting to the CHRO can also help provide air cover when the head of analytics has to turn down requests that are not in line with the strategy or are unlikely to yield sufficient benefit.
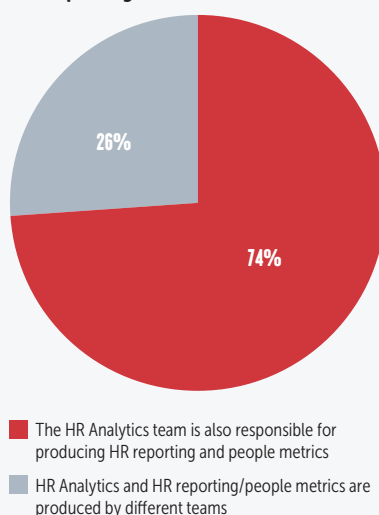
However, many interviewees expressed the view that the deeper the team is embedded within the HR function, the less likely it is to be working on strategic issues, and the more likely it is to be focused on 'HR for HR' projects. Furthermore, this puts it at greater risk of being cut when cost savings need to be made.

3. *Should the team be responsible for reporting and metrics as well as analytics?*

There was less consensus around whether or not reporting and analytics should report to different parts of the organisation. Some organisations have been through several cycles of separating reporting and analytics for a time to allow analytics to mature, and bringing them back together again at different stages in their development. For example, Brydie Lear said: "For us it's a big debate – should we split reporting and analytics? Until now, we have run them as separate teams, but now we are a more mature function, we need to weigh up whether the benefits of bringing them together outweigh the costs." Nearly three-quarters (74%) of respondents to the CRF survey reported that their workforce analytics team is also responsible for people reporting and metrics (see Figure 20).

If they are part of the same team, it's important to establish a clear boundary between the different sets of resources, because reporting can easily take up all the available capacity. Several interviewees pointed out that it's particularly important to ring-fence capacity for analytics work when the analytics function is in its infancy.

Figure 20: Is your HR analytics team also responsible for people metrics and reporting?

26%

74%

■ The HR Analytics team is also responsible for producing HR reporting and people metrics

■ HR Analytics and HR reporting/people metrics are produced by different teams

Source: CRF member survey, 2017

Regardless of whether reporting and analytics are managed together or separately, there is a strong argument for drawing clear boundaries that protect the analytics professionals from being drawn into reporting requests. For example, one company expressly barred its workforce analysts, for their own sake, from using reporting tools. If a stakeholder asked them for a report, they had a legitimate excuse for refusing and referring them to the reporting team instead. Haig Nalbantian said: "When you have, typically, an analytics team of three to five people, if they also have responsibility for reporting, there's no capacity left for more strategic analytics – it can easily get crowded out by reporting."

Some organisations have invested in automated reporting and dashboards, so that managers can find the basic

reporting and metrics information they need themselves. This allows the analytics team to focus on higher value-adding analysis. Nicky Clement's team at Unilever has developed and maintains a set of dynamic dashboards. She said: "They allow HRBPs and managers to drill down into many different sets of data, sliced and diced in multiple ways, at the touch of a button. It takes some of the pressure off my team. For example, if someone asks: 'What is the attrition rate in Ghana?', I can send a link to a dashboard with a video tutorial that explains how to use the system to get the answer."

4. *How should the analytics team connect to the business?*

For most workforce analytics teams, HR business partners are the main route into the business. However, a small set of more sophisticated organisations are developing the concept of workforce analytics business partners, who form a bridge directly between the analytics function and the business. Cisco has a team within central HR that's focused on reporting, metrics and creating dashboards, with analytics experts embedded in each of its core people processes such as recruitment and talent management. According to Ian Bailie, having this capability sitting close to the action is invaluable: "They sit next to the people they support and understand much better the business context and the problems their internal clients are looking to solve. And their conclusions are more implementable." Google – whose stated goal is "all people decisions at Google are based on data and analytics" – has people analytics business partners within business units.

"IT'S CLEAR YOU NEED TO FOCUS ON BUSINESS PRIORITIES, BUT MY CHALLENGE IS HOW DO I IDENTIFY WHAT TO FOCUS ON AMONG ALL THE ELEMENTS OF OUR OVERALL FRAMEWORK OF STRATEGIC PEOPLE PRIORITIES? HOW DO I DETERMINE WHERE DATA AND ANALYTICS WILL ADD GREATEST VALUE?"

Brydie Lear, Global Head HR Intelligence & Analytics, ING Bank

Other organisations have taken a more informal route to extending the business reach of the analytics function, for example, by building communities of practice. Unilever, for instance, has built an internal HR Intelligence Network. This is a community of 60 HR professionals around the world who, although they are not employed as 'analytics professionals', have strong analytical capabilities that allow them to guide and advise their colleagues in HR and the business, and help to deliver some of the more straightforward analytics projects. Nicky Clement said: "Instead of being a small team in the corporate centre, we are now an extended team of 60 across the globe. This has helped us build common understanding and capability across our businesses. It also means we can focus the central resource on more complex, innovative or high-impact work, as the network can pick up some of the more day-to-day work."

Some organisations combine HR strategy and workforce analytics, which can help ensure analytics projects are focused on the key business priorities for the organisation.

4.4

PRIORITISING ANALYTICS WORK THAT MAXIMISES BUSINESS IMPACT

With the myriad data sets available today, there are potentially thousands of different issues that organisations can explore with analytics. One of the main challenges is to narrow down all the possible options to those likely to have the greatest impact on the most important drivers of business performance. Some analytics teams are becoming victims of their own success, being inundated with requests that they lack the capacity to deliver.

Most organisations we spoke to haven't yet worked out a tried-and-tested mechanism for prioritising analytics work. The CRF survey found that nearly two-thirds don't have a process for identifying and prioritising HR analytics projects (see Figure 21). For those that do have a process, it tends to be relatively informal, involving, for example, regularly reviewing and reprioritising the queue of work, only taking on work that tackles a clear business problem, resolving through dialogue with HR leaders where to focus, and using the judgement and discretion of the head of analytics. Some respondents commented that they use their regular strategic planning cycle to work out which projects to progress. Only one survey response indicated a more formal process: "We have a clear and strong governance framework that validates requests for projects against the HR strategy and priorities of functional leaders on a quarterly basis."

However, prioritisation is high on the to-do list for many teams, and several survey respondents said they were

Figure 21: Does your organisation have a process for identifying and prioritising HR analytics projects?

- Yes — 19%
- No — 65%
- Don't know — 16%
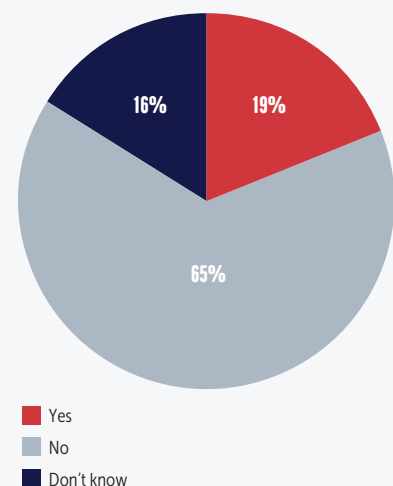
Source: CRF member survey, 2017

already working on it. One commented: "We have just established a process to prioritise analytics activity to address business critical challenges. We have an analytics forum which will govern the projects to be pursued." We think this is a pressing issue for analytics: organisations need a method for linking potential projects to key strategic priorities, because this will determine which projects receive support. Organisations also need to review and reprioritise projects regularly as business demands change.

"WE WON'T COMMISSION A PROJECT IF IT DOESN'T HAVE THE SPONSORSHIP OF A BUSINESS LEADER WHO IS CLEARLY ACCOUNTABLE FOR IMPLEMENTING THE RESULT. WE ACTIVELY CONTRACT WITH BUSINESS LEADERS TO DETERMINE WHAT DECISIONS THEY WILL TAKE ON THE BACK OF OUR ANALYSIS."

Ian O'Keefe, *Managing Director Workforce Analytics, JPMorgan Chase*

Some organisations are experimenting with prioritisation matrices. Guenole *et al.* suggest using the following complexity-impact matrix. Elements of complexity might include political complexity and a shortage of available skills as well as technical complexity.

Figure 22: **Complexity-Impact Matrix for workforce analytics projects**
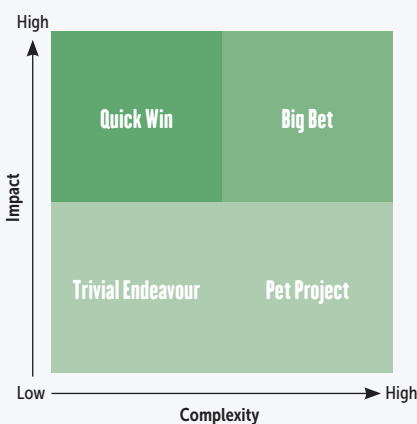
Source: Guenole et al., 2017

Some observations from our research are as follows.

- Being clear about the purpose and vision of the team, and clearly communicating this, can help to manage expectations. The vision should focus on supporting business outcomes such as growth, efficiency, productivity and profitability.
- There needs to be a balance between proactively driving projects out of the business strategy and people plan and responding to ad hoc requests from the business. According to Jorrit van der Togt and Thomas Rasmussen of Shell: "You need to balance medium pay-off but high likelihood projects ('bread and butter' projects) with high pay-off/low probability projects (moon-shots). Bread and butter gives you the credibility to pursue a few moon-shots that can potentially be transformational but can also fall flat on their face."

- Some of the more advanced organisations will no longer support analytics projects unless there is a clear estimate of ROI. "You need to require that requests meet a certain standard before they will be progressed," said David Creelman. For example, IBM's workforce analytics team won't support projects with a potential ROI of less than $100m. Similarly, UPS's analytics team requires a costed business case.

- Prioritisation tends to be more straightforward when the head of analytics reports to, and has a close relationship with, a business-oriented CHRO, who can also back the team up when it has to turn down a request for help from someone influential.

- More advanced analytics teams within your business are likely to be able to provide advice and direction on the best way to prioritise. Brydie Lear said: "I rely on my advanced analytics colleagues in the bank to help with prioritisation. They are very experienced at identifying where the business problems are and where analytics can have greatest impact."

- Although prioritisation means having to say no at times, sometimes people are sufficiently senior or influential that it is impossible to turn down their requests. In these situations, Alexis Fink recommends providing a 'gift with purchase' – in other words, as well as answering the specific question you're given, provide further insights that are actionable and will have an impact. "That way, you are able to essentially 'train' senior leaders regarding the high level strategic services you can provide, and help influence the nature of future requests," she said.

"WHETHER THE ANALYTICS TEAM WORKS DIRECTLY WITH ORGANISATIONAL LEADERSHIP OR INDIRECTLY THROUGH HR BUSINESS PARTNERS AND LEADERS, DISCUSSIONS ARE NEEDED TO UNDERSTAND AND PRIORITISE THE ORGANISATION'S ISSUES, DETERMINE HOW WORKFORCE ISSUES RELATE TO ORGANISATIONAL ISSUES, SHARE INSIGHTS THAT ANALYTICS REVEAL, AND AGREE ON ACTIONS TO BOTH ADDRESS AND RESOLVE THE ISSUES. LEADERS CAN THEN PROVIDE THE INFLUENCE NEEDED TO DRIVE ACTIONS."

Guenole *et al.*, 2017

Case Notes

Alexis Fink described how she approaches prioritisation at Intel. "We have a queue that we go through regularly with the head of HR, to review and re-prioritise. The head of HR provides long-term direction. I meet monthly with HR leaders to share what's in our queue, and they help us contextualise and prioritise projects. We also sit on the steering groups for specific change projects. We also have closer ties with certain parts of the business – for example, we have a very close relationship with our Corporate Strategy Office.

"Everyone has it drilled into them that they need to be clear [about] what's the strategic decision they're trying to make with this data, what they are likely to do differently as a result and how this is tied to our strategy. We are ruthless at only taking on projects that are strategically important. Often, that means prioritising new ventures or parts of the business that need support in refining their business model or deciding which markets they should enter, rather than helping more mature, profitable and dominant parts of the business. We focus on pivotal issues where the opportunity to benefit the business and employees – and where risk of getting decisions wrong – is greatest."

Creating a governance framework

As analytics functions mature, having a robust governance framework becomes more important. Our observation is that, so far, governance has focused primarily on data issues, such as developing data standards and policies for handling sensitive personal data. Increasingly, as well as looking at issues such as privacy, ethics and consent, organisations are going to have to engage key business stakeholders in defining the mission and purpose of the function, allocating budgets and providing the strategic direction required to determine priorities. Hoffmann, Lesser and Ringo (2012) recommend establishing a small decision-making body made up of representatives of business leaders, user communities, data suppliers and technical staff. "Given the fact that workforce analytics involves resources and capabilities from various functional groups, such as finance, sales, operations, HR and IT, as well as end users across the enterprise, a governing body that can evaluate the needs of various interests against the inevitable organisational constraints becomes important. [...] Part of its responsibility is to represent the needs and wishes of its separate constituencies. But equally essential are group members who focus objectively on the priorities of the business as a whole and the return on investment achieved by pursuing one option over another."

A small minority of organisations have already established a governance body for workforce analytics. For example, JPMorgan Chase has a workforce analytics steering committee made up of those members of the group-level HR operating committee who have enterprise-wide responsibility for an element of HR, such as HR strategy or technology. Ian O'Keefe said: "As the analytics function operates enterprise-wide, it makes sense that the leaders who steer and advise us also have enterprise-wide responsibility."

"IF YOU ARE GOING TO BE A SUCCESSFUL HR LEADER IN THE DATA AND ANALYTICS WORLD, YOU NEED TO ADDRESS BOTH CAPABILITY AND MINDSET."

Julian Holmes, Director, OrgVue

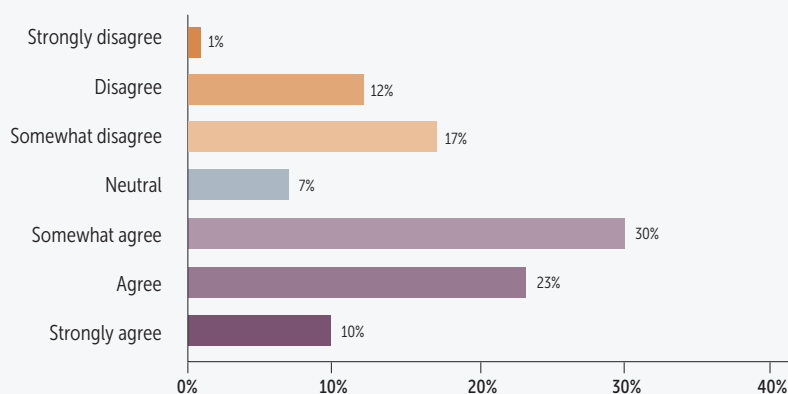## 4.5
BUILDING THE REQUIRED CAPABILITIES AND MINDSET

Working in a context that's driven by data and evidence requires a significant shift in both mindset and capability for the HR function. The CRF survey suggests that most organisations have some way to go to develop a mindset of making decisions based on data and evidence. Only just under one-third (33%) of respondents agreed or strongly agreed with the statement: 'My organisation has a strong culture of making decisions based on analysis of data and evidence rather than gut feel, or opinions of decision makers'. A further 37% agreed 'somewhat' or were neutral, and 13% disagreed.

Here, we touch on some of the key requirements for building the culture to support workforce analytics.

Figure 23: My organisation has a strong culture of making decisions based on analysis of data and evidence rather than gut feel, or opinions of decision makers.

Source: CRF member survey, 2017

Building a data-driven mindset across the organisation

Both HR and business leaders need a mindset shift. The HR function needs to raise its expectations around how it uses data – but HR professionals are likely to need support to do this. For example, Nicky Clement's team at Unilever includes a group of internal consultants who partner with HRBPs to help them understand the data. "Where we have large organisational change programmes, one of my team is tasked with sitting in the project team to make sure data and evidence are central to change management efforts. This gives the insights that come out of the data a greater chance of being implemented," she said.

HR can also help educate business leaders about the potential applications of data, and help to drive appropriate actions from the analysis. For example, you might be able to predict which of your top performers are at greatest risk of leaving the business, but unless their manager is aware of this insight and takes appropriate action, the insight is meaningless. HR can support the manager to understand what options are available, such as moving them to a new, more challenging assignment, offering them some development to build new skills or addressing pay gaps. David Green of IBM, said: "Analytical maturity is not just about creating a people analytics team. Just as important is creating an analytical culture both within HR, particularly with regards to

HR business partners, but also within the business, that this is a discipline that helps managers do their job better." Having a CHRO who acts as a strong advocate for a data-driven approach to HR can help to raise expectations of a more data-driven HR function.

The business also has to change its view of the value of people analytics. Business leaders have a responsibility to make sure people data is better integrated into annual budgeting and strategic decision making. Senior business leaders have to embrace the human capital analytics role HR can play, and HR has to meet the challenge by building analytics capability and effective processes.

"ANY VENTURE INTO ANALYTICS HAS TO BE LED BY SOMEONE WHO UNDERSTANDS THE BUSINESS ISSUES – NOT A DATA SCIENTIST. AND THEY NEED A CONSULTANCY MINDSET – NOT JUST TO BE A NUMBERS 'JUNKIE'."

David Creelman, CEO, Creelman Research

Role of the head of analytics

As well as the technical skills required of the job, an effective head of analytics will need:

- strong business acumen
- good understanding of strategic business priorities
- good relationships with and the ability to influence business leaders
- diagnostic and consultancy skills
- skill in dealing with organisational politics.

Make-up of the analytics team

Strong technical skills in data extraction, manipulation, modelling and analysis are a given for analytics specialists. But an effective analytics team requires a broader range of skills, including the following.

- *Understanding the people:* the fundamentals of human psychology, motivation and behaviour, at both individual and group level.

- *Understanding the business:* the organisation's strategy and operating model, where its competitive advantage lies, and how different work processes contribute to business performance.

- *Understanding the data:* strong statistical, data and relevant IT skills.

- *Consulting and collaboration skills:* there needs to be a strong partnership between the data scientists who generate the analyses and the business-facing HR people who commission the work and have to communicate and implement recommendations within the business. Analytics teams can't sit in an ivory tower.

- *Commercial acumen:* interested in business outcomes and questioning how the outcomes will affect the business, not just HR.

- *Storytelling and visualisation:* to help people understand the patterns in data and get key messages across.

- *Action orientation:* pushing to identify changes in work processes required to implement the insights gained and see projects through to completion.

No individual team member will necessarily possess all these skills, but there needs to be a balance of capabilities across the team.
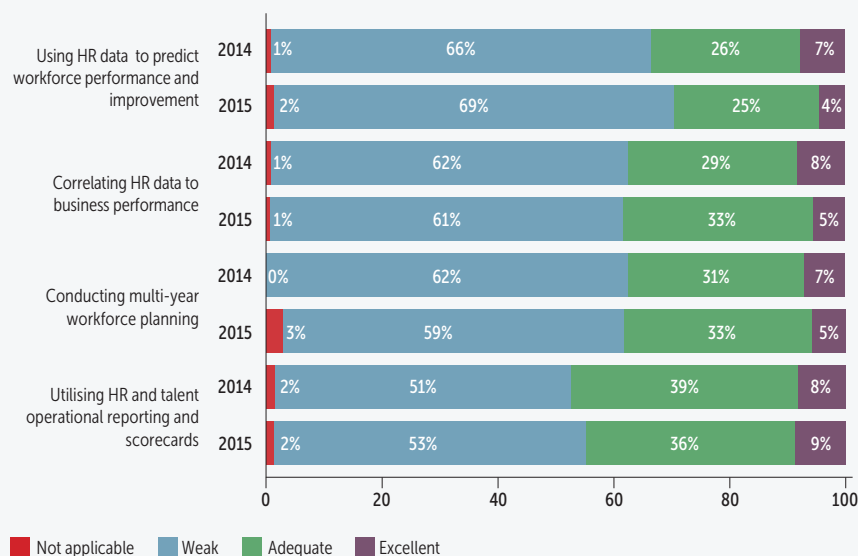
HR generalists

One of the major impediments to deploying workforce analytics is the HR professionals who interact on a day-to-day basis with the business. A 2015 Deloitte survey found that executives surveyed generally had a dim view of the function's capacity to deliver analytics projects (see Figure 24). Many organisations have built dashboards and reporting systems that put data directly in the hands of HR professionals – allowing them to slice and dice the data in real time. However, many of our interviewees suggested that one of the biggest barriers is getting HR professionals sufficiently proficient and confident to use the tools that are available to them.

Indeed, some HR professionals see analytics as a threat. Nick Holley, author of the Henley Research report *Big Data and HR,* said: "In my research the biggest barrier was the fear many HR people have of being made irrelevant

Figure 24: **Evaluation of workforce analytics capabilities**

		Not applicable	Weak	Adequate	Excellent
Using HR data to predict workforce performance and improvement	2014	1%	66%	26%	7%
	2015	2%	69%	25%	4%
Correlating HR data to business performance	2014	1%	62%	29%	8%
	2015	1%	61%	33%	5%
Conducting multi-year workforce planning	2014	0%	62%	31%	7%
	2015	3%	59%	33%	5%
Utilising HR and talent operational reporting and scorecards	2014	2%	51%	39%	8%
	2015	2%	53%	36%	9%

Source: Deloitte University Press, Global Human Capital Trends, 2015

"WE HAVE TO INVEST TIME IN LEARNING FROM OTHER PARTS OF THE BUSINESS THAT ARE MORE DATA SAVVY."

Tim Haynes, Global Head of Organisation and People Analytics, GSK

because they have based their career on gut instinct and relationships and they see analytics as a threat."

HR business partners don't have to be data experts, but they do need sufficient understanding of model building and interpreting statistics to be able to lead change efforts and collaborate with statistical experts who run the models.

HR generalists need to build their understanding of the possibilities of this field and what the technology can do. Marc Warner, CEO at ASI Data Science, said: "It's important for the HR function to be an educated buyer – so invest some effort in understanding what the tools and technologies can do and what the most effective projects look like."

This may involve rethinking the profile of people you recruit into HR, or identifying potential candidates from non-traditional sources. Some interviewees observe that they are seeing more data-literate graduates entering the HR profession, or people moving into HR from a consultancy background.

Developing analytical capability in HR

The CRF survey shows there is also a need to invest in building capability within the HR function. Only 46% of respondents agreed with the statement: 'The HR function in my organisation has a strong reputation for making decisions or recommending actions based on analysis of data and evidence.' Some 41% of respondents disagreed (see Figure 25). A 2017 IBM survey of readiness for workforce analytics found just 38% of HR professionals say they have the right mix of skills in their workforce analytics department.

Similarly, 60% of respondents agreed with the statement: 'HR professionals

Figure 25: The HR function in my organisation has a strong reputation for making decisions or recommending actions based on analysis of data and evidence.
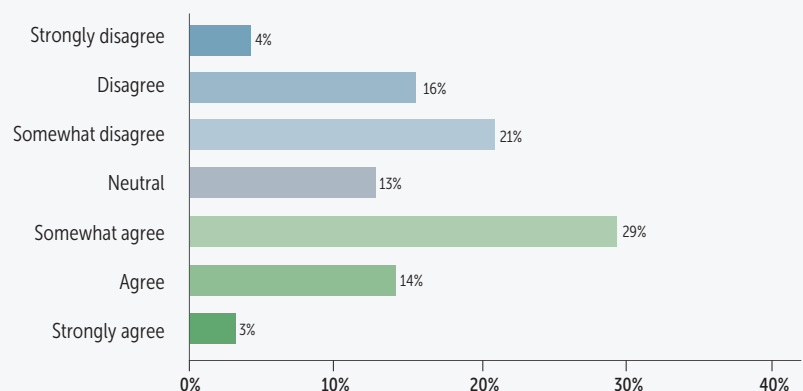
Source: CRF member survey, 2017

Figure 26: HR professionals in my organisation are analytically weak, struggle with basic statistics, and have difficulty explaining the results of analyses to the business.
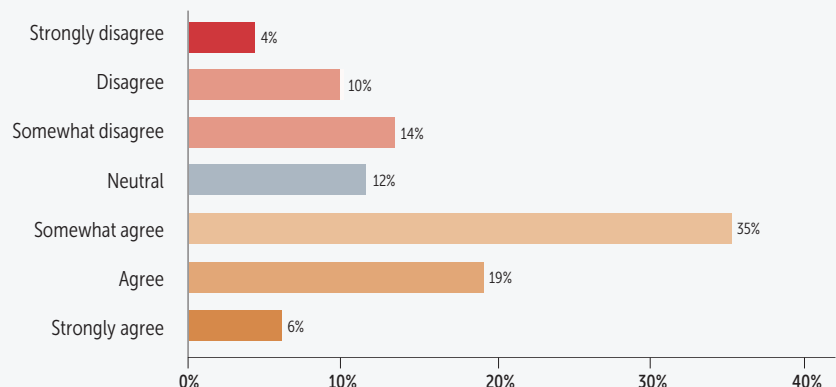
Source: CRF member survey, 2017

"IF YOU CAN GET HR BUSINESS PARTNERS, WHO INTERACT WITH THE BUSINESS DAILY, TO BE BOTH ANALYTICALLY MINDED AND ABLE TO SEE HOW ANALYTICS CAN HELP THEM DELIVER THEIR ROLE MORE EFFECTIVELY, THEN THAT'S WHEN YOU START TO MAKE SIGNIFICANT PROGRESS."

David Green, People Analytics Leader, IBM

in my organisation are analytically weak, struggle with basis statistics, and have difficulty explaining the results of analyses to the business.' Some 28% of respondents disagreed with this statement (see Figure 26).

To date, there has been limited investment in upskilling the HR function. Just under one-quarter (23%) of survey respondents said their organisation had invested 'a fair amount' or 'substantially' in upskilling HR in data and analytics (see Figure 27). We clearly have a long way to go before data-driven decision making becomes a key feature of the HR function.

Some organisations have invested in e-learning, tools and case studies, or have added an analytics module to their development offerings for HR. Others are investing in coaching to help HR professionals use and interpret dashboards, or have used the roll-out of new HR systems as an opportunity to train HR not just in using the systems, but also in helping them build skills to analyse the data effectively. Some organisations have developed more formal learning pathways focused on analytics. For example, Nicky Clement at Unilever said: "Our internal surveys have found this is one of the biggest skills gaps for HR. So we have built a learning pathway for analytics that anyone who wants to upskill in this area can follow." Similarly, Shell has a foundation programme in data analytics for HR professionals.

Figure 27: **To what degree have you invested in upskilling HR generalists and HR business partners in data and analytics?**
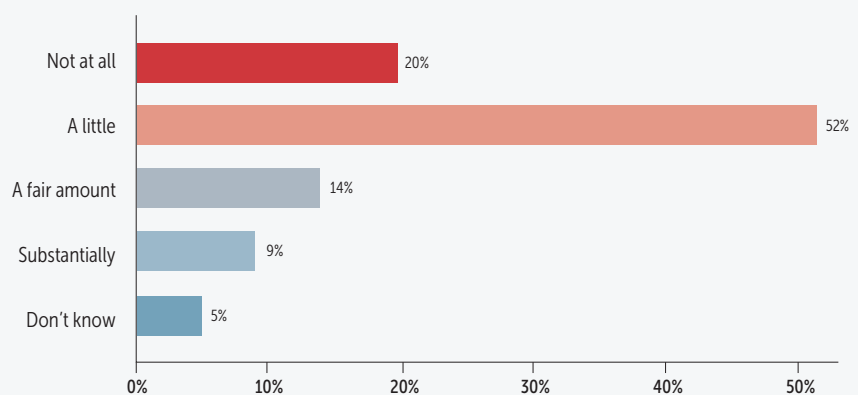
Source: CRF member survey, 2017

05

CONCLUSIONS AND RECOMMENDATIONS

This chapter sets out the key conclusions of our research and highlights recommendations for successfully building and deploying workforce analytics capability.

TOPICS COVERED

"THE DATA WE PRODUCE IS ONLY AS GOOD OR AS BAD AS THE DECISIONS THAT PEOPLE MAKE ON THE BACK OF IT."

Andy Rogers, HR Director UK and Ireland, Sodexo

5.1
CONCLUSIONS

- Workforce analytics has the potential to be a game-changer for the HR function, helping HR become more business-relevant, rigorous and evidence-driven. However, the vast majority of organisations are a long way from being able to realise this potential.

- Our research indicates a sizeable gap between the rhetoric and the reality of workforce analytics. For most HR functions, this is an emerging field – the CRF survey found only 7% of organisations have reached a reasonably advanced level. Organisations have a great deal to do before they are able to routinely deploy workforce analytics to improve business outcomes.

- Many workforce analytics interventions start in the wrong place – focusing on cleaning data, building systems or crunching numbers in the hope this will lead to meaningful insights. Analytics has to start with understanding the business strategy and identifying opportunities for improving strategy execution through analysis. You can explore any number of questions with workforce analytics, but only a few will be strategically relevant for any one organisation.

- Workforce analytics often focuses on HR for HR's sake. Information on employee turnover, engagement or the proportion of annual appraisals completed may be interesting, but it's only relevant if improving it leads to better business outcomes. Workforce analytics needs to focus on identifying the drivers of business performance, and working out how to improve the people-related elements of those drivers through, for example, better job design or more effective incentives.

- Analytics is only as valuable as the actions that it prompts. Establishing a correlation between two factors is not, on its own, enough: there needs to be a clear 'so what?' in terms of practical recommendations and an agreed implementation plan.

- There's a perception (or misconception) that the quality and availability of data is one of the biggest barriers for organisations. The analytics maturity curves promoted by many consultancies suggest that you have to focus on cleaning data and mastering basic reporting before you can do more sophisticated analysis. This is unhelpful: you sometimes have to generate new data in order to uncover useful insights, perhaps through employee surveys or qualitative interviews with business stakeholders, and you can do this without having to fix legacy data in the HR system. The right approach is to start with the business questions to be tackled and from there determine what data you need, rather than asking 'what questions can we answer with the data at hand?' And even when legacy data is used for analysis, it is never the right answer to clean the data perfectly before launching the analysis. Good data scientists can always strike the right balance between the benefit of cleaner data versus the cost of delaying the analysis.

- Workforce analytics functions can't afford to operate from an 'ivory tower'. Success depends on their ability to engage with the rest of HR and key business stakeholders. As workforce analytics matures as a function, it's important to clarify accountabilities between analytics specialists, HR leaders (who form the bridge between analytics teams and the business) and business leaders, who are ultimately accountable for improving business results.

- Workforce analytics teams typically need to get better at collaborating with analytics functions in other parts of the business, such as finance, marketing or customer insight. You can solve business problems using analytics much more effectively by combining business and people data.

- HR business partners need to play a key role in showing business leaders how workforce analytics can help solve business problems, generating the business questions and hypotheses to be tested, translating the results of analytics projects for their business customers, and making sure the recommendations are followed through. However, most HR generalists do not have the skills required and a substantial upskilling of the broader HR function, and a shift towards a more data-driven mindset are needed.

- The CHRO plays a pivotal role in determining whether investments in workforce analytics are going to be successful. Having the active, visible sponsorship of a commercially-

"I DO THINK ANALYTICS IS GOING TO BE A CRITICAL ELEMENT IN THE FUTURE SUCCESS OF HR. IT HAS THE POTENTIAL TO HELP US COMMUNICATE WITH OUR CUSTOMERS IN THE BUSINESS IN A MUCH MORE BUSINESS-ORIENTED WAY. IT HELPS US SPEAK THE SAME LANGUAGE AS THE BUSINESS."

Markus Kessler, Director of Human Resources, UPS Western Europe

oriented, analytically curious HR leader who's willing to provide air cover and make connections with business leaders where necessary is key. The consensus view is that unless the head of workforce analytics reports directly to the CHRO, they are unlikely to have sufficient visibility of strategic priorities to be able to determine where to focus the function's attention.

- Once workforce analytics teams start to build a track record within the organisation, they can become overwhelmed by demand. You therefore need to build a process for prioritising the activities that are likely to have the greatest impact on business outcomes, especially minimising time spent on reporting, and to develop clear governance frameworks.

- You have to take an 'outside in' view of workforce analytics. Academics and external experts can help narrow down the range of hypotheses to test, based on what is already known through scientific discovery. Also, external consultants can help you test out the possibilities of analytics, which avoids the need to hire permanent people before you're ready.

- Interest in workforce analytics has increased substantially over recent years, and we see no sign of this abating. Emerging technologies such as machine learning, along with the proliferation of workforce-related sources of 'big data', are likely to lead to ever more sophisticated ways of deploying data to understand the drivers of business performance. This is the future of organisations more generally and the HR function in particular, and it will require a substantial shift in capability and mindset for many HR professionals.

5.2
RECOMMENDATIONS

1. **Connect workforce analytics to business and people strategy.** Workforce analytics should focus on improving strategy execution by targeting the core capabilities that the organisation needs to develop in order to build and maintain competitive advantage. Key questions to consider include: What are the organisation's key strategic objectives, and where are the biggest gaps that are preventing the organisation from achieving those objectives? How could we deploy workforce analytics to address these gaps?

2. **Define a clear mission and purpose for workforce analytics.** You have to be clear why you're choosing to build a people analytics function. Is it because it's the 'shiny new thing' in HR, or is there a clear plan around how it will help deliver business strategy more effectively? Are your expectations about what analytics can deliver realistic? Just how data driven do you want people-related decisions to be in your organisation? Should data drive or merely inform decisions? Should the main focus be on reporting and metrics, workforce planning, or building predictive models, for example? Being clear about what workforce analytics is there to do, and what falls within and outside of its scope, will help drive other key decisions such as where the team should sit in the organisation, who it should report to, what interfaces are required with the rest of the organisation, and what capabilities

you'll need to acquire or develop. It's also important to communicate the purpose of workforce analytics to key stakeholders, so they understand what to expect and how to engage with the team.

3. **Clarify responsibilities.** You need to be clear how responsibilities are shared between the different parts of the organisation that get involved in workforce analytics interventions. Who is responsible for initiating and prioritising projects – the analytics centre of excellence, HR generalists or specialists, or business leaders? Who is responsible for implementing recommendations and to what extent is the workforce analytics team expected to remain involved once they have delivered their recommendations? Who will be held accountable if the insights from the data are not put to use in the business? Do all stakeholders clearly understand these responsibilities?

4. **Workforce analytics interventions should always start with a clear end point in mind.** It's easy to get involved in answering questions that may be interesting, but don't necessarily lead to improvements in business outcomes. Before embarking on a project, you have to ask some key questions. What business issues are we trying to solve by undertaking this analysis? Why do we need to know the answers to these questions? Who is asking and what actions are they likely to take as a result of the analysis? To what degree is the business prepared to

"ANALYTICS IS JUST AN ENABLER OF ORGANISATIONAL CHANGE – IT'S NOT THE END GOAL."

Brydie Lear, Global Head HR Intelligence & Analytics, ING Bank

make changes to systems, processes or behaviours as a result of what we discover? Is it likely to be worth it? Note that the work is not complete until changes to working practices have been implemented in the organisation.

5. **Use resources from outside HR.** The best insights tend to come when business and people data are combined, and this usually requires collaboration across organisational silos. Workforce analytics capability tends to lag behind that in other business analytics teams, so you can learn a lot by using the tools and expertise that exist elsewhere in the organisation.

6. **Don't allow the day-to-day to distract from strategic priorities.** Consider whether it would be helpful for ongoing HR reporting and metrics, and ad hoc data analysis and modelling, to have different reporting lines. This might avoid the risk that data analysts who should be working on strategic projects are distracted by day-to-day demands. Where the teams sit within the same reporting line, putting some clear boundaries around the work each does can help to ensure there is sufficient capacity ring-fenced for strategic analysis.

7. **Take a more expansive view of the data needed to answer the business question at hand.** It can be easy to get more hung up on cleaning data than you need to. In deciding what data to gather for the analysis, ask the following questions. Can we generate new data to help solve the problem at hand? What's the right balance between qualitative data from stakeholder interviews or focus groups, for example, and quantitative data? Can we use external data or analysis results, perhaps from

academic studies, to narrow down the hypotheses to test?

8. **Consider how to best use external resources to boost internal capability.** It can be helpful to engage external consultants for specific projects or to support the team as it's getting started.

9. **Adopt a consistent methodology.** Having a consistent approach that starts with a clearly defined business problem and ends with implementation of the findings and evaluation of outcomes can help keep projects business-relevant and on track.

10. **Invest in building analytics capability outside of the workforce analytics team.** HR generalists need to understand what analytics can achieve so they can help the business get the best out of a specialist workforce analytics capability, and be able to interpret and communicate the results of analytics work. This is not typically part of HR's core capability. Therefore, you may need to invest not only in building the capability of specialist workforce analytics teams, but also in the capacity of the wider business and HR function to do something useful with the insights generated by workforce analytics.

06

APPENDIX

TOPICS COVERED

6.1
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