MERCER ANALYTICS™
MOVING FROM I THINK TO I KNOW

PART ONE
HOW DO I GET STARTED IN WORKFORCE ANALYTICS?
Although 2014 looks to be a year of economic transition and recovery both globally and in the United Kingdom, organisations are not automatically returning to old ways. Controls over pay remain in place, recruitment levels are not expected to return to pre-recession levels, and improved productivity continues to be a focus. At an employer level, increases in part-time employees explain the reduction in unemployment while issues of affordability and household debt remain virtually unchanged from the dark days of the recession.

Against this backdrop, the best organisations are choosing to make their people investments with laser precision, by using evidence-based people decisions; and workforce analytics is moving from a “nice to have” function to an essential component of any successful business.

However, according to Mercer’s 2013 Talent Barometer Survey, 68% of European organisations view their workforce plan’s ability to meet their immediate and long-term human capital needs as either somewhat or not effective. Our discussions with clients reveal that there is a lack of understanding of value added by this critical function for HR departments.

At Mercer, we believe that one of the greatest challenges and opportunities for HR directors in 2014 is addressing the disconnect between the desire to create evidence-based workforce action and the lack of organisational ability and experience to do this effectively.

Make no mistake — the time for workforce analytics and planning is now.

KEY THEMES
This publication is the first in a three-part series on workforce analytics and planning, authored by Mark Quinn and Julia Howes from Mercer’s Talent business in London. This first paper explores:

• Why the workforce should be managed like any other investment, and the different ways in which organisations use workforce analytics as an input into their talent strategy.

• What you can do with analytics: workforce analytics means many different things and, typically, organisations evolve through a number of different stages of analytical maturity.

• Your new headcount report: understanding and measuring the interrelated flows of talent into, up, and out of the organisation by using Mercer’s Internal Labour Market (ILM) Map is often the best way to start workforce measurement and present insights to leaders.

• The place “big data” has in workforce analytics and how to avoid being stuck in the data trap.

• The best way to identify the right critical questions to start workforce analysis.

• How using long-data techniques can help organisations to combine data sources in a meaningful way for workforce analytics.
WHY SHOULD I CARE ABOUT WORKFORCE ANALYTICS?

We are seeing a change in how organisations are valued and what is valuable to an organisation. Consultants and academics have spoken for the last 15 years about the shift in importance from property and equipment alone, to a knowledge-based economy where the most important assets are the people in the organisation. However, 2014 is a tipping point: two years ago, Klaus Schwab, the founder of the World Economic Forum, stated that the world is “moving from capitalism to talentism” and talked about how investments in human capital help determine the success of both societies and organisations. In 2014, boards and CEOs see that too.

With this shift in understanding that the workforce is an asset, not a liability, comes the need to manage that asset with the same rigour we would any other investment. Organisations can no longer afford to make fundamental changes to how they manage their workforce without a clear understanding of what the full effect of those changes will be. Even when changes appear logical and sensible, they must be justified with the same level of analytical depth that our business leaders demand in other areas.

A prominent organisation recently increased the pay levels of workers at its retail stores. The sizable investment was justified in the following ways:

\- The pace of work was faster and more intense (compared with other retailers).
\- Other similar retailers paid more.
\- Some workers were dissatisfied with current pay levels.
\- Turnover was higher than desired.
\- The stores were highly profitable.

Missing from the discussion was a key question: what is the return that the organisation hopes to gain from this investment in its people?

We would expect greater rigour around these investments and, at a minimum, an understanding of the following:

\- Are the workers that are being given the raises generating higher levels of sales, and would the loss of these employees negatively affect business results? If so, how many additional workers does the company expect to retain over the next one, two, and three years as a result of the pay increases?
\- What is the volume of sales that the business expects to gain if these workers are retained for an extra year (compared with if they kept pay at the same level and workers left as expected)?
\- Is the volume in sales generated by their retention bigger or smaller than the cost of the pay increases?
\- Is the return on the investment in workers going to be realised in the current fiscal year or in the future?
\- How many years will it take for the investment to break even?
\- If the company was to spend the money in a different way (for example, bonuses, greater employee discount, training programmes) would the value generated by these other investment options result in a bigger or smaller return on investment?
Best-in-class organisations use workforce analytics and planning as an input into their talent strategy in order to make smart decisions about the right priorities for workforce policies and programmes. Sometimes the analysis reinforces the assumptions already made, but it can also show a different, better way forward.

**MYTH-BUST ASSUMPTIONS BASED ON INTUITION.** We worked with a client to help disprove assumptions the company had made based on intuition and, in doing so, saved it over £30 million. The company was experiencing high turnover in a key revenue-generating role. The client assumed that increasing the salary was the best strategy to decrease turnover; however, data analysis showed that manager stability and internal movements would have a much bigger impact. By focusing on these strategies, the client reduced turnover by over 20%.

**IDENTIFY TALENT SEGMENTS THAT IMPACT REVENUE.** We helped a client identify which workforce characteristics had the biggest impact on revenue. The company then targeted interventions in these directions, resulting in a revenue gain of £25 million. We found that the company locations with more experienced employees performed better: each additional year of average service increased revenue per customer by 4%. However, the organisation was paying a premium for new hires and high-performing, tenured employees were leaving the company. The client strengthened career tracks and expanded variable pay opportunities to reverse this trend.

**IDENTIFY UNKNOWN STRUCTURAL IMBALANCES.** We helped a client detect a £6 million business problem in one part of the organisation. Using our unique talent visualisation tool, ILM Maps, we tracked the flows of talent into (hires), up (promotions), and out (terminations) of the organisation. Insufficiently coordinated employee movements caused the organisation’s structure to become increasingly top-heavy, with no explicit business case to justify the resulting increased labour costs. ILM Maps were also used to understand and manage down this costly trend with minimal impact on the morale of the existing employee population.

**FUTURE-PROOFING THE ORGANISATION AGAINST RISKS OF TALENT SHORTAGES.** We worked with a client to create a 10-year forecast for their workforce supply and demand against critical roles that required more than eight years of experience. We created new internal career paths for roles with significant gaps and low availability in the external market. If the client had not developed a new pool of talent internally for these critical roles, it would have had to recruit expensive experienced workers from competitors, or be forced to shut down key operations.

An HR function with the capability to translate data about its people and performance into insightful recommendations on how to best engage, mobilise, reward, assess, and develop the workforce will be positioning itself at a competitive advantage within its organisation. As a result, it will secure its position as a critical player in the boardroom.
WHAT CAN I DO WITH WORKFORCE ANALYTICS?

Typically, the application of workforce analytics evolves through a number of levels of maturity.

We typically see organisations move beyond anecdotes and reactive checks to focus on building a consistent, repeatable process to create and distribute regular, ongoing reports. These reports allow an organisation to identify and understand the macro workforce trends that point to risks that need to be addressed. At this stage, organisations need to identify key measures and definitions to ensure consistency of measurement and understanding. Organisations embarking on the analytics journey should not underestimate how difficult this stage can be — or how important it is to stabilise this stage. Without a reliable process for ongoing reporting, any further analysis will be difficult and will lack credibility.

Segmentation focuses on grouping the workforce into different components for more detailed understanding: high performers, diversity profiles, job profiles, career profiles, engagement profiles, absence profiles, productivity profiles, etc. This “slicing and dicing” of data allows for internal and external comparisons and a more detailed understanding of hot spots and hidden trends.

The correlations stage is the first step towards using statistical techniques to help understand which variables have a positive or negative relationship to each other — for example, engagement and turnover, or pay and retention — and the strength of that relationship.

Simulations and forecasting allow us to understand the future state based on historical trends and the impact of “what if” scenarios, which test the impact of interventions on desired outcomes. Through workforce planning, an organisation can understand what the forecast of specific talent needs to be to meet the demands of its business.
Finally, predictive and causal modelling takes correlated variables and determines which independent factors have the biggest impact on a dependent variable. For example, what workforce characteristics of client-facing teams (tenure, experience, spans of control, engagement, pay, qualifications, training, etc.) have the biggest impact on profitability? This type of analysis allows for pinpoint accuracy and absolute confidence in understanding what workforce practices will have the biggest impact on the outcomes a company wants to achieve.

TALENT FLOWS: YOUR NEW HEADCOUNT REPORT

Every organisation that Mercer has worked with generally asks us the same question: what should I measure? As we discuss below, it is essential that the measurement focus be tailored to each organisation and its specific business context. However, we recommend that all organisations achieve a certain level of understanding about the workforce as a general starting point.

Our advice is to discard the multiple-page report containing pages upon pages and tables upon tables listing headcount, then hires, then terminations, filtered and sliced across multiple dimensions. Although detailed, this type of report does not make it easy to achieve insight and take action. Instead, organisations should take a fresh look at their workforce to try to understand its structure and shape and how the following three interrelated flows of talent impact each other:

- **ATTRACTION.** Who comes into the organisation? At what grades/levels are they entering? How experienced are these hires? How successful is the organisation at attracting the types of workers it needs to achieve its goals?

- **DEVELOPMENT.** How do workers move through the organisation, through different roles, jobs, assignments, projects, and levels of responsibility? How successful is the organisation at growing and nurturing the kinds of human capital it needs to execute its business strategy?

- **RETENTION.** Who is staying and who is leaving? How successful is the organisation at retaining people who have the right capabilities and produce the highest value?

To understand these flows of talent, we create workforce visualisations, or an ILM Maps. These maps are graphic, quantitative pictures that describe key dynamics related to the flow of people into, through, and out of an organisation over time.

Wendy Hirsch, Executive Director — Workforce Analytics, Johnson Controls, Inc.
HOW TO INTERPRET THE ILM MAP

• Each row represents a different career level. Labelled here as 1 to 6, this is an organisation-specific categorisation of levels such as senior executive, manager, professional, paraprofessional, administrative, and support. Each career level clusters a number of jobs and titles and is frequently created by mapping grades or levels. Levels are not just markers of salary grades; they should represent major points of career advancements at which the level of responsibility, authority, scope of job, and pay change fundamentally.

• The horizontal bars in the centre of the map represent headcount. These bars show the relative proportion of employees at that level in the career hierarchy. Typically, an average headcount metric (rather than a closing period headcount metric) is used.

• The left column of arrows in the map indicates the number of workers hired externally at each career level.

• Upward pointing arrows indicate the number of people promoted to the next level up during the period.

• Downward pointing arrows indicate the rare instances of demotions.

• The right column of arrows indicates the number of workers leaving the organisation from each level.

All calculations for an ILM Map must be based on a consistent unit of time (such as a year) to be meaningful. An ILM Map can be constructed for shorter or longer periods, depending on the organisation’s needs.
ILM Maps come in a number of different shapes and these shapes reveal how hierarchical an organisation is and how employees are spread throughout the organisation. By looking at patterns of entry and promotion throughout the hierarchy, we can tell whether an organisation tends to buy or build its talent. “Build from within” organisations tend to limit hiring at the middle and upper levels in order to concentrate on the development of homegrown talent and keep promotion opportunities for incumbents strong. “Buy” organisations tend to have many touch points with the market, as evidenced by diffused patterns of entry and exit.

ILM Maps allow us to investigate the following questions in a neat visual representation:

- Are we a build-from-within or a buy organisation?
- Do we have sufficient velocity of movement throughout the organisation?
- Where are our career choke points?
- Are there focal points of entry and exit?

ILM Maps can also be created for different workforce segments in order to investigate various issues, such as gender and diversity, high-performing talent, accelerated careers, international assignments, sources of hires/qualifications of employees, and so on. Such maps are an extremely useful visual tool for presenting to senior leaders and assisting them in understanding what is happening with their workforce. Creating this kind of map is our recommended starting point for ongoing reporting.

**DON’T GET STUCK IN THE DATA TRAP**

“Big data” is a fairly vague but forceful term that shows up predictably in just about every article, column, or blog touching on the subject of capturing and analysing the ever-rising tide of digital information. Big data in the context of workforce analytics is emerging as one of the hottest topics of 2014, with the Chartered Institute of Personnel and Development recently announcing that “talent analytics and big data are now must-have capabilities in HR”.¹ The interest in workforce analytics continues to be fuelled by the volume of data becoming available and the intensity and sophistication with which it is now being used.

**BUT IS HR IN DANGER OF GETTING LOST IN THE FOG OF BIG DATA?**

At Mercer, we observe that, for many organisations, their big data journey in workforce analysis starts with data clean-up, a large-scale investment in technology, and trying to find automated predictive analytics. We believe that a different focus is needed.

Organisations can easily fall into the trap of measuring what they know they can measure; they are constrained by the data they know they can produce. Typically, the pattern that HR teams follow when they start using data is:

- **Collect data**
- **Choose metrics**
- **Report metrics**
- **Analyse findings**
- **Assess impact**

In the beginning, analytics and reporting teams collect the data available — typically HR information system (HRIS) or payroll data. Then, they spend time cleaning up these data. Next, they select the metrics — usually based on a list of “best practice” KPIs — but these metrics are limited to the view of data in the HRIS. Based on these metrics, they design reports and dashboards to push out to the business. We frequently see organisations invest in teams whose main role is to create complex spreadsheets with pivot tables, based on a multi-tiered manipulation process, eventually creating hundreds of metrics and dozens of pages of analysis.

Not surprisingly, this process can take a substantial amount of time as reports are created and communications to the business are issued. Unfortunately, this investment is often wasted, as the process eventually unravels when leaders are left to analyse the metrics provided and somehow gain insight and impact from them. When reflecting on the impact big data analytics has had, few organisations are either able to show the impact or, if they can show impact, it is often driven by ad hoc parts of the organisation rather than being an embedded, repeatable, and consistent process.

**A BETTER APPROACH**

- **Determine impact**
- **Choose metrics**
- **Collect data**
- **Report metrics**
- **Analyse findings**

The key to a successful workforce analytics programme is to instead start the process by focusing on the impact of the data you will collect and the analysis you will undertake. This can be identified by determining the critical workforce questions that you want your analysis to solve, without being constrained by the data available. Essentially, your workforce metrics and analytics are only as good as the questions and resulting data that generated them — otherwise, the metrics and analytics will only produce “data smog”.
HOW DO I DETERMINE THE RIGHT QUESTIONS?

To start, critical questions can be generated by interviewing your senior leaders to understand their perspective on the following:

• Which skills/talent groups can be developed internally?
• Which skills/talent groups should be bought externally?
• Which talent groups or categories will be critically important to achieving your strategic goals?
• What do you believe are the biggest people challenges created by the company’s business strategy?

These questions will also help to ensure that the analysis is more focused and more valuable; for example, the first question above can identify a talent risk by highlighting a perceived weak pipeline or exposing a shortage of hot skills — either result may indicate growth concerns.

A second, complementary way of determining impact is to consider the focus of the current talent strategy. Is the organisation investing in leadership development programmes that develop high-potential talent; a pay review to help reduce employee turnover of a certain role; a wellness programme to try to decrease stress and improve productivity; or an international mobility programme to help retain key talent segments and develop future leaders? If so, what assumptions are being made about the impact of these programmes and should this impact be tested through data analysis?

A third angle that can be employed to create a holistic approach to identifying critical questions is to use the initial findings of the ILM Maps to pinpoint key workforce trends requiring further analysis.

When considering the right questions, ensure that you think beyond the core data system and do not dismiss the possibility of combining multiple data sources. Many HR functions are feeling overwhelmed by the volume of data available to them and demonstrate an overreliance on their HRIS, but information can also be sourced from engagement surveys; exit surveys; talent management programmes; industry benchmarks; and recruitment, compensation, benefits, wellness, learning, and financial data. At Mercer, we believe that, in most cases, combining one or two relevant fields of information from multiple systems will be more valuable and insightful than perfecting all of the data in one system.

This is not easy. However, organisations wishing to be successful at workforce analytics should spend at least as much time thinking through what data sources to use and how to combine them as they do on clean-up of the main data system.

“Combining one or two relevant fields of information from multiple systems will be more valuable and insightful than perfecting all of the data in one system.”
HOW DO I COMBINE DATA IN A MEANINGFUL WAY?

Big data analysis is a trend that will continue to be applied within HR; however, focusing on the technologies available to process the sheer mass of data is not necessarily the best approach when thinking about workforce analytics.

Big data is frequently understood in terms of volume, velocity, and variety. However, not all of these concepts are naturally applicable to workforce data. Workforce data does not have as large a volume of data (especially compared to consumer or fraud data sources) and, at least at present, the velocity is a great deal slower — for example, while a company may hire a thousand people over the course of a year, a sales function may perform hundreds of thousands of customer transactions in one day.

At Mercer, we consider that long data techniques are more valuable to workforce analytics instead. The term “long data” was coined by the mathematician and network scientist Samuel Arbesman to describe “datasets that have massive historical sweep.” Long data builds a time line of an employee’s entire lifecycle at an organisation, so that at any point in time we can see the characteristics, profile, and experience of that employee. The benefits of this approach are that it allows organisations to identify and analyse data as part of an ongoing process, thus avoiding the risks associated with making purely reactive or point-in-time decisions. The applicability of this approach to HR functions is clear: when considering workforce issues, we are often more focused on trends and impacts that occur through time:

- Do we offer our employees a defined career path?
- What are the best experiences to help accelerate the development of our future leaders?
- Will a wellness programme have long-term impacts on the productivity and retention of our workers?
- What recruitment sources produce our best-performing employees one, two, and three years after hire?
- Do we have a pay-for-performance culture?

The difference between big data and long data can be demonstrated by considering the concept of retention and pay of high-performing employees. The retention of high performers is a key issue for HR leaders; however, one aspect of this problem is how to identify who the high performers are.

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In our example, John Smith was hired in 2010 and was identified as a high performer in November 2011 and November 2012. In November 2012, John was also promoted. He then subsequently received a medium rating in his next performance review in November 2013. A point-in-time data approach would not identify John as a high performer when looking at any metrics run during 2013 and 2014 (such as the retention rate of high performers). However, generally, a medium performance rating in the year after promotion may be expected and, given a longer view, the organisation may still want to categorise this individual as a high performer. By using a long data approach, we can create an employee segment that looks at three or more performance ratings to determine whether an employee is considered a sustained high performer.

Analysing data over time can therefore provide far more valuable insights than a static examination at a point in time. This has many applications in workforce analysis:

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<th>Snapshot reporting example</th>
<th>Long data example</th>
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<td>Attraction</td>
<td>Average time to fill</td>
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<td>Average pay increase since hire of fast-tracked employees compared with employees hired at the same grade with similar tenure</td>
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<td>Average engagement score</td>
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FINAL REMARKS

The most effective talent strategies are those coming out of a rigorous analysis of human capital issues and their causes. HR leaders understand this, and the desire to use workforce analytics as an input into their talent strategy is growing.

However, just because there is a will, does not always mean there is a way, and while the momentum to get started exists, there is a danger that we will get lost in the noise of data, measurement, analytics, big data, and predictive analysis. We believe it is essential that organisations have a clear view of where they are in the measurement continuum, and what they need to do next to move up the continuum.

For those organisations that are getting started we recommend:

• Moving beyond traditional headcount and termination reports, and instead starting with an ILM Map to understand the workforce structure and the interrelated flows of talent into, through and out of the organisation.

• Focusing on determining the right questions that need to be answered with data, and using this to inform the metrics and the data that should be collected, rather than limiting your initial analysis to the data available.

• Using long data techniques to create a data asset that is more meaningful for workforce analysis, and which also establishes a data framework that is more appropriate for statistical correlations, simulations, and forecasting.

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If you have any questions on workforce analytics and planning, and would like to get in touch, please contact Dion Groeneweg on dion.groeneweg@mercer.com or call on +65 6398 2920.
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For further information, please contact your local Mercer office or visit our website at: www.mercer.com

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