



CIPD

*Championing better
work and working lives*

Guide

November 2018

**Getting started with
people analytics:**
a practitioners' guide

The CIPD is the professional body for HR and people development. The not-for-profit organisation champions better work and working lives and has been setting the benchmark for excellence in people and organisation development for more than 100 years. It has 150,000 members across the world, provides thought leadership through independent research on the world of work, and offers professional training and accreditation for those working in HR and learning and development.

Guide

Getting started with people analytics: a practitioners' guide

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1 Introduction

People analytics continues to be seen as an emerging area of HR and people management, even though it has been around for some time – over 20 years. However, there is still a perception that HR is not yet making the most of people data.

Given that HR is often criticised for making gut decisions, there needs to be a more concerted effort on the part of HR to invest the time and resources into building people analytics capability. The growth of evidence-based practice in HR is a positive step towards making more effective decisions. Data is one of four types of evidence recognised in evidence-based practice (the others being professional judgement, the views of stakeholders, and scientific insights). Therefore, the ability of HR to use people data is vital if the profession is to be more evidence-based.

The CIPD report *People Analytics: Driving business performance with people data* highlighted that globally skills and confidence in conducting even basic levels of analytics is low. HR practitioners therefore need support if they're to make the most of people data.

Data and evidence is a key part of the CIPD's strategy for developing the HR profession. The CIPD is investing in building practitioner capability as part of its drive to improve the use of people data in decision-making in organisations. The CIPD's new Profession Map was developed with three key concepts in mind: being principles-led, evidence-based and outcomes-driven.

People analytics also forms part of the CIPD's agenda to improve transparency on workforce practices, and encourage firms to report on how they manage and develop the value of their human capital. This stems from a need to see more evidence reported by firms to meet the changing needs of regulators, investors and future employees.

This guide will cover the following key concepts:

- **Getting started:** While many HR practitioners fear data, it's easy to get started with people analytics and create real value. There are key steps that any HR practitioner can follow, no matter what technology they're using, to start to improve their analytics practice. This guide focuses on those steps.
- **Using systems effectively:** HR practitioners have the opportunity to take the lead in making the most of the people data that is now often available through the technologies and systems that support and deliver HR practices. They often have large amounts of data that are not being used effectively. This guide will help them to sort out how to use this data effectively, and what needs to be put in place to make a sustainable and high-impact analytics practice.
- **Becoming more evidence-based:** People analytics is a fundamental part of evidence-based practice. For HR to become more evidence-based, it needs to improve the use of people data when informing or advising on decision-making. Without people analytics, HR will struggle to be seen as an evidence-based profession that is able to deliver sustainable outcomes for its stakeholders.
- **Building trust and engagement with data:** People data can help to improve trust and transparency when used appropriately in organisations. HR practitioners should look to make the most of people data to share with the workforce the effectiveness of people management and HR practice, as well as evaluate good and bad practice, for the purpose of improving outcomes for employees.

2 What is people analytics?

Scope

From the outset it's important to clear up any confusion around the terminology applied to this discipline.

This report, for example, promotes the term '*people analytics*'. Is this the same as '*workforce analytics*' or '*HR analytics*'? Well, yes and no.

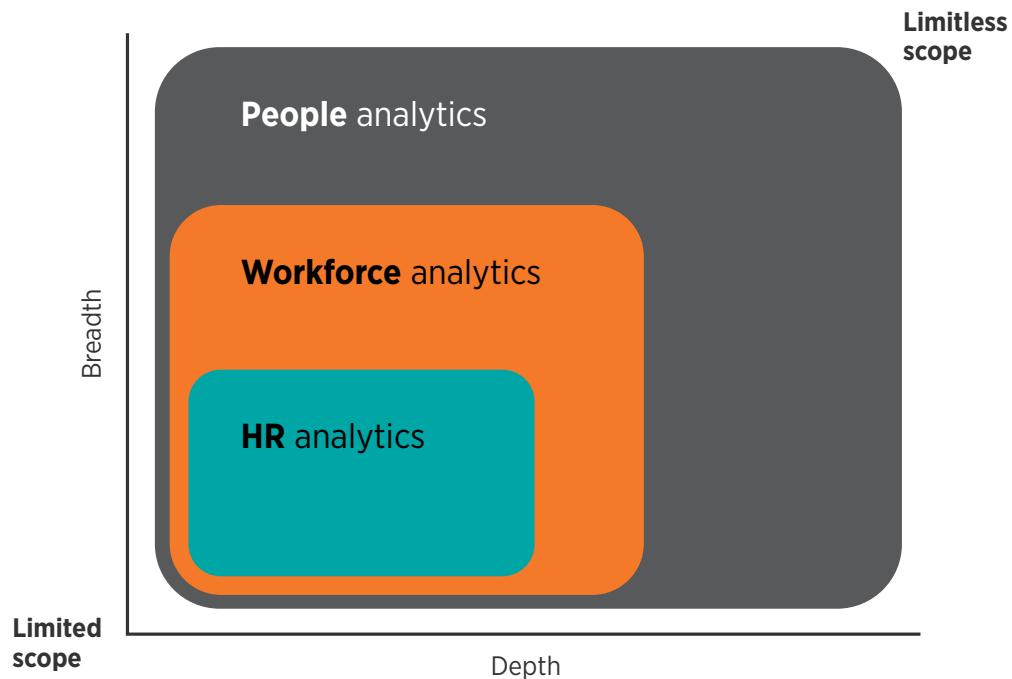
In practice the terms are interchangeable; however, it is important to approach the discipline with the appropriate mindset. If we wish to maintain credibility with, and add value to, the business we support, we must think beyond the HR function, its traditional processes, and the data typically held on HR information systems.

We must consider how the actions of the workforce may positively drive business metrics, and consequently contribute to the success of the organisation.

We should also look outside of the organisation at the trends that will, for example, influence the optimal size and shape of our workforce in the future, and the challenges we may face in sourcing and developing that workforce.

The key message here is: describe the discipline in a way that makes sense to you and your stakeholders, but adopt a holistic view in respect of scope (see Figure 1).

Figure 1: Scope of people analytics



Source: www.workforcedimensions.co.uk

Beyond scope, a recent evidence-based review of decades of academic research into HR analytics describes the concept in the following way:

'HR analytics consists of a number of processes, enabled by technology, that use descriptive, visual and statistical methods to interpret people data and HR processes. These analytical processes are related to key ideas such as human capital, HR systems and processes, organisational performance, and also consider external benchmarking data.'

(Marler and Boudreau 2017)

We therefore suggest that people analytics can be described with this definition, but with recognition of the broader scope and potential impact of the practice.

Reporting versus analytics

Often reporting and analytics are used to describe similar or the same processes. They are in fact distinct but related concepts:

Reporting is process-based, and descriptive. The core proposition is to provide snapshots of current workforce composition, and highlight the past trends of key metrics. A good example of reporting practice is the use of people data dashboards which include key performance indicators (KPIs) of important workforce data.

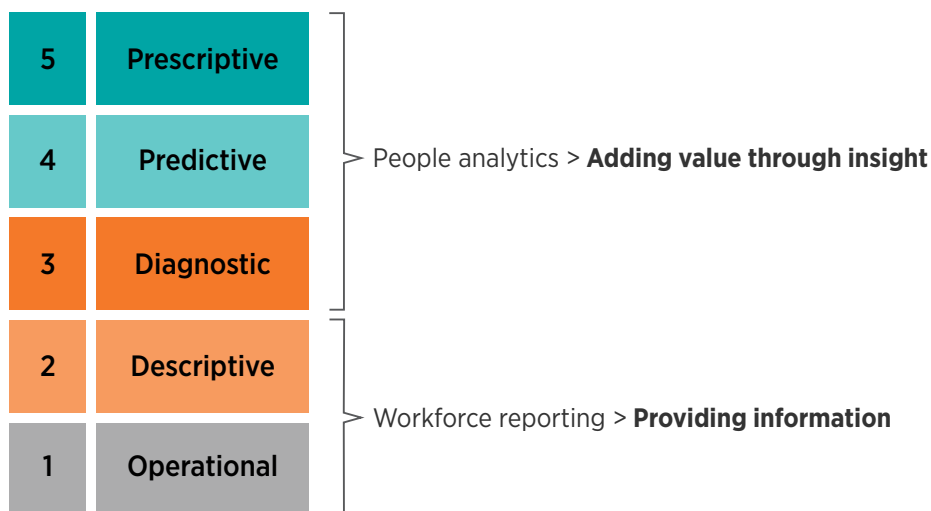
Analytics is typically project-based, often examining the root cause of a workforce issue, and strives to provide advice that will mitigate against associated risk. Or it is used to measure the success of a particular initiative, and to provide advice on optimisation.

Reporting focuses on the past and provides information; analytics is forward-thinking and delivers insight that influences decision-making.

The transition from reporting to analytics can be broken down into five levels of service provision (see Figure 2).

Although the aim should be to progressively focus resources on level 3–5 outputs, it should be recognised that the foundations remain important, and a mature, balanced reporting and analytics proposition will continue to encompass and deliver against the entire spectrum.

Figure 2: Five levels of reporting and analytics



Source: www.workforcedimensions.co.uk

- 1 Operational:** raw, unstructured data, typically presented as a list. An example would be a list of staff members, with each row representing a characteristic of the employee, such as age, start date, location, salary and gender.
- 2 Descriptive:** typically represented in tabular or graphical form, perhaps presenting a snapshot of the workforce's composition, or tracking a critical metric through time (that is, what happened).
- 3 Diagnostic:** typically the output from a piece of root-cause analysis, the purpose of which was to determine why something has happened. For example, an unwanted increase in employee turnover (that is, why it happened).
- 4 Predictive:** typically taking the output from diagnostic analysis, integrating other environmental factors, and projecting the future direction of critical metrics or KPIs (that is, what will happen next?).
- 5 Prescriptive:** working with stakeholders to determine intervention strategies that will minimise risk or maximise opportunity; and measuring the success of these plans (what we need to do).

People analytics and human capital: quantifying the value of the workforce

People analytics is often used by organisations to understand the value of its workforce, sometimes known as its human capital. Data is often captured that is used to describe the value and quality of human capital, and whether or not it is being used effectively to generate positive outcomes for the business.

The CIPD's *Human Capital Analytics and Reporting: Exploring theory and evidence* (2017) report provides the following definition:

'A broad definition of human capital is that it is the knowledge, skills and abilities of the workforce. There are a number of perspectives of human capital, from the economic, finance and human resource management disciplines.'

'Human capital can be considered to exist and be measured at both the individual level (for example formal qualifications) and at the collective level (for example measures of performance using technical skills).'

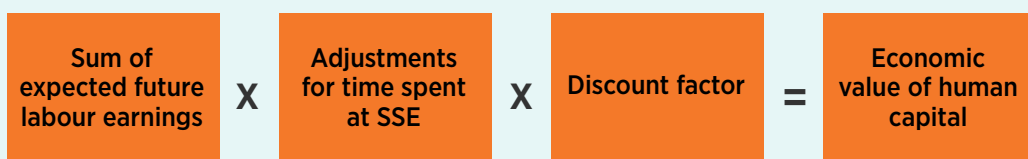
'Social capital considers the value of relationships in networks (for example within and between teams of individuals, value of collective action) and is important to consider in highly networked and social work environments. It includes the shared norms and values that facilitate team or group co-operation.'

Reporting human capital: demonstrating the value of investing in people

Organisations are under increasing pressure to demonstrate how they manage and develop their workforce. Such information is increasingly featuring in corporate annual reports. People analytics is the process by which organisations can measure their workforce, and report it to their key stakeholders, such as investors, regulators and customers.

Leading UK organisations such as SSE have developed human capital reports using people data and economic information from national data sets. Their publicly available report details key information about their workforce, including an estimated human capital value for each employee of £173,000 and a total company human capital value of £3.4 billion (SSE 2015).

Figure 3: SSE steps to calculating human capital value (SSE 2015)



3 How is HR using people analytics?

In section 2 we established that people analytics is the discipline that aims to establish the contribution that the workforce makes to business success, and then provide insight that will maximise this contribution.

If HR can successfully introduce and embed a value-add people analytics proposition, they will increasingly be seen as a strategic partner, which will support transition from a traditional perception of a service provider to that of a business enabler.

However, even with this opportunity, the adoption of people analytics has been surprisingly slow despite the value it can potentially bring.

Adoption of people analytics

As the recent (2018) *People Analytics: Driving business performance with people data* survey conducted by the CIPD in association with Workday reveals, people analytics is far from being business as usual:

- Just over half (54%) of global respondents had access to people data and analytics.
- Two-fifths (39%) had no access to people data for decision-making purposes.
- Just half (52%) of HR practitioners stated that their organisation uses people data to tackle business problems.

However, when people analytics is used, it is adding demonstrable value to organisations:

- 75% of HR practitioners globally who are using people data are using it to tackle workforce performance and productivity issues.
- 65% of those who said they work in an organisation with a strong people analytics culture said that their business performance was strong when compared with other competitors, but only 32% of those in organisations with a weak analytics culture reported strong business performance.
- Using people data was shown to predict the effectiveness of tackling key organisational challenges, such as workforce performance and productivity, showing that using people data leads to good business outcomes.

So why are these numbers not more encouraging?

Based on interaction with CIPD members, it is not a lack of interest or motivation on the part of HR practitioners; rather, it's not knowing where to start, in particular how to identify investigations that will add genuine value.

Adding value

As the CIPD's *Human Capital Analytics and Reporting: Exploring theory and evidence* (2017) synthesis report reflects:

‘These concepts have been around for some time, but modern people professionals have not adequately adopted a language which conveys their meaning.

‘This is particularly true of human capital, which for many professionals is a divisive and inhumane term.

'The people profession should look to adopt a language that conveys a positive notion of human capital, describing the importance of knowledge, skills and capabilities to personal growth, investment in skills from both organisations and individuals, and the importance of human connectivity in social capital terms.'

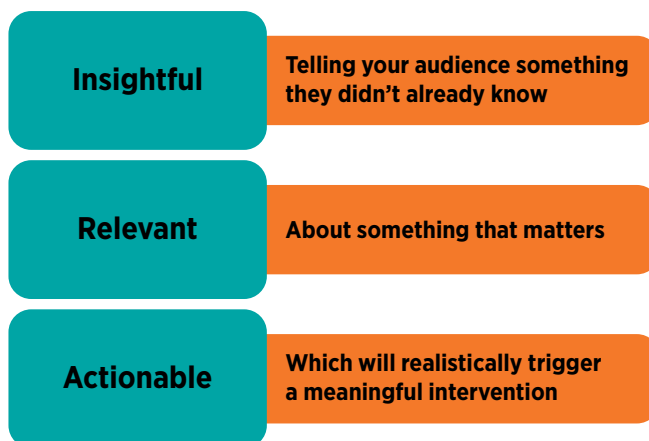
So, how can we isolate those value-add projects?

Let's first determine what we mean by 'value-add'.

Workforce Dimensions, a people analytics consultancy practice, highlight three checkpoints that should be considered before initiating any people analytics investigation:

- Will it be insightful?
- Will it be relevant?
- Will it be actionable?

Figure 4: Value-add people analytics



Source: www.workforcedimensions.co.uk

Typical organisational KPIs

One of the most frequently asked questions from HR practitioners concerns the KPIs and metrics that are commonly used across other organisations, and by inference, those that they themselves should consider using.

At organisational level, the KPIs in the eyes of the CEO or CFO may be revenue per employee. It is an effective way of illustrating the productivity and output of the workforce.

The calculation can be adapted for different employee groups, but the basic calculation remains the same:

$$\text{Revenue per full-time employee (£/n)} = \frac{\text{total business revenue for the year (£)}}{\text{average number of full-time employees (n)}}$$

Employee number can be substituted for other key measures, such as part-time employees, or total employee hours worked.

For not-for-profit organisations, revenue may be substituted by a measure of cost saving, service delivery or cost-efficiency.

Outside of these common indicators, metrics should be selected based on the critical questions that matter to your own organisation. This context is a vital driver, so it is impossible to be prescriptive.

However, Table 1 suggests metrics that should be at the forefront of our minds when answering an arbitrary selection of value-add questions.

Table 1: Example indicators/metrics

Question	Suggested metrics
Why are there high levels of manager dissatisfaction?	<ul style="list-style-type: none"> • Manager span of control • Leadership programme attendance
Why is there a variance in customer satisfaction levels across similar departments?	<ul style="list-style-type: none"> • Tenure in staff role • Number of product training days
Will we struggle to retain high-performing employees?	<ul style="list-style-type: none"> • Pay benchmarked against market • Time since last promotion or development opportunity
What is the likelihood of attracting appropriately skilled talent?	<ul style="list-style-type: none"> • Complexity of commute • Agile working options

For illustrative purposes only, suggested metrics are indicative only and do not represent an exhaustive list

4 Finding focus

There is an increasing demand, not just from our HR colleagues, but also from our business customers, for value-add, decision-driving people insight. However, that same audience is not entirely confident of HR's ability to deliver this proposition. The only way to attract that confidence is to consistently deliver meaningful insight to build a positive reputation and become trusted advisers.

To start this journey, first and foremost, we must probe and examine the right areas; we must adopt a *question-based* mindset.

A question-based mindset

Possessing a question-based mindset means careful consideration of the viewpoint of the customer and providing answers to the questions that they should be asking about workforce issues, people processes and the contribution that the workforce makes to organisational success.

We say 'should be asking' because, in reality, in many cases, the audience won't know – they will not be aware of the 'art of the possible'.

They may have only ever seen 'descriptive reporting', labelled as 'analytics' – and with this lack of awareness, they'll often default to asking for more of the same, and more quickly.

Immediately *efficiency*, rather than *effectiveness*, becomes the measure of success. This approach will rarely bring value, and will not support an aspiration to be seen as a strategic HR function.

We should consider carefully whether the question being asked will provide information only, or whether it has the potential to deliver insight. Again, a balanced proposition will encompass both, but genuine value is more likely to be created where focus is concentrated on insight.

We must present a proposition to customers that offers a series of potentially *insight-generating* questions – we can then work in partnership with them to refine and prioritise the proposition; we must move to consultation and away from pure service provision. In many ways, being a good analyst of people data means being a good researcher.

Effect and non-effect: two types of questions for people analytics

People analytics questions tend to take two forms: those which are based on linking concepts (effect), and those which are more descriptive in nature (non-effect). Reporting questions are typically non-effect, while people analytics questions are often effect. Below are some examples:

Non-effect questions:

- What is the sickness/absence rate for apprentices at my organisation?
- How satisfied are employees who work in the manufacturing department?

Effect questions:

- Does our health and safety training save the organisation money?
- Does our learning and development programme reduce employees' intention to leave?
- Which well-being initiatives are improving employee well-being the most?

Before we consider how to determine what those value-add questions may be, we need to recognise that 'one size does not fit all' in respect of our customers, and to ensure relevance we must segment our audience.

Audience segmentation

Audience segments, and how they are labelled and prioritised, will differ from organisation to organisation; and certainly when we are considering external stakeholders, they will vary depending on their strategic posture, for example private and listed companies, public or not-for-profit entities.

For this reason it would be disingenuous to offer a definitive list. Examples are shown below, along with suggestions as to the proposition (reporting or analytical) that may interest various groups.

- **Line managers** – would probably require relevant, clearly defined and understood measures and metrics, such as trended absence rates against target.
- **HR business partners** – may need enablement and empowerment to deliver meaningful information and insight to their customers, perhaps in the form of on-demand dashboards showcasing key people measures with support on interpretation.
- The **HR leadership** and other senior management – may need a projection on impact and ROI of proposed major people programme.
- And if we were to look externally, current **shareholders** or **potential investors** could be interested in evidence that the business is investing in the development of the workforce, and this investment is aligned with corporate strategy.

It's therefore important to consider the interests and information needs of each key stakeholder, as their requirements are likely to be specific to their role and focus. Therefore, a one-size-fits-all approach to sharing insights is unlikely to work.

As HR practitioners we must identify these groups in the context of our organisation and offer a differentiated proposition if we are to maintain their interest and embed people analytics into our business.

Once we have identified these groups, we should build and maintain a relationship with key stakeholders within them. We can then work in partnership to craft the appropriate proposition, and determine the optimum channel of delivery.

Killer metric: Employee turnover

Employee turnover rate describes the rate at which employees are leaving the organisation, and is measured over a defined period (usually annually). Sub-categories of employee turnover rate include intended, for example because of poor performance, retirement, restructuring, and unintended, for example new role outside of the organisation, death, and so on. For a defined period, turnover rate can be calculated as:

$$\text{Turnover rate (\%)} = \frac{\text{number of employee separations (n)} \times 100\%}{\text{average number of employees (n)}}$$

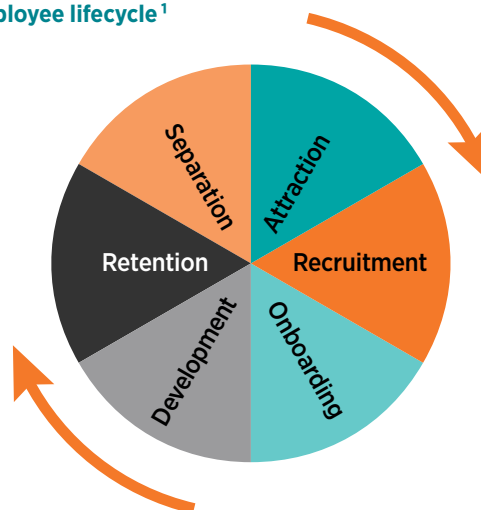
Alignment with the employee lifecycle

We have now established that priority should be given to projects that will provide output that will add value to the decision-making process in both the HR department and the wider organisation. And that these projects will have their origin in 'asking relevant questions' and will be different depending on audience segment.

Next we need to determine and craft those questions. Often these questions will be easy to identify; however, sometimes we need a prompt to get the ball rolling – and the employee lifecycle is a great place to start.

Because it tracks employees before, during and potentially after they exit the organisation, the employee lifecycle offers a framework that allows us, in principle, to evaluate investments in the attraction, recruitment, performance, development and retention of our workforce (see Figure 5).

Figure 5: The employee lifecycle¹



¹ <https://inside.6q.io/six-stages-to-success-with-the-employee-lifecycle/>

Alignment to the employee lifecycle has a number of additional benefits:

- Every HR practitioner understands the logic of an employee lifecycle.
- Each stage of the cycle is associated with a specific people process or event; therefore, mapping to a particular audience segment should, in principle, be straightforward.

When crafting questions based on the employee lifecycle, it is important that our investigations incorporate metrics that measure both *cost and benefit*, and *efficiency and effectiveness*.

Example 1: The recruitment process

When appraising the success of the recruitment process, the staffing function will, quite rightly, be keen to understand both the cost of, and time to, source hires – possibly also segmenting and comparing the source, or talent pool, from which these new entrants originated. This analysis focuses on efficiency.

However, would they (or should they) also be interested in tracking these new hires to understand performance, progression and tenure in the organisation? This is a question of quality, often termed the quality of hire.

This would surely be of value to both the staffing function and their business customers, because assessing the effectiveness of the process in this way would inform the future direction of resourcing strategy and improve the quality of talent entering the organisation.

Example 2: Learning and development interventions

Similarly, with learning and development we should not aim only to quantify the direct and indirect cost of a training programme, but also identify the metrics that measure its impact. This could be a (before and after) measure of revenue, improved customer feedback or any other quantification of additional value to the business.

Essentially this is the holistic mindset that will allow us to answer the questions that the business should be asking about its human resource.

One obvious drawback with aligning our people analytics proposition with the employee lifecycle is that although it captures much of the business-as-usual activity of the workforce, it doesn't look to the future needs of an organisation in terms of numbers and types of people a business will need in, say, three to five years.

In recognition of this gap, next we'll consider the concept of a holistic people analytics strategy.

Killer metric: Succession coverage

Succession planning is a key element of workforce planning, particularly for senior roles, or pivotal roles in the organisation that have significant risk attached when vacant. Aside from the measure of a succession plan being in place, other key measures to consider are:

$$\text{Succession coverage (\%)} = \frac{\text{number of succession plans in place (n)} \times 100\%}{\text{number of roles identified as requiring succession plan (n)}}$$

A people analytics strategy

There are any number of barriers to introducing, embedding and maintaining a credible people analytics proposition within an organisation. Those voiced most regularly are lack of analytical skill, lack of time and lack of stakeholder support (or interest).

However, as Workforce Dimensions (2018) reflect:

'A barrier that is rarely recognised but is all too apparent is a lack of a People Analytics Strategy of any kind – let alone a coherent one.'

'A well-thought-out strategy will help an organisation focus on what really matters to the business in respect of workforce actions, behaviours and configuration.'

'Crucially, it will help HR to be seen as a strategic business enabler.'

So, what does a 'people analytics strategy' look like? Again, this will be different for each organisation, and should be fluid as context and drivers change. However, the core inputs for most organisations will remain constant and can be categorised as primary drivers and secondary drivers (see Figure 6).

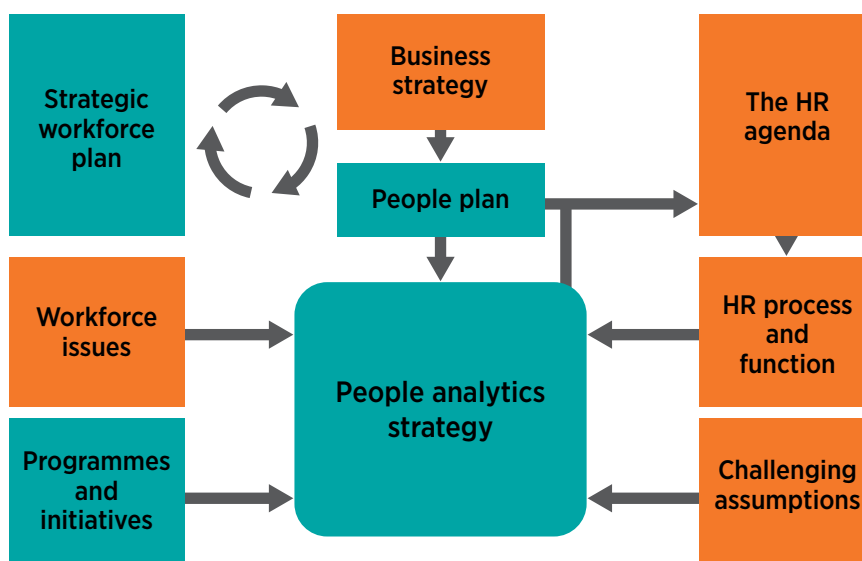
Primary drivers include:

- current and emerging workforce issues
- measuring the efficiency and effectiveness of HR processes and function
- changing workforce requirements based on business strategy.

Secondary drivers include:

- measuring and optimising the success of people programmes and initiatives
- challenging assumptions made about workforce actions
- the HR agenda.

Figure 6: Framework for a people analytics strategy



Source: www.workforcedimensions.co.uk

Let's consider those drivers in more detail.

Current and emerging workforce issues

This is the obvious and comfortable place to start. Most organisations will at some point encounter problems such as increasing sickness absence rates, or a failure to retain staff.

However, passive reporting of these trends is not enough; we must move beyond the provision of information to the generation of insight by adopting that question-based mindset.

For example:

- Is an increase in absence driven by increasing stress levels? If so, has there been a specific change in the environment that may be a contributory factor?
- Are those employees who are separating from the organisation 'regretted' losses? If so, is the root cause a lack of career progression or the aggressive pursuit of our talent by a competitor?

If we can pose and then provide satisfactory answers to these types of question, we will increase the probability of delivering genuine insight.

By doing this we will identify the metrics that need to be used and the data that need to be collected.

Measuring the efficiency and effectiveness of HR processes and function

Earlier, when highlighting the advantages of aligning our people analytics with the employee lifecycle, we identified two opportunities for measuring the success of HR processes in respect of both efficiency and effectiveness, that is, the recruitment process and the learning and development function.

Many other opportunities will become apparent as you work around the lifecycle and consider your own organisational context.

One word of caution, though: don't be drawn into analysing HR processes in isolation; look for opportunities to ask questions that touch multiple aspects of the lifecycle.

For example:

- How do new hires view the onboarding process? Where there is negative feedback, how does this impact on separations of these employees within the first six months of tenure compared with those who offered positive feedback?

For an investigation of this type we would potentially need to create a data set that doesn't currently exist, that is, to survey new employees for their views on induction. We should not be apprehensive about doing this, as long as the potential upside from the investigation can be demonstrated.

Killer metric: Cost of vacancy

Vacant roles invariably cost the business and are of key interest to senior stakeholders. Highlighting the revenue lost because of the vacant position is a simple way of demonstrating the importance of having an efficient and effective recruitment process:

$$\text{Cost of vacancy per day} = \frac{\text{average total yearly revenue per employee (£)}}{\text{number of working days per year (n)}}$$

This number can then be used to calculate the cost of vacancy over the period by multiplying by the number of days in the period (for example x 30 days for a month).

Changing workforce requirements based on business strategy

Although not as directly accessible as workforce issues and HR process concerns, from a purist's point of view, an organisation's business strategy should be the primary driver of a people analytics strategy, and there should be a logical and complementary link to the people strategy (if this is separate from the business strategy).

The HR department must understand exactly what the organisation is trying to achieve in the medium to long term, and determine what that is likely to dictate in terms of the optimum size (numbers) and shape (skillsets) of the workforce at each interval of the forecast period.

We can then quantify and qualify the gap between our current and ideal future workforce profile, and craft the short-, medium- and long-term interventions required to close that gap.

The outcome of this exercise should be a key input to an organisation's people strategy, which will in turn inform multiple people initiatives including recruitment strategies, learning and development interventions, succession plans, retention initiatives, job redesign, the diversity agenda, and decisions on acquisitions and divestments.

Ultimately this should help prioritise our people analytics strategy.

Although linking business strategy to a people analytics strategy has clear benefits, to do this effectively will require a formal strategic workforce planning process – this is complex, time-consuming and will require specialist expertise and considerable involvement of multiple business and HR stakeholders.

An explanation of this process does not fall within the remit of this guide. However, if the process exists and is embedded within your organisation, it is strongly advised that you leverage the output to inform your people analytics agenda.

If the process does not exist, as a minimum, each time you plan and prioritise projects, consider whether the outputs have the potential to link workforce contribution to the execution of business strategy.

Measuring and optimising the success of people programmes and initiatives

For most organisations, their greatest investment is in the attraction, employment and development of their workforce.

Therefore, it is reasonable that senior HR and business stakeholders should expect to understand whether those investments have paid off.

A real area of opportunity for HR is to measure the return on investment associated with selected people programmes and initiatives.

These will of course vary by organisation, but a constant theme across most is the efficiency and effectiveness of learning and development interventions – as referenced earlier in this guide.

Another opportunity may be the value of a graduate scheme – that is, cost of attraction, onboarding, employing and training against benefits in terms of performance and longevity.

Organisations may also be interested in the value of an agile working policy, a new ideas scheme or the introduction of a flexible benefits scheme.

Consider where significant investments are being made in people in your organisation and look for opportunities to conduct a cost versus benefit analysis.

Killer metric: Return on investment

Return on investment is a calculation of the benefits realised as a result of investing in an HR programme. It is often used in learning and development to quantify the short-, medium- and long-term impacts of a learning and development programme.

$$\text{Return on investment (\%)} = \frac{\text{realised benefits (\pounds)} - \text{costs (\pounds)} \times 100\%}{\text{costs (\pounds)}}$$

Challenging assumptions made about workforce actions

Often assumptions are made upon which we make decisions about our workforce without any attempt to establish whether these assumptions are actually correct.

Examples may include:

- An increase in commute distance will impact negatively on staff retention.
- Staff stability will result in higher profitability.
- Higher engagement drives higher productivity.

All three of these examples have something in common: they are entirely plausible – and indeed they *may* be absolutely correct.

However, what if commute complexity or time were actually the issue, or staff training rather than stability was the key factor in driving sales, or the level of engagement simply indicated a happier workforce, not a more productive one, or in fact productivity drives engagement?

All of these scenarios are equally plausible. So the opportunity here is to treat the assumption as a hypothesis and isolate the actual root cause.

There is equal value in proving the hypothesis true (that is, the assumption is correct) and proving the hypothesis false (the assumption is incorrect). In either case, we will be providing insight that will add value to the decision-making process.

The HR agenda

Finally, the HR agenda should be examined for any residual opportunities. This may seem counterintuitive for an HR practitioner – surely this is where we should start?

However:

- To look at the HR agenda first will risk us skewing our people analytics proposition towards HR processes and functions – remember, more value is generated for a wider customer base if we analyse the link between the workforce and business success.
- In theory the HR agenda should be informed by the people strategy (whether this exists formally or informally), which should be informed by business strategy – so there should in principle already be a natural alignment.

Having put forward the case for a formal strategy to ensure our people analytics proposition is aligned to the needs of the business, it is important to recognise that in reality people are unpredictable, and organisations, and the context in which they operate, can change.

Consequently we may need to be flexible with our people analytics strategy and introduce additions or amendments to our plan and conduct tactical investigations into emerging risks and opportunities

The balance between 'strategic' and 'tactical' inputs will be determined by the level of volatility in the organisation or within the environment in which the organisation operates; but a 70:30 split is typical.

5 Executing analysis

Having identified the various drivers for an appropriate and coherent people analytics strategy and, in the process, crafted a series of value-add questions relevant to a variety of audience groups, it's now time to start executing this strategy by conducting associated investigations.

Earlier in this guide we made the point that while workforce reporting tends to be standardised and can therefore be underpinned by clearly specified and repeatable processes, people analytics is made up of a series of one-off projects, which do not necessarily have defined frameworks for us to reference.

However, there are elements of good practice we can apply to all projects.

How to approach an investigation

Below is an illustration of good practice, presented on a step-by-step basis, and applied (for illustrative purposes) to a workforce issue that all organisations will face in some form, at some point – employee turnover.

In addition to advantage of familiarity, focusing on employee turnover also allows us to demonstrate the mindset as well as the skillset required to execute value-add people analytics.

Step 1: Define the KPI

The KPI will be determined by the critical question we are asking (see 'A question-based mindset' on page 9) and will most likely be a measure or metric that tracks progress from where we are to where we want to be (our target).

For this illustration the metric will be a variant of the employee turnover rate.

In terms of the calculation of this metric, essentially this is the number of people separating from a group (the 'numerator') divided by the number of people in that group (the 'denominator'), then multiplied by 100 to present the output as a percentage:

$$\text{Turnover rate (\%)} = \frac{\text{number of employee separations (n)} \times 100\%}{\text{average number of employees (n)}}$$

This is typically measured over a rolling year.

For the number of people leaving, we should consider the purpose of our investigation: what question are we attempting to answer?

Most likely we are seeking to understand unplanned, unwanted separations – in this case, it would be senseless and misleading to include all leavers in our investigation.

We must, as a minimum, segment between those leaving voluntarily (resignations), those who are subject to an organisational action (dismissal, redundancy, divestment, and so on), and those exiting through a life event (predominantly retirement).

The denominator could be the start-of-period headcount (or full-time equivalent), or the mean average headcount (or full-time equivalent) across the period. However, we have to be consistent.

Step 2: Isolate critical segments

Next we need to isolate the segments of the separating employees that represent the greatest 'level of risk' in terms of the efficiency and effectiveness of our operation, for example:

- performance level
- criticality of job role
- time to backfill the vacated position (assuming the position is to be repopulated)
- impact on team and/or organisational productivity while the position is vacant
- lead time to competency for a replacement hire
- impact on the diversity balance.

Step 3: Hypothesise on root cause

We now have a focus for our investigation – a discrete group of people who have chosen to leave our organisation who we would (for whatever reason) have preferred to have kept in the business.

Logically the next challenge, the next step of our investigation, is to understand why and/or when these people are most likely to leave our organisation.

It's not enough to passively report the results from exit interviews or surveys; we must take this output, and qualitative information (from, for example, pulse surveys of those still in employment), and selected information from our information systems that will help us predict future separations.

For example, we may analyse:

- tenure in role or overall length of organisational service
- impending attainment of qualifications or accreditations
- when share options can be exercised – and the value of these shares in the market
- patterns of lowering engagement and/or increasing casual absence
- stability, experience and quality of line management or peer group.

We may also consider the external environment – for example, is a competitor becoming active in the talent market?

The considerations above are not exhaustive, nor will they be relevant for every organisation, but they do illustrate the holistic approach required if we hope to genuinely understand and provide insight in respect of employee turnover.

Step 4: Plan an intervention – and measure the impact

Once we have, and can articulate, this insight, we can then work in partnership with the business we support to craft an appropriate intervention strategy.

And of course the involvement of the HR practitioner should not end here. Once the intervention strategy has been implemented, we should determine whether these measures have been successful, and how they can be optimised.

Although the focus of this example is employee turnover, the general principles that underpin the approach – the identification of a critical question, crafting an appropriate key performance indicator, identifying specific areas of focus, hypothesising on root cause and drawing a conclusion – can be adapted and applied to the majority of common workforce issues and HR process concerns.

The steps outlined should also allow us to find the evidence that proves (or indeed disproves) our theories.



The importance of evidence

It's important that we take a pragmatic and auditable approach to evidence-gathering that is wide-ranging and does not rely on HR 'gut feel' (although this intuition should not be discounted, as it is often an important factor in forming a plausible hypothesis).

This is not traditionally an area of strength for the HR community.

As the CIPD's (2017) *Human Capital Analytics and Reporting: Exploring theory and evidence* report reflects:

'The empirical evidence of the outcomes of HR analytics, both at the organisation level and individual level, remains fairly scant.'

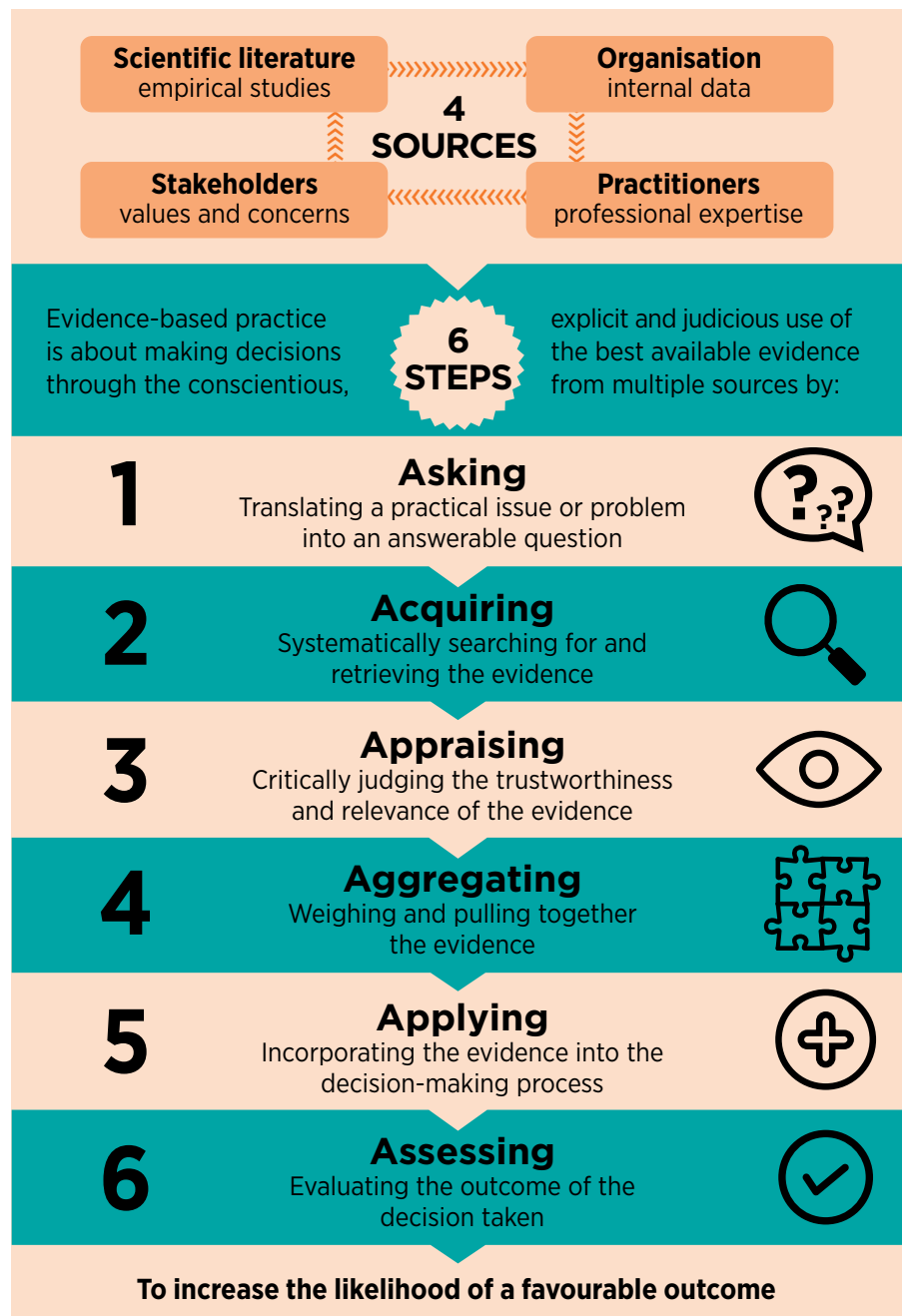
'Many academic publications adopt cross-sectional studies which offer insights at a snapshot moment on practice, without exploring if practice is resulting in specific outcomes.'

In recognition of this gap, the CIPD has introduced an evidence-based HR course that explores the principles of evidence-based decision-making and focuses on the need to make and argue for better decisions.

In summary, when considering a people analytics proposition, we must consider the investigations that will add genuine value, and recognise, and accept, the burden of proof upon us to support our work with evidence.

As Barends et al (2014) say, evidence-based practice is about making decisions through the conscientious, explicit and judicious use of the best available evidence from multiple sources. Figure 7 illustrates the key concepts underpinning evidence-based practice.

Figure 7: Evidence-based practice



The data quality conundrum

Shortfalls in data quality, completeness or accessibility should not prevent us from presenting workforce reporting and executing people analytics.

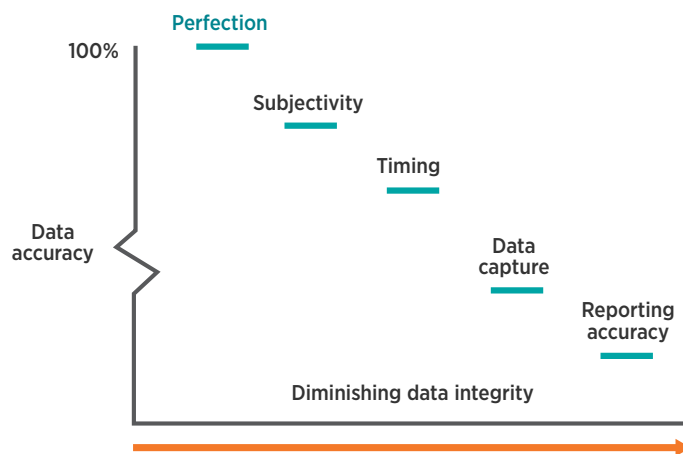
The very process of reporting with questionable data shines a light on the process of collection, and assuming we are asking the relevant questions that have the potential to provide value-add insight, there will be a demand for people analytics that insists data issues are addressed.

Of course where data isn't trusted, we should provide a health warning, but within reasonable margins: does it matter whether the resignation rate of a critical resource has sharply increased to 15% or 17%? Regardless of the number, there is a problem that needs to be analysed and addressed.

Our sensitivity to data quality will change according to the question being asked. Therefore, transparency about quality and errors is an important part of people analytics. We should report our findings along with our assessment of the data quality, and allow the decision-maker to use their judgement when using the insights.

It's important to accept (and educate those who use people data in our business) that the majority of people data will never be perfect. As Figure 8 shows, there are multiple points where data quality can lose integrity.

Figure 8: Data failure points



Source: www.workforcedimensions.co.uk

Subjectivity

Much of our data about people is based on opinion, and therefore a degree of subjectivity. For example, a manager's view of employee annual performance may be weighted towards more recent contributions, or a customer's perception of service provision may be skewed by factors not in the control of the front-line employee.

Timing

Much of data is extracted from 'live systems', therefore the 'truth' today may be out of date tomorrow.

Data capture

The process of data capture can present a significant risk, particularly when the process is unclear, ignored or unmonitored; or key performance indicators measure efficiency (in the form of speed) rather than effectiveness (in the form of quality).

Reporting accuracy

Finally, unless we have the structures, competencies and reconciliations that ensure our reporting and analysis reflects the data held on source systems, we will lose credibility and therefore the permission to present our analysis.

HR practitioners analysing people data must accept that a proportion of our information is based on opinion, and is therefore variable, and the fluid nature of our systems and data repositories will sometimes present slightly disconnected versions of the truth.

We must also highlight (not necessarily take ownership or responsibility for) data capture process errors, while ensuring that the data we use is auditable back to its origins.

6 Building capability

New global research from the CIPD in association with Workday (2018) illustrates an important relationship between the use of people data and strong business outcomes. It shows that organisations with a strong people analytics culture are much more likely to report strong business performance.

However, the survey also highlights that the wide-scale adoption of people analytics practice is still low and that more needs to be done to improve skills and confidence in the HR function, particularly in the UK, which is lagging behind other markets in both capability and confidence.

CIPD Profession Map

In November 2018 the new [CIPD Profession Map](#) was launched. It includes significant references to how analytics should be used to inform organisational decision-making.

It outlines what will be expected from the HR practitioner and people analytics specialist in the following broad areas:

- the selection, integration and leverage of databases
- the creation of quantitative and qualitative data models using a range of techniques to investigate people issues
- the application of analytical consulting to solve problems and shape solutions
- the use of data visualisation techniques to present the output from people analytics in a meaningful and compelling way.

A range of core skills will commonly underpin delivery against these expectations; a selection of these is outlined below.

Core skills

While maintaining that meaningful people analytics is the result of bespoke projects rather than repeatable processes, and that these projects are driven by mindset ahead of skillset, there are certain capabilities that are necessary requirements for the HR practitioner.

These are embedded in the CIPD's learning portfolio, but deliverables can be summarised as:

- linking HR and business strategies
- assessing organisational readiness for analytics initiatives
- building the business case for analytics
- demonstrating the credibility and value added by HR
- using analytical insights to improve talent management processes
- defining the roles, capabilities, and structures required to maximise analytics effectiveness.

To support these aims, the ability to execute the following skills is crucial:

- segmentation of data and metrics to highlight specific areas of concern or opportunity
- to examine the correlation, and level of causation, between two or more metrics
- the testing of a plausible hypothesis to establish the root cause of workforce issues or people process failure
- the determination, separation and optimisation of the ROI from people programmes.

Communicating findings

In addition to the core skills above, ability to effectively and convincingly present insight and conclusions is vital to any HR practitioner.

Whether this is visually or verbally, the following considerations should be made:

- Have you clearly explained the workforce issue?
- Is the evidence you are presenting compelling and auditable?
- Why does the issue matter to the business, and to your specific audience?
- Have you quantified the level of risk or size of missed opportunity?
- What is the root cause of the issue – and what other factors have you considered and discounted?
- What intervention do you recommend?
- What level and type of resources will be required to support this intervention?
- How and when will you measure success?

Although data will underpin any investigation and therefore presentation, you should lead with the question, the insight and the conclusion.

However, supporting data should be held as an appendix and available to stakeholders on request

Data science skills

In the event that HR practitioners choose to specialise and build a career in people analytics, there is a developing case for them to acquire data science skills.

Data science is an interdisciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from data in various forms, both structured and unstructured.

There is of course a huge reservoir of data about our former, current and future workforce, held within and without our HR information systems that is available to be leveraged, so at some point why wouldn't we apply data science techniques?

Typically this encourages familiarisation with statistical software programs, of which there are many available in the market, and often one or more of these is already used in your organisation.

These software programs are often used to interrogate large data sets, recognise patterns and predict future outcomes – for example, in the context of HR, to forecast future attrition rates.

It should be reinforced that it is unlikely that software alone will deliver value-add insight; knowledge of the business and workforce behaviour is required to ask the right question. However, it is undeniable that the skills of the data scientist, and the application of statistical software within HR, will become a key enabler for a high-class people analytics proposition.

Investing in technology

While statistical software packages are slowly being used by the 'data-savvy' HR practitioner, a significant number of organisations have for a long time introduced integrated platforms to stage people-related data to support workforce reporting and people analytics.

These will typically incorporate embedded visualisation options, and be pre-configured with a catalogue of people metrics, summary and trend reports, and HR or people dashboards.

Again, there are many 'enablement' solutions available on the market. Our advice is to first determine the level of reporting and analytics you aspire to in your business, and then select the solution that best supports that proposition.

7 Conclusion

The undeniable truth is that demand for quality and timely people information, and above all insight, is accelerating. The stakeholders of HR now demand more information and interpretation in easy-to-understand and actionable forms. It's clear that as the HR function looks to become more evidence-based and outcomes-driven, it must adapt its skills and capabilities and invest in the systems and technologies that can make the most of people data.

The HR function – everyone, not just analytics specialists – must deliver against this demand or risk a loss of relevance in the eyes of the organisation they support.

We suggest that there are four key pillars or principles to effective people analytics practice for HR practitioners to consider in their people analytics practice:

- 1 focused on solving a business issue (not an HR-only issue)
- 2 clearly defined with clear boundaries and research questions that need answering
- 3 started small and grown through testing and learning, evaluating impact
- 4 developed with key stakeholders' needs in mind and they're engaged throughout the process. It also uses their perspectives to refine insights

These key principles are useful for any HR practitioner in any organisation to start to make the most of their people data. Effective analytics doesn't need sophisticated statistical software and large data sets. Many issues are instead simple but require a clear methodology and excellent engagement with stakeholders.

To make the most of people data, however, HR must first invest in itself and build its own people data capability. Above all, HR analytics provides a way to unlock the profession's curiosity into how and why organisations work, and perhaps more crucially, why people and their human capital are vital to the succession of organisations today.

8 Glossary of terms

Commonly used terms used throughout this guide are defined and differentiated as follows:

Data	Measures	Metrics	KPIs	'Analytic'
<ul style="list-style-type: none"> • Information in raw, unorganised form • A repository (or repositories) from which un-curated information can be drawn as and when needed 	<ul style="list-style-type: none"> • A measurement taken for a specific reason • Absolute numbers, for example headcount at a point of time, or a count of joiners in a defined period 	<ul style="list-style-type: none"> • A calculation using 2 (or more) measures • Typically presented as a percentage or a ratio; for example resignation rate or profit per FTE 	<ul style="list-style-type: none"> • A measure or metric promoted in stature • Associated with a target and actively managed with assigned accountability. Strategically aligned 	<ul style="list-style-type: none"> • Drives a business decision • Characteristics include: insightful, predictive, transformational, often with joint HR and business ownership

Source: www.workforcedimensions.co.uk

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