PART ONE

Introduction to workforce planning

01

# What is workforce planning?

Introduction

In early 2019 I was a member of a panel at PAFOW London (People Analytics Future of Work) discussing workforce planning; the organizer and a global figure in people analytics, Al Adamsen, was chairing the panel. In recognition of the challenge in understanding workforce planning, he posed a quotation: 'The beginning of wisdom is to call things by their proper name' (Confucius, 1979). Workforce planning is known by many different names, including people planning, headcount planning, manpower planning, human capital planning, and human resource planning. The director of research and consultancy at the Institute for Employment Studies, Peter Reilly, provides the following opening definition: 'A process in which an organization attempts to estimate the demand for labour and evaluate the size, nature, and sources of the supply which will be required to meet that demand' (Reilly, 1996). In this chapter, we will go deeper into the definition and explore the way we look at organizations when thinking about workforce planning, the specifics of what workforce planning aims to achieve, and the timelines we consider when planning.

Three levels of the organization

By their very etymology, the concepts of workforce and organization are inextricably linked: a business organization is a workforce that is structured and managed to pursue a collective goal. Organizations vary in scale and complexity and, with this, the considerations and implications of workforce planning vary. Organizations can be viewed as existing at three levels

(Wagner and Hollenbeck 2015), lenses through which we will view workforce planning throughout this book.

FIGURE 1.1   Three levels of the organization
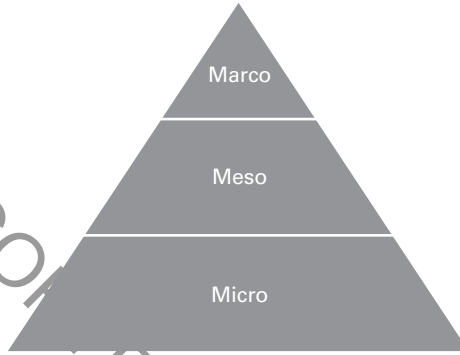
Macro

This is the level of the organization as a whole; for example, the Acme Corporation featured in Warner Bros' *Loony Tunes* is the macro level.

Meso

These are the component levels within an organization. For example, the Acme Corporation may be subdivided by its central product departments, including explosives and vehicles. Those departments may be divided further into lines of specific products: the Acme 'Little Giant' Firecracker and Acme Self-Guided Aerial Bomb production lines within the explosives department, and the Acme Rocket Sled and Acme Spring-Powered Shoes production lines within the vehicles department. Each of these departments and lines can be considered the meso level.
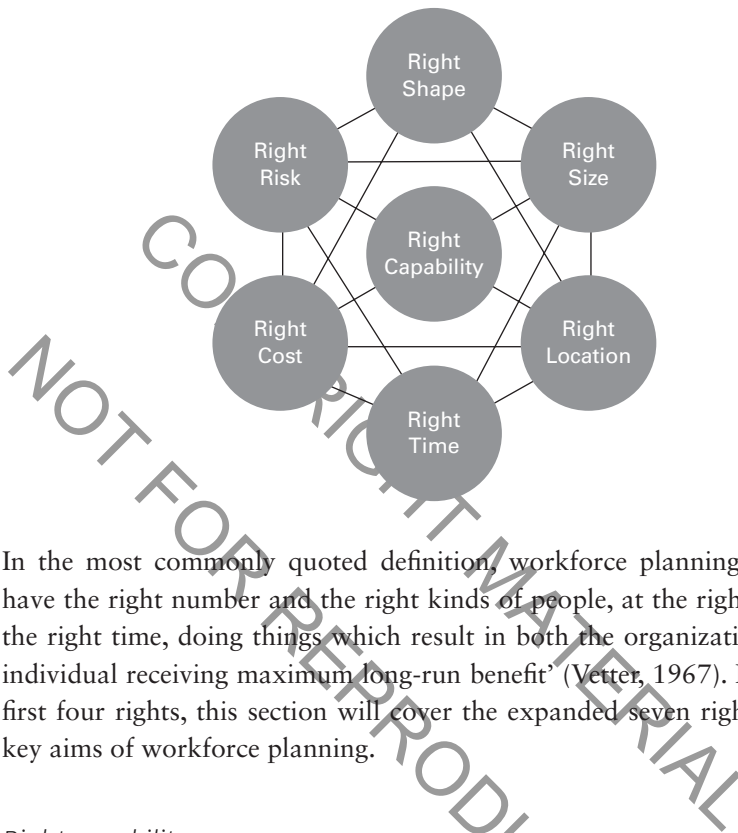
Micro

This is the level of the individual teams, for example, the team on a product line who box up the Acme Birdseed.

Workforce planning sets out to achieve the following seven Rights at each of those levels of the organization.

Seven rights of workforce planning

FIGURE 1.2   Seven rights of workforce planning

In the most commonly quoted definition, workforce planning 'strives to have the right number and the right kinds of people, at the right places, at the right time, doing things which result in both the organization and the individual receiving maximum long-run benefit' (Vetter, 1967). From those first four rights, this section will cover the expanded seven rights that are key aims of workforce planning.

Right capability

Capability is the extent of an ability to achieve a particular outcome and both combines and transcends the traditional categorizations of *right people* and *right skills* (eg Sinclair, 2004; Lambert, 2009). As we will discuss further in Chapter 6, the modern workforce is a hybrid of people and technology. Also, both people and technology are inextricably linked to activity, leaving capability as a more accurate descriptor.

When we consider a workforce, we can view capability as a construct of five components (Matthews, 2014): knowledge, skills, mindset, physiology and environment. Knowledge is the internally memorized information required to complete a particular task. It is derived from a learning experience, either active in the form of training or passive through having direct exposure. Knowledge is distinct from having access to knowledge, which is an

element of the environment. Indeed, the growing ease of access to information and the increasing use of intuitive systems has corresponded with a reduction in the requirement for knowledge to complete tasks.

Skills are practised techniques that enable the achievement of an outcome. These skills can be viewed as considering ideas (cognitive), doing things (technical) or relating to people (interpersonal). Competency is often used interchangeably with the word skill. However, a competency is created when skills (how to do something) combine with specific knowledge (what, when and where to do something) and, where necessary, accreditation (proof of that skill or knowledge). To that extent, competency can exist in individuals and only translates into capability within the context of the organization alongside mindset (willingness to do something).

The mindset comprises the mental aspect that both enables skills and knowledge to be achieved and for them to become action. It can be said to comprise three distinct elements: emotional, how we feel about something; cognitive, how we think about something; and behavioural, how we react to something. The range of these elements is often considered as a range from positive to negative; it is probably more helpful to recognize mindset within the Aristotelian concept of virtues and vices. In this sense, virtue is the positive element itself (such as courage) and vices are the negative excesses (rashness) or deficit (cowardice) (Aristotle, 1980). Elements within mindset, such as self-belief or courage, are often referred to as competencies; more accurately, these elements are components of competency.

Physiology refers to those characteristics required to achieve knowledge, skills, and mindset, but also the ability to translate that into action in a particular circumstance. It comprises mental (eg intelligence) and physical (eg appearance and strength); health and wellbeing, both mental and physical, are key elements. Physiology can also be said to relate to natural ability that can enable knowledge and skills to be attained quicker or executed to a higher degree of performance. Throughout time, technology has continued to bridge physiological limitations, both enabling competency attainment and execution for the first time in some and pushing the boundaries of human possibility for others.

Environment is the factors independent of a worker that promote, enable, restrict or prevent a competency from translating into the desired outcome. This can include hygiene factors (eg noise, temperature and comfort), hard factors (eg technology, processes and resources) and soft factors (eg culture and leadership). Environment is a critical factor that both impacts mindset (positive and negative) and can overcome limitations of physiology.

To the five components proposed by Matthews, I add a sixth: accreditation.

Even with all the above five components, which theoretically translate into action, accreditation is the increasingly common requirement to translate action into reality. At a basic level, most workers are subject to some form of screening or basic background check. Roles in government, defence and law enforcement typically require varying degrees of security clearance. Regulated professions necessitate accreditations either on the basis of a single qualification, such as barristers passing the bar, or a time-limited certification, as is the case with gas engineers. Those regulated professions with exacting standards around safety require declarations around personal health and intoxication, or logbooks confirming hours worked in advance. For both these professions and the vast majority of workers, accreditation will take the form of a license or pass that must be carried. Indeed, even basic capabilities in the modern workplace are inextricably linked to the completion of mandatory training, regardless of whether or not that training translates into knowledge.

Fundamentally, workforce planning is about ensuring an organization has the *right capability* to achieve its business objectives. More important is how that capability connects across six additional dimensions.

Right size

Size is often used as a synonym for capacity; though they are related, they are distinct and capacity will be covered in greater depth in Chapter 9. Size is simply about the numbers: is there a sufficient quantity of a capability within an organization to achieve an outcome? It is a concept requiring some care as the compound, to *rightsize*, has negative connotations as a euphemism for layoffs (Kokemuller, 2014). Indeed, an article in the *New Yorker* satirizes it with a discussion of a Cubicle Inhabitant Reduction Program and says, 'Rightsizing simply refers to our commitment to optimizing our head count after discovering that we are, in fact, wrong-sized. I want to reassure you that this is very different from downsizing, which is something we haven't done since before the word "rightsizing" was invented' (Nissan, 2014). Amongst HR thinkers, however, the concept of rightsizing is correctly recognized as a positive approach to ensure there are the right number of workers to do the work:

> A work force may indeed be too small for the task. And the work then suffers, if it gets done at all. But this is not the rule. Much more common is the workforce

that is too big for effectiveness, the workforce that spends, therefore, an increasing amount of time *interacting* rather than working (Drucker, 1985)

Right shape

If size is about the numbers of a capability, then shape is the mix of those capabilities within a workforce: is there the right shape of capabilities to achieve an outcome? We can breakdown shape into four components:

INTRA-CAPABILITY

We acknowledge that a capability is derived from an individual mix of knowledge, skills, mindset and physiology, further intertwined with organization-specific environment and accreditation. From the purest perspective, therefore, there can be no two capabilities that are the same; each capability would be as unique as a fingerprint. In reality, we recognize capabilities within broad categories (eg project management, and human resources). The Intra-capability components are the sub-levels or degrees within capabilities; it is easiest to understand capabilities as ranging from foundation, to intermediate and then advanced (perhaps with the final dimension of expert for the truly exceptional). When we look at the right shape at an intra-capability level, we are looking for that mix of foundation, intermediate and advanced capabilities. Work tends to require a mix of capability levels and is subject to the phenomenon of *regression to the mean* (Galton, 1889), so that the majority of work requires an intermediate level of capability. That being the case, too much capability at foundation level will result in a sub-standard outcome, whilst too much capability at an advanced level will result in a wasted capability (and impact *right cost*).

As we recognize that an intra-capability mix is a necessity, it provides the additional benefit that capabilities being used actively can be expected to develop over time. Just like a muscle, a capability that hinges heavily upon skill will develop based on continued practising of that skill. Similarly, those capabilities that rely on knowledge should expect to grow that knowledge as more relevant information becomes internally memorized. It is important to appreciate that foundation, intermediate and advanced levels are not absolute: not only do they change over time, largely on the basis of increasing global knowledge, but they are viewed differently between organizations (eg consider how a small bookkeeping firm might determine an intermediate level of computer literacy when compared to a technology giant).

INTER-CAPABILITY

If intra-capability is about the mix of levels *within* capabilities, then the inter-capability component is concerned with the mix *of* capabilities. Whereas an intra-capability view cannot exist at the lowest micro level of an organization (a worker cannot be both foundation level and advanced level at project management), the inter-capability view exists at all three organizational levels. At the micro level, this might refer to the mix of programme management and team management capabilities within a worker. At a meso and macro level, this is the mix of capabilities within teams, business areas and across the organization.

CHARACTERISTIC

The characteristic component relates to those dimensions of a workforce that are not inextricably linked to capabilities and can be subdivided as sentient, physiological and non-physiological. The sentient component refers to the extent that a capability is a conscious being (Nagel, 1974) and can be considered as human, artificial intelligence (where robotics can mimic human cognitive function), animal (consider the continuing use of working animals in transportation, guarding, searching, hunting and assisting), automated (non-intelligent machines) and inanimate (capabilities that are either stationary or move only through interaction with one of the other types of sentience). As explained earlier, the physiological component of a capability is directly related to the ability to achieve knowledge, skills, and mindset, and also the ability to translate that into action in a particular circumstance. The physiological component of a characteristic does not, in and of itself, enhance or limit the ability to create an outcome. Take for example an above-knee amputee who requires the use of a wheelchair for mobility. That physiological component becomes a factor limiting the attainment of a capability in an environment without a wheelchair ramp; in an environment with a wheelchair ramp, this is simply a physiological characteristic. The most recorded physiological characteristics in the workplace are age, sex, ethnicity, disability and physical dimensions (consider the provision of uniforms). The non-physiological element encompasses the myriad characteristics that make us what we are, including our heritage (eg nationality, socio-economic background and previous employment) our life circumstances (eg personal relationships, parenthood and caring responsibilities) and our lifestyle (eg politics, propensities and activities).

Whilst there are many physiological and non-physiological characteristics that can rightly be considered beyond the scope of the workplace, it

must be recognized that the cultural fabric of an organization is a complex mixture of these characteristics and they are increasingly recorded in order to improve the diversity of thought (the mindset element of capability) and promote inclusivity.

CONTRACT

The contractual position of capabilities is closely interlinked to some characteristic components. The difference is that whilst a characteristic does not impact a capability, the contractual component does impact the way that a capability can be used. For example, a capability within a permanent employee cannot necessarily be leveraged in the same way as an identical capability from a consultant.

CASE STUDY
NATO

The military has used the concept of *command states* for decades to differentiate these relational elements of capabilities. In doing so, it allows senior commanders to delegate authorities to more junior levels and increase the speed of decision making, which, in turn, delivers outcomes faster. NATO (2013) use the following:

- **Operational Command (OPCOM)**
  The authority to assign and reassign specific tasks and to redeploy all capabilities. This could be considered to be equivalent to the authority a CEO wields within a business.

- **Operational Control (OPCON)**
  The authority to assign and reassign specific tasks to units and to redeploy those units. The authority does not extend to those capabilities *within* units. This could be seen as similar to a business working with a matrix structure: a senior manager may ask their finance manager to focus on a particular issue, but that does not allow that leader to direct the way that finance task is done.

- **Tactical Command (TACOM)**
  The authority to assign specific tasks to all capabilities for the duration of a particular mission. This is similar to a project lead directing a project team and that ability being limited to the scope and duration of that project.

- **Tactical Control (TACON)**
  The localized direction of a capability whose task has already been assigned. This could be viewed as a junior manager working with an assigned consultancy

service; they would have a limited ability to direct when and where the work
takes place, but not how it is done.

The importance of this contractual position cannot be understated; it tends
to be inextricably linked to the concepts of *right cost*, *right time* and *right
risk*.

Right location

Is a capability in the right location to achieve an outcome? It can be consid-
ered within two specific dimensions: geographic and structural. Depending
on the meso level of the organization, the geographic element could be
viewed as an economic region level (eg EMEA – Europe, Middle East and
Africa), at a national level, an intra-national level (eg states, counties or
cities) or at a locale level (eg offices or plants). There are strong views
that location is no longer important (Friedman, 2007) due to the rise of
technology-enabled globalization. This technology has certainly impacted
global supply chains and connectivity is increasingly overcoming physical
locations. Accordingly, it is important to recognize cyberspace as a geo-
graphic location. That said, 'location does matter and will continue to mat-
ter' (Hagel and Seely Brown, 2010) as activity happens in a location, be that
physical or cyber. The structural location relates to the business hierarchy
in which a capability exists, usually a team. In simple terms, if a finance
team requires a finance capability, it is of limited value if that capability is
otherwise employed within the marketing team. Whilst it is not unusual for
some capabilities to be dispersed within a structure, it requires some form of
business structure to bring it together at scale, even only on a temporary
basis. Consider, for example, a fire and evacuation capability; these are
usually dispersed around locations with emergency procedures to enable
that capability.

Right time

Just as activity always happens in a place, it also always happens at a time.
The right time is considered across two dimensions: firstly, is a capability
available at the point it is needed? A capability too early may result in
wasted value, a capability too late may delay an outcome and waste value
in related capabilities. Consider the wasted value of an aircraft, of ground

crew and aircrew, just through the delay of a pilot. Secondly, is a capability available for the duration it is needed? Every task takes time and even the shortest of tasks have a duration where a capability is needed. A capability that cannot be provided for the duration can result in delay and wasted value. Consider both a capability required for three days, but only provided for one, and a capability provided for three days but borrowed elsewhere for the second day. In addition, after the duration of a task a capability is surplus and, unless reassigned, again results in wasted value. Time is often the most overlooked aspect within the field of workforce planning: 'The output limits of any process are set by the scarcest resource. In the process we call *accomplishment*, this is time... one cannot rent, hire, buy or otherwise obtain more time' (Drucker, 1985). To ensure the right workforce at the right time is to ensure that time is not wasted.

Right cost

Are we paying the right cost for the capability? This goes beyond the concept of a budget and if an organization can afford a cost, but is more importantly seen as a question of *value for money*. The cost can be considered in three different ways: accounting, opportunity and external. The accounting cost is the actual funds spent on an activity. Typically understood as fixed costs that do not vary with output (eg factories) and variable costs that do change with output (eg raw materials). At a macro level, human capabilities are semi-variable as a workforce is always needed to keep the lights on. At a meso level, however, the cost of human capabilities can be distinguished as either fixed or variable; this will be covered in greater detail within Chapter 11. The opportunity cost is the cost of employing a capability in one activity rather than another and captures imputed costs where factors of production are already owned by an organization. For example, whilst employing a team would be considered as an accounting cost, reassigning them from one activity to another would be considered an opportunity cost. In addition to the accounting and opportunity cost, usually grouped together as the economic cost, is the external cost. The external costs are those imposed on a third party; the commonly cited example is the external cost of passive smoking that results from the tobacco industry. In relation to the workforce, this cost is typically associated with decisions around *offshoring*, (relocating a business process from one country to another) to satisfy an economic cost. The resulting layoffs can devastate local communities (Bottini, Ernst and

Luebker, 2007) and must be recognized as an organization may wish to take a different choice once the *true cost* is established.

Right risk

Risk is concerned with two things: the potential impact of a negative event and the likelihood of that event taking place. The workplace has myriad risks that will need to be accepted or mitigated. Mitigations come at cost, such as:

CAPABILITY DEFICIT

This is the risk that at a future point in time there will be insufficient levels of capability to deliver an output, which might result in lost revenue for an organization. It can be separated into two elements: non-delivery and capability loss. If you are reading this book, you probably work in an organization that has learnt to accept the risk of non-delivery of capability, which typically manifests as vacancies. It is important to recognize the distinction between a vacancy (a current gap in the workforce) and a requirement (eg the requirement to hire an employee to fill a future vacancy). Vacancies typically arise when a capability is lost and there is no immediate replacement. Non-delivery also manifests where a capability fails to keep pace with market requirements; consider the pace of change in digital skills, for example. In this sense, having the right capability now that is inflexible to change, may increase the risk of a future capability deficit.

The concept of workforce loss is inextricably linked to non-delivery; as the likelihood of losing a capability increases, so too does the risk of non-delivery to replace that capability. Capability loss tends to relate to the contract component of *right shape*; contracts of permanent employment with a three-month notice period have a far lower risk of capability loss than a one-week notice period. The fear of capability loss can lead to a reluctance to invest in training; that reluctance to invest in training can lead simply to not having the capability at all.

CAPABILITY SURPLUS

At the opposite end of a capability deficit is having more capability than is needed. The key element is that the standard mitigations for capability surplus, such as the use of contract workers and limited notice periods for staff, directly increase the risk of capability deficit. Balancing this risk is a

key challenge, one example being the apocryphal tale of the chief financial officer asking of employees, 'What happens if we train them and they leave?', to which the chief executive officer replies, 'What happens if we don't train them and they stay?' This is played out in boardrooms globally as organizations try to balance deficit through non-delivery against cost through capability surplus.

FRAUD AND CRIMINALITY

It is estimated that a typical organization loses 5 per cent of revenues annually as a result of fraud (ACFE, 2016). The risks of fraud and criminality tend to be heavily mitigated within organizations, not only during employment but in advance of it. A famous article by the Governor of New York State and the CEO of Ben & Jerry's claimed that one in every three Americans had a criminal record. Organizations will often mitigate the risk of fraud and criminality through not hiring those with certain criminal records. They went on to highlight that joblessness was the single biggest predictor of reoffending (an *external cost* to taxpayers of a hiring decision), therefore employment of those individuals that could reduce reoffending by just 10 per cent would result in an annual saving of $635 million to the United States (Cuomo and Solheim, 2017).

Three horizons of workforce planning

Having understood the seven rights, we circle back to the concept of *right time* and establish *when* the right time is. In workforce planning, we talk about those time periods as three horizons: resource planning, operational workforce planning and strategic workforce planning. These horizons relate to the time frame when the seven rights are achieved, not the point where planning or indeed execution of plans takes place.

Horizon one – resource planning

Resource planning, also known as resource management or capacity planning, focuses on the period of the current financial year. The aim is to manage the workforce against the fluctuations of demand and the natural evolution of employees (eg absence and turnover). At the most basic level, this is what line managers do on a daily basis: they ensure they have sufficient staff to meet the need, they manage their workforce and work
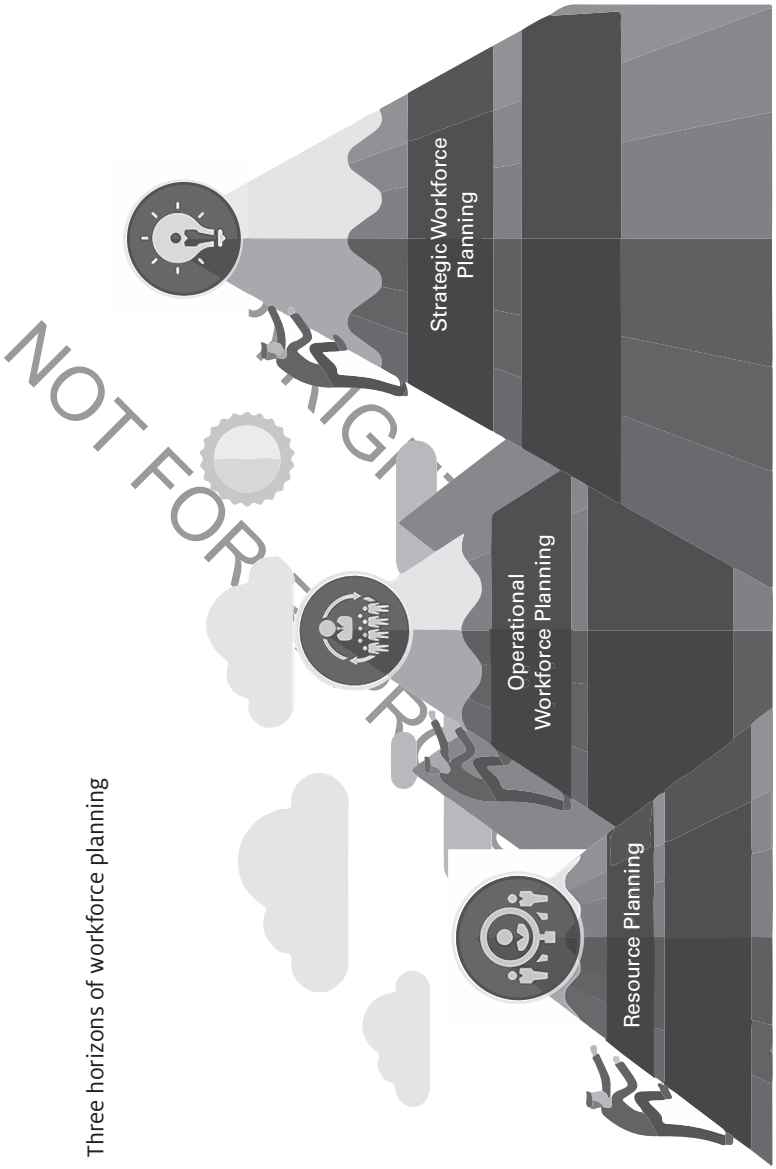
FIGURE 1.3   Three horizons of workforce planning

Strategic Workforce Planning

Operational Workforce Planning

Resource Planning

accordingly when additional work arrives or an employee is sick. In many organizations, this planning translates into a rota or schedule detailing when employees are expected in the workplace, or to be at a particular location. Most of the time, these schedules can be provided in advance, in others an advanced schedule can be accompanied by real-time resource management (eg taxicab drivers). Resource planning, unlike operational and strategic workforce planning, takes a *bottom-up* approach that starts at the micro level with the resources required to do the work and then rolls upwards to the meso and macro levels. At advanced levels, resource planning delves into the detail of productivity and utilization, which we will explore in Chapter 9.

Horizon two – operational workforce planning

Operational workforce planning focuses on the period of the next financial year. The aim is to plan a workforce that will achieve the business objectives for the coming year. Operational workforce planning is often run by finance functions as part of a budgetary planning process and, as a result, is the most common approach to workforce planning. This approach tends to result in a focus more around workforce costs at macro and meso levels and less on *how* that workforce will be achieved.

Horizon three – strategic workforce planning

Strategic workforce planning focuses beyond the next budgetary cycle and across multiple years. As Peter Cheese, CEO of CIPD, says, 'strategic workforce planning has never been more important' (Cheese, 2020). There are myriad definitions of the practice; one of the better definitions is provided by Rob Tripp, workforce planning manager at Ford Motor Company, that strategic workforce planning is 'a disciplined business process that ensures that current decisions and actions impacting the workforce are aligned with the strategic needs of the enterprise' (Tripp, 2013).

Though approaches to strategic workforce planning vary as much as the definitions, they all follow a path similar to that articulated by consultant and thought leader in workforce planning and analytics, Tracey Smith:

- determine the roles of interest;
- establish the current state and historical trends;
- determine desired forecasting scenarios;

- perform gap assessments (in headcount and skill sets);
- establish action plans (Smith, 2012).

As a result, it is an approach that typically starts at the macro level and trickles down to the meso level.

Summary

The concepts of workforce planning can appear impenetrable at first glance. The reality is that many subjects, which claim to be different, are simply workforce planning by another name. Moreover, many subjects claiming to be workforce planning, but with different approaches, are constituent parts of workforce planning that differ based on organizational levels and planning horizons. Workforce planning practitioners will continue to provide different definitions and approaches for their craft, but all those successful practitioners will agree on the organizational lenses we look through (the levels of the organization), what workforce planning aims to achieve (the seven rights) and the timelines we consider (the three horizons).

This chapter serves as the basis for the rest of the book. When you practice workforce planning, ask yourself:

- Which level of the organization are we thinking about?
- Which planning horizon are we looking at?
- Does this approach deliver each of the seven rights of workforce planning?

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