
Human resource management — Workforce planning

*Management des ressources humaines — Gestion prévisionnelle de la
main d'œuvre*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL www.iso.org/iso/foreword.html.

The committee responsible for this document is Technical Committee ISO/TC 260, *Human resource management*.

Introduction

This document has been developed in response to worldwide demand for workforce planning advice and support to enable industry, organizations and businesses of all sizes to advance their workforce planning capabilities and to respond more effectively to the current and projected demands of the labour market, the dynamic international business environment and its increasing complexity.

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Human resource management — Workforce planning

1 Scope

This document provides guidelines and a framework for workforce planning that are scalable to the needs of any organization regardless of size, industry or sector.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 30400 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

workforce

people who provide a service or labour to contribute to business or organizational outcomes

3.2

planning

process of thinking about and organizing the activities required to achieve a desired outcome

3.3

workforce planning

systematic identification, analysis and *planning* (3.2) of organizational needs in terms of people

Note 1 to entry: It is a process used to generate business intelligence to inform business of the current and future impact of the external and internal environment on the business, enabling the business to be resilient to structural and cultural changes to better position itself for the future.

3.4

strategic workforce planning

workforce planning (3.3) which usually covers a defined period of time, aligned to organizational strategy

Note 1 to entry: The scope of planning can include identifying the *workforce* (3.1) assessments and benchmarking, human resource policy frameworks and associated processes on current and future organizational strategic objectives.

3.5

operational workforce planning

workforce planning (3.3) which covers a defined period of time, aligned with the organization's *planning* (3.2) cycle, and which focuses on gathering, analysing and reporting on workforce planning strategy

Note 1 to entry: The shorter-term planning activities of staffing or scheduling can be excluded.

4 Value of workforce planning

4.1 General

Workforce planning identifies current, transitional and future workforce demand and supply and, in doing so, makes explicit the human resource requirements of an organization. It enables management to anticipate and respond to identified needs to strengthen organizational performance outcomes.

Strategic workforce planning is relevant because we live and work in a global knowledge economy that is highly connected and interrelated. Furthermore, the environment within which it operates is uncertain and constantly changing. To operate effectively in this environment, organizational leaders and organizations are required to plan and predict for future growth. This requires flexibility, adaptability and resilience.

Organizations can be perceived as a collection of capabilities. The value of strategic workforce planning is that it enables organizational growth and success by connecting human resource strategy and practices to business strategy and financial plans.

Workforce planning also plays a critical role in managing change, including growth, restructure, merger and acquisition, divestment and closure.

4.2 Relevance of workforce planning to different stakeholders

There are many influences involved with workforce planning. It is used by organizations of all sizes, industries or sectors to enable them to respond more effectively to the current and projected demands of the labour market.

Stakeholders in workforce planning can include employers, leaders, the workforce, governments, labour unions, potential talent and academic institutions. This knowledge can be gained from a comprehensive management process to advise leaders and to ensure that the human capital, and therefore organizational capabilities, required to create and execute the business strategy are present within the organization.

4.3 Value to organizations

Workforce planning applies to organizations of all sizes, industries or sectors. Though the objectives and outcomes of each plan are often consistent, the complexity varies with the nature and size of an organization.

Workforce planning strengthens the capacity to:

- retain existing staff, skillsets, and attract high-performing staff;
- manage the workforce to avoid skill shortages or oversupply with regard to:
 - economic cycle (growth, no change and decline);
 - uneven or cyclical market demand;
 - under-utilized labour market;
- adopt new business models and new technology;
- maintain the best skill mix and to identify, monitor and manage workforce risk;
- plan the human resource function;
- remain competitive with regard to the workforce:
 - at regional level;

- across industry sector;
- globally.

4.4 Value to industries or sectors

Industry representative groups engage in workforce planning for their industry sectors to:

- identify the required skills and ensure the industry has access to a pool of appropriately skilled people;
- lobby governments and the education industry to ensure that they are training enough people to fill future skills needed within the industrial sector;
- protect the reputation of the industry sector by ensuring that it has the skilled workforce required to deliver;
- create and maintain flexibility of labour by accommodating workers who swap jobs by keeping their skills in the sector and/or in the region.

4.5 Value to regions

Regions can undertake regional workforce planning themselves and encourage and support local businesses to undertake this to:

- ensure that local employment opportunities are a good match for the skills of the residents of the region and vice versa;
- encourage local businesses to utilize the skills that exist in the community;
- create a planning base for attracting and supporting new industries/employers to the region;
- manage the impact of demographic changes and other economic factors on the region, including:
 - helping to maintain regional workforces to support essential community services like elder care, medical and community development; telecommunications, transport and infrastructure;
 - targeting programmes to attract new residents with the right skills to complement existing workforce needs;
 - supporting longevity and sustainability of local industries and increase the productivity of local enterprises to increase job opportunities and promote regional growth;
 - encouraging regional growth through better employability of workers and workforce mobility.

4.6 Value to the public sector

The public sector is a key external stakeholder of an organization and can support and undertake a range of workforce planning initiatives at the economy wide, regional, industry, individual enterprise, country and global level.

It can promote greater productivity and economic prosperity, by helping to regulate the labour market and tackle inequalities, and can contribute by building resilience and agility in the economy to enable it to prosper, absorb shocks, adapt and respond to the impact of global factors, including periods of rapid structural change brought on by changing global demand and competition.

4.7 Value to people

Workforce planning enables people to know the current and future talent requirements of the organization.

4.8 External and internal influences

Workforce planning generates business intelligence to inform business of the current and future impact of the external and internal environment on the organization, enabling the organization to be resilient to structural and cultural change to better position itself for the future. These influences can be complex and comprehensive, and include the following:

- external influences: local, regional, national and international economic, political, social and demographic labour market environment, industry and government regulation, compliance, legislation, technology;
- internal influences: varying market conditions, local and global economic cycle, workplace policy and practices, workforce mobility, amalgamations, upsizing, downsizing, closures, new entities, cost reduction, competition, productivity, new products and services, retaining talent, building business resilience, capability building.

All require change management to determine business risk and to ensure that management priorities, policies and practices effectively respond to strategic, regulatory and operational needs. Workforce planning enables workforce risk assessment and identification of risk mitigation strategies.

Workforce planning is an integral part of a director's fiduciary responsibilities for governance, finance, operations, risk and compliance.

5 Structure of workforce planning

5.1 General

Workforce planning continually faces new challenges from increasing globalization, enhanced technologies and the shift in workforce demographics. It requires navigation through the dynamic and often complex economic, legislative, social, environmental and industrial environment in which the plans operate.

5.2 Structure of workforce planning

Workforce planning is defined as two separate but interrelated tasks requiring different knowledge and skill sets consisting of the following:

- strategic workforce planning;
- operational workforce planning.

5.3 Process of workforce planning

Workforce planning is an active and continuous process in the organizational planning cycle.

Workforce planning is the responsibility of the senior management of the organization and should be aligned and consistent with its organizational strategies and governance. It includes a review mechanism, risk management and compliance with appropriate requirements.

Workforce planning is supported by the process and systems available to gather, analyse and report on workforce demographics and planning strategies.

6 Key components of workforce planning

6.1 General

There are many different ways to develop a workforce plan. An organization may have completed some, but not all, of the steps. This clause provides a detailed procedure for workforce planning, and it is

recommended that an organization using this document should apply the basic steps, at a minimum. As more experience is gained, the process of workforce planning can be refined by implementation of a more sophisticated, systematic and future focused approach which enables descriptive, predictive and prescriptive reporting.

6.2 Workforce planning checklist

The checklist in [Table 1](#) provides a reference to the recommended order and steps in a workforce plan for a medium or large organization. An example of a workforce plan for a smaller organization is given in [Annex A](#).

Table 1 — Workforce planning checklist

Phases	Tasks
1. Getting started (see 6.3)	
Establish the team and define the justification	a) Secure the right leadership and establish the workforce planning lead/team. Justify the expenditure of resources on workforce planning. Write the business case to proceed.
Align strategic, business and workforce plans	b) Identify workforce implications of organizational and business strategies.
Implement a communication plan to engage stakeholders	c) Develop and implement a communication plan to inform and engage leaders, the workforce and other stakeholders in the objectives of workforce planning.
Segment the workforce	d) Segment the workforce. Identify specific job segments in context of strategic planning (role based segmentation, employee-based segmentation, horizontal and/or vertical segmentation). Review, analyse and report on existing workforce data on the segmented workforce: current and future demand and current supply, human resource management and finance data.
	e) Conduct environmental or labour market scan, if more comprehensive information is required on the segmented workforce.
Review demand and supply data and identify information gaps	f) Create a methodology or if available use a system (such as computer-based data integration and management processing system) to identify and report on available demand and supply data and associated information gaps (quantitative and qualitative) on the segmented workforce.
Future focused business scenarios	g) Identify the future focused business scenarios for the organization as a whole, and the segmented workforce. Example scenarios: 1) no change; 2) Growth - quantified; 3) Decline - quantified; 4) other, e.g. work/group/location/supply chain division specific scenario.
2. Analyse the data (see 6.4)	

Table 1 (continued)

Phases	Tasks
Undertake supply and demand gap calculation	a) Including but not limited to funded positions, funded vacancies, mobility (exits-minus entries), future focused business scenario. Define and evaluate the demands with a benchmarking approach both internally and against national/international and/or industry-based standards. Explore the alternative approaches of redeployment, retraining, outsourcing, and recruitment. Quantify workforce demand and supply gap.
Describe the workforce supply risk	b) Apply organizational risk assessment procedures to identify and prioritize workforce risks from supply gap calculations at whole of business level and/or by segmented workforce. Report on workforce demand and supply risk.
3. Risk management (see Clause 7)	
Identify risk management strategies, action plan, and report	a) Identify strategies to manage and mitigate workforce risk of segmented workforce and by whole of workforce. Set a mechanism for planning and transition management. Source the resources: financial, personnel and systems to execute the management and mitigation strategy. Report on recommended risk mitigation strategies.
4. Implementation (see Clause 8)	
	a) Establish mechanism for monitoring and measuring workforce planning outcomes. b) Integrate strategic workforce planning into normal business planning process.

6.3 Phase 1: Getting started

6.3.1 General

A workforce planning lead and support team within the organization should be identified to integrate workforce planning into the normal business planning cycle.

A large organization should aim to include representatives from its organizational stakeholders. This maximizes shared responsibility for, and integration of workforce planning into the normal business planning processes.

For small and medium enterprises (SME), the starting point may be different than for larger organizations. It may not be feasible for SMEs to establish a project team, to write a business case or segment the workforce, but move directly to analysis of current and future workforce supply against business strategy and nominated scenarios. An example of workforce planning for a small organization is available in [Annex A](#).

All size organizations should consider the benefits of building workforce planning capabilities through training, coaching and/or mentoring of the workforce planning lead and/or support team.

6.3.2 Phase 1 a): Establish the team and define the justification

This step should reflect the organization culture. The need to start workforce planning may be initiated by an internal or external issue, workforce supply issues, industry competition, growth, capacity

addition, changes/advancements in technology, need to outsource certain activities or significant change in people requirements.

Options include:

- a) identifying potential organizational risks to exposure from absence or inadequacy of a workforce plan;
- b) presenting a written justification to the leadership which includes an environmental (internal and external) labour market scan and cost benefit analysis;
- c) introducing the concept to executive and management as a capability development session where regular workforce information such as head count, turnover, retirement, replacement/redeployment, diversity and inclusion issues, outsourcing issues are explored more comprehensively and placed within a framework of workforce planning facilitated by an experienced workforce planner;
- d) demonstrating the link between workforce analytics (data) and the organizational strategy;
- e) describe the current workforce data information gaps that will be addressed by workforce planning;
- f) a combination of the above.

The justification is best presented with a strategic and future focus.

6.3.3 Phase 1 b): Align strategy/business/workforce plans

Describe the current and future workforce requirements and/or implications of the strategic and business plans.

The organization strategy outlines the vision, mission and values, and provides guidance on the key functions and activities of the organization including the products and services to be delivered. This strategy guides the future direction of the organization for a defined period, typically three to five years. The strategy is used to underpin the workforce planning analysis for both the current and future state. The strategy may provide insights into the expected or likely workforce implications.

The workforce implications may be a result of proposed organizational restructuring, business processes, the diversification or the integration of new technology solutions, or a combination of these features. The strategy may also nominate the key timelines or event milestones for these activities to occur. The sequence and timing of events may have important workforce implications for the organization and its operational planning requirements.

The workforce implications should be documented during the strategic planning process, and these implications should be updated as new information or more detail becomes available. The workforce information may be limited to the likely change in the size of the workforce. While this information should be useful for workforce management, it may be insufficient for workforce planning purposes. The strategy and associated events may indicate the occupations (job families or job groups) and competencies required in the workforce and how these will change over time. Workforce plans need to be dynamic and easily adjusted to accommodate changes such as the rapid advent of online shopping, advent of automation and latest state-of-the-art technology, massive demand for tradesmen after a natural disaster.

Workforce planning priorities should focus on the job groups that contribute the most to the strategic or high value work undertaken by the organization.

6.3.4 Phase 1 c): Develop and implement a communications plan to engage stakeholders

Organizations should have established communication methods for their workforce and stakeholders. When initiating workforce planning, using an approach that prioritizes benefits for the workforce and other stakeholders can lead to improved engagement. Informing the workforce and other stakeholders about workforce planning intentions and goals supports an understanding of the implementation

process. This can include identifying who is leading the task and expected outcomes through assessments, surveys, benchmarking and progress reporting. The communication plan can demonstrate the organization's commitment to attract and retain the workforce required.

6.3.5 Phase 1 d): Segment the workforce

Segmentation is used to classify the different types of families, functions, roles and competencies within a business/organization. Workforce segmentation can be undertaken across industries/regions/supply chain workforces. It is used to focus workforce planning on the most critical job(s)/job groups or employee groups identified in the strategic and business plan as core to organization performance.

NOTE Workforce segmentation is a fundamental aspect in workforce planning.

6.3.6 Workforce segmentation approaches

There are two basic workforce segmentation approaches:

- role-based where jobs are segmented by value or type of work performed;
- employee-based segmentation by demographic, other observable or inferred characteristics.

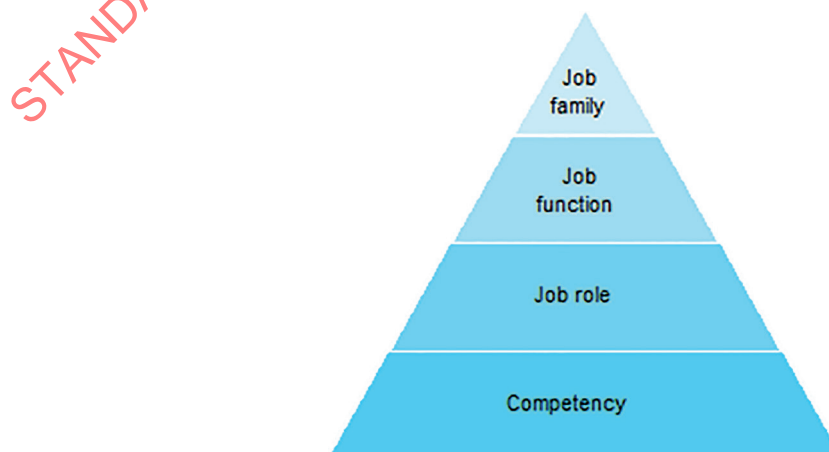
Depending on the level of complexity and maturity within the organization, each approach may be valid. The four approaches, in order of maturity level are shown in [Table 2](#).

Table 2 — Role based segmentation approaches

Segmentation approach	Level of maturity	Description
Organizational structure	Low	An organizational chart is a common way of portraying the organization's workforce. Segmenting the workforce and identifying gaps by way of an organizational chart has limitations; it groups positions (or roles) according to reporting lines and organizational functions rather than skills, capabilities or geography.
Geographic	Low	Segmenting the workforce by location enables an understanding of the geographical spread of employees. This approach allows for the analysis of workforce availability by location. Risk may include the availability of the broad skills and capabilities required from the external labour market within a geographic area. This approach is best combined with other types of segmentation to reflect local labour market conditions.
Job family	Medium	A job family model enables the workforce to be segmented into similar occupational groupings based on related competencies. It provides a deeper view of the workforce, allowing enhanced workforce analysis and planning. This approach is similar to that used by national statistical agencies to classify occupations. Integration with external labour market data provides an opportunity to identify the external workforce supply.
Systematic workforce segmentation	High	Although grouping the workforce into job families, job functions and job roles is useful, workforce planning is most effective when the organization is able to identify the requisite skills and capabilities needed within these job groups. This validates the accuracy of mapping of the workforce to the job family model, and it helps to identify where gaps in specific skills and capabilities exist, and which skills and capabilities within a job role or job profile are required to be developed (including lead times).
Job criticality	High	Classifying the criticality of role by the value added to an organization better allows for the efficient allocation of resources. Dimensions for assessing criticality include the impact on financial performance, delivery of essential services, development of new products and services, management of the organization and completion of strategic projects.

6.3.7 Job and competency segmentation hierarchy

Using a hierarchy similar to [Figure 1](#), an organization should be able to develop a practical means of segmenting their workforce.

**Figure 1 — Job and competency segmentation**

The definitions within the hierarchy are shown in [Table 3](#)

Table 3 — Workforce segmentation hierarchy

Segment	Definition	Example
Job family	A grouping of similar jobs at the highest level that usually consists of several job functions	Administration, Facilities and Property
Job function	A subgroup of jobs within a job family that require similar skills, capabilities and knowledge	Within the job family of Administration, Facilities and Property: "Executive Assistants, Secretaries and Receptionists"
Job role	A subgroup of jobs within a job function that allows for further refining and grouping of required skills, capabilities and knowledge	Within the job function of "Executive Assistants, Secretaries and Receptionists" (in the "Administration, Facilities and Property" job family): "Personal/Executive Assistants"
Competencies	The knowledge, skills, experience, capabilities and attitudes required for each job role	Some of these skills may be shared across job roles and families, which can assist in workforce planning

This layered approach is useful for job profiling, which supports a mature approach to workforce segmentation.

6.3.8 Job profiling

Job profiling identifies the skills and capabilities needed in the organization. This process should be conducted systematically to collect and manage information about particular positions or types of roles. A job profile is basically a comprehensive list of the responsibilities and tasks undertaken in a position or role plus a list of critical skills and capabilities needed to perform those responsibilities and tasks.

Job profiling has many benefits including:

- a) allowing the organization to identify and group the requisite skills and capabilities it has and needs to deliver its business priorities;
- b) insight into the development needs across the organization;
- c) visibility of the lead times involved in filling different roles;
- d) linkages with the potential supply pools for the required skills and capabilities.

6.3.9 Workforce segmentation principles

Within an organization, the following principles should be observed in relation to segmenting the workforce.

- a) The workforce segmentation model should be consistent across the organization and its respective business units.
- b) The workforce segmentation model should cover all workforce elements in the organization. This includes all employees (full time, part time and casuals), contractors and contingent workers.
- c) The workforce segmentation model should consider predicted and non-predicted knowledge changes, required for competency retention.
- d) The number of job families and occupations should be defined by the nature of the work within the organization, and should differentiate between key functions. Ideally, the number should be kept to a minimum.

- e) Depending on the size of the respective occupations, there may be a need to consider vertical or horizontal integration of these groups. Vertical integration involves combining different levels (graduate, qualified, senior and expert) from the same occupation (civil engineer) into a single group. Horizontal integration involves combining similar occupations (electrical, electronic and systems engineers) at the same level (qualified or senior) into a single group. Vertical or horizontal integration decisions should be consistent with how the organization employs these people and the career pathway for the occupation within the organization.
- f) The workforce classification system should be consistently applied to both workforce demand (positions) and supply (people) across the organization. Some organizations may have a preference to classify either positions or people only. If the workforce is only classified by either demand or supply, then this approach should be applied consistently across the organization.

6.3.10 Employee segmentation

Employee segmentation is based on a person's demographics, location, attitudes, opinion and behaviour, and can provide the basis of workforce supply forecasting.

Forecasting future workforce supply by better estimating changes to calculation inputs such as voluntary attrition rates or likelihood of promotion readiness. The key dimensions for this type of segmentation is current job, age, organization and position tenure, and current location. For example, a decrease in the number of low tenure employees (i.e. new hires) often results in a decline in voluntary attrition.

6.3.11 Review and analyse existing workforce demand and supply data

Larger organizations may have an analytics team or individuals who are supported with systems and knowledge to access data. Smaller organizations may not. Even those with analytical capabilities may not have anyone with the skills to make sense of the human resource data they have and/or have the data gathering and analysis under different division reporting lines or cohorts. The analytics are fundamental to workforce planning and it is equally important to have the skills to demonstrate the link between the workforce data and the organization strategy.

Keep it simple. Know what questions need to be answered. Collect only the data needed for the plan and respect privacy principles when collecting employee data.

As a starting point, workforce planning data can be confined to the following cohorts; but as confidence and capabilities grow more sophisticated and mature, workforce planning analytics and reporting against each of these and many other workforce descriptors can be achieved:

- a) quantitative data:
 - 1) funded positions;
 - 2) funded vacancies;
 - 3) vacancy wait (time to fill positions);
 - 4) workforce internal relocation (e.g. secondees, transfers within the organization);
 - 5) exits by type/reason;
 - 6) entries by type/reason;
 - 7) mobility (trends and net mobility);
 - 8) diversity characteristics, such as age, gender, cultural, linguistic, physical and mental difference and other diversity characteristics relevant to the organization;

NOTE Diversity is defined in ISO 30400 as characteristics of differences and similarities between people, and it includes factors that influence the identities and perspectives that people bring when interacting at work.

- 9) qualification;
- 10) skills and competencies;
- 11) experiences/exposure;
- b) qualitative:
 - 1) working life stage (new entry, early, mid, end career workers);
 - 2) engagement motivators (reasons employees are attracted to the workplace);
 - 3) disengagement motivators (reasons they may disengage/exit the workplace);
 - 4) career aspirations;
 - 5) learning and development intentions,
 - 6) employee and stakeholder opinion on management and business policy and practice.

Do not assume anything about the workforce. Ensure the data are evidence-based by using quantitative or qualitative outcome measures.

6.3.12 Current workforce demand

The current workforce demand, based on current business requirements should be used to baseline the approved size, skills and competencies of the organization to deliver business outcomes. Using the agreed workforce segmentation system (see [Table 3](#): organizational structure, geographic, job family or systematic), it is possible to determine the current demand for capability for the organization. As a minimum, the current workforce demand should be confirmed for the key job families or roles. Ideally, the organization should have a complete view of the current workforce demand for all job families and roles. This is normally expressed in terms of full time equivalents (FTE) or similar measures.

The demands for an increase in the current workforce should be referenced to benchmarking at the national and international level. A multi-disciplinary team comprising human resources, finance and operations should assist in the review of the demand. Technology alternatives and other workforce development strategies should be explored.

6.3.13 Aggregate demand

Aggregate demand refers to the total size of the organization. If an organization has segmented its workforce using a structural or geographical approach, then an aggregate current demand should be derived. An aggregate level demand presents challenges for workforce planning because it does not have sufficient granularity to show the differences by job families or roles. If aggregate demand figures are used, then it should be assumed that all job families and job roles behave in a similar manner in terms of retention, learning and development and recruitment.

6.3.14 Demand by job families or job roles

With an approved demand by job families or job roles, the organization should be able to concentrate its workforce planning efforts on the most important or valuable job families or roles. This approach is preferred to the aggregate level demand as it enables the organization to focus workforce planning onto a subset of the total organization.

6.3.15 Demand by competency

Job families may be defined by the different competencies or capabilities required of that group. This information may provide another layer of information, which may have workforce planning benefits. With an approved demand by competencies, this should help the organization to develop a systematic approach to workforce planning. It will assist to validate the most important or valuable job families or roles, and it should enable a detailed understanding of the competencies required within the organization. Demand by competency also needs to include time frame for positioning, i.e. workforce requirement, recruitment schedule, training schedule or actual positioning.

6.3.16 Unapproved demand

Unapproved demand comprises of identified additional workforce that has not been approved for the organization, but it is likely to be approved within the current planning period.

Present unapproved workforce demand figures in the same way as approved demand figures. This will help understanding of future workforce demands.

It is recognized that the unapproved demand should become more important in the future workforce demand analysis.

The core questions that are answered through a current workforce demand analysis are as follows and should be assessed by the whole of the organization and by nominated workforce segments.

- a) What is the organization required to deliver in terms of outcomes, outputs and services?
- b) Are all of these outcomes, outputs and services delivered on time and within budget?
- c) If not, is this because of lack of specific capabilities? What are these capabilities? What is the funded full-time equivalent? Is it sufficient?
- d) Will the current jobs require significant change in the coming future such as skills, knowledge and/or technology capabilities, in order to preserve competency?
- e) What is the rationale for the additional workforce requirements?

Below are some questions which could be asked to justify additional demand:

- What are the potential budget constraints to obtaining these?
- Can this additional workforce demand be reduced by changing the workplace infrastructure (for example, business processes or information technology support systems)?
- Can this additional workforce demand be reduced by changing the workplace structure?
- Can this additional workforce be addressed by exploring possibilities of redeployment from within the organization with retraining or re-skilling?
- Are there functions which should be discontinued and are there new functions that should be created?
- Are current jobs correctly designed? What new skill sets and/or job roles are important to achieve business success? What skills deficits are evident today?
- If the opportunity to set up the business area from scratch was available, how would it be structured? How many people, in what job roles, at what levels, in which locations and with what capabilities would be needed?

6.3.17 Current workforce supply

The current workforce supply should be used to baseline the size of the workforce. The current supply should be compared to the approved demand, which should enable the workforce vacancies to

be determined. The current supply will include different workforce components, and these typically include the following.

- a) Employees: Full time, part time and casuals (temporary).
- b) Contractors: Individuals who work on a regular basis for an organization, usually in approved positions, but are not employed directly by the organization, but rather through a third party.
- c) Outsourced functions: Service functions that are conducted for the organization by a third party under a defined performance level agreement.

Using the agreed workforce segmentation system (structural, geographic, job family or systematic), it should be possible to determine the current supply and the current number of vacancies within an organization. As a minimum, the current workforce supply should be confirmed for the key job families or roles. Ideally, the organization should have a complete view of the current workforce supply for all job families and roles. This is normally expressed in terms of Full Time Equivalents (FTE) or similar measures.

The manner in which the workforce is segmented will determine the level of granularity for the workforce supply.

6.3.18 Aggregate supply

Aggregate supply refers to the total size of the organization's workforce. An aggregate level supply presents challenges for workforce planning because it does not have sufficient granularity to show the differences by job families or roles. If aggregate supply figures are used, then it should be assumed that all job families and job roles behave in a similar manner in terms of retention, learning and development and recruitment.

6.3.19 Supply by job families or job roles

With an approved supply by job families or job roles, the organization should be able to concentrate its workforce planning efforts on the most important or valuable job families or roles. This approach is preferred to the aggregate level supply as it enables the organization to focus workforce planning onto a subset of the total organization.

6.3.20 Supply by competency

With an approved supply by competencies, this should help the organization to develop a systematic approach to workforce planning. Job families may be defined by the different competencies or capabilities required of that group. This information may provide another layer of information, which may have workforce planning benefits. For example, an organization may have a constant need over the next five years for IT Programmers (job family); however, 90 % of programmers will need to be competent in a new language. The supply by job family is constant, but the supply by competency varies. It will assist to validate the most important or valuable job families or roles, and it should enable a detailed understanding of the competencies required within the organization.

The core questions that are answered through a current workforce supply analysis are as follows and should be assessed by the whole of the organization and by nominated workforce segments.

- a) What is the composition of the current workforce in terms of gender, age, diversity, classification, location, experience, competence level and tenure?
- b) What are the separation patterns? Superannuation, resignation, death?
- c) What is the composition of the current workforce in terms of experience, fresh induction, and attrition levels?
- d) What is the ratio of directors to employees? What does this say about the workforce and organization?

- e) How reliant is the organization on the contingent workforce (consultants, contractors, temporary, casual employees)? What is the ratio of temporary workers on the total workforce? What skills and capabilities does the organization obtain through the contingent workforce? How does the contingent workforce profile compare with the permanent workforce? What work is currently completed by the contingent workforce and why?
- f) What is the age profile of the workforce? What implications does this have for the workforce, now and in the future? What are the separation patterns and impact of skill depletion?
- g) What is the work life stage of the workforce, i.e. new entry; early career; mid-career; end-career; transition workforce (graduates/trainees/transition to retirement employees)? What implications does this have for the workforce, now and in the future? What are the separation patterns and impact of skill depletion?
- h) What is the tenure pattern of the organization? What does this mean from a workforce planning perspective?
- i) How does the profile compare to industry wide profile? How and why are they different?
- j) What patterns are evident from the workforce profile and do they vary across the organization? Have they varied over time and, if so, how? What does this mean?
- k) What are the risk areas identified by the workforce data? (For example, a mature age profile may mean an expected loss of a large component of the workforce (knowledge and experience) at a point in time, a lack of retraining activities run by the organization may lower productivity.)
- l) What are the strength areas identified by the workforce data? (For example, a stable workforce spread across classifications may be great for succession and promotion opportunities.)
- m) Is supply distribution a more important issue for the business than under or over supply?
- n) Is there a gap between issuance of offers and actual reporting by the selected candidate? Such trends may be taken into account and equivalent percentage cushioning be made over and above the offers made.

6.3.21 Data analysis: Current state

The current state of the organization and its workforce should be portrayed through its data. The current state data analysis should show information at both aggregate and job family levels and if possible, by competency.

The current state analysis should show the most recent data, and if it is available the past history for the organization and its workforce. While there is no set period for the past workforce history, as a minimum, data sets should cover the previous 12 months, and preferably, the previous three years. Data should be collected on a frequent basis (based on business size and business type, but for large organizations normally monthly) and should be extracted using the same protocols (same time each month, using the same process). Consideration should be given to how the workforce planning data are collected, collated, stored, retrieved and archived.

Requirements of new projects in planning, required competencies/capabilities needs to be included in this analysis.

It is possible that some of the workforce planning data are not available at the commencement of the workforce planning process. Where data are missing, the use of proxies or assumptions should be considered. Both are viable alternatives and if they are used, then they should be documented. Over time, action may be taken to create a more robust workforce planning data set to minimize the reliance on proxies and assumptions.

6.3.22 Presenting the report on workforce data

The maturity of data analytics and reporting will vary from organization to organization for many reasons including systems used and human resource analytical capabilities. There are essentially three elements of analytics maturity:

- a) descriptive (what has happened, what is happening);
- b) predictive (what could happen);
- c) prescriptive (what should happen).

When undertaking workforce planning analytics the following questions should be asked.

- At what level of analytical maturity is the organization currently operating?
- At what level does the organization need to be?
- At what level does the organization want to be?
- What does the organization need to do to obtain the required level of maturity?

The workforce planning data report should include:

A workforce planning data story presents workforce information in a consistent manner to enable supporting analysis to be conducted. It should include different techniques from descriptive statistics to graphs to show how information changes over time. The data story should be used to show how the organization and its workforce have changed over time, both in aggregate and by job family. [Table 4](#) displays what data should be collected as a minimum.

Table 4 — Workforce planning data

Job family and aggregate
Demand
a) Number of positions in aggregate and by job family
b) Position data including job family, classification level, employment type (employee, contractor), location, and any other key descriptors such as skills/competencies
Supply
Workforce number in aggregate, and by job family
a) Demographic information for each worker including:
1) Age
2) Gender
3) Diversity information
4) Working life stage with the business: new entry, early, mid/end career
b) Experience information for each worker including:
1) Time in current role in the organization
2) Time in the organization
3) Time employed in this job family
4) Time employed in the same sector (e.g. industry sector or public service)
c) Other information:
1) Turnover data: both voluntary and involuntary for all employment types by location, job family, classification, etc. and reason, e.g. retirement, leave, secondment, transfer, programme close, career progression
2) Recruitment data: permanent, temporary and internal moves for all employment types plus workforce profiling quantitative responses
3) Qualifications and memberships (optional)

Table 4 (continued)

4) Qualitative information gathered through organization surveys
5) Skills/competencies
6) Quantitative surveys, e.g. work ability, employability, innovative behaviour, shift work recovery rate, burnout, presenteeism, work-related sleep quality or psychological distress measures. If workability, employability, innovative behaviour or shift work recovery rate low and burnout, presenteeism, work-related sleep quality or psychological distress high, then human resources need to start planning to change
Demand and supply
Demand
Approved and, if possible, unapproved (how it has changed over time and varied between levels)
Supply
a) Descriptive statistics
b) Employment type profile (all employees by employment arrangement and voluntary workforce if applicable),
c) Age and gender profile (could be combined into a single graph)
d) Diversity profile (all employees by employment arrangement and voluntary workforce if applicable)
e) Tenure profile (by current job and within the organization)
f) Experience profile (within the job group or occupation; experience or tenure)
g) Recruitment data (minimum last 12 months, preferably three years or longer)
h) Turnover information (minimum last 12 months, preferably three years or longer)
i) Past and current vacancy levels: Demand/Supply gap (aggregate, job group, competency)

The results from the current state analysis should provide the organization with a clear view of its present state and the immediate past history of its workforce. This information should form the baseline data for the workforce plan. This analysis should be considered as a pre-requisite for the future state analysis.

There is no single definitive method to present the current state analysis. It should depend on the requirements of the organization and its executives. As a minimum, the following features should be used to guide the presentation of the current state analysis:

- a) workforce data may be presented using a combination of graphs, figures, tables and descriptive statistics;
- b) data should be complemented with supporting analysis, which is designed to help the reader to understand the key messages and guide their interpretation;
- c) the analysis should identify the key results and possible implications for key job families.

6.3.23 Workforce demand and supply trends

Once an organization has sufficient workforce planning data available, consideration should be given to showing trend information (using time-series techniques) for the following:

- a) demand;
- b) supply;
- c) recruitment performance;
- d) turnover behaviour.

Trend information using time-series techniques can be as simple or complex as the organization requires. If an SME, it may be easier to report against a defined timeframe, e.g. pressure points in

relation to workforce supply are going to be most evident in the year 20xx when indicators are that 46 % of our highly skilled specialist workers will be retiring. If a large organization more sophisticated trend reporting techniques should be applied.

The core questions that are answered through a workforce trend analysis are as follows and should be assessed by the whole of the organization and by nominated workforce segments.

- What are current and projected retirements, turnover, secondments, etc.?
- Are there any new business proposals and what impact will these have on capacity and capability requirements?
- Are there any new policy proposals that are about to end? How will this affect the workforce?
- Are there any employee contracts (non-ongoing, contractors) that are about to end?
- Assuming employees will keep joining and leaving the organization at the same rate as in previous years, will the workforce decrease or increase in the specified forecast period?
- By how much will the workforce decrease or increase in the specified forecast period?
- Will this increase or decrease be prominent in a particular job family, function, role or skills and capabilities category?
- Taking this information into consideration, what are the likely changes to the outflow of employees in the specified forecast period? How many employees are likely to leave in the specified forecast period?

6.3.24 Phase 1 e): Conduct environmental or labour market scan

If seeking additional environmental information, it is best to undertake desktop research to identify existing sources of information which may be useful to the business case and workforce planning analysis, e.g.:

- a) most industry skills councils or training bodies will have produced comprehensive labour market scans for their members;
- b) many academic institutions also gather intelligence on macro skills and labour requirements by industry;
- c) some governments provide industry data.

Environmental scanning is best if it provides information on external and internal workforce demand and supply influences. Information gathered can include (but not be limited to):

- employing industries/sectors;
- occupational description and profiles;
- demand (current and projected and contributing factors);
- supply (current and projected and contributing factors);
- employment trends: growth, decline, no change;
- workforce characteristics;
- industry workforce development strategies;
- policy or institutional changes that may impact on ability to take action, e.g. education and training policy, priority workforce categories, etc.

When embedding workforce planning into the organization/business, it is useful to take this macro environmental scanning information and relate it to the business context. The following aspects should be considered:

- a) to what extent the macro trends reflect the business market environment at local, regional, national and/or global level;
- b) the quality of the macro data compared to the business trends;
- c) the relevance of the macro workforce segmentation to business segmentation;
- d) macro data information gaps: what is essential, important and desirable for the business to know about the workforce as a part of the broader industry workforce.

The core questions that are answered through an environmental or labour market scan are as follows and should be assessed by whole of organization and by nominated workforce segments.

- What is current availability of skills and capabilities?
- Where are these skills and capabilities currently sourced?
- What is the ratio of good-quality applications to each position advertised?
- Are there particular skills and capabilities that are harder to obtain than others?
- What is the average time to recruit? Does this vary between job families?
- How much bargaining power do potential employees have compared to employers?
- What is the demand for, and availability of, the organization's key skills and capabilities?
- What are the possible risks associated with the labour market in relation to the organization's workforce segmentation method (availability of qualified candidates, ability to recruit these candidates and organizational challenges in recruiting competitively)?
- What are the trends in external benchmarking data (rates of pay, skill availability)?
- What are the trends in external environmental data (inflation, competition, unemployment)?

6.3.25 Workforce profiling/survey

Information gaps (qualitative and quantitative) on the segmented workforce will become apparent as Phase 1 steps (a) to (e) are completed. To address some of the information gaps, consider undertaking a whole of organization workforce survey or focus on a particular segmented part of the workforce depending on the urgency of the workforce planning requirements. Some critical job groups require attention before others. Some industries undertake workforce profiles at sector level, i.e. industry by sector and location which enables them to snapshot and monitor industry wide trends and risks.

Workforce profiling allows the gathering of more specific information from the workforce. This can be identified or de-identified information. It allows for comparative analysis across various respondents and data to be aggregated to determine trends and risks.

Workforce profiling questions generally include the following:

- a) industry;
- b) sector;
- c) division;
- d) employee characteristics: age, gender, culture, language;
- e) length of time in industry and/or in the organization;

- f) type of work undertaken (role, classification, task);
- g) reasons for working in the organization;
- h) motivators for staying or leaving the organization;
- i) working life intentions within the organization, in the industry and in the labour market;
- j) career development and training intentions and expectations.

6.3.26 Phase 1 f): Identify information gaps

Report on workforce information gaps i.e. quantitative and qualitative data not available in current human resource management systems or requiring significant manual data manipulation.

6.3.27 Phase 1 g): Identify future focused business scenarios

Business scenarios are fundamental to workforce planning. They are result of the strategic business plan of the organization. To be future focused, it is important to present the future against at least three scenarios. The most common are growth, decline and no change (remains as is). The business scenarios are best if clear and quantifiable.

EXAMPLE 1 Our business strategy states we will grow by 3,5 % in the first year followed by incremental growth up to 12 % for the following five years. However, Division A will be in systematic decline over next two years due to withdrawal of public funding for that programme, while all other divisions will generate steady growth in line with the broad business strategy.

EXAMPLE 2 Incorporating advances in communications technology are central to our business growth; half of our current workforce will need additional skills to realize these opportunities.

EXAMPLE 3 Our business strategy is to close two divisions in the next 12 months, another division will be maintained at status quo (no change) for next two years and the remaining divisions will have staged growth (numbers and skill sets) by 6 % over next three years.

EXAMPLE 4 Our organization will be diversifying into a new area, new territories, and introducing state of the art technologies.

The core questions that are answered through a scenario planning analysis are as follows and should be assessed by whole of organization and by nominated workforce segment.

- a) What is the strategic direction of the organization over the next 1, 2, 3 and 4 plus years?
- b) What impact does this have on the work to be undertaken in the future (next 1, 2, 3 and 4 plus years)?
- c) What new activities will be incorporated in the budget? What activities will cease?
- d) What particular outputs will be affected by this change? How will these be delivered?
- e) What implications does this have for the workforce (capacity, capability, location, functional alignment to business delivery)?
- f) What new skills or job roles will become important to achieve business outcomes?
- g) What job functions or skills will no longer be required?
- h) Will the way the work is currently done change?
- i) How will changes in technology affect the work?

Sensitivity testing, stress testing and scenarios can enable demand and supply gap calculations for current and future workforce requirements. These approaches assist in determining level of workforce need, risk and associated mitigation strategies.

6.4 Phase 2: Analyse the data

6.4.1 Phase 2 a): Undertake demand and supply gap calculations

Depending on the size of an organization demand and supply gap calculations can be undertaken using complex workforce planning systems and tools or can be undertaken using simple excel spreadsheet methodology.

Supply gap calculations need to be quantified. They can identify over and/or under supply of workforce numbers and/or specific features of the current workforce with the expected future.

The core questions that are answered through a supply gap calculation are listed below and should be assessed by whole-of-organization and by nominated workforce segment.

- a) What is the available (funded and/or unfunded) workforce to meet current service demands?
- b) What has been the past mobility of that workforce (exits and entries) by type?
- c) What is the projected mobility of the current workforce (exits and entries) by type over a timeframe pertinent to the business and aligned to the strategic and business plans?
- d) What is the project gain/loss of the current workforce?
- e) What are the future (quantified) demands on the current workforce?
- f) What is the available supply against the nominated scenarios?
- g) What is the risk assessment of that supply against the nominated scenarios?

6.4.2 Phase 2 b): Describe the workforce supply risk

6.4.2.1 General

This step should reflect the organization culture. The need to start workforce planning may be initiated by an internal or external issue, workforce supply issues, industry competition, growth, capacity addition, changes/advancements in technology, need to outsource certain activities or significant change in people requirements.

There is a risk when there is a likelihood of a prejudicial or harmful event that happens and may produce a negative effect on the performance of the organization.

The objective of a good risk management ensures optimal, balanced and sustainable organizational performance.

It is necessary to develop a comprehensive, systematic, integrated and flexible identification, evaluation, analysis and management of risk and anticipation of risks whenever possible:

- develop best practices of risk management processes;
- process all types of risk related to the operation of an organization;
- take responsible risks;
- take informed decisions;
- better management of change.

6.4.2.2 Risk management

Risk management should be aligned with the strategy of the organization and be in support of performance management. It needs to cover the same activities of management and performance