
Department of Planning and Environment

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Guidance on strategic planning outcome -Understanding resourcing needs

Regulatory and assurance framework for local water utilities

November 2022



Acknowledgement of Country

The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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1 Introduction

Local water utilities can best meet the needs of their customers, and manage key risks, when their decisions and activities are based on effective, evidence-based strategic planning.

The NSW Department of Planning and Environment is committed that all local water utilities should have in place effective, evidence-based strategic planning. This will ensure utilities deliver safe, secure, accessible, and affordable water supply and sewerage services to customers. It will also ensure they can manage key risks now and into the future, and in the event of significant shocks. Local water utilities remain responsible for conducting strategic planning.

The department gives assurance of effective, evidence-based strategic planning. Local water utilities not making dividend payments¹ are encouraged, but not compelled, to use the department's assurance framework, experience and capacity to support effective strategic planning.

Through the department's assurance role under section 3 of the [Regulatory and assurance framework for local water utilities \(PDF, 1613.11 KB\)](#) - Regulatory and Assurance Framework - we establish what outcomes we expect effective, evidence-based strategic planning to achieve (see section 3.2 of the Regulatory and Assurance Framework) and assess if a utility's strategic planning achieves these outcomes to a reasonable standard (see sections 3.3 and 3.4 of the Regulatory and Assurance Framework).

We give separate, optional guidance in the department's guidance [Using the Integrated Planning and Reporting framework for local water utility strategic planning \(PDF, 573.33 KB\)](#) to explain how utilities can achieve the strategic planning outcomes to a reasonable standard using the *Integrated Planning and Reporting Framework* for councils under the *Local Government Act 1993*.

1.1 Purpose of this document

This document supplements the Regulatory and Assurance Framework and gives guidance on achieving the outcome of understanding resourcing needs to a reasonable standard.

This guidance is consistent with the objectives and principles established under the Regulatory and Assurance Framework, including being outcomes focused and risk-based.

This document sets out good practice **for all local water utilities** to apply when doing strategic planning to achieve the outcome of understanding resourcing needs.

¹ Sections 3 and 4 of the Regulatory and Assurance Framework, are also the Guidelines for council dividend payments for water supply or sewerage services, under section 409(6) of the *Local Government Act 1993*. Before taking a dividend payment from a surplus of the council's water supply and/or sewerage business, a council must have in place effective, evidence-based strategic planning in accordance with section 3 of the Regulatory and Assurance Framework.

1.2 Structure of this document

This guidance is structured providing:

- the expectations for achieving this outcome to a reasonable standard
- an appendix with optional 'how to' guidance that helps utilities achieve assurance expectations
- an appendix providing templates, case studies and tools useful for utilities to achieve assurance expectations.

1.3 Review of this guidance

As part of our commitment to continuous improvement, we will review the performance of the Regulatory and Assurance Framework within 2 years from finalisation. There will also be periodic reviews of the full suite of relevant regulatory and assurance documents, which will happen at least every 5 years.

We welcome feedback on this guidance and will update it when needed based on feedback or a 'lessons learned' review following our assessment of strategic planning by local water utilities.

2 Oversight of local water utility strategic planning

Under section 3 of the [Regulatory and assurance framework for local water utilities \(PDF, 1613.11 KB\)](#), the department establishes what outcomes it expects effective, evidence-based strategic planning to achieve (see section 3.2) and assesses whether a local water utility's strategic planning achieves these outcomes to a reasonable standard (see sections 3.3 and 3.4).

Councils making a dividend payment from a surplus of their water and/or sewerage business must meet the expectations set out in section 3 and section 4 of the Regulatory and Assurance Framework.² Local water utilities not making dividend payments are encouraged, but not compelled, to utilise the department's assurance framework, experience and capacity to support effective strategic planning.

For effective, evidence-based strategic planning to occur, the department expects strategic planning to achieve the following outcomes to a reasonable standard:

- Understanding service needs
- Understanding water security
- Understanding water quality
- Understanding environmental impacts
- Understanding system capacity, capability and efficiency
- Understanding other key risks and challenges
- Understanding solutions to deliver services
- Understanding resourcing needs (**this guidance**)
- Understanding revenue sources
- Make and implement sound strategic decisions
- Implement sound pricing and prudent financial management
- Promote integrated water cycle management

A **reasonable standard** is met if the utility considers and addresses an outcome in a way that is:

- **sufficient:** underpinned by evidence-based analysis that supports the conclusions reached
- **appropriate:** underpinned by relevant departmental guidance and industry standard approaches to conduct planning and reach conclusions
- **robust:** underpinned by evidence that draws on appropriate sources and recognises and rebuts potential alternative interpretations.

² Sections 3 and 4 of the Regulatory and Assurance Framework, are also the Guidelines for council dividend payments for water supply or sewerage services, under section 409(6) of the *Local Government Act 1993*. Before taking a dividend payment from a surplus of the council's water supply and/or sewerage business, a council must have in place effective, evidence-based strategic planning in accordance with section 3 of the Regulatory and Assurance Framework.

The assessment considerations the department will apply and how these may be addressed are set out in more detail in the Regulatory and Assurance Framework.

3 Guidance on understanding resourcing needs

Under section 3.2 of the Regulatory and Assurance Framework, the department expects utilities to achieve the strategic planning outcome **understanding resourcing needs** to a reasonable standard. This includes considering:

- What resourcing is needed to deliver services and manage risks?
- What are the life-cycle costs of managing assets?
- What are the technical and operational skills needed to deliver services and manage risks?
- How does the local water utility do workforce planning?

3.1 Understanding resourcing needs

Understanding resourcing needs is critical to determining the revenue needed to deliver services to required standards over time, developing and evaluating options for service delivery, and making strategic decisions.

The resourcing needs of a utility ultimately depend on the:

- service outcome it must achieve (which is dependent on its regulatory requirements, the risks it needs to manage and the views and preferences of its customers)
- solutions it chooses to implement to achieve these service outcomes.

However, the utility will also need to have a reasonable understanding of the likely resourcing needs of viable alternative options to inform its selection of preferred servicing solutions.

Once a utility understands its service needs, it will need to incorporate this into estimates of its revenue requirements, which inform its pricing decisions. It may also need to make strategic decisions that seek to balance service outcomes and resourcing needs if, for example, there is discretion in service outcomes and constraints in available resources (and funding sources).

The strategic planning outcome of understanding resourcing needs is therefore closely linked to all other strategic planning outcomes, including understanding:

- service needs
- water security, water quality, environmental impact and other key risks and challenges
- solutions to deliver services
- revenue sources
- make and implement sound strategic decisions
- implement sound pricing and prudent financial management.

In the following sections we set out **what** the department's expectations are for **understanding resourcing needs** to a reasonable standard. In Appendix A and Appendix B, we provide optional guidance and case-studies and tools on **how** some of these expectations could be met.

3.2 What resourcing is needed to deliver services and manage risks?

A local water utility should understand the resourcing needs to deliver its services and effectively manage its risks

A local water utility should have a sound understanding of its resourcing needs over the short, medium and longer term. This allows it to effectively develop and evaluate options for service delivery, understand revenue requirements, manage risks and make good strategic decisions.

The utility should understand the different types of resourcing requirements, including land, labour and capital (plant, machinery and other human-made assets), the key drivers of its resourcing requirements, and how its resourcing requirements may change over time.

In the following sections, we focus on key categories of local water utility resources: assets and labour (workforce).

3.3 What are the lifecycle costs of managing assets?

A local water utility should understand the life-cycle costs of its assets to inform the development and evaluation of servicing options and their resourcing needs

A utility should understand the life-cycle costs of its assets to ensure that it is fully informed of these costs when evaluating options to deliver services. Some options may have lower upfront costs but higher ongoing maintenance costs (and vice versa). Accounting for all costs of the asset/infrastructure over its entire life allows different infrastructure options to be compared on a like-for-like basis rather than just the short-term capital spend. In turn, this can help the utility select the most efficient servicing solution over the long term.

A utility should also be aware of the resourcing needs for managing assets over their life cycle. The process of mapping all relevant costs, the timing of those costs, and the impact of the time-value of money (net present value analysis) can help utilities understand their specific resourcing requirements, potential budget risks, uncertainties and where further investigation or analysis may be needed.

A local water utility’s life-cycle cost analysis should consider all costs associated with the design, development, delivery and operation of assets over their lives

The utility’s life-cycle cost analysis should consider all costs associated with the design, development, delivery, operation and where relevant decommissioning/disposal of assets over their lives. This includes:

- **concept and definition** – research, concept and design analysis, and infrastructure/asset specification analysis
- **design and development** – system and design engineering, design documentation, any testing or evaluation of components, productivity engineering and planning, vendor selection, quality assurance/management and other design and development activities
- **manufacturing, construction or installation** – non-recurring manufacturing, construction or purchase and installation costs. This can also include engineering and operational analysis required to get the asset functioning and should also consider any potential technological advances
- **operation and maintenance** –ongoing operation and maintenance of equipment and facilities, such as the acquisition of spare parts and consumables, staff, contract services, IT support, energy, chemicals, routine maintenance, major programmed maintenance and breakdown maintenance
- **support services over the life of the asset** – corporate management, project management, administrative overheads, insurance and general support services
- **residual or salvage value** (including disposal costs) –the value of the asset at the completion of the life cycle or the period of analysis (see Box 1. Calculating residual value).³

Life-cycle costs commence at the concept and pre-planning stages and conclude when the asset is sold or the site is returned to its original condition. Costs should be localised as much as possible. Estimates of future life-cycle costs should consider historic costs to deliver similar services and location-specific cost influences relevant to the local water utility.

One way to express the total life cycle cost is shown in Figure 1.



Figure 1. Equation for calculating total life-cycle costs

³ Adapted from Government of Western Australia, Department of Sport and Recreation, 2005. Life Cycle Cost Guidelines: Sport and Recreation Facilities (PDF 1.65 MB), P. 21

The impact of *when* expenditures in each of these categories are made over the life of an asset must also be accounted for through net present value (NPV) analysis.

Box 1. Calculating residual value

This method has been adapted from NSW Treasury.

The residual value must be estimated whenever the project life is:

- shorter than the asset's useful life and the business intends to dispose of the asset
or
- greater than the appraisal period and a residual/terminal value needs to be included in the final year of the appraisal in recognition that the asset provides value beyond the modelling period.

The residual value of an asset can be based on its value in place or its resale or scrap value less the costs of disposal (which can include expenses such as disassembly and removal, recycling or safe disposal and/or site remediation).

As a rule of thumb, the residual value of an asset in place can be calculated by applying straight-line depreciation (for example, the residual value of an asset would be 50% of its initial cost if it has an expected useful life of 20 years and was installed 10 years before the end of the analysis period).

3.4 What are the technical and operational skills needed to deliver services and manage risks and how does the local water utility do workforce planning?

A local water utility should undertake strategic workforce planning to understand the technical and operational skills needed to deliver their services and manage risks

Strategic workforce planning is a process that utilities can use to ensure their workforce is adequate to meet their current and future objectives.⁴ It involves analysing the utility's:

- strategic objectives and service needs
- current approach to staffing and workforce planning
- legal and compliance requirements
- governance mechanisms for documentation and continuous evaluation
- projected future staffing, including:
 - anticipated workforce deficits

⁴ Many councils already have established processes to develop resourcing strategies such as ones developed in line with the Integrated Planning and Reporting Framework

- external influences on workforce supply and demand (such as local demographics, ageing population, shifting industry trends and immigration policies).

This analysis allows water utilities to identify and avoid potential future risks, such as not having enough staff to meet future needs or not having staff with the right skills to meet compliance needs.

If water utilities undertake strategic workforce planning collaboratively with managers and key stakeholders, they can make it easier to take advantage of emerging opportunities, respond quickly to unexpected threats and cope with today’s more volatile environment.⁵

Developing and implementing strategic workforce planning will help a utility answer the following questions:

- What resourcing is needed to deliver services and manage risks?
- What are the technical and operational skills needed to deliver services and manage risks?
- How does the local water utility do workforce planning?

Strategic workforce planning to a reasonable standard

To do workforce planning to a reasonable standard, a utility should consider the 5 key steps set out in Figure 2, which are explained in detail in the following sections.

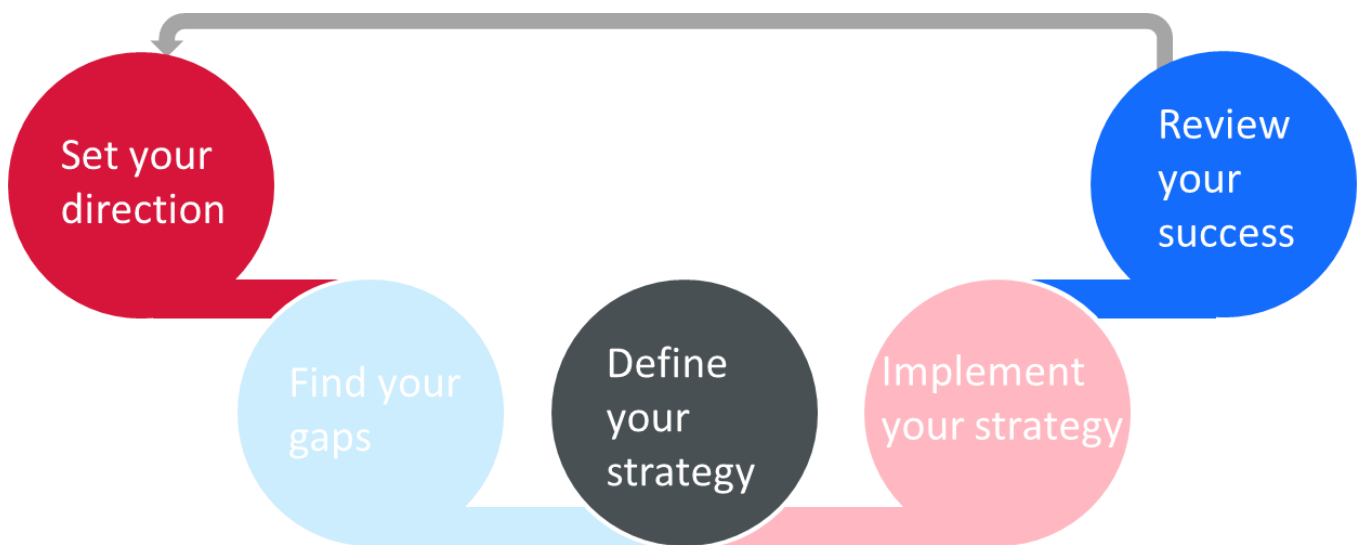


Figure 2. Water utility strategic workforce planning. Adapted from the NSW Public Service Commission’s Strategic Workforce Planning Framework

Step 1: Set your direction

What are the long-term and medium-term goals of your utility? What workforce do you need to deliver these objectives?

Strategic workforce planning should support the objectives of your overall strategic planning. Linking strategic workforce planning to your broader organisational objectives will help make sure that you build or acquire the right capabilities to achieve the utility’s objectives.

⁵ McKinsey and Company, 2021, [Becoming more strategic: Three tips for any executive](#)

In this step, you should make sure your strategic workforce planning is aligned with your:

- organisational vision and objectives
- service needs, including regulatory requirements and customer priorities
- delivery programs and operational planning.

At a minimum, strategic workforce planning should consider the utility's:

- mission and values
- service demand and supply
- current and future customers
- competitive landscape and structural industry changes
- financial goals, constraints and implications
- workplace culture
- core organisational capabilities or deficits
- inter-organisational alliances, partnerships or dependencies
- current strategic workforce planning maturity.

At the end of step 1, you should understand:

- what you need from your workforce to support strategic objectives and manage any risks
- the challenges and opportunities facing your workforce now and into the future.

Step 2: Find the gaps

What does your workforce look like now and in the future? Where are the gaps?

In this step, you should analyse your current and future workforce needs to determine the:

- capacity, capability and supply of current labour (from internal and external sources)
- labour market – the type of jobs and skills available internally and externally
- potential future state of your workforce
- gaps between your current and potential future workforce.

At the end of step 2, you will have identified:

- current and future workforce needs, including:
 - current workforce skills and capability
 - workforce gaps between the demand for services and the supply of labour to meet these demands
 - workforce gaps to achieve the utility's strategic objectives and manage risks
 - historical trends to help inform future projections
- strengths and weaknesses of your workforce, including skill gaps and demographics
- opportunities to address workforce weaknesses, including skilling new entrants to the workforce and upskilling existing workers to accommodate new technologies.

Step 3: Define your strategy

What strategies are needed to close the gap between your current and future workforce?

This step involves creating or updating your strategic workforce planning to target the areas identified as high priority – areas that will have maximum impact on your ability to achieve your strategic and service priorities.

You should define a workforce plan that sets out:

- the workforce priorities and how these align with the utility's strategic objectives
- the actions you will take to achieve these workforce priorities and their timing
- how you will evaluate success in terms of achieving the outcomes of the workforce plan.

Step 4: Implement your plan

What are the actions required to address the gaps and risks identified?

This step involves carrying out the actions defined in the workforce plan. This may take several years (and is subject to plan reviews), but the actions should become part of ordinary operations.

The outcome of this step will be having workforce plans that are linked to your priorities, with clear accountabilities, time frames and evaluation strategies.

Step 5: Review your success

What does successful strategic workforce planning look like?

Strategic workforce planning requires continuous evaluation. Because strategic workforce planning underpins the success or failure of organisational objectives and has a direct impact on bottom-line performance, the ongoing management of strategic workforce planning is typically the responsibility of the chief executive officer (CEO), or equivalent.

The CEO should be supported by the organisation's governance structure. In the case of significant change requirements, you may need additional dedicated resourcing to manage and evaluate the day-to-day operational management of the changes. Additional resourcing should come from the executive or management team or involve a change management specialist.

You should review and evaluate strategic workforce planning each financial quarter at a minimum, using both quantitative and qualitative methods to measure the success of the strategic objectives identified (see Step 1: Set your direction).

The outcome of this step will be an evaluation of your strategic workforce planning and the identification of areas in which to improve to ensure objectives are met.

Effectively implementing a strategic workforce plan could take some time depending on the capacity and size of the utility. For example, the first 3 steps could take between 3 and 6 months, whereas the implementation and review cycles could take much longer (1 to 2 years). You should ensure that the tasks identified for each of the steps are implemented so that the outcomes are attained within a time frame that works best for the utility.

Further guidance on how to undertake each of the steps of strategic workforce planning is outlined in Appendix A.

Appendix A: Optional ‘how to’ guidance for understanding resourcing needs

To support utilities in achieving the strategic planning outcome **understanding resourcing needs** to a reasonable standard, we offer the following optional how-to guidance.

The optional how-to guidance in this section covers a variety of areas that may help address one or more of the expectations set out in section 3 of this guidance document.

Assessing asset life-cycle cost

Asset life-cycle cost include all costs incurred from owning, managing and/or operating assets. The clearest and most direct costs are the utility’s financial expenses required to plan, design, commission, construct, manage, operate, renew/refurbish and dispose of assets. However, costs can also include less direct costs such as environmental costs (which can be challenging to assess).

If possible, all costs should be recognised quantitatively. Where this is not possible it is still important to qualitatively analyse and consider additional costs that are not included in the modelled numbers including, if possible, an indication of their likely magnitude.

The extent of the life-cycle cost analysis should be proportionate to the total costs of the asset/servicing solution. This means that a more extensive life-cycle cost analysis should be done for assets that are likely to have higher total costs over their life.

In some cases, technical or specialist expertise may be needed to provide and explain cost estimates of new assets over their whole life. Experts can also provide qualitative judgements where exact quantification may not be possible. Expert technical assessments can be obtained from a range of specialists such as architects, surveyors, engineers, environmental scientists and specific systems specialists (for example, specialists in electrical systems, environmental systems or reticulation).

The following sections outline some key considerations of the life-cycle costs of assets and give details of the process for estimating life-cycle costs

Calculating life-cycle costs in today’s dollars (NPV analysis)

The timing of expenditure over the life of the asset has an impact on the cost of that asset from today’s perspective. This is because consumption is generally accepted to have a ‘time value’. In short, a dollar received today has a higher value in today’s terms than a dollar received 10 years from now (or some point in the future), and a dollar of expenditure incurred today has a higher value (cost) in today’s terms than a dollar of expenditure incurred in the future.

This is for 2 main reasons:

- People typically prefer to receive a dollar now rather than later (there is a preference to incur costs later rather than now so that they have more money at their disposal now).
- The opportunity cost of spending a dollar now on an infrastructure item is higher than in 10 years and is usually measured as the rate of return that the dollar could have earned over the 10 years had it been available to be invested or deployed elsewhere (rather than spent on the infrastructure item).

When comparing infrastructure options, it is therefore important to account for some options having higher costs earlier or later in their life cycle (for example, higher upfront capital costs and lower ongoing maintenance costs further into the future, and vice versa). Accounting for differences in the timing of costs ensures they can be assessed on a common basis.

You can 'discount' the stream of costs over the life of each infrastructure item to the present value by a rate that measures the time-value of money (such as the opportunity cost of capital). The sum of annual discounted net costs (or net benefits) for an option is its net present value (NPV).

In calculating the present value or NPV of the life-cycle costs of assets, it is necessary to consider whether to use real or nominal dollars, whether to escalate costs, the lives of assets, the length of the analysis period and which discount rate to use.

Real or nominal dollars

The life-cycle cost analysis should treat costs consistently with respect to inflation.

The simplest approach is to record the cost time series in real dollars (in the dollars of a common base year, excluding the effects of inflation). This avoids the need to forecast inflation over the period of the analysis. The utility would still need to incorporate any forecast increases in costs in real terms (for example, if it forecast an increase in labour costs above inflation). Real dollar models clearly show changes in costs excluding inflation and can be more transparent.

However, some utilities may prefer nominal models if, for example, they integrate better into their overall financial framework and planning.

If a utility wishes to conduct a life-cycle costs analysis in nominal dollars (where the effects of inflation are included), it could use 2.5% per annum for forecast inflation, which is the midpoint of the Reserve Bank of Australia's target inflation range.

Cost escalation

It can be important to include an escalation factor where it is reasonably certain that project costs will rise over time (separately from the effects of inflation). An escalation factor is a simple multiplier applied to costs in each year of the modelling window. Escalation factors should only be used where there is reasonable confidence that costs will increase over time and of the rate at which they will increase. The multiplier should also be specific to the type of cost.

Both real and nominal models can make use of different cost indices. While the producer price indices published by the Australian Bureau of Statistics are nominal, they can be converted to real indices by deducting inflation.

Asset lives and the appraisal period

The time frame for the analysis (the appraisal period) should be determined after considering the factors outlined in separate guidance on the outcome of understanding solutions to delivering services (in the section ‘determining the appraisal period’).

Ideally, the time frame should cover the expected service life of the asset and/or be at least between 20 and 30 years. If several assets are being considered (for example, as part of an options analysis) with different asset lives, the analysis can include:

- renewal or replacement costs if the asset life is shorter than the appraisal period
- a residual value at the end of the analysis period if the asset life is longer than the appraisal period.

Discount rate

To discount future costs to the present value, a rate is needed that is considered an appropriate measure of the time-value of money.

When assessing life-cycle costs as part of options analysis, the discount rate should be the same as listed in the guidance on the outcome of understanding solutions to delivering services. The rate is 7% in real terms with sensitivity testing at 3% and 10% (in real terms), as per the NSW Government’s Guidelines to Cost Benefit Analysis.

When assessing life-cycle costs to understand a utility’s revenue requirements (such as when the utility is determining its water and sewerage prices), the discount rate should ideally be the utility’s weighted average cost of capital or estimates of the utility’s cost of debt. As discussed in the separate guidance on the outcome of sound pricing and prudent financial management, the NSW Independent Pricing and Regulatory Tribunal periodically publishes estimates of water utilities’ weighted average cost of capital⁶ and councils’ cost of debt.⁷

Expenditure should not be unduly delayed

The time-value of money does not mean that costs can be reduced simply by pushing them into the future. Delayed capital renewals, for example, can lead to substantially higher overall renewal costs by increasing the intensity of work needed to renew assets that have been extended beyond their true working lives or recommended refurbishment date. Similarly, deferred maintenance can be substantially more expensive overall than smaller, more regular maintenance outlays, even accounting for the time-value of money.

It is also important to consider the potentially large unquantified cost of poorer customer service outcomes that result from delayed renewals or maintenance of important infrastructure and services.

⁶ For example, see: www.ipart.nsw.gov.au/Home/Industries/Special-Reviews/Regulatory-policy/Market-Update

⁷ For example, see: www.ipart.nsw.gov.au/Home/Industries/Local-Government/Local-Infrastructure-Contributions-Plans/Local-Government-discount-rate

Dealing with uncertainty

Estimating costs over the entire life cycle of assets is likely to involve uncertainty. For instance, some assets could be impacted by climate change (for example, by increasing the operating and maintenance costs of a reticulation network or the frequency of replacement/refurbishment costs).

Uncertainty in estimating the life-cycle cost of assets can be addressed in the same way as undertaking cost-benefit analysis to inform decisions on servicing solutions. As outlined in the separate guidance on the outcome of understanding solutions to delivering services, this can include:

- conducting sensitivity and scenario analyses on key cost items or items where there is significant uncertainty to determine the impact of variations in cost assumptions
- including estimates of the probability and consequence of key risks into cost estimates.

There will be uncertainty in estimating costs over the life cycle of assets. However, if local water utilities use the best available information and estimates, they will gain a more accurate understanding of the likely life-cycle costs of infrastructure options and will make better-informed expenditure decisions – even with the uncertainty of estimating some costs.

How to calculate life-cycle costs

This section outlines the key steps in determining the life-cycle costs of assets. The process can be incorporated into options and cost-benefit analysis when considering the costs (and benefits) of potential service delivery options. A utility can also do a standalone analysis to assess and understand the full life-cycle costs of assets to inform investment decisions and financial planning.

Step 1: Define the assets and the service outcomes they are intended to achieve

The first step in life-cycle cost analysis is to define the assets being assessed and the service outcomes (or other objectives) they are intended to achieve. The asset or assets to be assessed may be a single large investment (such as a single sewage treatment plant) or a package of smaller related assets (such as a network of new pumping stations).

Ensuring the scope of the life-cycle costing analysis is clear can help make sure that no costs are omitted and no costs are double counted elsewhere.

It is important to identify and define the base-level performance outcome(s) to be achieved by the asset options. To ensure like-for-like cost comparisons, options to achieve a given outcome(s) should be assessed against each other.

Step 2: List all relevant costs and relevant cost components

Work through relevant life stages of the asset/infrastructure and identify all costs associated with delivering, owning and managing the asset. This should include identifying upfront capital costs, capital renewals and ongoing operating expenditures as well as end-of-life costs such as site remediation, disposal or recycling and any residual value of assets with longer asset lives.

A utility may need to consult with experts during this step. It is also worth considering what level of granularity within each cost item will best facilitate due diligence, be useful in comparing the performance of alternative options and allow identification of resourcing needs for planning while

minimising administrative effort. This will vary by project/asset. The level of analysis should be proportionate to the magnitude of the costs involved.

Step 3: For each cost component, estimate costs each year of the asset's life

For each cost component, estimate costs for each year of the asset's life to meet clearly defined service outcomes. This will require an estimation of the capital costs and the time frame over which this expenditure is incurred (for example, the estimated duration of the design and construction period).

It will also require an estimation of ongoing operation and maintenance costs over the life of the asset and an understanding of when capital renewal or refurbishment costs occur for assets with shorter working lives than the modelling period.

Step 4: Discount the series of costs over the life of the asset

Microsoft Excel's NPV function is a convenient way to calculate discounted costs over a time series. The function requires a specified discount rate and identification of the time series data of costs. When using the function, discounting should only begin in the future – from year one. Costs incurred in year zero (presumably the same base dollar year as the costs, for real dollar models) should be added to the discounted result of year one onwards.

Step 5: Rank the options

Rank the options assessed for achieving required service outcomes, with the option that has the lowest present value cost being the one with the lowest life-cycle cost. Also, consider any key uncertainties or costs (such as environmental costs) not quantified in the analysis.

Undertaking strategic workforce planning

Setting up the project

A local water utility could take the following steps to set up project management and governance arrangements to develop new strategic workforce planning:

- Set up a transparent governance structure. Identify who will be the project sponsor and project manager to support the development of the plan.
- Assemble the project team with representation from across the business (including HR, senior leaders, asset managers, operations and maintenance staff) to ensure that all views are considered in developing the plan.
- Identify how the utility will communicate with staff about the details of this plan during its development and how staff can provide feedback.
- Identify whether the utility already has a resourcing plan and then evaluate it using the strategic workforce planning maturity assessment tool. This will help identify if deficiencies exist in the current resourcing plan, the steps that may be needed to address those deficiencies and the time frames to update or develop the strategic workforce plan.

- Determine the frequency of reporting to the CEO and board on the progress made against the proposed timelines and objectives.

Tools you can use

- Strategic workforce planning maturity assessment (see Appendix B)
- Project management tools such as a Gantt chart, logic network, PERT chart, product breakdown structure and work breakdown structure.

Setting your direction

To set an overall direction, consider the 3 steps detailed in this section to identify goals and resourcing needs:

Understand your strategic objectives and key strategies

The utility should have a strategic plan that sets out its long-term objectives. This plan can be analysed, and the Business Model Canvas⁸ tool used to answer the following questions:

- What are the main priorities and objectives for the utility over the medium- to long-term?
- What areas of the workforce are critical to achieving these objectives?
- What is the role of external stakeholders in achieving the strategic objectives?
- What are the perceived risks to the utility in achieving its objectives?

The utility could use the SWOT (strength, weakness, opportunities and threats) tool to identify risks and opportunities and how this might affect its workforce planning.

Understand your customer needs

As outlined in separate guidance, the utility's required service levels and outcomes should be determined by regulatory requirements (for example, those concerning water quality and environmental impacts) and an understanding of its customers' needs, preferences and values.

The utility should consider what staff will be needed to deliver its services to the required levels.

Scan the external landscape for opportunities and risks

External factors can impact demand for a utility's services and its resourcing capability and requirements. A utility could use the PESTEL analysis tool⁹ to identify:

- which external factors are likely to influence or directly affect its workforce planning
- the social, technological, environmental and political trends that are likely to affect its customers and community and therefore workforce planning.

⁸ The Business Model Canvas is a strategic planning tool used by managers to illustrate and develop their business model.

⁹ A PESTEL analysis is a strategic framework commonly used to evaluate the business environment in which a firm operates.

Tools you can use

- Business Model Canvas
- SWOT analysis – analysis of the internal landscape
- PESTEL analysis of the external landscape
- Target operating model

Finding your gaps

Consider undertaking the following 4 steps when identifying gaps.

Analyse your current workforce

A utility should analyse its workforce to determine how well the workforce currently supports its strategic objectives. This can help identify challenges and may provide additional insights and innovative solutions.

Utilities can:

- analyse the qualitative and quantitative features of their workforce
- consult internal stakeholders (such as the CEO, general manager and executive directors, focus groups with directors and focus groups with staff) using the Internal Consultation Tool.

Looking at published plans from other utilities can ensure that a utility has considered all relevant factors for its plan.

Scenario planning

Scenario planning can help utilities test their ability to respond to future challenges. Utilities can use scenario planning to anticipate workforce requirements and responsibilities over the short, medium and long term.

Ideally, utilities should look at the scenarios that are most likely to significantly affect their business. For each scenario, the utility should assess the relevant workforce needs and the likelihood that the scenario will eventuate over different time horizons.

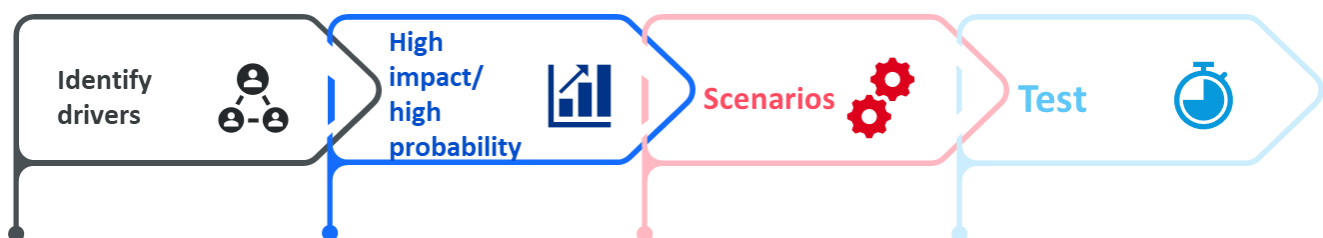


Figure 3. Steps for scenario planning

Scenario testing examples include:

- growth scenarios such as low-, medium- and high-growth staffing requirements
- transformation scenarios such as technology advances (drones, robotics, automation) and work condition changes (remote working, extreme heat, bushfire danger days and other health, safety and environment-related issues)

- constraint scenarios such as economic constraints, skill shortages and changes in areas of operation
- obsolescence scenarios such as no longer delivered/required services (for example, the need for in-person site inspections).

RACI (responsible, accountable, consulted, informed) scenario testing can strengthen business continuity and strategic workplace planning by looking at roles and responsibilities. Potential scenarios are identified in consultation with the relevant workforce. See the section 'RACI scenario planning tool' in Appendix B for details.

Future workforce state

Analysis of historical and current state workforce data will provide an understanding of workforce trends, enabling data-driven projections and decision-making for future planning. See the section 'Future workforce tool' in Appendix B for details.

Identifying the gaps

To identify gaps, utilities can compare their current workforce with future workforce requirements, to identify potential shortages, surpluses and areas of risk over the medium to longer term.

Tools you can use

- Quantitative and qualitative matrix
- Internal workforce supply and demand
- RACI tool
- Sample of technical and operational skills needed.

Defining your strategy

To identify its goals and resourcing needs, a utility can:

- outline its workforce planning priorities as determined from steps 1 and 2 defined in section 3.4 of this guidance.
- develop a business case for transformation/change that identifies which priorities to implement based on their impact and effort. Ensure relevant stakeholders are consulted
- determine whether the strategic workplace planning initiatives are minor or significant. If a significant change is anticipated, consider incorporating change management strategies into the implementation approach
- identify key performance indicators (KPIs) and ultimate measures of success (quantitative and qualitative). KPIs should assess whether the strategic workforce planning has helped:
 - achieve the utility's objectives
 - determine the appropriate skills required
 - develop resources to continuously upskill where needed
- identify relevant stakeholders to be involved in the finalisation of KPIs.

Tools you can use

- Examples of common workforce planning KPIs
- Change management

Implementing your planning

A utility should consider including the following elements when implementing its strategic workforce planning:

- measures of success
- roles and Responsibilities
- leadership commitment
- funding sources, budgets and progress tracking
- data collection, analysis and review
- succession planning for key roles
- training and knowledge sharing
- mechanisms for review and update.

Tools you can use

- Action plan
- Job vacancy advertisement

Reviewing your success

A utility can review and enhance the effectiveness of its strategic workforce planning by:

- reviewing the strategic workforce plan regularly to ensure that it aligns with the utility's strategic objectives
- ensuring that any actions from the review are implemented as a priority
- formalising evaluation governance mechanisms
- identifying roles responsible for continuous evaluation, documentation and communication/reporting about strategic workforce planning.

Tools you can use

- Questionnaires, surveys and interviews

Appendix B: Templates, case studies and tools

To support utilities in achieving the strategic planning outcome of **understanding resourcing needs** to a reasonable standard, we give the following optional templates, case studies and tools

Lifecycle cost tools

There is a range of guidance and tools available on the internet that can assist in estimating the lifecycle costs of assets or infrastructure options. For example:

the Western Australian Department of Local Government, Sport and Cultural Industries has published on its website [Life Cycle Cost Guidelines](#) with supporting Microsoft Excel models and examples.

Life-cycle cost case-study

Table 2. Example NPV calculation: Option 1 (\$millions) and Table 3. Example NPV calculation: Option 2 (\$millions) below provide a simplified NPV analysis of 2 hypothetical alternative wastewater systems. In each example, costs are presented in a time series to make clear when costs are incurred. As Table 1 shows, once discounting is applied, Option 1 has the lowest life-cycle costs.

In this example, Option 2 benefits from avoided water purchases due to wastewater recycling (shown in **Error! Reference source not found.** as a negative cost). However, these recycled water benefits come at an additional cost compared to Option 1.

Both options show hypothetical costs only, discounted at 7%. This hypothetical analysis covers years 0 to 30. Years 0 to 5 and years 29 and 30 are presented for illustrative purposes.

Table 1. Comparison of NPV results from a hypothetical example of alternative stormwater systems

Option	Rank	NPV (\$ millions)	Total cost in first 5 years (\$ millions undiscounted)	Total cost (\$ millions undiscounted)
Option 1	1	\$-37.95	\$28.93	\$60.13
Option 2	2	\$-57.89	\$42.93	\$94.00

Table 2. Example NPV calculation: Option 1 (\$millions)

Asset life stage and cost item	NPV	Undiscounted Total Cost	Year 0	1	2	3	4	5	29	30
Concept and Definition	\$0.85	\$0.85	\$0.85							
Design and Development	\$4.43	\$4.45	\$4.20	\$0.25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Manufacturing / Construction / Installation										
Wastewater retic & trunk	\$2.05	\$2.50		\$0.50	\$0.50	\$0.50	\$0.50	\$0.50		
Service connection	\$3.60	\$3.95		\$2.85	\$0.65	\$0.45				
Wastewater treatment plant	\$9.16	\$11.00		\$1.00	\$3.00	\$5.00	\$2.00			
Land	\$2.80	\$3.00		\$3.00						
TOTAL	\$17.61	\$20.45	\$0.00	\$7.35	\$4.15	\$5.95	\$2.50	\$0.50	\$0.00	\$0.00
Maintenance										
Wastewater reticulation & trunk network	\$0.12	\$0.26						\$0.01	\$0.01	\$0.01
Service connection	\$0.59	\$1.30						\$0.05	\$0.05	\$0.05
Wastewater treatment plant	\$12.42	\$27.30						\$1.05	\$1.05	\$1.05
Land	\$0.00	\$0.00								
TOTAL	\$13.13	\$28.86	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.11	\$1.11	\$1.11
Support Services										
Support Services	\$5.27	\$9.10	\$0.00	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92	\$0.18	\$0.18
Residual Value										
Wastewater retic & trunk	-\$0.07	-\$0.08								-\$0.08
Service connection	-\$0.93	-\$1.00								-\$1.00
Wastewater treatment plant	-\$2.34	-\$2.50								-\$2.50
TOTAL	-\$3.35	-\$3.58	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	-\$3.58
Total costs	\$41.29	\$63.71								
Total benefits	-\$3.35	-\$3.58								
NPV Result	-\$37.95									
Total Cost Result (undiscounted)		\$60.13								

Note: hypothetical costs only, discounted at 7%. This hypothetical analysis covers year 0 to year 30. Years 0 to 5 and years 29 and 30 are presented for illustrative purposes.

Table 3. Example NPV calculation: Option 2 (\$millions)

Asset life stage and cost item	NPV	Undiscounted Total Cost	Year 0	1	2	3	4	5	29	30
Concept and Definition	\$0.85	\$0.85	\$0.85							
Design and Development	\$4.43	\$4.45	\$4.20	\$0.25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Manufacturing / Construction / Installation										
Wastewater retic & trunk	\$2.05	\$2.50		\$0.50	\$0.50	\$0.50	\$0.50	\$0.50		
Service connection	\$3.60	\$3.95		\$2.85	\$0.65	\$0.45				
Recycled water treatment plant	\$19.58	\$24.00		\$2.00	\$5.00	\$7.00	\$10.00			
Land	\$3.74	\$4.00		\$4.00						
TOTAL	\$28.97	\$34.45	\$0.00	\$9.35	\$6.15	\$7.95	\$10.50	\$0.50	\$0.00	\$0.00
Maintenance										
Wastewater retic & trunk	\$0.12	\$0.26						\$0.01	\$0.01	\$0.01
Service connection	\$0.59	\$1.30						\$0.05	\$0.05	\$0.05
Recycled water treatment plant	\$27.79	\$61.10						\$2.35	\$2.35	\$2.35
Avoided water costs due to reuse	-\$5.91	-\$13.00						-\$0.50	-\$0.50	-\$0.50
Land	\$0.00	\$0.00								
TOTAL	\$22.59	\$49.66	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.91	\$1.91	\$1.91
Support Services										
Support Services	\$5.27	\$9.10	\$0.00	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92	\$0.18	\$0.18
Residual Value										
Wastewater reticulation & trunk network	-\$0.07	-\$0.08								-\$0.08
Service connection	-\$0.93	-\$1.00								-\$1.00
Recycled water treatment plant	-\$3.21	-\$3.43								-\$3.43
TOTAL	-\$4.21	-\$4.51	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	-\$4.51
Total costs	\$62.11	\$98.51								
Total benefits	-\$4.21	-\$4.51								
NPV Result	-\$57.89									
Total Cost Result (undiscounted)		\$94.00								

Strategic workforce planning

Getting started

Strategic workforce planning maturity assessment

Organisations may be at different stages of maturity in implementing strategic workforce planning. The maturity level is driven by a combination of factors including:

- organisational priorities
- organisational readiness
- data availability and quality
- internal capacity and capability to undertake strategic workforce planning.

Utilities could use Table 4. Assessing a utility's approach to strategic workplace planning to assess their maturity level.

Table 4. Assessing a utility's approach to strategic workplace planning¹⁰

Parameter	Initiating	Consolidating	Advancing
Strategic alignment	Limited alignment between strategic workforce planning and organisational strategy	Some alignment between strategic workforce planning and organisational strategy	Full integration and alignment between strategic workforce planning and organisational strategy
Understanding	Limited understanding of strategic workforce planning	Some understanding of strategic workforce planning and integration into business activities	Organisational planning is fully integrated with strategic workforce planning. An organisational strategy is informed by strategic workforce planning
Approach	Limited integration of strategic workforce planning. Workforce planning is predominantly managed by HR	Strategic workforce planning is used by parts of the organisation, but is likely siloed and is not interoperable	There is a broad understanding across the utility and workforce that provide meaningful inputs to strategic workforce planning
Resources	Limited strategic workforce planning resources or tools available	Some resources and senior workforce sponsorship are available to support workforce planning activities	Business units throughout the organisation use, improve, and provide meaningful data for continuous improvement of strategic workforce planning resources

¹⁰ Adapted from: Strategic Workforce Planning Framework, Public Service Commission, NSW Government, 2019

Parameter	Initiating	Consolidating	Advancing
Data	Limited data to support strategic workforce planning	Some limited workforce data is used to inform some workforce decisions	Workforce planning is fully data-driven (qualitative & quantitative)
Scenario testing	Planning looks at where the organisation needs to be in one to 2 years. Typically, organisations with minor workforce agendas can fall into this area	Use scenarios and strategic foresight to forecast workforce needs for the next 5 years and undertake extensive scenario planning exercises to provide clarity of vision	Planning takes a longer-term view and extends well beyond 5 years

Tools for setting direction (step 1)

As outlined below, several tools can be used in setting the direction of the strategic workforce plan. Target operating models also need to be considered.

Business Model Canvas

The Business Model Canvas helps to assess and align the strategic workforce plan with the organisation’s strategic objectives. Consideration of the internal and external landscapes will facilitate robust workforce planning and decision-making based on a broad assessment of potential influences.

The Business Model Canvas’ objective is to summarise the key elements of an organisation on a single page that can be the blueprint for checking that plans are aligned. A template for a typical business is shown in Figure 4.

<u>Key Partners</u>	<u>Key Business Activities</u>	<u>Value Proposition</u>	<u>Customer Relationships</u>	<u>Customer Segments</u>
	<u>Key Resources</u>		<u>Channels</u>	
<u>Cost Structure</u>			<u>Revenue Streams</u>	

Figure 4. Business Model Canvas for a typical business

PESTEL analysis

A PESTEL analysis will identify the workforce landscape and influences through 6 lenses: political, economic, social, technology, environment and legal.

Table 5. PESTEL analysis

Influence	Description	Example
Political	Influences that affect the distribution of power or decision-making	Change in political leadership causing policy changes/amendment and shifting focus
Economic	Changes in the state of the economy that can impact the demand for services and impact profitability	Emergence of pandemics, cost of labour, unemployment rates, climate change and related targets set by the utility
Sociological	Impact of increase in population and changing demographics on the utility	Population growth, workforce diversity, ageing of the population and consumer expectations, migration increasing or decreasing
Technological	Impact of emerging technologies on the services, delivery automation and skills requirement	Intelligent water metering (such as automatic meter reading, meter data management, sensor device management, networks and transmission); intelligent asset management and operations (such as SCADA, remote condition monitoring, automated water quality and control); and data acquisition and insights
Environment	Impact of the environment on the ability of the utility to deliver its services	Compliance with the NSW <i>Environmental Protection Act 1994</i> and related regulatory instruments
Legal	Compliance obligations for consumer safety and wellbeing	None

SWOT analysis

A SWOT analysis provides a matrix that identifies:

- strengths (what do you better than anyone else)
- weaknesses (what could improve)
- opportunities (what good opportunities you can spot)
- threats (what obstacles you face).

A SWOT analysis is a complementary tool to the PESTEL analysis and, when used in combination, can be very effective for developing strategic plans. Figure 5 gives an example SWOT analysis.



Figure 5. SWOT analysis example

Target operating model

The resource needs of the utility, and hence the strategic workforce plan, will be strongly influenced by target operating model decisions within the utility. For example, the utility might consider different types of capital delivery models. Examples include:

- **Client-led design and contractor construction** – the utility optimises the solution, and the contractor’s role is detailed design and construction or construction only. This requires utilities to have high levels of technical know-how (or be supported by consultant partners). This approach requires a good mix of skills at the start of the process.
- **Early contractor involvement** – the contractor is engaged earlier in the process than with client-led design and is incentivised to optimise the design against an outcome set at business planning time. This approach is potentially less resource intensive for the utility.
- **Alliance** – all alliance partners are incentivised together. It’s an ‘all win or all lose’ scenario. Underpinned by digital delivery, this can allow an increased focus on strategic objectives and involves a high degree of relationship maturity. This approach might enable the utility to draw in resources from the market to complement its own and form long-term relationships with resource partners. This model requires considerable effort to establish and procure.

The examples above might also be used to inform longer-term strategic workforce planning if the utility intends to change target operating models in the future. In reviewing target operating models, a utility could consider questions such as:

- What services/areas of the asset creation process need to be owned and delivered in-house?
- Where is there value in partnering to deliver work?
- What is the long-term target operating model, and what are the risks, opportunities and steps to get there?

Tools to identify workforce gaps (step 2)

Current workforce analysis guidance

To determine the characteristics of a utility's current workforce, it may wish to analyse the following qualitative and quantitative metrics.

Quantitative metrics include:

- organisational structure and design
- employee headcount and full-time equivalent positions
- workforce flexibility
- employee levels
- remuneration profile
- employment type
- the proportion of work conducted by external contractors, consultants, contractors and casuals
- skills and capability profile
- employee workloads
- diversity profile
- succession plans.

Qualitative metrics include:

- understanding current workforce culture, wellbeing and performance through
 - employee engagement
 - performance appraisal
- core work versus 'nice to do' comparison
- workload perceptions.

Internal consultation tool

Utilities can consult with individuals (such as with the executive or manager levels) or collectively with the broader workforce. The method of consultation chosen should be fit-for-purpose and allow all employees to contribute their views. It may be appropriate to offer methods that allow for anonymity, such as online surveys. Consideration should be given to modality and flexibility of consultation – minimising time or geographical constraints.

Finding from employee consultation may be both quantitative and qualitative. Quantitative findings will be easier to gather, measure and compare; less challenging to communicate/visualise; and more objective, repeatable and focused. Qualitative findings may be more challenging to gather, interpret and communicate.

Employee consultation findings may be 'themed up' (through thematic analysis) to provide an additional data source on the current state of resources.

RACI scenario planning tool

RACI scenario testing is a useful planning method that can strengthen business continuity and strategic workforce planning. Potential scenarios are identified with involvement from the relevant workforce. The individual or collective workforce is allocated as being responsible, accountable, consulted or informed (RACI).

Allocations of RACI may include multiple elements (for example, a representative of the senior leadership team may be both responsible and accountable). Ideally, there will be just one allocation for accountability. Ultimate accountability promotes a common understanding and confidence within the workforce that helps improve performance and measure progress.

The definitions of RACI are:

- **responsible** – completes the task
- **accountable** – ultimately answerable and/or has authority in decision-making
- **consulted** – contributes to inputs and/or reviews
- **informed** – kept in the loop.

Scenario 1	Senior Leadership team			Team A			Team B			External Team/s		
Level 1 activity												
Sub-activity	I	A	R	C		I	I		C/I		C/I	
Sub-activity	A/R	I			I			C		C/I		C
Level 2 activity												
Sub-activity		R/C	I	R/A	C	C	C/I	I			I	C
Sub-activity	I	A	R	C		I	I			C/I		
Level 3 activity												
Sub-activity	A/R	I			I		C		C/I		C	
Sub-activity										I	I	R/C
Level 4 activity												
Sub-activity		R/C	I	R/A	C		C/I	I				
Sub-activity	A/R	I			I		C		C/I		I	

Figure 6. Example of a RACI analysis

Future workforce tool

A utility can gain an understanding of potential future workforce requirements by analysing:

- customer trends such as requirements for improved interactions, customer-centricity and personalised, fast-response customer services (chat now service, increased data and analytical capabilities)
- skill trends such as infiltration of advanced technologies, digital technologies and automation (coding and programming, robotics, self-managed networks)
- industry trends such as digitisation, the internet of things, customer-focused smart networks, customer engagement, increased asset management maturity and increased data capture
- future work trends such as flexible work arrangements and advanced leadership skills.

Identifying these trends may require access to both formal and informal information sources, including population data, educational data, job market information and intelligence from headhunters.

A continuing understanding of the expectations of regulators and customers is also important to determine what service levels and outcomes may be required over time and the resourcing requirements needed to meet these. Utilities should also seek to understand the broader drivers that are likely to have an impact on labour supply and demand and factor this into scenario planning.

To identify improvements to approaches, tools and technology to support workforce planning, utilities may want to consider using a '3-horizons' approach to distinguish today's tactical improvements (horizon 1) from tomorrow's innovation and changes (horizon 2) and how to take advantage of emerging or future innovation (horizon 3), as shown in Figure 7. The 3-horizons approach to articulating scenario planning.

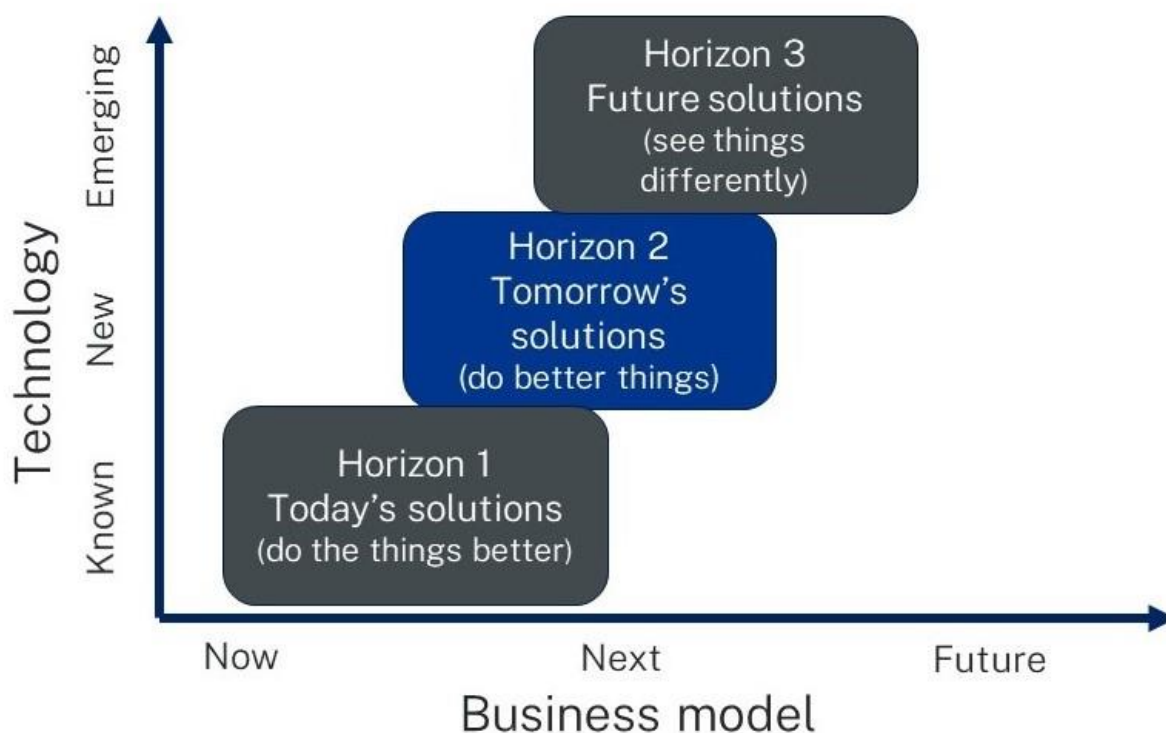


Figure 7. The 3-horizons approach to articulating scenario planning

Technical and operational skills required by local water utilities

To inform its strategic workplace planning, a utility can map its services against current and required skills. For example, Table 6. Technical and operational skills lists skills against a sample of services.

Table 6. Technical and operational skills

Service	Skills
Front-line services	Electrical technician Mechanical technician Water operations – civil maintenance SCADA technician Water and wastewater treatment operations Sampling and testing Logistics Scheduling and dispatch
Customer engagement portals	Counters/telephone/internet, etc. – services Customer relationship management Customer meter reading Billing
Asset management services	Asset management Strategic and master planning Asset planning Process treatment engineering (water, wastewater) Project appraisal and feasibility Modelling – treatment, networks, demand forecasting, degradation, renewals, financial, etc. Civil, mechanical, electrical, instrument, communications, digital engineering Performance analytics Maintenance planning Standards Asset and financial information management: <ul style="list-style-type: none"> • enterprise management system • computerised maintenance management System • water quality monitoring • wastewater sampling Others: <ul style="list-style-type: none"> • Geographic information system (GIS) • Drawing management
Regulatory compliance management (water quality, environmental, etc.)	Regulatory specialist Legislative Environmental specialist Scientific services
Leadership and governance	Management Financial/economic/accountancy Procurement Project and program management

Tools to define strategy (step 3)

Examples of common workforce planning KPIs include:

- alignment of strategic workforce planning to the utility's objectives
- level of engagement from senior leadership and the broader staff
- quality of forecasts – forecasting future scenarios well and meeting projected full-time equivalent positions and types of skillsets needed in the time frames specified.
- employee attrition rates (before and after implementation of strategic workforce plans)
- staff engagement survey outcomes for items such as diversity, performance and development and engagement in work
- performance development targets and outcomes
- retention rate
- customer feedback results
- exit interview results
- spend on training as a percentage of staff costs.

Change management

John Kotter's Change Management Model (1995) provides 8 steps to manage the change process:

1. **creating a sense of urgency** – persuasively communicating the imminent need for transformational change through an aspirational opportunity statement
2. **building a guiding coalition** – identifying and embracing effective internal personnel to guide, coordinate and communicate transformation activities
3. **forming a strategic vision and initiatives** – clarifying the vision for the future optimal state and how the key transformation initiatives will deliver on this vision
4. **enlisting a volunteer army** – rallying and uniting internal staff to the opportunity and strategic vision to become change drivers
5. **enabling action by removing barriers** – identifying and removing inefficiencies (process, structures) to allow for multidimensional work throughout the whole organisation
6. **generating short-term wins** – achieving and broadcasting small, frequent wins to energise, motivate and persuade staff that this change will continue to be successful
7. **sustaining momentum** – ensuring change continues to accelerate as transformation credibility increases. Continue to accelerate until the strategic vision has become the reality
8. **instituting change** – communicating the alignment between new behaviours and organisational success to reinforce the continuity of the new behaviours.

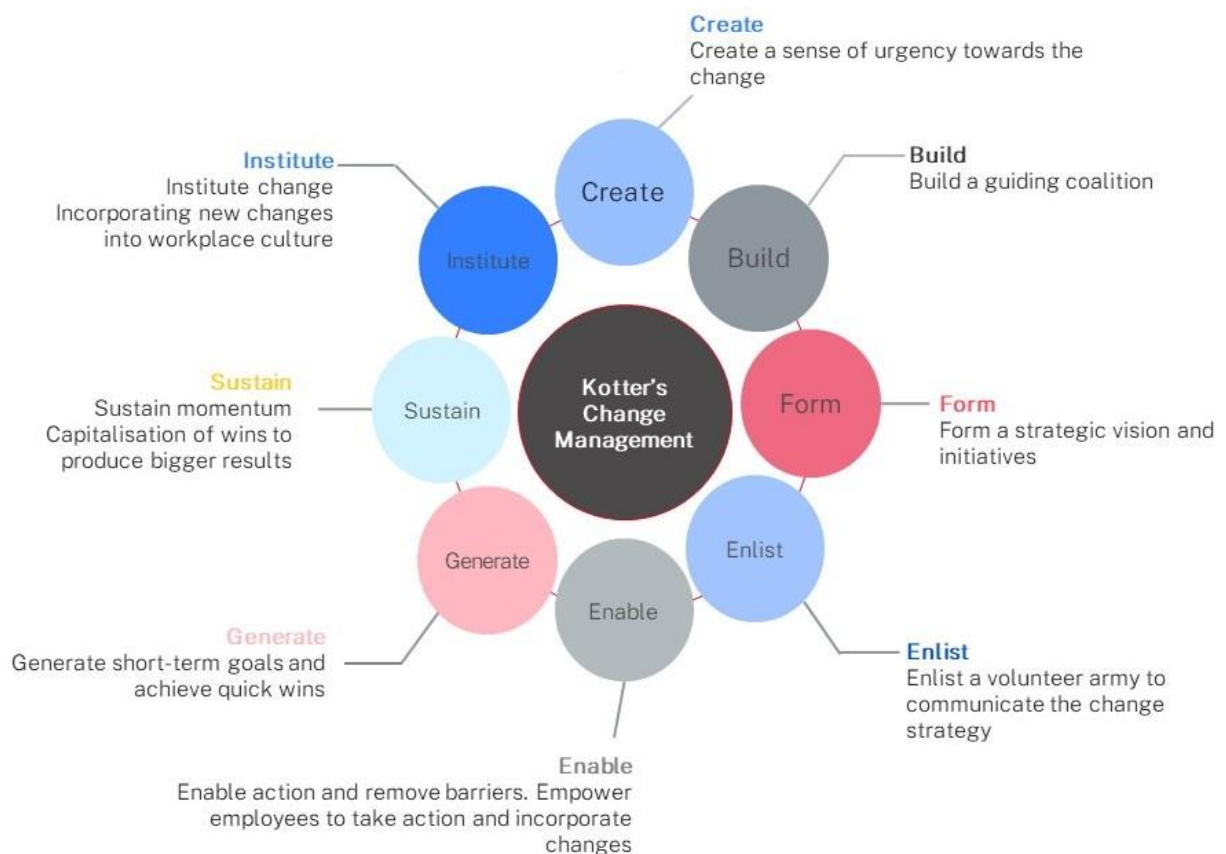


Figure 8. John Kotter's Change Management Model

This method of managing change was designed to support both parties in the workforce – those driving the change and those affected by the change. The model focuses on building buy-in and collaboration to achieve successful organic change.

Change management should aim to ensure:

- success in execution
- minimal disruption (confusion, frustration, anxiety) to support the utility's people and business-as-usual activities
- greater efficiency and effectiveness of the workforce
- workforce consultation that brings together a diverse range of voices and perspectives to challenge norms and identify improvement opportunities
- identification and management of risks and issues
- changes progress along considered pathways.

Tools for implementing plans (step 4)

Action plan

An action plan is a document that tracks key actions and the time frame for delivery of these action items. Table 7. Example template that can be used to create an action plan shows an example template giving typical headings used in an action plan.

Table 7. Example template that can be used to create an action plan

Objective	Tasks	Responsibility	Availability of resources	Challenges	Timing	Progress	KPI
Action 1
Action 2

Job vacancy advertisement

Where positions need to be filled following the gap analysis, utilities will need to seek these resources either internally or externally. In either situation, they should develop position descriptions that cover the range of required skills over the project life cycle.

A typical position description should include:

- objectives of the role
- key accountabilities
- qualifications and experience of the candidate
- personal qualities of the candidate
- selection criteria.

Depending upon the scale and type of the utility's assets and the availability of resources, it may be possible to combine some of the skills above into single roles. A utility should also consider whether these technical and operational skills should be internal or external resources.

Further, there can be skills shortages, particularly in regional towns where attracting specific skilled labour can be a challenge. There can also be long lead times to train network operators and engineers. To ensure resources shortages are minimised where possible, utilities should consider:

- short- to medium-term investments in skills retention (formal training, structured mentoring and coaching activities)
- paid apprentices
- flexible working
- partnering and/or resource sharing with other utilities
- succession planning.

Tools for reviewing success (step 5)

Utilities should consider how best to monitor, review and report on the success of their strategic workforce plan. Dashboards produced using software such as PowerBI can provide a useful illustration for progress tracking. Alternatively, simple tracking using tables with corresponding actions (as shown in Table 8. Example template for a simple table to track the performance of a strategic workforce plan) can communicate strategic workplace planning progress and needs.

Table 8. Example template for a simple table to track the performance of a strategic workforce plan

KPI	Does not meet expectations	Meets expectations	Exceeds expectations	Action
KPI 1
KPI 2

Other useful strategic workforce planning tools

- The Victorian Public Sector Commission has developed a [strategic workforce planning toolkit](#) to support the development of a strategic workforce plan.
- The NSW [Workforce Planning Framework \(PDF 732 KB\)](#) has been developed to help agencies across NSW prepare their workforce for future needs.
- Queensland's [Strategic health workforce planning framework](#) helps the state's health service organisations plan their workforces.