



**Victorian  
Skills Authority**

## **Victorian Skills Plan**

# **Public Administration and Safety Industry Insight**

October 2022



Education  
and Training



## Contents

Introduction .....	2
Report coverage .....	4
Executive summary.....	5
Industry outlook.....	8
Workforce and skilling implications .....	16
Education and training pipeline.....	20
Workforce priorities .....	24
Collaborative response .....	26
Appendix A: Data methodology .....	29
Appendix B: Victorian VET pipeline methodology .....	32
Appendix C: Stakeholder engagement process .....	33
References.....	34

## Introduction

This report on the public administration and safety industry forms part of the 2022 Victorian Skills Plan and outlines demand for occupations, education and training directed to meeting this demand and current workforce issues facing the industry.

This report has been prepared by the Victorian Skills Authority (VSA). The VSA was formed in July 2021 in response to the review *Future Skills for Victoria: Driving collaboration and innovation in post-secondary education and training* (known as the Macklin Review). The VSA is charged with preparing an annual Victorian Skills Plan (the Skills Plan) to guide decision-making on skills and training, by the Government, education and training providers, industry and communities.

### The Victorian Skills Plan

The annual Skills Plan sets out Victoria's skills needs for 2022 to 2025 by drawing on data, evidence and insights from a range of system-wide and local sources.

The Government in conjunction with industry, communities and education and training partners brings collaborative action through the Skills Plan which:

- **defines skill needs** with clear statements of required skills and capabilities (current and emerging)
- **sets priorities** for post-school education and training in Victoria
- **communicates to the community** the opportunities education and training can provide to offer careers for individuals that also meet the workforce needs of industry
- **aligns action** across industry and government to support improved outcomes for all Victorians.

The Skills Plan consists of:

- a summary report – the Victorian Skills Plan
- the industry needs of the Victorian economy segmented into 13 insight reports, each comprising like industries – of which this report is one
- profiles of industry and occupations in the regional areas of Victoria which outline priorities for skills development – either as snapshots or Regional Skills Demand Profiles
- current employment and forecast demand to 2025 across Victoria – a user-driven dashboard.

### About Industry Insight Reports

Each industry insight is based on robust research, qualitative and quantitative data collection and analysis and extensive consultation with the Government's Industry Advisory Groups, partners and stakeholders over a period of six months. Each report sets out to:

- profile the **industry outlook**, taking into account sector trends and key drivers of demand
- detail the **workforce and skilling implications** of the industry based on forecasting
- set **industry priorities** in responding to current and future workforce challenges
- provide initial guidance for an **education and training response** to these challenges.

The industries reflected in each report are defined according to their classification within *1292.0 - Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006*, prepared by the Australian Bureau of Statistics. Occupations within industries have been defined using the *Australian and New Zealand Standard Classification of Occupations (ANZSCO)*.

Each industry insight contributes to the conclusions and recommendations of the Skills Plan, focusing on actions for implementation over a three-year period.

The VSA acknowledges and extends sincere thanks to the individuals and organisations that participated in the consultations and contributed to these materials.

**Using this report**

This is a point-in-time report on the public administration and safety industry in Victoria and the associated skills and workforce issues.

This report, along with the Skills Plan, has been prepared for industry and provider partners as a summary of demand for occupations and workforce issues. In addition to being used by the Victorian Government to consider responses, as a public document it is available to industry and education and training partners to form actions and responses.

The report does not represent the full picture of workforce issues in the industry. Opportunities associated with skills and workforce are longstanding. The information in the report, however, provides the basis for ongoing work on skills demand and responses, including by the VSA and through the Industry Advisory Groups.

**Feedback**

Feedback on this report, and others, is welcome and can be provided to [SkillsPlan@education.vic.gov.au](mailto:SkillsPlan@education.vic.gov.au). Feedback will contribute to developing insights and actions.

## Report coverage

This industry insight focuses on the public administration and safety industry as defined under ANZSIC and the occupations relevant to the industry, classified according to ANZSCO. It covers activities such as legislative, executive and judicial activities; physical, social, economic and general public safety and security services; and regulatory enforcement, along with emergency services and defence activities.

Statistics about an industry and its sub-sectors are collated by the Australian Bureau of Statistics (ABS) from the activity of businesses. Each business is classified to an industry based on their primary activities. Where an individual works for multiple businesses, their main job is used.

Industry classifications rarely encompass the full nature of the work (and therefore skills) associated with a given industry. ABS definitions of industries or sectors may not align with the definitions used by an industry association, while the allocation of businesses on primary activity can result in businesses that perform similar services but with a different emphasis being classified across different industries.

Coverage in this report is limited to employment in the industry and sectors as defined by ABS, noting some occupations are almost exclusively associated with an industry, such as a police officer in public administration and safety, while others, such as accountants and electricians, are associated with many industries. Note, however, that occupational demand for Victoria as reflected in the dashboard is the total of occupational demand for all industries.

Table 1 sets out activities that may occur within the Public Administration and Safety industry but are reported formally under other industries. The relevant Industry Insight report is listed.

**Table 1 | Scope of related industry activities and insights related industries**

Activities	Industry insight
Defence Industries - manufacture of machinery and equipment for defence purposes	Manufacturing
Waste management*	Electricity, Gas, Water and Waste Services
Social work, mental health and other human services*	Health Care and Community Services
Recreation (including management of aquatic centres and sporting fields), landscaping	Services
Gardening services, pest control and arboriculture	Administration and Support services
Surveying, engineering and other professional information and technical services	Professional, Information, Technical and Financial Services
Education and training for swimming instruction and golf coaching	Education and Training

\*Discussion of skills for these activities is covered by the relevant industry report. However, where individuals are directly employed by public organisations to perform these activities e.g., local government they have been included in workforce estimates for the public administration and safety industry.

## Executive summary

### Industry outlook

The public administration and safety workforce plays a crucial role in ensuring Victorians feel safe, protected, and supported. Over 207,400 people are employed across the government, defence, emergency management and justice sectors.

Current investment by the Victorian Government will drive demand for workers to support the delivery of key initiatives (e.g., Big Housing Build, transport infrastructure and renewable energy). The anticipated return to increased population growth, including in regional areas, will create demand. Digital transformation will also boost productivity and growth.

### Workforce and skilling implications

On average, across all industries total employment is expected to grow by an additional 211,900 workers to 2025, from 3,538,900 workers in 2022, an annual growth rate of 1.97 per cent<sup>a,1,2</sup>. In comparison between 2017 and 2020 employment grew by 2.68 per cent<sup>b</sup> annually.<sup>3</sup>

In the public administration and safety industry, employment is expected to grow by an additional 5,800 workers to 2025, from 207,400 workers in 2022, an annual growth rate of 1 per cent<sup>c</sup> which is below the overall Victorian average across all industries.<sup>4,5</sup> In comparison between 2017 and 2020 employment across this industry grew by 2.33 per cent<sup>d</sup> annually.<sup>6</sup>

The public administration and safety workforce will need to grow by an estimated 14,600 new workers by 2025 to meet expected demand. This includes employment growth of 5,800 jobs and replacement of 8,800 retirees.<sup>7,8</sup>

Table 2 identifies the top ten occupations in demand across the industry by 2025. Of these, six occupations (highlighted in table) are expected to experience employment growth at a rate above the overall Victorian average between 2022 and 2025.

**Table 2 | Occupations in demand in the public administration and safety industry by 2025<sup>e,9,10, f, g, h</sup>**

Occupation	Current employment	Employment growth (2022–25)		Retirements (2022–25)	New workers needed (2022–25)
		Number	Per cent		
Police	16,050	650	1.4%	550	1,200
Inspectors and Regulatory Officers	9,300	400	1.8%	300	700
Database and Systems Administrators, and ICT Security Specialists	3,100	550	5.7%	150	650

<sup>a</sup> 3-year compound annual growth rate

<sup>b</sup> Computed for 2017 to 2020 employment growth for pre-COVID comparison

<sup>c</sup> 3-year compound annual growth rate

<sup>d</sup> Computed for 2017 to 2020 employment growth for pre-COVID comparison

<sup>e</sup> Due to rounding, some totals may not correspond with the sum of the separate figures

<sup>f</sup> Forecast includes paid roles only, excluding volunteers which make a large contribution to the emergency services sector.

<sup>g</sup> Some roles will also appear in other industries, for example Aged and Disabled Carers will appear in the Health and Community Services industry insight report.

<sup>h</sup> Supporting roles such as human resource managers and general clerks have been excluded.

Other Information and Organisation Professionals	9,000	450	3.8%	200	650
Security Officers and Guards	12,200	50	0.3%	400	500
Aged and Disabled Carers	7,700	350	2.9%	150	500
Welfare Support Workers	2,850	350	2.9%	100	500
Welfare, Recreation and Community Arts Workers	2,500	250	2.6%	150	400
Intelligence and Policy Analysts	5,700	200	1.3%	200	400
Software and Applications Programmers	1,200	300	3.9%	100	400

#### Legend

	Above Victorian employment growth average between 2022 and 2025
--	---

The digital transformation occurring across the industry is driving demand for new jobs, including data privacy and cybersecurity engineers, data analysts and risk analysts. In addition, the projected reduction in volunteer numbers will place demands upon the paid workforce.

Meeting this demand will be challenging. There are 23 occupations of specific relevance to the industry that have been identified as in shortage, and many other occupations in shortage identified across other Insight reports that are also relevant to the industry. Shortages have been exacerbated by the demands that have been placed on it by the COVID-19 pandemic, recent bushfires, floods and other more recent agriculturally related disease outbreaks. Industry reports that shift work, complex client management, a heightened risk of burnout, declining volunteer numbers and high levels of competition with the private sector and other related industries as all contributing to this challenge.

Skills needs across the industry are changing. Workers will need data and cybersecurity capability. Skills to interact with vulnerable communities and offenders with complex psychological profiles will also be needed across most sectors.

### Workforce priorities

Three priorities are identified to address workforce and skilling needs for the public administration and safety industry:

1. Explore pathways into public sector roles, focusing on entry-level points – a workforce that better reflects the diversity of its community will achieve better outcomes.
2. Explore the development and retention of specialist skills to address an immediate need in some roles – opportunities to support workers to respond to new scenarios should be cultivated.
3. Support improved articulation pathways and recognition of prior learning – improved recognition of skills will assist with attraction and retention of workers.

### Education and training pipeline and workforce response

Pathways to employment in the public administration and safety industry are split across higher education and VET with 36 per cent of workers holding a degree or above as their highest level of education and 40 per cent holding a VET level qualification as their highest level of education. There were around 13,210 enrolments in relevant VET qualifications in 2020 and 16,110 equivalent full-time study load (EFSTL) in higher education in 2019.

Key VET pathways into the industry include the Certificate II in Security Operations, the Certificate III in Correctional Practice and the Certificate IV in Cyber Security. Graduates from these programs provide an important source of workers to the industry. While activity is high in some courses, some experience lower enrolment numbers and opportunities exist to better respond to identified priorities. Activity does not always map to demand.

Supporting pathways into the industry for students from diverse backgrounds will secure the productivity and innovation benefits that come from a diverse workforce. Cadetships, industry mentoring, training and recruitment opportunities can help achieve this objective. Expanding the breadth of pathways available to students (e.g., electives) will expand awareness of the opportunities available.

Delivering skill sets or micro-credentials, where appropriate, in priority areas such as disaster resilience will enable the workforce to better respond to the needs of the community it serves. In addition, recognition of prior work experience and training within different systems (e.g. VET and HE) will be a key enabler to building the pipeline of workers.

Supporting employers which are registered training organisations or significant funders of training is important. These employers are uniquely placed to drive skill acquisition that genuinely reflects the needs of industry. They are also critical to upskilling the large numbers of existing volunteers which are having to meet greater expectations.

Without consideration of appropriate workplace policies and culture to support workforce diversity, the industry will continue to be at a disadvantage in securing the right workers and retaining them in industry.

Table 3 highlights actions that can be considered by education, industry, and government to meet workforce demand.

**Table 3 | Actions for consideration for education, industry, and government**

- Support students from diverse backgrounds into employment with mentoring and training opportunities in partnership with industry.
- Explore flexible education and training models such as micro-credentials to improve surge capacity across the industry.
- Clarify and enable articulation in to VET and higher education pathways based on skills gained through volunteering and employment.
- Explore ways to maintain strong connections with the community to promote the benefits of working in the industry. This could include shadowing and exchange programs.
- Explore alternative pathways for under-represented cohorts to employment in the industry (including cadetships, apprenticeships and traineeships) with support such as mentoring, anti-discrimination and equal opportunity initiatives prior to and during employment.
- Consider support to volunteers through a tailored management approach to deliver positive outcomes for all stakeholders.



## Industry outlook

### The public administration and safety industry plays an increasingly critical role in supporting and protecting Victorians

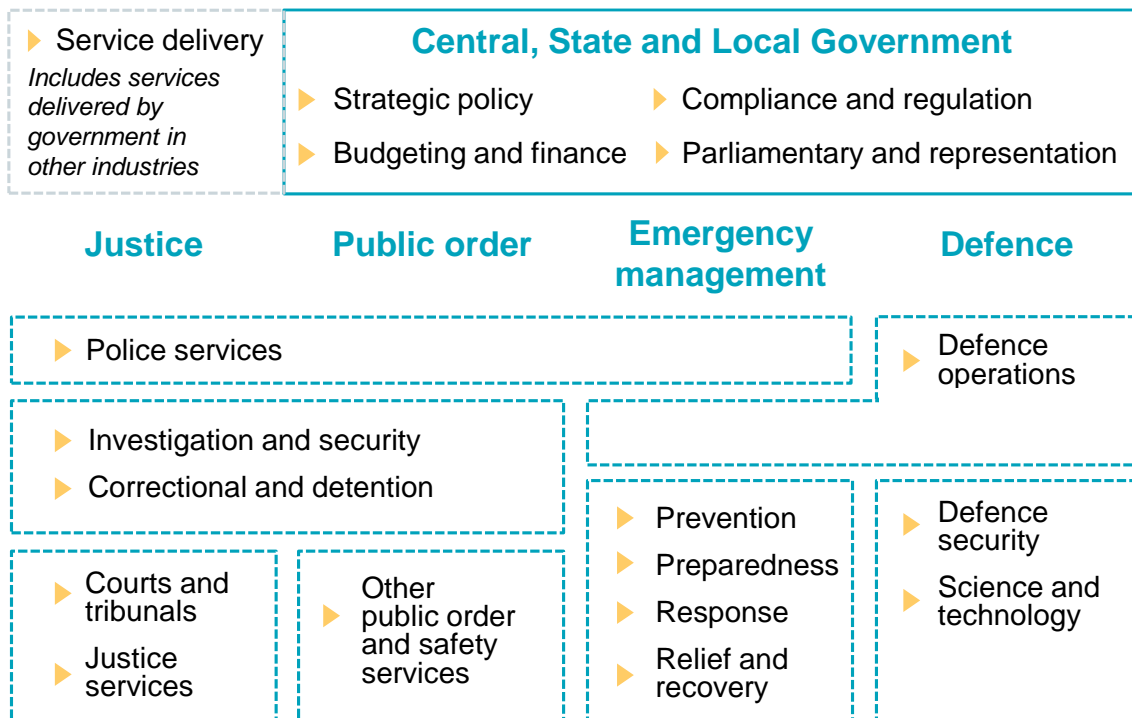
The public administration and safety industry ensures that Victorians live in a supportive and well-protected society.

The industry provides leadership, policy and services that maintain public systems at all levels of government, and in public order, justice, defence and emergency management. Collectively, it constitutes an integrated and expansive network of public service and public sector entities, supported by private security firms and volunteer organisations, whose purpose is to ensure safety and strong public governance in Victoria and in Australia.

The public administration and safety industry employs 6 per cent of the total Victorian workforce (207,400 workers)<sup>i</sup>, although it also relies on a significant number of volunteers.<sup>11</sup> Across the industry, 46 per cent of workers are female, similar to the Victorian average of 47 per cent,<sup>12</sup> and approximately 34 per cent of workers are aged over 50 (slightly higher than the Victorian average of 29 per cent).<sup>13</sup>

Key sectors within the public administration and safety industry are shown in Figure 1 and described below.

**Figure 1 | Key sectors within the public administration and safety industry<sup>j</sup>**



The COVID-19 pandemic had a significant impact on the industry – almost all sectors played a vital role in leading and facilitating the state pandemic response and did not experience shutdowns to the same extent as many others. Several sub-sectors pivoted to COVID-19 specific supports for other industries and were required to accommodate new and higher demands. Inter-operability across

<sup>i</sup> Excludes the surge workforce that has been onboarded to respond to the COVID-19 pandemic

<sup>j</sup> Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC).

sectors which were crucial during the height of the COVID public health response will likely be the ongoing expectation of citizens and will need to feature in skilling programs.

## Government

Public administration entails the range of services arising from federal, state and local governments. Defence, public safety and emergency also form part of the industry as responsibility for their delivery rests with governments.

Services of governments at all levels include strategic policy, programs and regulation, compliance and enforcement against regulations and facilitation of representation of constituents in Parliament (or council) and management of public finances.

The central government administers federal laws (including in relation to social welfare benefits, tax, workplace relations and border security)<sup>k</sup> and delivers services in Victoria. Workers for some federal departments and agencies are based in Victoria, including for some agencies which are headquartered in Victoria such as the National Disability Insurance Agency and Fair Work Australia and the Fair Work Ombudsman.

Victoria's state government activities operate solely from Victoria (e.g., health and human services and justice), apart from trade functions such as Global Victoria offices based overseas. Government also includes independent entities who lead public sector regulatory services, such as the Transport Accident Commission, Environmental Protection Authority and WorkSafe.

Local councils operate in local government areas and administer by-laws, including in health, planning and building control, business and economic development, waste and environmental management, and human and community services. They administer permits, household rates and deliver important community services such as aged care, disability support and the administration of recreation centres (which provide swimming lessons).

Throughout the COVID-19 pandemic, the public service has been critical in delivering a coordinated response and support services. It has also shown the importance of government in public emergencies.

## Justice

The justice sector prevents and responds to crime and civil wrongs. Victoria Police is the independent state agency responsible for upholding and enforcing the law. Governments, individuals, and businesses contract private investigation and security providers to support this role. The private security industry states that the number of their workers outnumber the combined size of Australia's police and defence forces.<sup>14</sup>

There is particular demand for workers in the justice and public order sectors. More child protection and victim workers will be required to manage higher caseloads as awareness and reporting of family violence and child abuse increases. This is consistent with the Youth Justice Strategic Plan 2020-2030 and other initiatives to support residential care workers, local police, and the Children's Court Youth Diversion workforce to achieve better outcomes in youth corrections, predicated on a non-traditional approach to corrections.<sup>15</sup>

The Victorian Department of Justice and Community Safety administers prisons and remand centres in Victoria. Courts and tribunals including the Supreme Court of Victoria and the Victorian Civil and Administrative Tribunal determine criminal and civil liability under state laws, whereas federal bodies such as the Fair Work Commission and the Federal Circuit Court determine liability under federal laws.

Wraparound support and administration for the justice sector is provided by bodies such as Court Services Victoria, which provides independent judicial services, and Fines Victoria, which collects payment for criminal and civil fines.

---

<sup>k</sup> *Commonwealth of Australia Constitution Act 1901*, section 52.

Throughout 2020 and 2021, this sector has undergone significant digital transformation as courts and tribunals have been compelled to convene virtual hearings. COVID-19 has caused a significant case backlog by limiting jury trials (with implications for the volume of those held on remand). In March 2022 the Victorian Parliament passed laws permitting judge only trials for a one-year period.<sup>16</sup>

## Emergency management

Many organisations are responsible for emergency management, working across the stages of prevention, preparedness, response and relief and recovery.

Emergency Management Victoria (EMV) coordinates emergency management in Victoria by connecting agencies and strengthening the capacity of communities to plan for, withstand, respond to and recover from emergencies.<sup>17</sup> EMV supports the Emergency Management Commissioner to coordinate emergency preparedness, response and recovery across Victoria's emergency management sector in conjunction with communities, government, agencies and business.<sup>18</sup>

Victoria Police plays an important role in emergency response (e.g., where a violent crime or significant car accident has taken place).<sup>19</sup> Other important first responders include Fire Rescue Victoria and Ambulance Victoria, triaged by Triple Zero Victoria, and Forest Fire Management Victoria which is responsible for preparedness, mitigation, and response to fire on public land (such as bushfires).<sup>20</sup> Volunteer-based organisations such as the Country Fire Authority, the State Emergency Service and Life Saving Victoria play a critical role in regional and rural areas where a lower number of paid first responders reside.<sup>21</sup> These organisations have a critical role in the prevention and response to frequent hazards such as fires, storms and floods.

Bushfire Recovery Victoria was established by the Victorian Government following the 2019-20 bushfire season and was tasked with recovery coordination for the June 2021 storms.<sup>22</sup> These agencies join other relief agencies such as the Red Cross and Salvation Army (as not-for-profit organisations), which provide food, community and material aid in the wake of emergencies.<sup>23</sup>

Other organisations may have a responsibility to respond in an emergency depending on the type of hazard or recovery required. Across Victoria's State Emergency Management Plan this could draw-in over 200 organisations such as Parks Victoria, Melbourne Water and Department of Transport.

## Defence

The defence sector focuses predominantly on national and border security. The Australian Defence Force (ADF) includes the Royal Australian Navy, the Australian Army, Royal Australian Air Force (RAAF) and several "tri-service" units. These bodies patrol Australia's borders and undertake military missions nationally and overseas.

Defence activity, expenditure and employment makes a significant contribution to economic activity in Victoria. The RAAF has bases in East Sale and Point Cook, the ADF has a base in Albury Wodonga and Puckapunyal (outside Seymour) and the Navy has a base in HMAS Cerberus (among others).<sup>24</sup> A Defence science and technology facility has been established recently in Fishermans Bend and is scheduled for significant redevelopment in 2023, subject to funding approval.<sup>25</sup>

Significant defence industries operate out of Victoria and the sub-sector is expected to expand in line with the Defence Strategic Review announced by the federal government in August 2022. The review will consider investment in Defence capabilities to meet the nation's security challenges over the period 2023-24 to 2032-33 and beyond.<sup>26</sup> Its impact on Victoria's manufacturing sector plus public administration has the potential to be significant.

The defence sector occasionally plays a role in emergency response. For example, the Australian Defence Force assisted in facilitating the COVID-19 hotel quarantine program and provided rescue efforts to the community of Mallacoota in the 2019-20 bushfires.<sup>27</sup>

## Public order

Many of the entities described above also support the public order sector.

Police attend public venues and events to manage access and community safety.<sup>28</sup> Police may arrest and charge individuals with criminal offences if they threaten public order. Once charged, individuals will be held on remand unless they are granted bail. Corrections Victoria transfer and detain those on remand.<sup>29</sup>































Private security also ensures the safety of venues and public events. They redirect and remove threats by evicting patrons, monitoring security footage and engaging in risk management.<sup>30</sup>































The Australian Government through the ADF and Australian Border Force (ABF) maintain border integrity in respect of movement of natural persons. The ABF also oversees Customs and the movement of goods into and out of Australia.

## Recovery from COVID-19 will continue to drive demand in the public administration and safety industry

The public administration and safety industry in Victoria is expecting strong growth to 2022-23, tapering to steady growth with recovery from COVID-19. The industry outlook is driven by a range of factors, detailed in Table 4.<sup>31</sup>

**Table 4 | Drivers of demand in the public administration and safety industry**

Driver	Government	Justice	Public order	Emergency Management	Defence	
Policy	Recent Royal Commissions and inquiries are having significant implications and recommendations for the industry, including greater investment in resources.	 Medium	 High	 Medium	 High	 High
	Investment by the Victorian Government will drive demand for additional government employees to support delivery of these initiatives (e.g., Big Housing Build, transport infrastructure, renewable energy).	 High	 Low	 Low	 Low	 Low
	Legislative reform seeks stronger accountability and genuine engagement between industry and the constituents it serves.	 High	 High	 Medium	 High	 Low
Economic	A tight fiscal market resulting from COVID-19 has led to a more limited capacity to fund services in the immediate future.	 High	 High	 Medium	 High	 Medium
	A significant increase in outsourcing of historically government services to external providers, presenting both advantages and disadvantages for the industry.	 High	 Low	 Low	 Low	 Low
Social	Population growth, particularly in regional areas will drive greater demand for accessible services.	 High	 Medium	 Medium	 High	 Medium

Driver	Government	Justice	Public order	Emergency Management	Defence
<p>An increasing emphasis on holistic, person-centred services and 'Better Connected Care' is shaping the industry. This will require greater collaboration and co-location of police, justice and human services.</p>	 High	 High	 Medium	 High	 Low
	 Low	 Low	 Low	 High	 Medium
<p>COVID-19 accelerated the workforce to uplift its digital capability (e.g., virtual hearings). Ongoing upskilling will be required into the future.</p>	 High	 High	 Medium	 Medium	 High
	 Medium	 High	 Low	 Low	 High
<p>The industry will continue to face significant digital transformation because of government investment and technological advancements to boost productivity and growth (e.g., sonar systems and robotics in the defence sector).</p>	 Medium	 High	 Low	 Low	 High
<p>Natural disasters resulting from climate change are likely to cause greater frequency and higher intensity emergencies.</p>	 High	 Low	 Medium	 High	 Medium

### Government

The Victorian Government will prioritise delivering efficient, trusted and secure services to its citizens online amid significant regional and rural population growth.<sup>32</sup> The aim is for service delivery and interaction with government to be seamless, holistic and accessible.

A \$195 million investment from the Victorian Government to establish Digital Victoria will transform and centralise its online services and capacity to drive policy.<sup>33</sup> An uplift in digital capability for all staff in the Victorian public service is essential, as is the selection of appropriate technology for the existing workforce to support this development. Higher levels of cyber security across government systems to protect personal information is important.

Increasing diversity in the public sector workforce will also remain a key priority.<sup>34</sup> The sector reflects the community it serves through inclusive and culturally appropriate programs, policy development and service delivery strategies.<sup>35</sup> This promotes high quality service delivery.

## Justice

A widening economic gap has potential to create increased service demand across the justice sector. In addition, the sector is seeing increasing complexity of cases and more complex assessments of risk, requiring a highly skilled workforce and new models of service delivery.

Ongoing upskilling in digital capability will be required to alleviate pressures on the justice system brought about by the COVID-19 pandemic and to pursue productivity and growth.

Through the 'Better Connected Care' initiative, the justice system is also prioritising a coordinated service response, which enables informed decision making and reduces the potential for re-traumatisation. The 'Better Connected Care' initiative, jointly led by Department of Justice, Community and Safety and Department of Families, Fairness and Housing, supports integrated service delivery for 'common clients' across a range of sector partners. The initiative commenced in June 2022 across 17 regional catchments.

Another continuing area of focus is to provide a holistic, therapeutic and trauma-informed justice response – experiences of trauma are common among offenders who often come from disadvantaged backgrounds.<sup>36</sup> The corrections workforce will need to have more specialised skills to de-escalate stressful situations and engage effectively with offenders,<sup>37</sup> interfacing effectively with human services and other industries. Reporting of crimes with complex causes (including family violence and child abuse) is increasing and necessitates a nuanced and coordinated response from police and other organisations in the justice sector. These shifts are consistent with the Youth Justice Strategic Plan 2020-2030 and other initiatives to support residential care workers, local police and the Children's Court Youth Diversion workforce.<sup>38</sup>

There is an opportunity for increased focus on improving industry conditions and training for private security workers following the Review of Victoria's Private Security Industry. This review exposed major gaps in the training of security staff, many of whom are contract workers.<sup>39</sup> Reform will centre on increased regulation for businesses registered to train security guards and oversight of teaching standards,<sup>40</sup> which will have direct impact on the VET sector.

## Emergency management

In recent years, Victoria has seen natural disasters including drought, the 2019-2020 summer bushfires and major storm and flood events, alongside the COVID-19 pandemic. Communities and economies are still recovering, creating ongoing demand for the emergency management sector. The sector's involvement in supporting other industries such as health is also likely to continue alongside Victoria's COVID-19 recovery. Natural disaster events are expected in increased frequency and intensity due to global warming.

Alongside this heightened demand, the Inquiry into the 2019-20 Victorian Fire Season Phase 1 and Phase 2 has highlighted opportunities for reform in the sector. The inquiry emphasised a community-led approach, and a clear understanding of roles and responsibilities. It also highlighted the need to focus on relief and recovery, alongside response efforts, which will likely create new demand for relief and recovery workers.<sup>41</sup>

The sector is also managing declines in volunteerism across Victoria, particularly in the emergency management sector (and in rural areas where the population is ageing).<sup>42</sup> This is likely to reduce the availability of services across certain localities, increasing pressure on agencies with paid workforces to respond to emergencies.

## Defence

Evolving technologies will impact the defence sector, including advanced manufacturing, biotechnology, cyber security, electronic surveillance and countermeasures, radar and sonar systems and robotics.<sup>43</sup>

Government funding for the defence sector has increased by 6.1 per cent on 2020-21 levels,<sup>44</sup> and an extra 500 Army Reserve recruits are anticipated nationally.<sup>45</sup> The 2022-23 federal budget has committed \$38 billion to boost the workforce by 18,500 personnel nationally over 10 years.<sup>46</sup> The federal government has also announced significant investment in technology, committing \$9.9 billion investment over the next decade in new national cyber and intelligence capabilities and \$270 billion in broader defence capabilities.<sup>47</sup>

The defence sector may also have a greater role to play in state-based emergency management – particularly if agencies face capacity or capability strain.

## Public order

Population growth will drive demand for public order services across the state.<sup>48</sup>

The sector is required to adopt continuously updating technologies (particularly in policing and defence work). In addition, the sector will face increasingly sophisticated technology-related crime and threats to national security. This will add increasing complexity to existing roles, require new skills, and create new roles for workers with high levels of digital literacy.<sup>49</sup>



## Workforce and skilling implications

### An estimated 14,600 net new workers are required to meet projected demand over the next 3 years

On average, across all industries total employment is expected to grow by an additional 211,900 workers to 2025, from 3,538,900 workers in 2022, an annual growth rate of 1.97 per cent<sup>l</sup>.<sup>50,51</sup> In comparison between 2017 and 2020 employment grew by 2.68 per cent<sup>m</sup> annually.<sup>52</sup>

In the public administration and safety industry, employment is expected to grow by an additional 5,800 workers to 2025, from 207,400 workers in 2022, an annual growth rate of 1 per cent<sup>n</sup> which is below the overall Victorian average across all industries.<sup>53,54</sup> In comparison between 2017 and 2020 employment across this industry grew by 2.33 per cent<sup>o</sup> annually.<sup>55</sup>

The public administration and safety industry in Victoria is expected to grow by 14,600 net new workers between 2022 and 2025.<sup>56</sup> This includes 5,800 employment growth and replacement of 8,800 retirees.<sup>57,58</sup> The number of retirements does not consider people leaving the industry for other reasons.

Workforce demand in the public administration and safety industry is predicted to increase significantly across all sectors, driven by anticipated population growth, an ageing workforce and increased demand for public and community services.<sup>59</sup> Significant job opportunities are forecast for all sectors in the industry. For example, the justice and public sectors are likely to face increased demand to manage the higher reporting and management of family violence and child protection matters as Victoria recovers from COVID-19.

The emergency management sector is also expected to continue its growth trajectory, with an emphasis on transitioning seasonal workforces (e.g., fire response) to operate year-round with a focus on recovery.<sup>60</sup> Demand for volunteers will remain strong – 44 per cent of organisations with volunteers surveyed across Victoria indicated they will need more volunteers over the next few years.<sup>61</sup> Population changes in rural areas and diminishing volunteer numbers accelerate this demand.

Table 5 identifies the top ten occupations in demand based on employment growth and replacing retirees by 2025.<sup>62</sup> Of these, six occupations (highlighted in table) are expected to experience employment growth at a rate above the overall Victorian average between 2022 and 2025. These figures are estimates but it is important to note that they may be under-estimated as they do not account for existing vacancies nor take account of changes in the rate of workers leaving the industry.

**Table 5 | Occupations in demand for the public administration and safety industry<sup>p,63,64,q,r,s</sup>**

Occupation	Current employment	Employment growth (2022–25)		Retirements (2022–25)	New workers needed (2022–25)
		Number	Per cent		
Police	16,050	650	1.4%	550	1,200

<sup>l</sup> 3-year compound annual growth rate

<sup>m</sup> Computed for 2017 to 2020 employment growth for pre-COVID comparison

<sup>n</sup> 3-year compound annual growth rate

<sup>o</sup> Computed for 2017 to 2020 employment growth for pre-COVID comparison

<sup>p</sup> Due to rounding, some totals may not correspond with the sum of the separate figures


<sup>q</sup> Forecast includes paid roles only, excluding volunteers which make a large contribution to the emergency services sector.

<sup>r</sup> Some roles will also appear in other industries, for example Aged and Disabled Carers will appear in the Health and Community Services industry insight report.

<sup>s</sup> Supporting roles such as human resource managers and general clerks have been excluded.

Inspectors and Regulatory Officers	9,300	400	1.8%	300	700
Database and Systems Administrators, and ICT Security Specialists	3,100	550	5.7%	150	650
Other Information and Organisation Professionals	9,000	450	3.8%	200	650
Security Officers and Guards	12,200	50	0.3%	400	500
Aged and Disabled Carers	7,700	350	2.9%	150	500
Welfare Support Workers	2,850	350	2.9%	100	500
Welfare, Recreation and Community Arts Workers	2,500	250	2.6%	150	400
Intelligence and Policy Analysts	5,700	200	1.3%	200	400
Software and Applications Programmers	1,200	300	3.9%	100	400

Legend

 Above Victorian employment growth average between 2022 and 2025

Emergency management roles will also be in high demand over the next three years, such as first responders and recovery workers. The number of paid workers does not fully account for the number of people required in these roles, due to the large volunteer-base. In addition, significant changes in emergency services across the public administration and safety industry are driving demand for the new and emerging jobs detailed in Table 6. The reduction in volunteer numbers in the emergency services sector will require more from paid workforces within agencies. The digital transformation that is shaping the public service and public sector in Victoria will rely on employees with greater data and cybersecurity capability, which exposes the industry to risk and may require regulatory intervention.

Emerging occupations are defined as new, frequently advertised jobs that are substantially different to occupations already defined in the ANZSCO.<sup>65</sup>

**Table 6 | Emerging occupations in the public administration and safety industry<sup>66</sup>**

Emerging occupations	
<ul style="list-style-type: none"> <li>Climate scientists</li> </ul>	<ul style="list-style-type: none"> <li>Compensation and benefits analysts</li> </ul>
<ul style="list-style-type: none"> <li>Data privacy and cybersecurity engineers</li> </ul>	<ul style="list-style-type: none"> <li>Data analysts</li> </ul>
<ul style="list-style-type: none"> <li>DevOps engineers</li> </ul>	<ul style="list-style-type: none"> <li>Emergency services roles historically performed by volunteers – e.g., bushfire prevention and response</li> </ul>
<ul style="list-style-type: none"> <li>Regulatory affairs specialists</li> </ul>	<ul style="list-style-type: none"> <li>Relief and recovery specialists</li> </ul>
<ul style="list-style-type: none"> <li>Risk analysts</li> </ul>	

## Occupational and skill shortages will need to be addressed with a focus on technological capability and the needs of vulnerable groups

The public administration and safety industry faces chronic shortages, exacerbated by the demands that have been placed on it by the COVID-19 pandemic and recent bushfires and floods. Changing community expectations around the accessibility of public services fuel digital transformation across all sectors.

A shortage exists when employers are unable to fill or have considerable difficulty filling vacancies for an occupation at current levels of remuneration and conditions of employment, and in reasonably accessible locations. Where an occupation specialisation is in shortage, the occupation will be treated as in shortage.

The industry faces a shortage of workers at the intersection of social services and justice, including child protection, youth justice and interdisciplinary workers that understand the complex circumstances that can lead to criminal behaviour and who require a holistic approach to engaging with these cohorts. This has been exacerbated by the demands for family violence services.

VSA consultations indicates further occupations across Victoria can be considered to be in shortage, or soon will be. A list of specific occupational shortages in the public administration and safety industry is shown in Table 7.

**Table 7 | List of occupational shortages facing the public administration and safety industry<sup>67</sup>**  
68

Occupational shortages	
• Building surveyors	• Child protection workers
• Community development and engagement officers	• Corrections officers
• Environmental health officers	• Maternal and child health nurses
• Policy and project officers	• Security officers and guards
• Specialist planners	• Victim support workers
• Youth justice workers	
Additional occupations as part of the National Skills Commission's updated Skills Priority List released on 06 October 2022 <sup>69</sup>	
• Building inspectors	• Immigration officers
• Fire protection equipment technicians	• Motor vehicle license examiners
• Security officers	• Invasive pest, weed and disease inspectors
• Customs officers	• Social security assessors
• Taxation Inspectors	• Train examiners
• Water inspectors	• Transport operations inspectors

The industry is also experiencing shortages in roles that are captured within other industry insights reports including those in health and community services, arts and recreation. Please refer to Table 1 for information on where to find further information about these.

Workers in the public administration and safety industry will need to build general technological skills to adapt to pressures for digitisation in government. All sectors will need to focus on building soft skills to interact with vulnerable communities and offenders with complex psychosocial profiles. Contracted security workers, who typically hold qualifications in areas outside of this field and at a higher level, also require de-escalation skills and in-depth interpersonal skills.

For the emergency management sector, the capability of volunteers is just as important as paid staff. Situational awareness and other professional skills need to be emphasised amongst volunteers, who typically do not require or access the same level of skill development as paid staff.

Inter-operability across sectors which were crucial during the height of the COVID public health response will likely be the ongoing expectation of citizens and will need to feature in skilling programs.

A list of specific skills shortages across the paid and volunteer workforces is shown in Table 8. These have been drawn from several workforce strategies prepared by governments and industry sectors.

**Table 8 | Skills shortages facing the public administration and safety industry<sup>70</sup>**

Skills shortages	Govt	Justice	Public order	Emerg. Mgmt.	Defence
• Business acumen	✓				
• Case coordination and management		✓			
• Change management	✓			✓	
• Data capability	✓	✓	✓	✓	✓
• Digital capability	✓	✓	✓	✓	✓
• Electronic warfare, information operations and cyber security intelligence					✓
• General skills such as inclusion of diverse cohorts and communication	✓	✓	✓	✓	✓
• Lived experience		✓			
• Mapping				✓	
• Interdisciplinary capability	✓	✓	✓	✓	
• Incident management				✓	
• Leadership	✓	✓	✓	✓	✓
• Logistics				✓	
• Radio communications				✓	
• Risk assessment	✓	✓	✓	✓	✓
• Situational awareness			✓	✓	✓

## Education and training pipeline

There were almost 13,210 enrolments in public administration and safety related VET qualifications in 2020 (excluding police) and 16,110 relevant enrolments in Higher Education.<sup>71,72</sup> This should translate to close to 15,440<sup>t</sup> students entering the workforce each year with relevant qualifications, presenting a significant opportunity to meet the projected demand, although some will seek employment in other industries. For further detail, see the collaborative response toward the end of this report.

### VET is likely to remain a significant pathway into the industry

VET will continue to provide pathways into the public administration and safety industry, with 40 per cent of workers holding a VET level qualification as their highest level of education.<sup>73</sup> A VET level qualification is required to hold a Private Security Business License and/or membership to Australian Security Industry Association Limited, reflected in high enrolment numbers. Apprenticeships and traineeships are an important part of the skilled workforce pipeline for specific occupations such as locksmithing and corrections officers. There are also good entry level opportunities, with 24 per cent of workers not holding any post-school qualifications.

Top employing occupations in the industry are in policing, private security and corrections. This excludes occupations that are primarily associated with another industry.

In 2020, there were approximately 11,270 enrolments in Victoria in public administration and safety related Vocational Education and Training (VET) qualifications and skill sets prior to employment.

### VET Activity

People enrol in VET courses for one of three main reasons:

- to prepare for employment
- to support current employment
- to progress their careers within the industry.

This equates to training categorised as prior to employment, with employment (as an apprenticeship or traineeship) and upskilling once qualified as shown in Table 9. The table shows the enrolments in 2020 VET courses on the Victorian Funded Course List (FCL) and Victorian Funded Skill Set List (FSSL)<sup>74,75</sup> related to this industry and against each category. The enrolment numbers are drawn from Total VET activity (TVA) which comprises enrolments supported by public funding or private contribution.

As part of preparing this report, industry representatives have provided their perspectives on the purpose of these qualifications, which is summarised in Figure 2 and helps to read Table 9.

---

<sup>t</sup> This number is determined by taking the total number of VET enrolments in courses undertaken prior to employment, combined with 1/3 of the total number of HE enrolments in AQF 5-8 courses (as these courses are traditionally undertaken prior to employment and the average bachelor degree is three years, so therefore only those in their final year of study will enter the workforce the following year).

**Figure 2 | VET pipeline key**

- 'AT' indicates a classroom-based course is also available as an apprenticeship or traineeship option
- 'Q' indicates industry values the course as a qualification
- 'SS' indicates industry values the course as a skill set
- 'EIR' indicates it is an Endorsed Industry Requirement as noted by industry
- 'OL' indicates the course leads to an Occupational License as noted by industry

Note: Industry has not provided feedback on all qualifications and where indicated; each value assignment can be reviewed in the future.

**Table 9 | VET pipeline for public administration and safety in Victoria<sup>u</sup>**

<b>Prior to employment</b>	
Qualifications (11,236 TVA enrolments 2020, 34 Skill Set enrolments 2020)	
<b>Advanced Diploma</b>	<b>74</b>
Advanced Diploma of Cyber Security (Q)	74
<b>Certificate II</b>	<b>5,512</b>
Certificate II in Security Operations (Q,SS,EIR)	5,512
<b>Certificate III</b>	<b>1,877</b>
Certificate III in Correctional Practice (Q,SS,AT,EIR)	1,813
Certificate III in Government (Q,SS,AT,EIR)	64
Certificate III in Locksmithing (Q,AT,EIR)	-
<b>Certificate IV</b>	<b>2,880</b>
Certificate IV in Court Operations (Q,EIR)	-
Certificate IV in Cyber Security (Q,AT)	2,880
<b>Diploma</b>	<b>893</b>
Diploma of Justice (Q)	893
<b>Skill Set</b>	<b>34</b>
Course in Policing Recruitment Pathway (Q)	34
<b>With employment (apprenticeship and traineeship)</b>	
Qualifications (116 TVA enrolments 2020)	
<b>Certificate III</b>	<b>102</b>
Certificate III in Locksmithing (Q,EIR)	84
Certificate III in Security Operations (Q,SS,EIR)	18
<b>Certificate IV</b>	<b>14</b>
Certificate IV in Cyber Security (Q)	14
<b>Upskilling once qualified</b>	
Qualifications (1,826 TVA enrolments 2020)	
<b>Advanced Diploma</b>	<b>98</b>
Advanced Diploma of Justice (Q)	98

<sup>u</sup> VET courses can support a range of occupations across a range of industries, and occupations can also support a range of industries. To present the likely VET trained employment pipeline by industry, enrolments for a course have been assigned to the most common industry in which people seek employment.

<b>Certificate III</b>	<b>833</b>
Certificate III in Investigative Services (Q,SS,EIR)	119
Certificate III in Security Operations (Q,SS,AT,EIR)	714
<b>Certificate IV</b>	<b>895</b>
Certificate IV in Correctional Practice (Q,AT,EIR)	118
Certificate IV in Government (Q,SS,AT,EIR)	269
Certificate IV in Government Investigations (Q)	400
Certificate IV in Security Management (Q,SS,OL)	108

Note: Enrolment figures in the table above are as reported by NCVER, Total VET student and courses 2020: program enrolment. There may be instances where program enrolments are not reported by providers to NCVER and therefore not included in the enrolment figures in the total VET training activity data. Total VET activity for 2021 is expected to be released in August 2022.

The Diploma of Policing is funded and supported by government outside the Funded Course List and administered by Victoria Police as a Registered Training Organisation.

The emergency management sector also utilises skill sets and qualifications, in addition to the above qualifications on the Funded Course List, such as units that build to a Certificate III in Public Safety. These are often administered by emergency service organisations as Registered Training Organisations.

## Higher education qualifications are common but not always essential for workers in the public administration and safety industry

Higher education also supports pathways into the public administration and safety industry, with 36 per cent of workers holding a degree or above as their highest level of education.<sup>76</sup> A higher education qualification is not always required for occupations in the industry, although many workers that enter government (particularly in policy roles) will hold one.

Some occupations in the industry that rely on higher education are projected to grow over the next five years, including policy analysts.<sup>77</sup> Whether students continue to enrol in relevant qualifications will be dictated by preference and industry expectations, rather than minimum role requirements.

In 2019, there were approximately 16,110 equivalent full-time study load (EFTSL) delivered by Victorian universities.<sup>78</sup>

The public administration and safety industry pipeline in the higher education system is shown in Table 10. Only high enrolment courses with equivalent full-time study load (EFTSL) over 100 are included. Please note that many of these courses serve multiple industries – the total EFTSL numbers are reflective of this broader pipeline.

**Table 10 | Higher Education pipeline for public administration and safety in Victoria<sup>79v</sup>**

<b>Justice and Law Enforcement (1,284 EFTSL, Victoria, 2019)</b>	
<b>Australian Qualifications Framework (AQF) 9+ (e.g., Master and above) (5 EFTSL)</b>	<b>AQF 5-8 (e.g., Diploma, Bachelor, Hons) (1,279 EFTSL)</b>
Examples include: <ul style="list-style-type: none"> <li>N/A</li> </ul>	Examples include: <ul style="list-style-type: none"> <li>Bachelor of Criminal Justice (720)</li> <li>Bachelor of Legal and Dispute Studies (198)</li> </ul>

<sup>v</sup> A course may be allocated to different narrow field of educations by different higher education providers based on the primary purpose of the course. Higher education enrolments reported against a course under a specified narrow field of education reflect only the portion of enrolment allocated to the narrow field of education and are not reflective of the total enrolment for the course.

	<ul style="list-style-type: none"> <li>Bachelor of Criminal Justice and Psychological Studies (153)</li> </ul>
<b>Law (9,824 EFTSL, Victoria, 2019)</b>	
<b>AQF 9+ (e.g., Master and above) (2,706 EFTSL)</b>	<b>AQF 5-8 (e.g., Diploma, Bachelor, Hons) (7,118 EFTSL)</b>
Examples include: <ul style="list-style-type: none"> <li>Juris Doctor (1,897)</li> <li>Master of Laws (275)</li> </ul>	Examples include: <ul style="list-style-type: none"> <li>Bachelor of Laws (4,945)</li> <li>Graduate Diploma in Legal Practice - Practical Training Course (543)</li> <li>Graduate Diploma in Migration Law (159)</li> </ul>
<b>Other Society and Culture (3,922 EFTSL, Victoria, 2019)</b>	
<b>AQF 9+ (e.g., Master and above) (236 EFTSL)</b>	<b>AQF 5-8 (e.g., Diploma, Bachelor, Hons) (3,686 EFTSL)</b>
Examples include: <ul style="list-style-type: none"> <li>N/A</li> </ul>	Examples include: <ul style="list-style-type: none"> <li>Bachelor of Criminology (1,248)</li> <li>Bachelor of Criminology/Bachelor of Cybersecurity (186)</li> </ul>
<b>Political Science and Policy Studies (1,083 EFTSL, Victoria, 2019)</b>	
<b>AQF 9+ (e.g., Master and above) (671)</b>	<b>AQF 5-8 (e.g., Diploma, Bachelor, Hons) (412)</b>
Examples include: <ul style="list-style-type: none"> <li>Master of International Relations (300)</li> </ul>	Examples include: <ul style="list-style-type: none"> <li>Bachelor of International Studies (207)</li> <li>Bachelor of International Studies/Bachelor of Commerce (152)</li> </ul>

There are a broad range of roles requiring higher education degrees that are not captured within the above table, including engineers, communications specialists, and logisticians. This is largely due to enrolments lower than 100 EFTSL. In addition, information on higher education pathways to roles not captured in the public administration and safety industry as defined by ANZSIC are set out in Table 1.



## Workforce priorities

### Key workforce priorities centre on ensuring diversity and improving capability

Service delivery in the public administration and safety industry increasingly requires citizen-centred and multidisciplinary responses. To do this, the industry is challenged to lead a digital transformation across the public sector amid widespread occupation and skills shortages.

Key challenges exist to address the supply and skill of labour. Some extend beyond the remit of the Skills Plan. For example, the attraction of new workers to the public administration and safety industry is threatened by the high competition for talent within the private sector and other related industries, coupled with shift work, complex client management and heightened risk of burnout across the justice sector. Similarly, diminishing volunteer numbers in the emergency management sector will place pressure on the paid workforce.

The Skills Plan identifies three key priorities for the public administration and safety industry.

#### Explore pathways into public sector roles, focusing on entry-level pathways

The public administration and safety workforce can better reflect the diversity of the communities that it serves to achieve better outcomes. Industry representatives advocate for increasing diversity at all levels in the workforce, beginning with entry-level roles (e.g. for asylum seekers and refugees).<sup>80</sup> This can directly support the industry in meeting increased workforce demand.

A greater diversity of pathways will support individuals to gain employment within the public administration and safety industry. This need is greatest in the government sector with most workers holding a higher education qualification as their highest level of education.

#### Case Studies | Successful programs to improve racial and cultural diversity in the emergency management sector

**Life Saving Victoria:** Since 2007, approximately 500 culturally and linguistically diverse youth have successfully completed training at Life Saving Victoria to become employed or job-ready as lifeguards, swimming teachers, volunteer surf lifesavers and (more recently) Ambulance Community Officers.<sup>81</sup> The majority of these candidates first engaged with Life Saving Victoria through water safety and other outreach programs. Life Saving Victoria provided mentoring, funding, accredited training and interview support to facilitate entry to the industry and their overall settlement in Australia.<sup>82</sup>

**Victoria Police:** Victoria University created the Victoria Police Diversity Recruitment Program in partnership with Victoria Police and organisations including Africause, Jesuit Social Services, AMES Australia, Maurice Blackburn and Matchworks.<sup>83</sup> The program addresses barriers to employment for African-Australians including language, numeracy, affordability, cultural differences and swimming capability. Its objectives are to build the skills of potential recruits and to increase representation from African and refugee backgrounds in Victoria Police.<sup>84</sup>

**Table 11 | Areas of focus to build the pipeline of workers and retain them in industry**

- Improve workforce diversity at all levels, representative of the wider Victorian community.
- Pathways to employment to support the breadth of workers who could be attracted to the industry.

### **Explore the development and retention of specialist skills to address an immediate need in some roles**

The industry requires its workforce to be skilled and agile so that it can continue to respond to new circumstances, threats and emergencies. The industry can therefore focus on growing skills for workers in all sectors once they enter the industry. The sudden response required by the emergency management sector, for example, creates unique challenges in skills and training, requiring retention of a highly specialised skill set that may be infrequently used, or rapid upskilling of surge workforces.

Specialist skills including in family violence, suicide prevention and cybersecurity are also important to ensure that the workforce has the right capability to match new circumstances. Where possible, the industry can focus on cultivating these skills to remove barriers for entry level roles.

Consultation highlighted some example occupations where these specialist skills could be particularly valuable: emergency services workers in the face of declining volunteer numbers, private security workers and prison officers (given the diverse range of roles they may find themselves in).

**Table 12 | Areas of focus to build the pipeline of workers and retain them in industry**

- More workers are needed with specialist skills in areas of family violence, suicide prevention and cybersecurity.
- The approach to training and skill development needs to account for sudden demand for skills, particularly at the onset of emergencies for surge workforces.

### **Support improved articulation pathways and recognition of prior learning**

Workers in the public administration and safety industry often develop a wide range of skills that are not always recognised, especially if they have significant volunteering experience in emergency services or work in the defence sector. These cohorts would benefit from stronger recognition of their skills to allow them to obtain further qualifications, training and employment. This will assist attraction and retention of workers and reflects the important role that agencies with large volunteer workforces hold in the industry.

**Table 13 | Areas of focus to build the pipeline of workers and retain them in industry**

- Strengthen recognition of prior learning, especially for volunteer workers.
- Develop clearer pathways to obtain further qualifications, training and employment.

## Collaborative response

### There are opportunities to enhance how the education and training response supports the public administration and safety industry

The education and training response has a key role to play in helping to address the three key workforce issues for the industry:

1. Explore pathways to public sector roles, including with entry-level pathways.
2. Explore the development and retention of specialist skills to address an immediate need in some roles.
3. Support improved articulation pathways and recognition of prior learning

There is significant opportunity for the education and training response to support alternative pathways for students from diverse backgrounds. As described above, all sectors within the public administration and safety industry are prioritising entry level recruitment to ensure their workforces are reflective of the communities that they serve and to secure the productivity and innovation benefits that come from a diverse workforce.

There are opportunities for the education and training response to support this objective through innovative pathway programs, support for cadetships apprenticeships or traineeships (including school based) where appropriate and holistic support for students to ensure that they are ready for employment once they graduate. The system could partner with industry to connect students with mentoring, training and recruitment opportunities to smooth their transition into employment. The Course in Policing Recruitment Pathway at Victoria University is an example of this.

There is also an appetite for increased availability of micro-credentials to address priority skilling needs for experienced workers, including digital, family violence, suicide risk and self-harm awareness and disaster resilience, among others. Maintaining a highly skilled workforce is critical to the ability for the sector to respond to the needs of the community it serves, with constantly evolving priorities and needs.

*“Micro-credentials might be able to be delivered to improve surge capacity and the public response [to emergencies].”*

Skills Plan Consultation, March 2022

The education and training response could assist industry in embedding articulation pathways. Improved recognition of prior learning (including what they have learned at work) will be a key enabler of this given the extensive opportunities for on-the-job learning in many sectors. Clearer articulation would enable greater access to further qualifications within and outside the industry. However, low numbers may make it financially prohibitive.

The system could also explore opportunities to tailor the breadth of qualifications to enable pathways into the industry (e.g., including majors or minors that lead to a particular role) or implement initiatives to ensure students are aware of the full range of employment opportunities on completion.

*“Articulation is really important for volunteers and informs skills transfer into other industries.”*

Skills Plan Consultation, March 2022

## Industry and government can be active partners in this response

The education and training response alone cannot deliver on the three workforce priorities to improve how the public administration and safety industry attracts and manages talent. All partners working together to support the training and skilling requirements necessary to meet future demand can deliver a coordinated response.

It is important that strategies to increase the pipeline for workers into the public administration and safety industry do not compromise the integrity of services provided. Many workers in this industry have public powers and responsibilities that necessitate a high level of conduct. This relies on adequate education and training.

Government and industry naturally expect workers entering the field to be appropriately qualified and trained, but regulations can also place strain on the supply of new workers to the industry. For example, there were significant reforms to the private security subsector to ensure a higher level of capability and regulatory compliance in 2021. Despite high demand for security officers and guards, it will take time for new and existing operators to obtain the required licences and memberships through VET pathways. Consideration can be given to where micro-credentials can support this, noting that shorter pathways cannot compromise the intent of recent regulatory reform to ensure a higher level of ethics and capability across the workforce. In either case, strategic workforce planning is crucial to support the intent and effect of regulation.

*“In the private security industry, we have tightened and will continue to tighten regulation, so it is important that we do not go too far the other way.”*

Skills Plan Consultation, March 2022

The public administration and safety industry is committed to increasing diversity in its workforce, beginning with entry level pathways. It is therefore important that those workers are provided with an environment in which they can succeed. This requires employers to ensure that equal opportunity and anti-discrimination strategies are in place and are effective for both paid and volunteer workforces.

Workers from diverse backgrounds can be supported to progress beyond entry-level roles to ensure longer term attraction and retention consistent with government’s ambition for the industry workforce to represent the wider Victorian community. Industry can consider how mentors and peer support workers can assist transitions into the workforce. Successful pilots include the Victoria Police Diversity Recruitment Program and initiatives set up by Life Saving Victoria to increase participation for multicultural communities.

Industry also plays an important role in driving skills acquisition with key employers who are either registered training organisations in their own right, or significant funders of training. For example, Victoria Police facilitates the attainment of a Diploma in Policing as part of its recruitment program, the Victorian State Emergency Service is responsible for training large groups of volunteers, while the Department of Justice and Community Safety Victoria funds training across the justice system, including within prisons. These organisations and others are uniquely placed to provide advice on how education and training aligns with industry needs and can partner with the broader system to give effect to an education and training response that genuinely reflects this balance.

Volunteers continue to play an important role in the industry. Demands and expectations on volunteers have increased in recent years. This has been matched by a greater focus on training, and professionalisation. This may lead to increased workloads and rising administrative and compliance burdens for volunteers, contributing to a further decline in numbers. Industry can continue to focus on how it can best support volunteers in recognition of their different motivations, expectations, and skills.

**Actions for consideration for education, industry, and government**

- Support students from diverse backgrounds into employment with mentoring and training opportunities in partnership with industry.
- Explore flexible education and training models such as micro-credentials to improve surge capacity across the industry.
- Clarify and enable articulation in to VET and higher education pathways based on skills gained through volunteering and employment.
- Explore ways to maintain strong connections with the community to promote the benefits of working in the industry. This could include shadowing and exchange programs.
- Explore alternative pathways for under-represented cohorts to employment in the industry (including cadetships, apprenticeships and traineeships) with support such as mentoring, anti-discrimination and equal opportunity initiatives prior to and during employment.
- Consider support to volunteers through a tailored management approach to deliver positive outcomes for all stakeholders.

## Appendix A: Data methodology

### VSA Employment Model overview

The VSA Employment Model produces estimates of:

- projected employment growth between 2022 and 2025
- projected retirements between 2022 and 2025
- projected total new workers needed between 2022 and 2025.

Table 14 further defines the model outputs and identifies the primary source for each output.

**Table 14 | Employment model outputs**

	Employment growth 2022-25	Retirements 2022-25	New workers needed 2022-25
<b>Definition</b>	Change in the number of workers employed from 2022 to 2025	Workers expected to permanently leave the workforce from 2022 to 2025	Workers needed from 2022 to 2025 to meet demand from growing employment and to replace retirees
<b>Primary source</b>	Benchmarked to the NSC Employment Projections	Derived from retirement rates from Australian Census Longitudinal Dataset	The sum of employment growth and retirements

All outputs are modelled at the occupation, industry and region level:

- occupations are defined by 4-digit occupation unit groups in the Australian and New Zealand Standard Classification of Occupations (ANZSCO)
- industries are defined by 1-digit industry divisions in the Australian and New Zealand Standard Industrial Classification (ANZSIC)
- regions are defined by the nine Regional Partnerships of Victoria as outlined by the Victorian Department of Jobs, Precincts and Regions.

Benchmark data from the NSC give estimates of projected employment growth. Using an approach called iterative proportional fitting, the detailed occupation, industry and region breakdowns are generated by applying the distribution of employment in ABS Census and other data to the benchmark projections.

The model was developed by the VSA with the support of Nous and Deloitte Access Economics (DAE). The sections further below describe how the key outputs were modelled.

The VSA Employment Model gives a best estimate of employment by industry, occupation and region. It provides an indication but does not, and cannot, tell the full story of the region's economy.

### Employment growth, 2022-25

**Source:** VSA and Nous (2022), *modelling of NSC (2022) Employment Projections*

This modelling takes the NSC Employment Projections as the benchmark data for 2022-25 and breaks it down into occupation by industry by region tables.

The benchmark data sources provide ‘control totals’ for occupation, industry and region breakdowns independently. However, they do not provide the interaction between each of the variables. For example, they do not give the breakdown of occupations within industries.

Iterative proportion fitting uses a detailed ‘seed’ data table with the necessary breakdowns from a representative dataset and scales that distribution to control totals in the new dataset. Over many iterations, the seed data is transformed to sum up to the occupation, industry and region control totals.

The seed data comes from the ABS Census 2016. The control totals for occupation and industry come from the NSC's Employment Projections, and the control totals for region come from the NSC's Small Area Labour Markets data. Table 15 describes the inputs in detail.

The modelling results in:

- industry and occupation projections that align with the NSC Employment Projections
- regional data that matches the distribution across NSC Small Area Labour Markets
- industry by occupation by region data tables that approximate the distribution within the ABS Census 2016.

**Table 15 | Data sources used to model employment growth from 2022 to 2025**

Type	Data	Source
Seed	Employment x 3-digit industry (ANZSIC3) x 4-digit occupation (ANZSCO4) x Statistical Area Level 2 (SA2)	ABS, <i>Census of Population and Housing</i> , place of usual residence data
Control total	Employment x SA2	NSC, <i>Small Area Labour Markets</i> , ‘SALM smoothed SA2 Datafiles (ASGS 2016) - March quarter 2022’.
Control total	Employment x ANZSIC1	NSC, <i>Employment Projections, 2020-25</i>
Control total	Employment x ANZSCO4	NSC, <i>Employment Projections, 2021-26</i>

Notes:

1. Following the modelling, SA2 data is aggregated up to Regional Partnership region. Where an SA2 spans multiple regions, the estimates have been apportioned based on geographic area.
2. The NSC industry projection is often not available until some months after the occupation projections. As at May 2022, there were no 2021 to 2026 ANZSIC1 by state forecasts available. The previous release of 2020 to 2025 ANZSIC1 by state forecasts were used and scaled up to match the Australian total employment numbers in the ANZSCO4 forecasts.

## Retirements, 2022-25

**Source:** VSA, Deloitte Access Economics (DAE) and Nous (2022), *Retirement projections 2022-2025*

Retirements are estimated by applying occupation-specific retirement rates to the employment projections.

Using the Australian Census Longitudinal Dataset, an estimate of the size of the labour force aged 50 and over in 2016 was taken and compared to the size of the labour force aged 45 and over in 2011. After adjusting for migration, the gap is an estimate of retirements between 2011 and 2016. The relative age structures of occupations in the Census 2011 were then used to estimate retirements at the detailed occupation level (ANZSCO4).

The outputs were used to estimate an occupation-specific retirement rate, calculated as:

$$\text{Retirement rate} = \text{retirements between periods } t \text{ and } t+1 / \text{employment at } t$$

The retirement rates were applied to the employment projections to estimate the number of retirements between 2022 and 2025 at the region (Regional Partnerships), industry (ANZSIC1) and occupation (ANZSCO4) level.

## **New workers needed, 2022-25**

New workers needed is the simple sum of employment growth and retirements. It is calculated at the region (Regional Partnerships), industry (ANZSIC1) and occupation (ANZSCO4) level.

**New workers needed is an estimate of demand for workers to join an industry, occupation or region.** In this model, demand comes from growth in employment (as business, government and other employers expand their operations) and the need to replace retirees who leave the workforce.<sup>w</sup>

**New workers needed is not an estimate of skills shortage.** In the VSA Employment Model, demand is always met by supply of new workers who enter the work force from study, unemployment, migration, a change in industry or occupation, or other avenues.

This means that the VSA Employment Model is not suitable for identifying current or future skill shortages. The Victorian Skills Plan draws on the National Skills Commission's Skills Priority List and stakeholder feedback to identify skills shortages within industries and across Victoria.

---

<sup>w</sup> This will generally underestimate demand as it does not account for the need to replace workers who leave a job for other reasons, such as switching occupations or migrating out of Victoria.



## Appendix B: Victorian VET pipeline methodology

### Enrolment numbers

#### Sources:

National Centre for Vocational Education Research (NCVER) (2021), Total VET students and courses 2020, available [here](#).

Victorian Department of Education and Training (2022), Funded Course List, available [here](#).

Victorian Department of Education and Training (2022), Funded Skill Set List, available [here](#).

The Victorian VET pipeline table estimates the number of enrolments in each qualification and skill set for the 2020 academic year in Victoria. The NCVER total VET students and courses is used as the dataset. Only courses on the Victorian Funded Course List (FCL) and the Victorian Funded Skill Set List (FSSL) are included.

The following steps were taken to develop the table:

1. Each course was reviewed by IAG members and allocated to **only one** of three main reasons for studying: to prepare for employment; to support current employment (apprenticeship or traineeship); and to progress their career. Each course is then listed under their respective allocation.
- The numbers of students who enrolled in that course in 2020 is then noted in the VET pipeline table.
  - For courses that provide **an apprenticeship and traineeship option and a classroom-based option**, these courses are duplicated twice in the table, with enrolment numbers split across the other two options: the number of apprentice and trainee enrolments are reported under the header 'with employment (apprenticeship and traineeship); the number of classroom-based enrolments is shown under the purpose for completing the classroom-based option (either to prepare for enrolment or to progress their career). An ('<sup>AT</sup>') is noted next to these duplicated classroom-based courses to indicate they are also delivered as an apprenticeship or traineeship.
  - Where industry has provided feedback on the value of qualification or skill set, a ('<sup>Q</sup>') indicates it is valued as a qualification, while a ('<sup>SS</sup>') indicates it is valued as a skill set. A ('<sup>EIR</sup>') indicates it is an Endorsed Industry Requirement and ('<sup>OL</sup>') indicates it is an Occupational Licence. Industry has not provided feedback on all qualifications and where indicated; and each value assignment can be reviewed in the future.
  - Numbers are then totalled in their respective headers above. For the Skills Plan, the number of enrolments 'prior to employment' is a key focus for industry as it indicates how many students are being trained but are not yet employed.

The 2020 enrolment figures are a best estimate of the pipeline of workers for industry to draw on. The 2020 figures were the latest dataset available from the NCVER at the time of developing the Skills Plan and will be updated in future iterations of this document. They intend to provide an indication of the pipeline but do not and cannot tell the full story of workforce supply. Factors such as completion rates and the COVID-19 pandemic during 2020 are also likely to impact the availability of the future workforce.

## Appendix C: Stakeholder engagement process

Stakeholder engagements allowed VSA to test, update and validate the content of the Public Administration and Safety Industry Insight Report. Stakeholders from organisations in government, education and industry were engaged to provide input to the report and the Skills Plan more broadly. Specifically, stakeholders provided insight on economic outlook, workforce and skilling challenges and an education and training response across three rounds of consultations. Engagements guided initial thinking and research, as well as opportunities to test and revise the insights. We would like to thank the following organisations for their participation in the stakeholder engagement process. Table 16 lists the organisations involved.

**Table 16 | Consultation participants**

Organisation
Australasian Fire and Emergency Service Authorities
Australian Services Union
Australian Workers Union
Business Services Industry Advisory Group
Community and Public Sector Union
Department of Environment, Land, Water and Planning
Department of Families, Fairness and Housing
Department of Justice and Community Safety
Fire Rescue Victoria
Life Saving Victoria
Melbourne Polytechnic
Melbourne Water
Municipal Association of Victoria
Public Safety, Public Sector, Corrections, Water and Local Government Industry Advisory Group
United Firefighters Union
Victoria Police
Victoria State Emergency Service
Victorian Public Sector Commission
Wodonga TAFE

## References

- <sup>1</sup> VSA and Nous (2022), modelling of NSC (2022) Employment Projections.
- <sup>2</sup> VSA and Nous (2022), modelling based on Australian Bureau of Statistics, Labour Force, February 2022.
- <sup>3</sup> ABS (February 2022), Labour Force Quarterly, Employment by industry (Victoria), available [here](#).
- <sup>4</sup> VSA and Nous (2022), modelling of NSC (2022) Employment Projections.
- <sup>5</sup> VSA and Nous (2022), modelling based on Australian Bureau of Statistics, Labour Force, February 2022.
- <sup>6</sup> ABS (February 2022), Labour Force Quarterly, Employment by industry (Victoria), available [here](#).
- <sup>7</sup> Victorian Skills Authority (VSA) and Nous (2022), modelling of National Skills Commission (NSC) (2022) Employment Projections.
- <sup>8</sup> VSA, Deloitte Access Economics (DAE) and Nous (2022), Retirement projections 2022-2025.
- <sup>9</sup> VSA and Nous (2022), modelling of NSC (2022) Employment Projections.
- <sup>10</sup> VSA and Nous (2022), modelling based on Australian Bureau of Statistics, Labour Force, February 2022.
- <sup>11</sup> Victorian Skills Authority and Nous 2022, modelling based on Australian Bureau of Statistics, Labour Force, February 2022.
- <sup>12</sup> ABS (February 2022) Labour Force Quarterly, Employment by industry by sex (Victoria), available [here](#).
- <sup>13</sup> ABS (February 2022) Labour Force Quarterly, Employment by industry by age bracket (Victoria) available [here](#).
- <sup>14</sup> Australian Security Industry Association Limited (ASIAL) (2021), Security 2025, available [here](#).
- <sup>15</sup> Victorian Skills Plan consultation, Public safety, public sector, corrections, water and local government IAG – 10 March 2022.
- <sup>16</sup> Victorian State Government (2022), Justice Legislation Amendment (Trial by Judge Alone and Other Matters) Bill 2022, available [here](#).
- <sup>17</sup> Emergency Management Victoria (2022), About Us, available [here](#).
- <sup>18</sup> Emergency Management Victoria (2022), About Us, available [here](#).
- <sup>19</sup> Victoria Police (2022), About Victoria Police, available [here](#).
- <sup>20</sup> ESTA 000 (2022), Our role, available [here](#).
- <sup>21</sup> Country Fire Authority (2022), Your Community, Your CFA, available [here](#).
- <sup>22</sup> Inspector General Emergency Management (2021), Inquiry into the 2019-20 Victorian Fire Season: Phase 2 report, available [here](#).
- <sup>23</sup> See for example, Red Cross, About, 2022 – available [here](#).
- <sup>24</sup> Australian Government Department of Defence (2022), Base Locations, Victoria, available [here](#).
- <sup>25</sup> Australian Government Department of Defence (2022), Base Locations, Victoria, available [here](#).
- <sup>26</sup> Australian Government Department of Defence (2022), Defence Strategic Review, available [here](#).
- <sup>27</sup> Australian Government Department of Defence (2021), 'Bushfire service recognised by Mallacoota', available [here](#).
- <sup>28</sup> Victoria Police (2022), About Victoria Police, available [here](#).
- <sup>29</sup> Corrections Victoria (2022), Corrections Victoria, available [here](#).
- <sup>30</sup> ASIAL (2022), About ASIAL, available [here](#).
- <sup>31</sup> PESTEL Analysis (2015), The PESTEL Framework Explained: 6 Important Factors, available [here](#).
- <sup>32</sup> Australian Industry Skills Commission (AISC) (2022), Government, available [here](#).
- <sup>33</sup> Premier of Victoria (2020), Digital Revolution Making Life Easier for Victorians, available [here](#).
- <sup>34</sup> AISC (2022), Government, available [here](#).
- <sup>35</sup> AISC (2022), Government, available [here](#).
- <sup>36</sup> AISC (2022), Correct and public safety, available [here](#).
- <sup>37</sup> AISC (2022), Correct and public safety, available [here](#).
- <sup>38</sup> Victorian Skills Plan consultation Public safety, public sector, corrections, water and local government IAG – 10 March 2022.
- <sup>39</sup> The Age (2021), Victoria's private security industry set for overhaul, available [here](#).
- <sup>40</sup> The Age (2021), Victoria's private security industry set for overhaul, available [here](#).
- <sup>41</sup> Inspector-General for Emergency Management, Inquiry into the 2019-20 Victorian fire season Phase 1 (2020) and Phase 2 (2021), available [here](#).
- <sup>42</sup> Volunteering Victoria (2020), State of Volunteering Report, available [here](#).
- <sup>43</sup> Australian Government Department of Defence (2022), Our Value Proposition – Defence Science and Technology Group, available [here](#).
- <sup>44</sup> Hellyer, M (2021), Defence budget climbs to \$44.6 billion, available [here](#).
- <sup>45</sup> Burgass, K (2020), Coronavirus: Billion-dollar boost for Army Reserve, Defence Industry, available [here](#).
- <sup>46</sup> Prime Minister of Australia (2022), Budget 2022-23 delivers record investment in defence and supporting our veterans, available [here](#).
- <sup>47</sup> Prime Minister of Australia (2022), Media Release; Budget 2022-2023 Deliver Record Investment Defence and Supporting Our Veterans, available [here](#).
- <sup>48</sup> Victoria State Government Department of Environment, Land, Water and Planning (2019), Victoria in Future 2019 – Population Projections 2016 to 2056, available [here](#).
- <sup>49</sup> AISC (2022), Correct and public safety, available [here](#).
- <sup>50</sup> VSA and Nous (2022), modelling of NSC (2022) Employment Projections.
- <sup>51</sup> VSA and Nous (2022), modelling based on Australian Bureau of Statistics, Labour Force, February 2022.
- <sup>52</sup> ABS (February 2022), Labour Force Quarterly, Employment by industry (Victoria), available [here](#).
- <sup>53</sup> VSA and Nous (2022), modelling of NSC (2022) Employment Projections.
- <sup>54</sup> VSA and Nous (2022), modelling based on Australian Bureau of Statistics, Labour Force, February 2022.
- <sup>55</sup> ABS (February 2022), Labour Force Quarterly, Employment by industry (Victoria), available [here](#).
- <sup>56</sup> VSA and Nous (2022), modelling of NSC (2022) Employment Projections. Numbers have been rounded to the nearest 500.
- <sup>57</sup> VSA and Nous (2022), modelling of NSC (2022) Employment Projections. Numbers have been rounded to the nearest 500.
- <sup>58</sup> VSA, DAE, Nous (2022), Retirement projections 2022-2025
- <sup>59</sup> Municipal Association of Victoria (2018), Local Government Workforce and Future Skills Report, available [here](#).
- <sup>60</sup> Volunteering Victoria (2020), State of Volunteering Report, available [here](#).
- <sup>61</sup> Volunteering Victoria (2020), State of Volunteering Report, available [here](#).
- <sup>62</sup> VSA and Nous (2022), modelling of NSC (2022) Employment Projections.
- <sup>63</sup> VSA and Nous (2022), modelling of NSC (2022) Employment Projections.
- <sup>64</sup> VSA and Nous (2022), modelling based on Australian Bureau of Statistics, Labour Force, February 2022.
- <sup>65</sup> NSC (2022), What are emerging occupations? available [here](#).
- <sup>66</sup> NSC (2022), What are emerging occupations? available [here](#).
- <sup>67</sup> NSC (2021), Skills Priority List, available [here](#).
- <sup>68</sup> Victorian Skills Plan consultation (2022), Sector forum
- <sup>69</sup> National Skills Commission (2022), Skills Priority List 2022, available [here](#).
- <sup>70</sup> Department of Education and Training and VSA (2021), Employment Forecasts; Department of Defence Australian Government, 2020 Defence Strategic Update, 2020; Municipal Association of Victoria (2018), *Local Government Workforce and Future Skills Report*; Volunteering Victoria (2020), State of Volunteering Report; Australian Government (2021), *APS Workforce Strategy 2025*.
- <sup>71</sup> NCVER (2021), Total VET students and courses 2020, available [here](#).

---

<sup>72</sup> Australian Government Department of Education, Skills and Employment (2021), Selected Higher Education Statistics – 2019 Student data, available [here](#).

<sup>73</sup> ABS Census (2016), Education attainment by industry (Victoria).

<sup>74</sup> Victorian State Government Department of Education and Training (2022), Funded course list, available [here](#).

<sup>75</sup> Victorian State Government Department of Education and Training (2022), Funded Skill Set List, available [here](#).

<sup>76</sup> ABS Census (2016), Education attainment by industry (Victoria).

<sup>77</sup> NSC (2021), Skills Priority List, available [here](#).

<sup>78</sup> Australian Government Department of Education, Skills and Employment (2021), Selected Higher Education Statistics – 2019 Student data, available [here](#).

<sup>79</sup> Australian Government, Department of Education, Skills and Employment (2021), Selected Higher Education Statistics - 2019 Student data, available [here](#).

<sup>80</sup> Victorian Public Sector Commission (2022), Refugee and asylum seeker internship program, available [here](#).

<sup>81</sup> Victorian Skills Plan consultation with Life Saving Victoria, 17 March 2022.

<sup>82</sup> Life Saving Victoria (2020), Multicultural, Water Safety, Settlement and Social Cohesion, available [here](#).

<sup>83</sup> Victoria University, Victoria Police Diversity Recruitment Program – available [here](#).

<sup>84</sup> Victoria University, Victoria Police Diversity Recruitment Program – available [here](#).