

The logo for VAGO, consisting of the letters 'VAGO' in a bold, blue, sans-serif font.

Victorian Auditor-General's Office

A photograph of a construction site at dusk or dawn. The sky is a mix of orange and blue. In the foreground, a large tower crane stands prominently. In the background, the steel framework of a building is visible, with another tower crane. A large, semi-transparent blue shape is overlaid on the right side of the image, containing the title and subtitle text.

Major Projects Performance

September 2021

Independent assurance report to Parliament
2021–22:05

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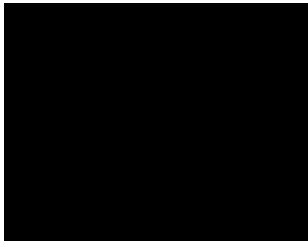
The Hon Nazih Elasmr MLC
President
Legislative Council
Parliament House
Melbourne

The Hon Colin Brooks MP
Speaker
Legislative Assembly
Parliament House
Melbourne

Dear Presiding Officers

Under the provisions of the *Audit Act 1994*, I transmit my report *Major Projects Performance*.

Yours faithfully



Andrew Greaves
Auditor-General

22 September 2021

The Victorian Auditor-General's Office acknowledges Australian Aboriginal peoples as the traditional custodians of the land throughout Victoria. We pay our respect to all Aboriginal communities, their continuing culture and to Elders past, present and emerging.

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Review snapshot

Does public sector reporting of major capital projects contain relevant and sufficient information to enable Parliament to understand project performance against approved scope, cost, time and benefit expectations?

Why this review is important

As at 1 July 2021, Victoria has \$144 billion invested in public sector capital works. This includes transport and water infrastructure, hospitals, schools and other community facilities.

Given the size and importance of this investment, Parliament and the community expect to know how projects are performing against their scope, time, cost and benefit expectations.

Who we examined

We examined the Department of Treasury and Finance (DTF), including the Office of Projects Victoria (OPV). We also surveyed 16 entities responsible for 110 major projects.

What we examined

We performed a limited assurance review engagement under section 20 of the *Audit Act 1994* and assessed if:

- the major projects data that DTF and OPV collect and report is timely, relevant, sufficient and fairly presented
- DTF and public sector entities' reporting on major projects' performance to the government and Parliament is clear and objective.

What we concluded

DTF and public sector entities' reporting to Parliament and the public about major projects' performance is not timely, relevant or sufficient.

DTF collects useful project data from entities and provides clear performance reports about some major projects to the government. DTF does not use this data to holistically report on major projects to the Parliament and the public.

Public data on major projects focuses on costs and expected completion dates. It does not usually report on a project's expected scope and benefits or the impact a performance variance might have on project outcomes.

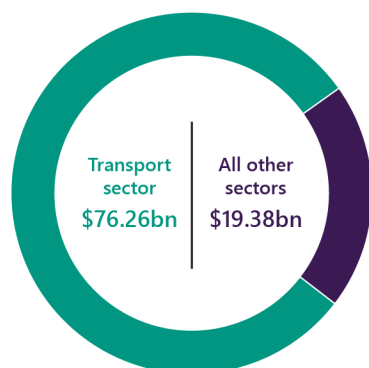
Our Major Projects Performance dashboard demonstrates how DTF could enable Parliament and the community to better understand how entities are managing Victoria's major projects.

Key facts

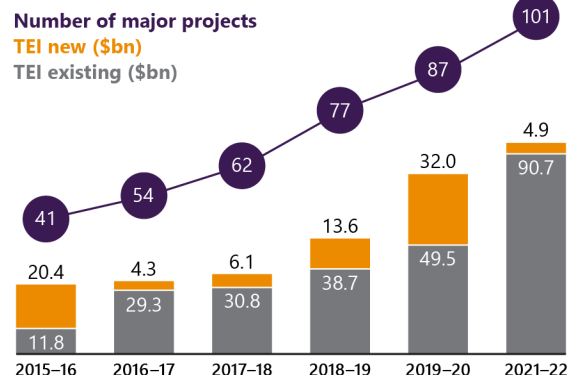
Our review
(2019–20 and 2020–21)



Total estimated investment (TEI)—
transport versus all other sectors (2021–22)



Number of major projects and TEI
(2015–16 to 2021–22)*



Note: * No major projects data is available for 2020–21 because *Budget Paper No. 4: State Capital Program (BP4)* was not published in 2020–21.
Source: VAGO; DTF's 2021–22 BP4.

What we found and recommend

We consulted with the reviewed entities and considered their views when reaching our conclusions. The entities' full responses are in Appendix A.

Public reporting of major projects performance

DTF and public sector entities' reporting to Parliament and the public about major projects' performance is not clear and objective. In particular, there is no easily accessible or timely public reporting that gives a holistic understanding of major projects performance across the public sector.

Budget Paper No. 4: State Capital Program

The only document that supplies public information about the performance of all major projects is the BP4.

DTF advised us that although the BP4 gives some information about capital projects' time and cost targets, they see its main purpose as an estimates document within the context of the wider state budget.

Up until 2018–19, DTF did not publish any data for completed projects, other than the project name, in the BP4. While the 2021–22 BP4 is more detailed than it was four years ago, it does not have enough information to provide Parliament or the public with an adequate understanding of major project performance.

Annual reports

Public sector entities include some project information in their annual reports.

However, entities do not report on this information until after a project is practically complete and also after it is financially complete.

As a result, users of this information can only see how a project performed months or years after a newly built or upgraded asset is finished.

The **BP4** provides an overview of the new investments that general government sector entities and public non-financial corporations will deliver in the coming financial year. It also includes capital programs and projects currently in progress and lists existing projects that are, or are expected to be, completed in the current or coming financial year.

A capital project is **practically complete** when most or all of the construction of a project is finished. After practical completion, projects move into the **financial completion** phase which is when an asset may be operational before any disputes, warranties and defects have been resolved with construction contractors. After resolution, a project is financially complete.

Project performance reporting limitations

In summary, we found that:

Public reporting on major projects is limited by ...	because ...
data presentation inconsistencies	DTF and entities inconsistently present project information, such as project names, in the BP4 from year to year.
a lack of clarity about who is responsible for each project	the BP4 lists a project against the entity that will ultimately 'own' the asset instead of the entity that is delivering it. For example, the Major Transport Infrastructure Authority (MTIA) or the Department of Transport (DoT) are delivering all the major projects that DTF lists against VicTrack.
a lack of information about projects' performance against their targets	<p>DTF and entities' reporting focuses on a project's spending to date and not against budget or key deliverables.</p> <p>DTF and entities' reporting on completion dates does not highlight the size of any variance between the original and most recent estimated completion date if a change occurs.</p>
a lack of timely reporting	the BP4 is released only once each year and entities' annual reports only include projects that they have completed by 30 June of the relevant financial year. By the time an entity's annual report raises historical issues around a project's schedule or cost, Parliament is left with no time to review its progress and propose corrective actions.
a lack of reporting about expected benefits	DTF and entities' reporting has no meaningful data on what benefits entities expect their projects will achieve after completion.
a lack of explanation of changes	<p>DTF and entities' reporting does not include reasons for variations, such as changes to a project's:</p> <ul style="list-style-type: none"> • TEI • estimated completion date • scope • timing. <p>The BP4 includes some variance explanations in footnotes. However, this information:</p> <ul style="list-style-type: none"> • is generated by entities and not verified by DTF • is not always descriptive enough to understand the change or variance • sometimes combines scope, time and cost change information without explaining the relationship between them • does not quantify the impact of changes against a previous baseline measure, such as previously approved cost or completion date.
data errors	<p>in our review of the BP4s from 2014–15 to 2021–22 we found:</p> <ul style="list-style-type: none"> • some illogical expected delivery dates, with some before the commencement dates

Public reporting on major projects is limited by ...

because ...

- duplicate mentions of the same \$185 million project within different entities in 2021–22
- an incorrect disclosure of funding in 2017–18, with \$135 million for the Victorian Heart Hospital not disclosed and a correction made in the next financial year.

lack of sufficient disclosure or explanation of project details

in the BP4s from 2014–15 to 2021–22:

- highly aggregated capital works program listings do not disclose separate major projects within a program
- water entities do not separately disclose data for their major projects
- there are confusing data changes between completion dates for new and existing projects and completed projects. New and existing projects disclose a practical completion date and label it as an 'estimated completion date'. Once an entity completes a project's construction, the completion date disclosed in the BP4 changes from a practical completion date to a financial completion date. DTF does not clearly explain this data distinction in the BP4.

a lack of clarity about the type of investments

it is unclear from information in the BP4 whether an investment is:

- a standalone project
- a program of works, sometimes over multiple years, with a TEI that changes from year to year
- an asset or land acquisition fund
- a capital grants program
- a minor projects' fund.

missing major project investments

the BP4 does not fully disclose:

- some transport sector major projects worth more than \$100 million, particularly many sub-packages that are being delivered as part of the two level-crossing removal programs (worth an aggregate \$13.31 billion)
- sub-projects within the health, housing and education sectors' infrastructure and maintenance funds, despite the fact that the individual value of these sub-projects is often more than \$100 million
- the reasons for the removal of the Melbourne Strategic Assessment program from the 2021–22 BP4. In the 2019–20 BP4, the program was allocated a TEI of \$1.42 billion, including capital expenditure, land acquisition and some wider environment-related spending. DTF told us that due to legislative changes to how the program is funded, it will not be listed in future BP4s and future spending will be reported by the Department of Environment, Land, Water and Planning.
- six water infrastructure projects with sufficient value to require the Treasurer's approval, were not disclosed in the 2019–20 BP4. DTF advised us that these types of water sector projects should be disclosed. Appendix F contains more information about this and other issues we observed with water sector major projects.

Reporting of major projects performance to the government

In contrast to public sector entities' reporting to Parliament and the public about major projects performance, DTF and OPV's reporting to the government is timely and sufficient to allow Cabinet ministers to understand how projects are performing.

The Major Projects Performance Report

DTF collates project data that public sector entities upload to a central computer system every quarter. OPV uses this data to produce the Major Projects Performance Report (MPPR) for the Cabinet each quarter. However, this data and documentation is not publicly available.

Before submitting the MPPR to the Cabinet, OPV coordinates and finalises it with DTF and the Department of Premier and Cabinet (DPC). This quarterly reporting gives the government more opportunities to identify a risk or variance to a project and take timely corrective actions.

Information in the MPPR

The MPPR provides frank information to the government about all High Value High Risk (HVHR) projects that are underway. It contains:

- information on time and cost performance over the last quarter
- known or emerging delivery risks
- an overall status assessment for each project using a red, amber or green 'traffic light' rating. The overall rating is a joint judgement by DPC, DTF and OPV, which is informed by the delivery entity's self-assessment of a project's scope, time and cost performance.
- historical ratings and trends over time
- commentary and analysis that gives more information about the context for major projects, such as size of construction industry contractors' exposure to public sector projects and impact of the coronavirus (COVID-19) pandemic on construction productivity.

Opportunities to improve the MPPR

While the MPPR provides timely and sufficient information about major projects' performance, we identified some areas for improvement:

- It tracks a project's overall rating over time, but it does not track material scope changes and monitor the impact they might have on cost, time and expected benefits.
- It shows the costs of some larger capital programs at a highly aggregated level. While it reports on the status of some sub-projects, it does not specifically assess targeted versus actual expenditure for sub-projects or project packages.
- It analyses a project's cost estimates to date and how much was spent during each project phase. However, there is little focus on what 'earned value' has been achieved to date, or by key project milestones.
- There is a lack of detailed cost variance analysis for sub-projects within large capital programs.

HVHR projects are identified as **high value and/or high risk** by DTF or by the government. They are subject to more rigorous scrutiny and approval processes than other projects. HVHR projects undergo extra assurance checks and the full Gateway Review process to increase the likelihood that they will meet their timelines and budgets and deliver intended benefits, unless specifically exempted. Not all projects with a TEI of \$100 million or more are designated as HVHR.

Earned value is the estimated monetary value of the work done, compared against the amount spent on the work.

- Its cost analysis does not focus on the materiality of overspending or variances. For example, it does not quantify a variance's impact on an entity's capital project list, a sector's overall capital projects portfolio and the wider state budget. Focusing on materiality would mean that a 20 per cent variance for a billion-dollar project should receive more scrutiny and analytical focus than a 20 per cent variance for a \$100 million project.
- It provides some information on how many post-delivery benefit assessments are scheduled or have been done by entities. However, it does not summarise any key themes or learnings from them.
- It does not systematically analyse the underlying causes of scope changes and the impact these have on a project's originally expected benefits.

Data systems, quality and disclosure

DTF performs limited quality assurance checks of the quarterly project data that entities upload. Its assurance processes primarily focus on procedural sign-offs.

DTF has limited resources to verify data sources, and because entities upload their own data, DTF relies on them to be candid about project issues as they arise. There is also a risk that entities' data and self-assessment ratings are not free from bias.

State Resource Information Management System

DTF uses the State Resource Information Management System (SRIMS) database to record the state's financial performance data, including capital projects data.

SRIMS was designed 10 years ago to accommodate DTF's processes at the time. Previous limitations within the SRIMS's asset management module (known as ASSAM) meant that the system's logged-on sessions could generate a 'time out' interruption for users, who then needed to re-type or re-upload any unsaved data.

To address various system instabilities, DTF turned off SRIMS's ability to show historical data to users. This means that after an entity uploads and finalises its capital expenditure information, their previous quarter's data in ASSAM is no longer visible.

DTF analysts also lose visibility of the previous quarter's data, and there is no reporting function to extract and analyse the archived data.

To work around this issue, DTF analysts rely on manual offline methods, such as exporting data to spreadsheets on a regular basis, so they can compare project data between quarters or perform retrospective analysis.

DTF told us that it is working with its technology contractor to move SRIMS to a cloud-based system. This should allow DTF to back up and store historical information in ASSAM. However, DTF also told us that it may not be possible to report this data in a meaningful way because it is difficult to link data in the system archive.

Cloud based systems use a network of remote servers hosted on the internet to store, manage, and process data, rather than a local server or personal computer.

Progress against our previous recommendations about the reporting of project performance

2016 Managing and Reporting on the Performance and Cost of Capital Projects audit

In our 2016 audit *Managing and Reporting on the Performance and Cost of Capital Projects*, we found that there was:

... limited transparency on the status of major capital projects across the Victorian public sector, which means that Parliament and the public are restricted in their ability to access information on the progress of each project against cost and time targets.

Recommendation

In 2016, we recommended:

That DTF and DPC advise government on how best to establish a public reporting mechanism that provides relevant project status information on capital projects costing \$10 million or more, planned and actual costs, timelines, governance arrangements and the extent to which benefits are realised.

At the time of the report, DPC noted the recommendation and DTF accepted it in principle. During this review, we confirmed that DTF briefed the Treasurer on options for a project performance reporting system in August 2018.

Action taken by DTF

DTF offered the Treasurer two options to implement our recommendation, which were:

- a 'basic' reporting tool with limited or no interactivity that would compile data that is already in the public domain
- a 'detailed' option that would replicate the transparency and reporting functionality available in the Victorian Government Information Technology (IT) Dashboard and collect data from entities on a monthly or quarterly basis. DTF noted the difficulty of collecting data and identified a need to build direct links into public entities' finance systems, which it estimated would cost \$800 000 to \$1.5 million at the time.

The Treasurer chose the basic option and referred the matter to a Cabinet subcommittee to confirm how it would be implemented. DTF and OPV told us that that this Cabinet process led to OPV publishing the Victorian Major Projects Pipeline on its website in 2020.

We analysed the data in OPV's pipeline and found that it does not meet the intent of our original recommendation. This is because the pipeline only has 69 of the 101 major capital projects we identified in the current BP4 data and does not provide specific cost and time information.

Apart from the 2021–22 BP4, we are not aware of any other publicly available report or tool that collates data about major public sector (non-IT) projects. We are also not

aware of any public document or data source that meets the 'basic' option that DTF recommended to the Treasurer.

Collecting and sharing lessons learnt about major projects

In previous audits, we have noted that entities do not usually collect and share meaningful 'lessons learnt' data about major projects across the public sector. Our previous audits have also noted that the Gateway Review processes' Gate 6 Benefits Realisation reviews have not been conducted as often as the other stages.

Since 2017, a Gate 6 review has been a compulsory requirement for all HVHR projects. However, DTF and OPV told us that they do not systematically collate or analyse lessons from these reviews for recurring themes and learnings to inform the broader public sector.

The MPPR does track if entities have performed Gate 6 reviews and Project Assurance Reviews (PARs). However, we did not see evidence that DTF or OPV have collated, analysed or shared project learnings across the public sector. OPV has recently scoped a project to collect lessons and themes from PARs to help address this gap.

DTF undertakes **Gateway Reviews** at six key decision points of a project.

The six reviews, or 'gates', are:

1. concept and feasibility
2. business case
3. readiness for market
4. tender decision
5. readiness for service
6. benefits realisation.

Gateway Reviews provide confidential advice to senior responsible officers about a project's progress and likelihood of delivery success.

All HVHR projects are required to undergo the Gateway Review process.

Interactive dashboards developed for this review

As part of the work for this review, we developed an interactive dashboard showing historical BP4 data, which collates seven years of published BP4 data from 2014–15 to 2021–22 for major projects worth \$100 million or more.

We also created another interactive dashboard that shows various aspects of selected major projects' performance and analyses sectors and entities' performance against scope, cost and time parameters. We developed this performance dashboard from a survey we sent to 16 entities with 110 projects worth \$100 million or more in 2019–20 and 2020–21.

Chapter 2 provides more information about these dashboards. It also discusses our key observations from the performance dashboard.

Recommendations

We recommend that:

Department of Treasury and Finance and Office of Projects Victoria

1. develop and maintain a public-facing major projects performance dashboard that:
 - has at least the same data fields and update frequency as the Victorian Government IT dashboard
 - shows scope, cost and time variance analysis against previously reported results
 - identifies applicable project delivery entities in addition to the agencies identified in the budget papers (see Section 1.4)

2. support implementation of recommendation 1, amend applicable guidance, including the *Resource Management Framework* (RMF), to collect a more comprehensive dataset from all entities that gives a more holistic view of project performance (see Section 1.3)

Response

Partially accepted by:

Department of Treasury and Finance and Office of Projects Victoria

Accepted by:

Department of Treasury and Finance and Office of Projects Victoria

We recommend that:

Response

3. develop a repository of lessons learnt from major capital projects, including analyses of key themes from Gateway reviews, benefits realisation studies and Project Assurance Reviews, and make this resource available to project teams across the public sector (See What we found and recommend, and Section 1.2)

Accepted by:
Department of Treasury and Finance and Office of Projects Victoria

4. improve the consistency of disclosure of public sector entities' major projects by requiring:

Not accepted by:
Department of Treasury and Finance and Office of Projects Victoria

- entities with aggregated capital programs to separately disclose any individual packages and sub-projects that are worth more than \$100 million
- public non-financial corporations, such as water entities, to disclose and report on any sub-projects worth more than \$100 million within their capital investment programs (see What we found and recommend, Section 1.4, and Appendix E and F)

5. improve data quality and their capacity to analyse capital project trends by:

Accepted by:
Department of Treasury and Finance and Office of Projects Victoria

- defining and implementing data quality assurance practices so entities align data formats and streamline data input processes to achieve more consistent reporting
 - improving data integrity and updating the State Resource Information Management System's asset module to report historical project data for easier trend and comparative analysis of projects over multiple quarters (see What we found and recommend, and Sections 1.3 and 1.4).
-

1. Context

This chapter provides essential background information about:

- Major projects in Victoria
 - Reporting and oversight roles and responsibilities
 - DTF and OPV's authority to collect data
 - Major projects reporting
-

1.1 Major projects in Victoria

Major projects deliver important community assets and services and contribute to the state's economic prosperity.

For this assurance review, we defined a major project as any project:

- with a TEI of \$100 million or more
- that has been announced, in progress, or completed from 2014–15 to 2020–21.

We excluded IT projects from this review because we have examined and reported on these types of projects in detail over the last decade. DPC also publishes and maintains the Victorian Government IT Dashboard and discloses many aspects of these projects' performance each quarter.

Project disclosures in the state budget papers

Since 1998 (except for 2020), the Victorian Government has published a BP4 (or equivalent) as part of the state budget papers.

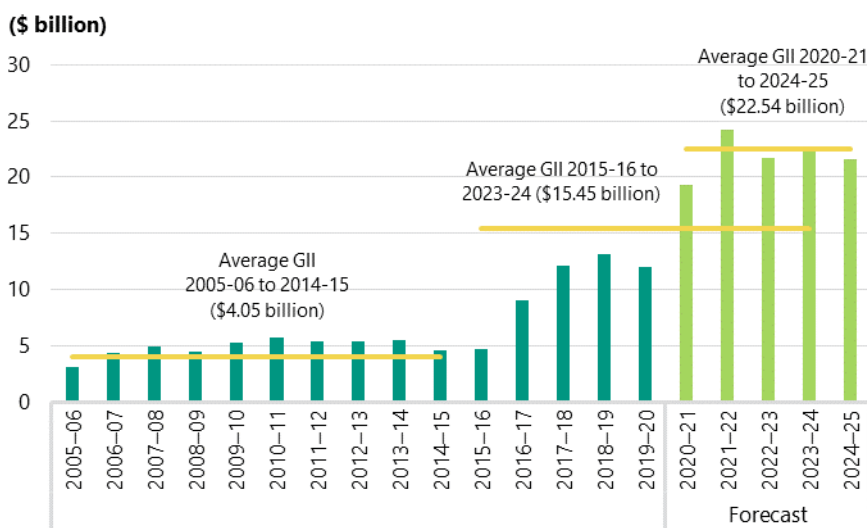
Different BP4s over the years have included different contextual information and case studies covering topics such as public–private partnerships, the HVHR project assurance model, and in the most recent 2021–22 BP4, an outline of cost and time variances for a selection of major projects.

Infrastructure investment in the 2021–22 BP4

The most recent BP4 shows that \$7.10 billion was added to the state's existing public infrastructure investment program in the 2021–22 financial year. As at 1 July 2021, the government has committed a total capital expenditure of \$144.24 billion for 1 589 new and existing projects.

As Figure 1A shows, the average government annual infrastructure investment is estimated at \$15.45 billion a year between 2015–16 and 2023–24. This is approximately four times more than what it was in the nine years prior to 2015–16, when the average investment was \$4.05 billion a year.

FIGURE 1A: Average government infrastructure investment (GII) from 2005–06 to 2024–25



Source: 2021–22 BP4.

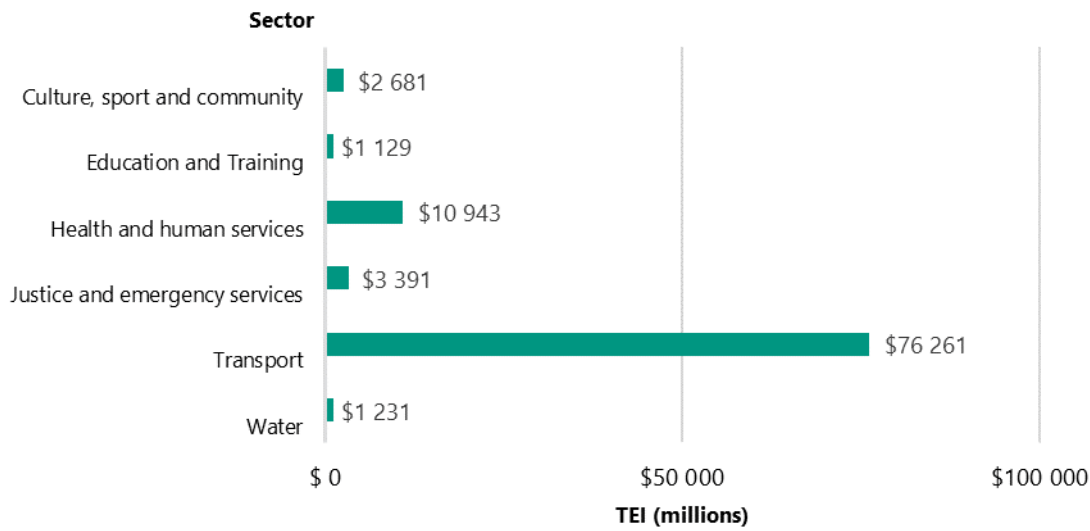
Of the 1 589 capital investments announced or in progress in Victoria, 101 of them meet our major project definition. The TEI for these major projects in 2021–22 is \$95.64 billion, or 66 per cent of the total capital expenditure allocated in the 2021–22 budget.

Some of the major projects listed in the BP4 are aggregated. While some appear to be one project, they can contain multiple smaller-value projects.

See Appendix E for a list of 59 aggregated projects we identified from the 2019–20 and 2020–21 Budget papers.

Figure 1B shows the TEI of major projects in the 2021–22 state budget by sector.

FIGURE 1B: TEI of major projects in 2021–22 state budget by sector



Note: Sector labels align with the *Victorian Infrastructure Plan*, published in October 2017.

Source: VAGO analysis of the 2021–22 BP4.

1.2 Reporting and oversight roles and responsibilities

This section describes the roles and responsibilities of various public sector bodies in overseeing and reporting on major project performance.

Parliament and the executive government

The Victorian Constitution and other key legislation, such as the *Financial Management Act 1994*, define the executive government's spending powers. They also describe the roles of Parliament, the Auditor-General and the Governor to authorise, check and formalise public sector spending respectively.

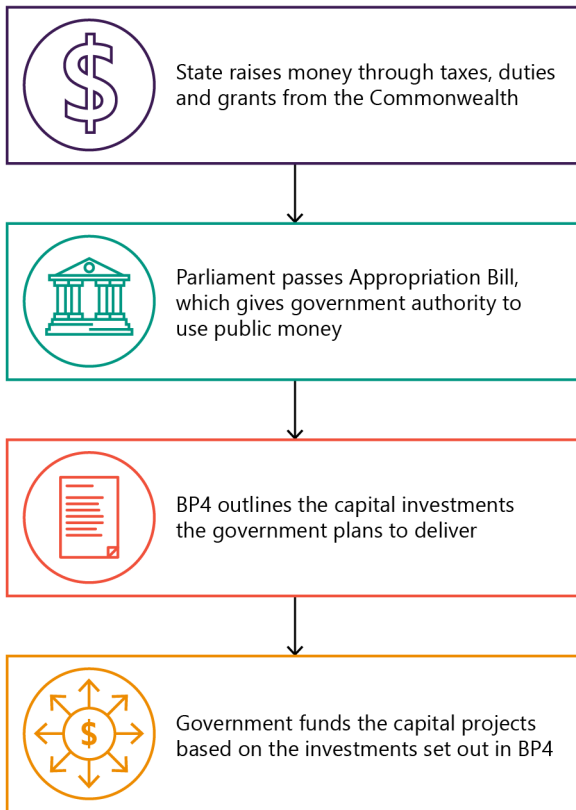
Authorising spending

Under the Constitution, Parliament authorises public sector spending. The executive government confirms this spending through its budget processes. It formalises this by submitting annual appropriation bills to Parliament for voting and approval.

Figure 1C shows Parliament and the executive government's process for authorising capital spending.

The **executive government** is the government of the day. It is made up of the Premier, ministers and the Governor.

FIGURE 1C: **Process for authorising capital spending**



Source: VAGO based on information from DTF's RMF.

Reviewing spending and performance

In addition to authorising spending, Parliament and its committees, particularly the Public Accounts and Estimates Committee (PAEC), have a key role in reviewing the performance of budget items, including capital investments.

PAEC can examine ministers and public sector officials at budget estimates hearings and seek data from entities. In the past, PAEC has specifically focused on major projects and their performance, including a substantive report it published in 2012 called *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects*.

In recent years, other parliamentary committees have taken an interest in major infrastructure projects. For example, the Legislative Council's Economy and Infrastructure Committee published a series of reports on infrastructure projects between 2015 and 2018.

Department of Treasury and Finance

DTF manages Victoria's budget and finance processes. It also advises the government about economic policy and strategy.

DTF's roles that are relevant to this review include:

- preparing the state budget papers, including the BP4
- giving assurance and advice to the government on the delivery of major capital projects
- advising the government about major transactions and contracts, such as public-private partnerships
- coordinating the Gateway Review process.

Office of Projects Victoria

OPV is an administrative office within DTF. It was established in 2016 to support the effective delivery of major projects and improve the skills and delivery capability of the public sector, industry and the infrastructure workforce.

OPV's roles relevant to this review include:

- preparing a quarterly MPPR for the Cabinet about HVHR projects
- maintaining the Victorian Major Projects Pipeline portal on its website
- conducting PARs for selected projects or programs either before a key decision point or milestone or at the request of the Treasurer, or a department or entity's responsible minister.

PARs complement Gateway Reviews. They provide advice to the government, responsible department and/or agency and DTF on a project or program's objectives, governance and readiness.

General government sector

General government sector entities make up the bulk of the public sector. Under the government's financial reporting framework, they must report specified cost and time data about all their capital projects to DTF.

For HVHR projects, general government sector entities also report qualitative data to DTF and OPV on emerging delivery risks and conduct self-assessments about their projects' statuses.

Public non-financial corporations

Public non-financial corporations include water corporations, VicTrack and various trusts and bodies in the events, culture, housing and sporting sectors. These entities usually get their funding from selling goods and services.

A public non-financial corporation routinely reports on its capital projects to its relevant minister, portfolio department and DTF.

1.3 DTF and OPV's authority to collect data

DTF and OPV do not have an explicit legislative mandate to collect and inspect entities' project performance data.

However, they can collect this data if it is specified within the compulsory financial management instructions that DTF issue to entities under ministerial and legislative authority.

DTF and OPV collate entities' data to report quarterly asset investment to the Cabinet. They also use this information each financial year to draft the BP4 for the Treasurer who then confirms it for tabling in the Parliament.

Resource Management Framework

DTF's RMF includes mandatory requirements and guidance for entities on a range of financial management topics. It specifically describes the expenditure data that DTF collects from entities about their capital projects.

All Victorian Government departments must follow the RMF as required by the *Standing Directions 2018* under the *Financial Management Act 1994*.

According to the latest version of the RMF (applicable from 1 July 2021) an entity's accountable officer must submit the following information to DTF each quarter for each project that their entity is responsible for:

- asset project name
- funding source
- phasing of quarterly expenditure
- key milestone dates
- any other relevant information, such as the type of work underway.

Under the RMF, the accountable officer must also provide information on:

- any issues relating to the overall progress of specific major asset projects in terms of project delivery and spending
- the progress and delivery of all projects in their entity (as listed in the BP4), as well as any projects being delivered by a department on behalf of its portfolio entities
- the source of money used for the asset investment, including a description of internal and external funding.

Other capital investment reporting requirements

DTF also requires government business enterprises (such as water entities) to provide data on their capital programs and seek the Treasurer's endorsement for capital project business cases.

This requirement is defined by cost thresholds specified in the *Corporate Planning and Performance Reporting Requirements: Government Business Enterprises*, which DTF published in August 2020.

1.4 Major projects reporting

BP4

The BP4 is the most comprehensive source of publicly available information about the state's overall capital investment program.

The BP4 provides the following information for each project:

- title
- responsible entity
- location
- TEI
- estimated expenditure for the financial year covered by the BP4
- total remaining expenditure
- footnotes about changes to its scope, funding or timing since the previous financial year.

The BP4 also outlines:

- estimated completion dates for projects underway or newly funded
- financial completion dates for projects that have achieved practical completion.

The impact of COVID-19 on the BP4

In 2020, the government did not publish a BP4 due to the impact of the COVID-19 pandemic on public sector entities. The pandemic also delayed the 2020–21 Budget by six months.

In 2020–21, collated public reporting on the state's capital investment program was limited to a single chapter in the *2020–21 Budget Paper No. 2: Strategy and Outlook* (BP2). In previous years, the BP4 outlined expenditure for all projects funded by the state. However, the 2020–21 BP2 chapter only gave aggregated cost outcomes for new and existing projects.

The 2021–22 BP4 did not disclose project-specific performance data for any projects funded in the 2020–21 financial year, except for a footnote that stated they were funded in the previous budget year.

Major Projects Performance Report

In addition to the major projects data that is publicly available in the BP4, the Cabinet receives detailed quarterly assessments of HVHR projects through the MPPR.

The MPPR shows entities' self-assessment ratings and commentary on issues relating to their projects' costs, time and scopes. The report also covers any emerging risks and the general progress of each project.

Using this information, OPV, DTF and DPC work with delivery entities to determine each project's overall risk rating using a traffic light system.

Figure 1D shows the assessment guide that OPV, DTF and DPC use to decide a project's overall risk rating.

FIGURE 1D: **The MPPR project risk rating assessment legend (December 2021)**

Rating	Definition
Red	Issues and risks will significantly affect the current approved project scope, timing and/or budget. Further government action may be needed to manage the identified risks.
Amber	Risks emerging that may affect project delivery. Identified risks and issues are being managed and/or strategies being developed to address these issues without significantly affecting the current approved project scope, timing or budget. Effectiveness of risk mitigation strategies should be closely monitored, but no further government action recommended at this time.
Green	Project on track for delivery on schedule and within the current approved budget. Identified risks and issues are being managed appropriately, with no further government action recommended at this time.

Source: OPV and the MPPR.

OPV highlights in the MPPR any projects that are rated as 'red' and gives qualitative details about their progress. If necessary, OPV makes suggestions to the Cabinet on how to mitigate the key issues that are contributing to the red rating.

OPV also uses the HVHR project data that it routinely collects to visualise:

- trends in project risk ratings over time
- the timeliness of entities in confirming and conducting PARs
- the amount of state investment committed to a project compared to a project's phases
- exposure of key contractors to state projects
- project ratings from different procurement models.

For this review, we adapted the MPPR risk rating model and applied it to the 110 projects we selected for our survey.

Appendix D contains the full list of projects in this review and their self-assessment ratings, using our adapted traffic light rating model.

Public sector entity annual reporting on projects

Entity annual reports supply some information about project time and cost, including variances for capital projects that were completed within the relevant financial year. These annual reports do not give details on any new and existing projects and instead refer to the BP4 for this type of information.

According to DTF's guidance on the expected content of annual reports, for projects worth more than \$10 million, entities should report the information shown in Figure 1E.

FIGURE 1E: **Project data expected in entities' annual reports**

Data type	Projects that reached practical completion in the reporting year	Projects that reached financial completion in the reporting year*
Original estimated completion date	✓	
Latest approved completion date	✓	
Practical completion date	✓	✓
Financial completion date		✓
Explanations for any date changes (showing the root cause/s for each change)	✓	
Original approved TEI	✓	✓
Latest approved TEI	✓	✓
Actual total investment	✓	✓
Variance between the latest approved TEI and the actual cost	✓	✓
Explanations for changes in total investment (showing the root cause/s for each change)	✓	✓

Note: *Projects that reached financial completion after practical completion and after all warranties, defects and liabilities have been finalised.

Source: DTF's 2020–21 Model Report for Victorian Government Departments.

Annual reports must be tabled in Parliament no later than four months after the end of the financial year. Entities must report any variances (increase or decrease) greater than 5 per cent or more than \$50 million for projects that have been reported as practically complete in a previous reporting period.

2. Dashboards and analysis

This chapter discusses:

- Our interactive dashboard showing BP4 data
 - Our major projects performance dashboard (2019–20 and 2020–21)
 - Material scope changes
 - Overall cost (TEI) variances
 - Time (estimated completion date) variances
 - Business cases, investment logic maps and benefits management plans
 - Impact of the COVID-19 on major projects
 - Procurement models used by major projects
-

2.1 Our interactive dashboard showing BP4 data

Given the lack of easily accessible historical information about major projects, we collated publicly available data and developed an interactive dashboard. We published it on our website in April 2021 and refreshed it in July 2021 using data from the most recent 2021–22 state budget.

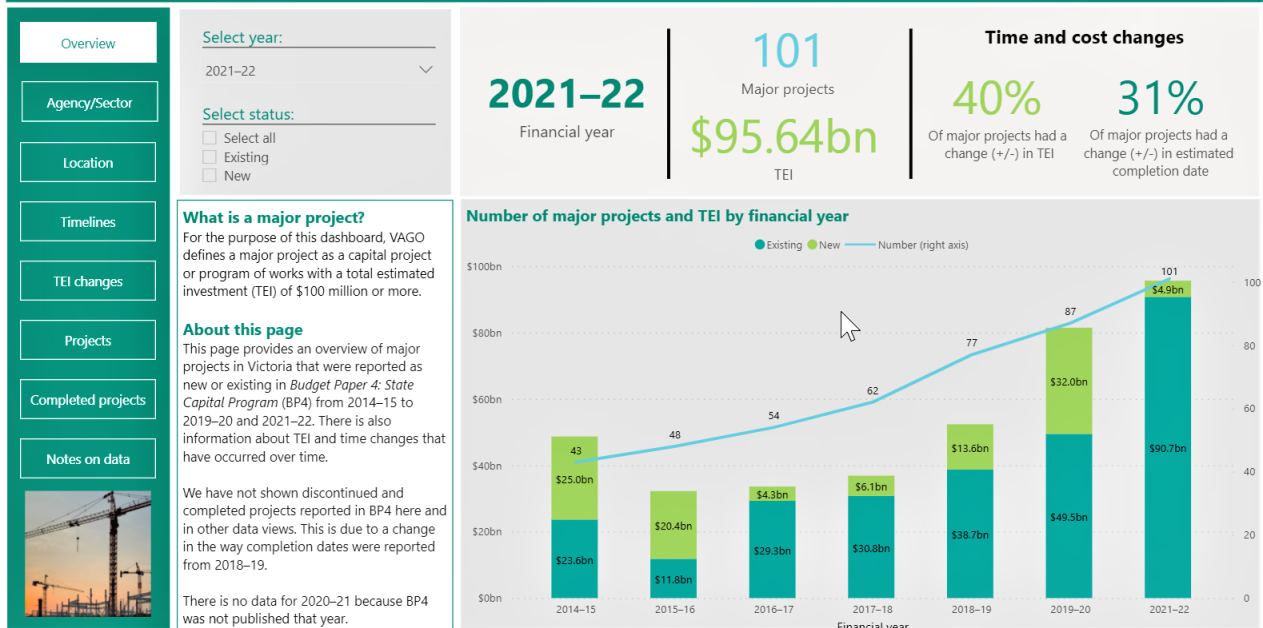
The dashboard collates seven years of published BP4 data from 2014–15 to 2021–22 for major projects worth \$100 million or more. It does not include data from 2020–21 because there was no BP4 published in that year. Any projects funded in that budget year are included in the 2021–22 dataset.

We sorted and cleansed the BP4 data to account for year-to-year changes in project and entity names. We also removed other reporting inconsistencies to present projects more clearly.

Figure 2A shows the entry page for our searchable and interactive dashboard of historical BP4 data.

FIGURE 2A: Entry screen for our BP4 dashboard

Financial years 2014–15 to 2021–22 (not including 2020–21)
Major projects (> \$100 million): Overview



Source: VAGO, published at <https://www.audit.vic.gov.au/dashboards/major-projects-performance>.

2.2 Our major projects performance dashboard (2019–20 and 2020–21)

Due to the limited amount of project data in the public domain, we could not rely on the BP4 to assess major projects' actual performance.

To address this gap, we sent a detailed questionnaire about project performance to 16 public sector entities with capital projects worth \$100 million or more.

Seven of the 16 entities we surveyed only had one major project. They are listed in Appendix C.

We identified capital projects costing \$100 million or more in the 2019–20 BP4 and the *2020–21 Budget Paper No.3: Service Delivery* before confirming with entities whether the investments we identified were stand-alone projects or programs of smaller valued projects. Appendix C details how we selected the major projects.

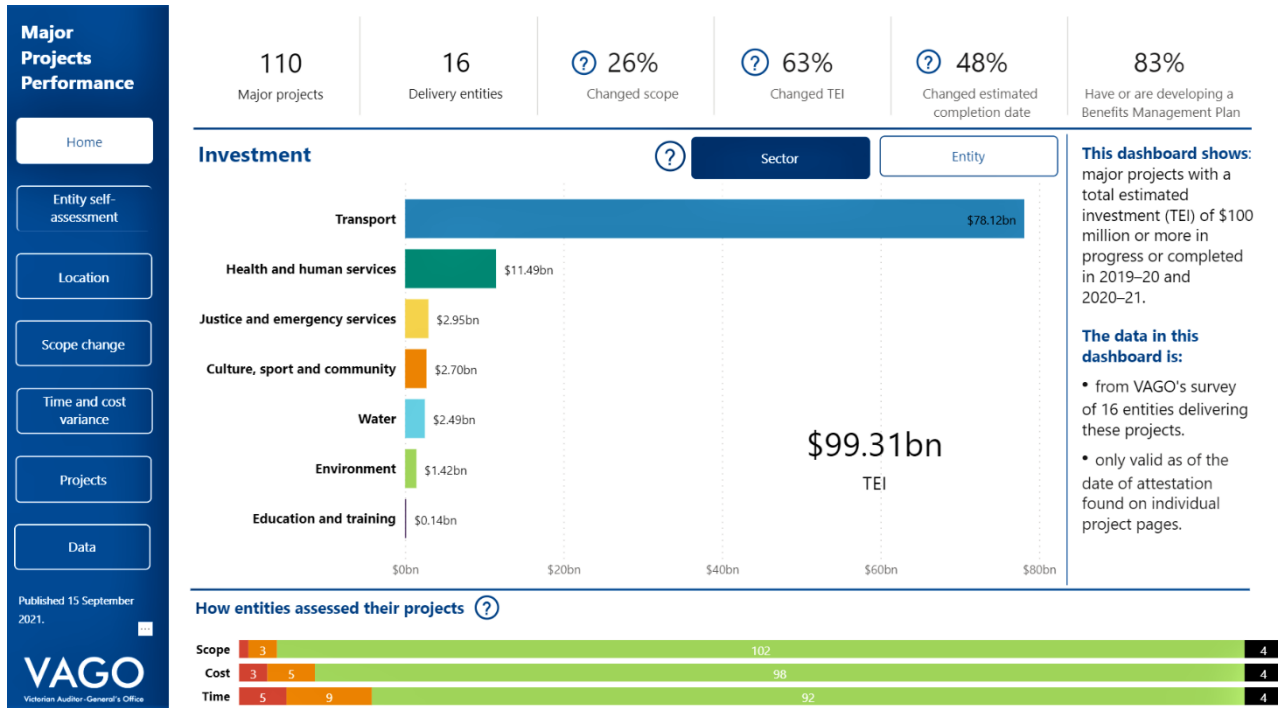
We used the attested survey data to develop an interactive and searchable dashboard. We included 110 major projects that are collectively worth \$99.31 billion. All relevant data from the surveys that we used in this review and the projects' performance dashboard is at Appendix G.

We required an accountable officer such as the Secretary of a Department or their delegate, such as the Chief Financial Officer, to formally **attest** that the data provided to us within the survey is accurate and approved.

The dashboard shows various aspects of performance for the selected major projects. It also presents sectors' and entities' performance against scope, cost and time parameters. It does not specifically analyse the reasons or causes for time and cost variance.

Figure 2B shows the dashboard's entry page.

FIGURE 2B: Entry screen for our major projects performance dashboard

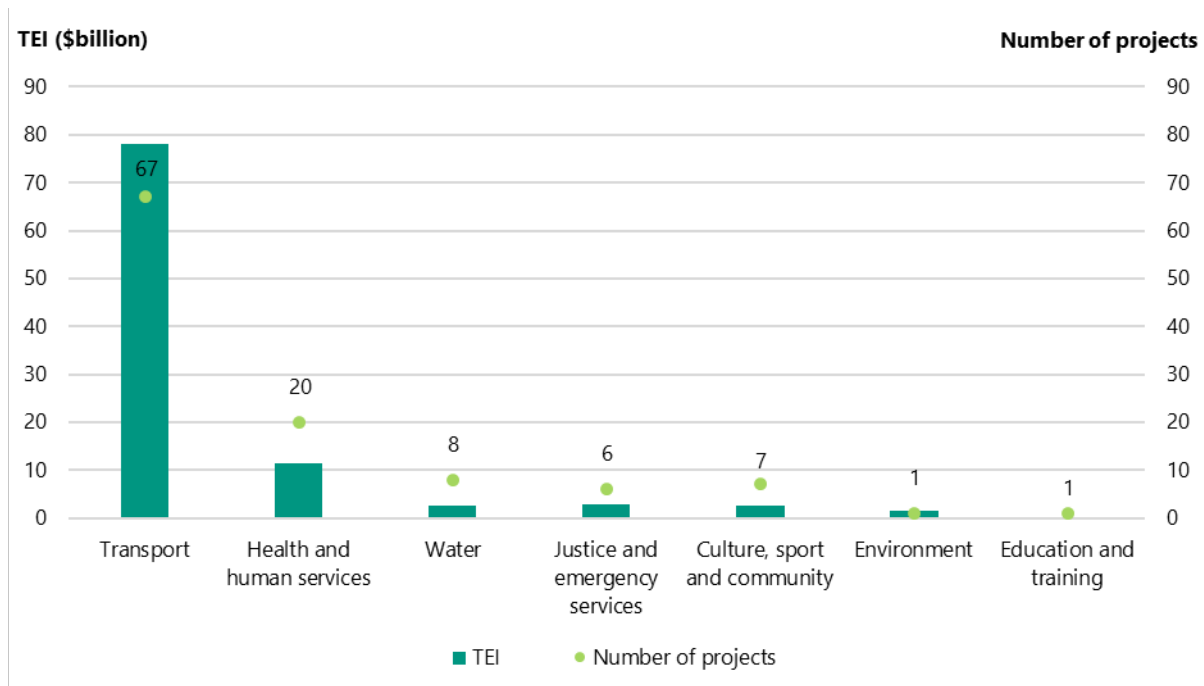


Source: VAGO, published at <https://www.audit.vic.gov.au/report/major-projects-performance>.

The total value of the projects included in this dashboard is equivalent to 69 per cent of the state's total capital budget, as reported in the 2021–22 BP4.

Figure 2C shows that investment in transport sector major projects (\$78.12 billion) is seven times higher than the health and human services sector (\$11.49 billion) and 26 times higher than the justice and emergency services sector (\$2.95 billion).

FIGURE 2C: TEI and number of the surveyed major projects by sector



Note: This shows a sector-level overview of the major projects (disclosed in the 2019–20 or 2020–21 budget papers) that we surveyed.
Source: VAGO.

Overview of major projects performance against scope, cost, time and benefits management plan expectations

We analysed scope, cost, and time changes for the projects we selected for the dashboard, using entities’ responses to our survey. We also assessed which projects had described their expected benefits by developing a Benefits Management Plan. Figure 2D shows an overall snapshot of our findings.

FIGURE 2D: Changes to selected major projects scopes, costs, time and benefits



Source: VAGO.

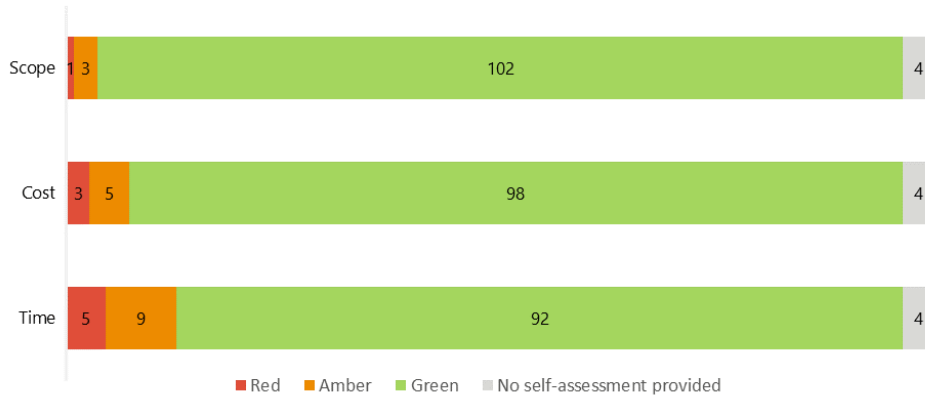
Entities' self-assessments

Our survey requested entities to self-assess their projects’ performance against their scope, time and cost expectations at the time they submitted their data to us.

The assessment criteria we used is similar to the self-assessments that DTF requires in the HVHR process. The full assessment criteria we used is in Appendix D.

Overall, most entities self-assessed their projects as within scope, on budget and on time, which Figure 2E shows. The biggest project challenge faced by entities is time (estimated completion date), followed by cost (TEI). We saw very few concerns about scope in the survey responses.

FIGURE 2E: Agencies' self-assessment ratings for their projects' scope, cost and time



Note: The full rating definitions we used are in Appendix D. The four grey results are for projects where MTIA advised it was unable to provide ratings due to the relevant projects being in the development stage.

Source: VAGO.

Appendix D contains a full list of the projects in our survey and dashboard and the relevant entities' self-assessment ratings.

2.3 Material scope changes

Of the major projects in this review, 29 projects, or 26.4 per cent, have had a material scope change. The total TEI for these 29 projects is \$44.83 billion. Based on the survey data, the value of disclosed scope changes is \$2.8 billion. We discuss the TEI increases for all projects later in this section.

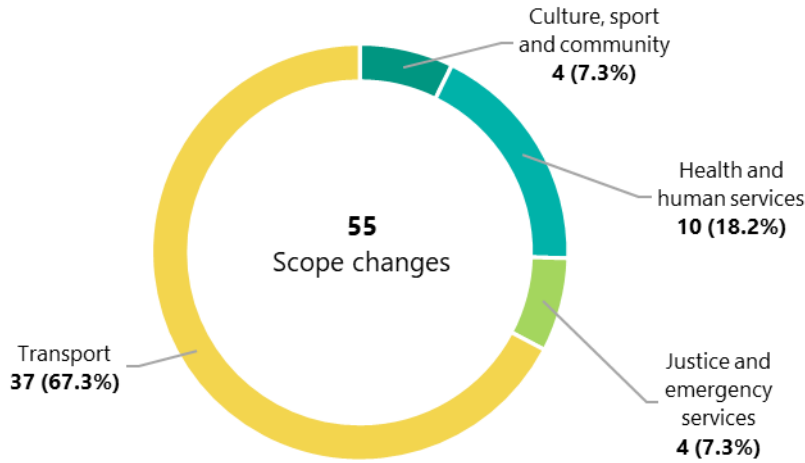
Our analysis does not include any data on cost or time changes for two of DoT's major projects that reported material scope changes. DoT did not provide information on the impact to time and/or cost for to the following projects:

- Bayside Rail Improvement Project (Frankston - Werribee Line)
- Keeping Victorians Moving (a \$174.63 million traffic congestion package).

Figure 2F shows the number of material scope changes in each sector.

For this review, a **material scope change** is a major change to a project's scope, time or cost that requires approval by a minister or the government.

FIGURE 2F: **Number of material scope changes by sector**



Note: There were no material scope changes for the education and training or environment sectors. Due to a rounding error, percentages do not sum to 100 per cent.

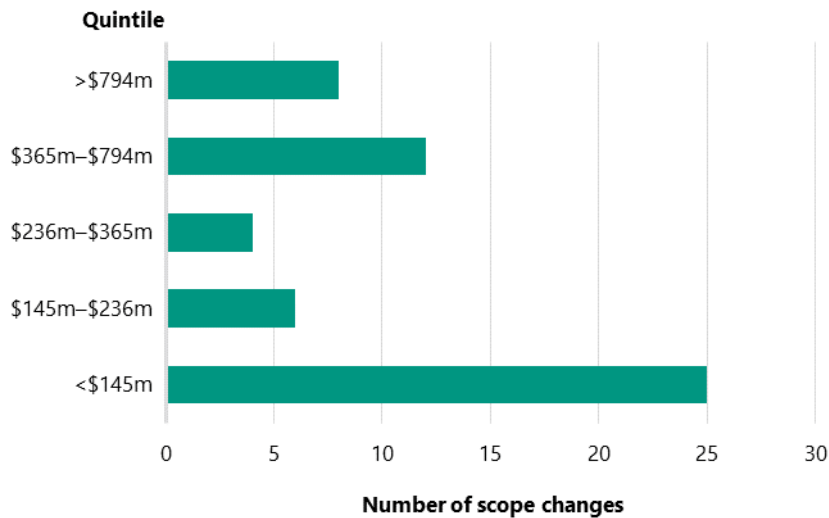
Source: VAGO.

We also analysed the distribution of scope changes against five project value bands (defined by quintiles of the total number of projects), which is shown in Figure 2G.

The scope changes are mostly concentrated in the two lower value quintiles (\$100 million to \$236 million) with 31 changes. The two higher-value quintiles (\$365 million and above) have 20 scope changes.

A **quintile** is one of five values that divides a range of data into five equal parts. Each part is worth 20 per cent of the population.

FIGURE 2G: **Number of material scope changes within project value bands**



Source: VAGO.

Figure 2H shows the eight projects from the dashboard that had two or more material scope changes impacting their time and/or cost estimates. Only two projects disclosed more than two material scope changes.

FIGURE 2H: **Major projects with two or more material scope changes**

Scope changes	Sector	Entity	Project	TEI (millions)	Estimated completion date
16	Transport	DoT	Bayside Rail Improvement Project (Frankston – Werribee Line)	\$115.00	Qtr* 2 2019–20
7	Transport	DoT	Flinders Street Station Redevelopment	\$100.00	Qtr 1 2020–21
2	Transport	MTIA	North East Link	\$15 441.00	Qtr 4 2026–27
2	Transport	MTIA	Metro Tunnel Project	\$12 255.14	Qtr 2 2025–26
2	Justice and emergency services	DJCS**	Men’s Prison System Capacity - Prison Infill Expansion Program	\$798.19	Qtr 4 2022–23
2	Transport	MTIA	Mernda rail extension project (Mernda)	\$575.00	Qtr 1 2018–19
2	Health and human services	DH**	Ballarat Base Hospital Redevelopment	\$541.60	Qtr 2 2027–28
2	Culture, sport and community	DJPR**	Melbourne Exhibition Centre Stage 2 Development (Southbank)	\$205.00	Qtr 1 2018–19

* Quarter (Qtr)

** Department of Jobs, Precincts and Regions (DJPR), Department of Health (DH), Department of Justice and Community Safety (DJCS).

Source: VAGO.

Figure 2I shows the 11 projects that showed scope changes leading to significant variances to estimated completion dates, and therefore increases in elapsed time.

FIGURE 21: **Projects with time increases due to scope changes**

Sector	Delivery agency	Project	Current estimated completion date	Number of scope changes	TEI (millions)	Time added (quarters)
Transport	DoT	Murray Basin Rail Project	Qtr 2 2023–24	1	\$794.41	20 (5 yrs*)
Health and human services	DH	Joan Kirner Women's & Children's Hospital Sunshine	Qtr 4 2020–21	1	\$280.17	9 (2 yrs 1 qtr)
Transport	DoT	Car Parks for Commuters Program	Qtr 2 2024–25	1	\$485.62	6 (1 yr 2 qtrs)
Transport	DoT	Flinders Street Station Redevelopment	Qtr 1 2020–21	7	\$100.00	5 (1 yr 1 qtr)
Health and human services	DH	Ballarat Base Hospital Redevelopment	Qtr 2 2027–28	2	\$541.60	5 (1 yr 1 qtr)
Health and human services	DFFH**	Carlton redevelopment - 246 units/sites	Qtr 4 2022–23	1	\$146.57	4 (1 yr)
Health and human services	DH	Goulburn Valley Health Redevelopment Stage 1	Qtr 1 2022–23	1	\$229.30	4 (1 yr)
Health and human services	DFFH	Public Housing Renewal Program (PHRP) – North Melbourne, Northcote and Preston sites	Qtr 4 2026–27	1	\$173.00	3
Justice and emergency services	DJCS	Cherry Creek Youth Justice Project	Qtr 1 2022–23	1	\$419.65	3
Health and human services	DH	Northern Hospital Inpatient Expansion Stage 2	Qtr 1 2021–22	1	\$162.67	2
Justice and emergency services	DJCS	Chisholm Road Prison Project	Qtr 4 2021–22	1	\$1 118.53	2

* Yr(s) = Year(s)

** Department of Families, Fairness and Housing (DFFH).

Source: VAGO.

The projects in Figure 21 account for 63 extra quarters (15 yrs 3 qtrs), or 28.8 per cent, of the overall 219 quarters (54 yrs 3 qtrs) of added elapsed time recorded for all projects. We discuss overall project time additions later in this section.

Figure 21 also shows that three projects in the transport sector added 31 quarters (7 yrs 3 qtrs) to their estimated completion date, due to nine material scope changes. The health and human services sector has a further six projects that added 27 quarters (6 yrs 3 qtrs) of elapsed time, due to seven scope changes.

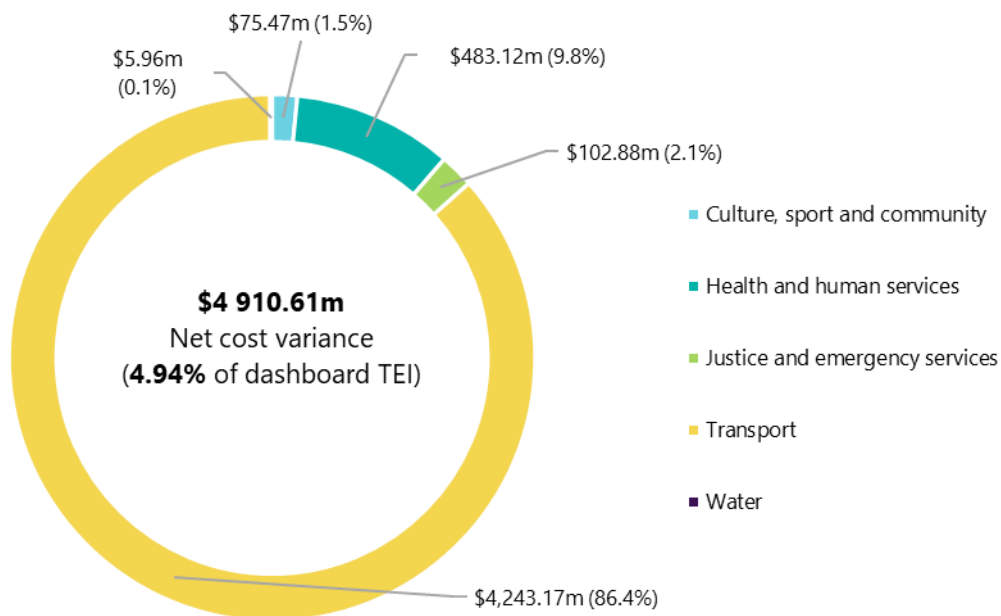
The most significant time addition to a specific project due to scope change was for the Murray Basin Rail Project in the transport sector, which added 20 quarters (5 yrs) to its estimated completion date, due to one scope change.

2.4 Overall cost (TEI) variances

We found that the TEI for 69 of the 110 projects, or 62.7 per cent, has varied (increased or decreased) compared to their first publicly announced estimated budget.

Figure 2J shows the size of net project TEI variances, which is the sum of TEI increases less the sum of TEI decreases, by sector.

FIGURE 2J: **Size of projects' net TEI variances (TEI increases less decreases) by sector (\$ millions)**



Note: Due to a rounding error, percentages don't sum to 100 per cent.
Source: VAGO.

Within the dashboard, 42 projects, or 38.2 per cent, had a TEI increase compared to their initial disclosed TEI. There are 27 projects, or 24.6 per cent, that show a TEI decrease.

Overall, the total value of all TEI increases within the 110 projects was \$5.95 billion, which is six times more than the value of TEI decreases (\$1.04 million).

Figure 2K shows the projects with a TEI variance of more than +/-10 per cent. Only three of the 25 projects with a TEI decrease show more than 10 per cent.

FIGURE 2K: **Projects with a TEI variance of more than +/-10 per cent**

Agency	Project	Original TEI (millions)	Current TEI (millions)	Variance (millions)	TEI variance (%)
DoT	Car Parks for Commuters Program^	\$150.00	\$485.62	\$335.62	223.8
MTIA	Warrnambool Line Upgrade (regional various) Stage 1	\$114.00	\$348.00	\$234.00	205.3
DoT	City Loop Fire and Safety Upgrade Stage 2 and Intruder Alarm	\$132.86	\$382.09	\$249.23	187.6
MTIA	Streamlining Hoddle Street (Richmond)	\$56.21	\$112.53	\$56.32	100.2
DH	Royal Victorian Eye & Ear Hospital Planning & Redevelopment	\$165.00	\$317.81	\$152.81	92.6
DoT	Murray Basin Rail Project	\$426.50	\$794.41	\$367.91	86.3
MTIA	Mordialloc Freeway Upgrade (Braeside)	\$300.00	\$522.25	\$222.25	74.1
DoT	Hall Road Upgrade Skye	\$169.00	\$282.50	\$113.50	67.2
DJCS	Chisholm Road Prison Project^^	\$689.45	\$1 118.53	\$429.08	62.2
MTIA	Monash Freeway Upgrade – Stage 2	\$684.42	\$1 037.85	\$353.43	51.6
MTIA	Princes Highway East – Traralgon to Sale Duplication (regional various)	\$175.00	\$259.07	\$84.07	48
MTIA	O’Herns Road Upgrade (Epping)	\$77.75	\$113.72	\$35.97	46.3
DJCS	Cherry Creek Youth Justice Project	\$288.70	\$419.65	\$130.95	45.4
DH	Joan Kirner Women’s & Children’s Hospital Sunshine	\$200.00	\$280.17	\$80.17	40.1
DH	Goulburn Valley Health Redevelopment Stage 1	\$168.53	\$229.30	\$60.76	36.1
DH	Casey Hospital Expansion	\$106.30	\$139.78	\$33.48	31.5
MTIA	Western Highway duplication – Ballarat to Stawell (regional various)	\$505.00	\$656.36	\$151.36	30
MTIA	Echuca-Moama Bridge (Echuca)	\$134.90	\$173.25	\$38.35	28.4
MTIA	Frankston Line stabling (Kananook)	\$187.40	\$239.98	\$52.58	28.1
DH	Geelong Hospital - Major Upgrade	\$93.27	\$118.17	\$24.90	26.7
MTIA	Plenty Road Upgrade Stage 2	\$114.21	\$144.19	\$29.98	26.3
MTIA	Gippsland Line Upgrade Stage 1 (regional various)	\$435.00	\$531.36	\$96.36	22.2
MTIA	Ballarat Line Upgrade Stage 1	\$516.72	\$631.12	\$114.40	22.1
DJPR	Melbourne Exhibition Centre Stage 2 Development (Southbank)	\$168.70	\$205.00	\$36.30	21.5
DH	Ballarat Base Hospital Redevelopment	\$461.60	\$541.60	\$80.00	17.3

Agency	Project	Original TEI (millions)	Current TEI (millions)	Variance (millions)	TEI variance (%)
DoT	Bayside Rail Improvement Project (Frankston – Werribee Line)	\$100.00	\$115.00	\$15.00	15
MTIA	Barwon Heads Road upgrade (Barwon Heads)	\$318.30	\$365.00	\$46.70	14.7
MTIA	Drysdale Bypass (Drysdale)	\$102.56	\$117.38	\$14.82	14.5
MTIA	Chandler Highway Upgrade (Alphington, Kew)	\$110.00	\$125.42	\$15.42	14
MTIA	Level Crossing Removal Program (metropolitan various)	\$6 000.00	\$6 759.02	\$759.02	12.7
MTIA	Metro Tunnel Project	\$10 900.00	\$12 255.14	\$1 355.14	12.4
MTIA	Thompsons Road duplication (Lyndhurst)	\$148.30	\$123.24	\$25.06	-16.9
DoT	More Regional Trains Regional Network Development Plan	\$287.89	\$224.15	\$63.74	-22.1
DJCS	Men's Prison System Capacity - Prison Infill Expansion Program ^{^^^}	\$1 255.37	\$798.19	\$457.18	-36.4

[^]Note from the BP4 2021–22: The Car Parks for Commuter and Train station car parking programs have been consolidated into one initiative as this will be managed as a single car parking program to streamline reporting and maximise program efficiencies.

^{^^}Note from the BP4 2021–22: TEI has increased compared with the 2019–20 Budget due to \$429.08 million being provided from the Men's Prison System Capacity (statewide) to deliver a further 548 beds.

^{^^^}Note from the BP4 2021–22: TEI has reduced by \$450.70 million compared with the 2019–20 Budget due to \$429.08 million provided to the Chisholm Road prison project (non-metro various) and \$21.62 million for a revised scope of works.

Source: VAGO.

Cost (TEI) decreases

According to the BP4 data, many TEI decreases were due to new accounting standards, which have been intermittently applied to various projects in different financial years. These new standards have required some entities to reclassify various capital amounts to operating expenditure, which is not included in a project's publicly disclosed TEI.

Other projects have had funds reallocated to a different project. For example, in 2021–22, DJCS's Men's Prison System Capacity - Prison Infill Expansion Program, had \$429.08 million moved to the Chisholm Road Prison Project.

Cost (TEI) increases

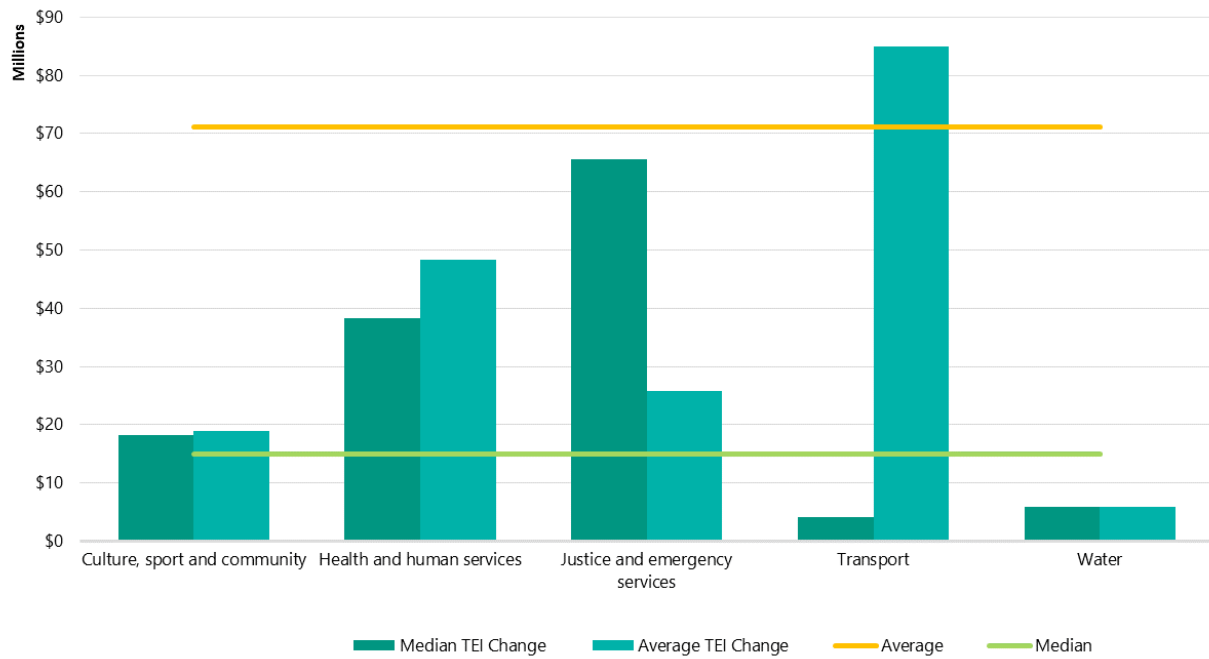
Forty-two projects, or 38.2 per cent, contributed to \$5.95 billion in total TEI increases, which is equivalent to 6 per cent of the dashboard's TEI of \$99.31 billion.

Across all projects with a TEI variance, either positive or negative, on average there was a TEI increase of \$71.17 million, with a median increase of \$15 million.

Figure 2L shows the average and median percentage of TEI increases by sector.

The **median** is the middle point in a sorted, ascending or descending, list of numbers.

FIGURE 2L: Average and median variance for projects with cost (TEI) additions and reductions by sector



Note: As the water sector has only one project with a variance there is no difference between average and median.
Source: VAGO.

Notably, the \$5.95 billion in overall TEI increases is much larger than the \$2.80 billion in added cost that entities said were due to material scope changes. This indicates that factors other than material scope changes are driving budget amendments across all sectors from when a project’s initial cost is announced to its most recently disclosed TEI.

2.5 Time (estimated completion date) variances

The dashboard shows that 53 major projects, or 48.2 per cent, have had a time variance (increase or decrease) compared to their first announced estimated completion date.

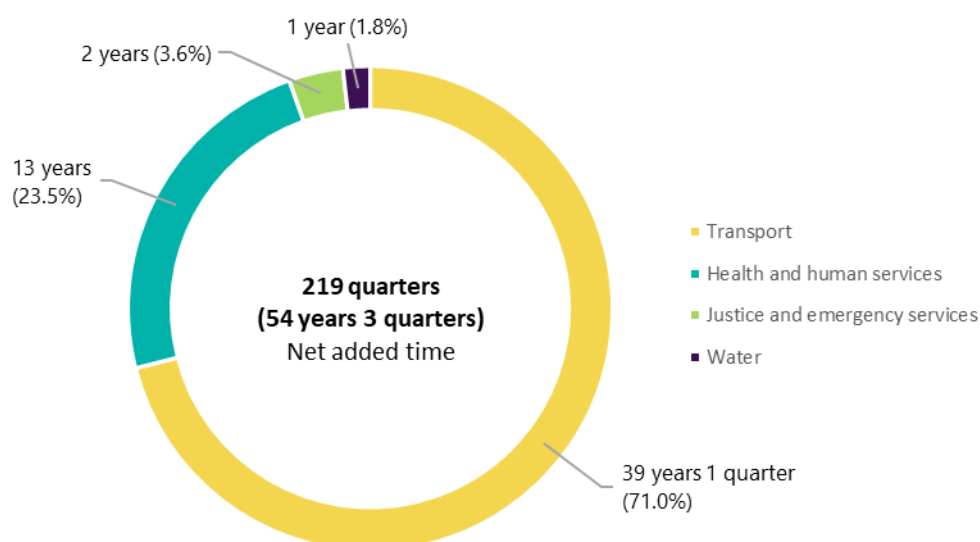
There were 37 (33.6 per cent) major projects that added at least one quarter to their original estimated completion dates. The average extra elapsed time was 7.14 quarters. The smallest time addition we saw was one quarter, and the largest was 23 quarters (5 yrs 3 qtrs).

Sixteen projects have brought forward their estimated completion dates. On average, these projects estimate they will finish 2.81 quarters ahead of their original estimate.

Figure 2M shows the net added time (estimated completion date) variances. That is, the sum of the completion date additions less the sum of completion date reductions, by sector.

When taken together, the projects in the Culture, sport and community sector finished two quarters before their estimated completion dates which means we cannot show this sector in the figure.

FIGURE 2M: Time (estimated completion date) variances by sector, in quarters



Note: Culture, sport and community sector projects have a net variance of 2 quarters of reduced elapsed time, which cannot display here. Due to rounding error, percentages do not sum to 100%

Source: VAGO.

Figure 2N shows the data for the five projects with the most added time. Figure 2O shows the eight projects that estimate they will finish the furthest ahead of their first disclosed estimated completion date.

FIGURE 2N: The five projects with the most added elapsed time

Sector	Delivery agency	Project	Original estimated completion date	Current estimated completion date	Quarters added
Transport	MTIA	Western Highway duplication – Ballarat to Stawell (regional various)	Qtr 3 2015–16	Qtr 2 2021–22	23 (5 yrs 3 qtrs)
Transport	DoT	Murray Basin Rail Project	Qtr 2 2018–19	Qtr 2 2023–24	20 (5 yrs)
Health and human services	DH	Royal Victorian Eye & Ear Hospital Planning & Redevelopment	Qtr 2 2017–18	Qtr 4 2021–22	18 (4 yrs 2 qtrs)
Health and human services	DFFH	Carlton redevelopment - 246 units/sites	Qtr 2 2018–19	Qtr 4 2022–23	18 (4 yrs 2 qtrs)

Sector	Delivery agency	Project	Original estimated completion date	Current estimated completion date	Quarters added
Transport	DoT	Tram Procurement & Supporting Infrastructure	Qtr 4 2017–18	Qtr 4 2021–22	16 (4 yrs)

Source: VAGO.

FIGURE 20: The eight projects estimating most reduced elapsed time

Sector	Delivery agency	Project	Original estimated completion date	Current estimated completion date	Quarters reduced
Health and human services	DFFH	Public Housing Renewal Program (PHRP) – North Melbourne, Northcote and Preston sites	Qtr 4 2028–29	Qtr 4 2026–27	8 (2 yrs)
Transport	MTIA	Mordialloc Freeway Upgrade (Braeside)	Qtr 4 2022–23	Qtr 2 2021–22	6 (1 yr 2 qtrs)
Transport	MTIA	New Trains for Sunbury	Qtr 2 2024–25	Qtr 1 2023–24	5 (1 yr 1 qtr)
Transport	MTIA	Monash Freeway Upgrade – Stage 2	Qtr 4 2022–23	Qtr 4 2021–22	4 (1 yr)
Transport	MTIA	Yan Yean Road duplication – Stage 1 (Plenty)	Qtr 4 2019–20	Qtr 1 2019–20	3
Culture, sport and community	DV	Melbourne Park redevelopment stage two (Melbourne)	Qtr 4 2019–20	Qtr 1 2019–20	3
Culture, sport and community	DJPR	Melbourne Exhibition Centre Stage 2 Development (Southbank)	Qtr 4 2018–19	Qtr 1 2018–19	3
Transport	MTIA	Hurstbridge rail line upgrade (metropolitan various)	Qtr 4 2018–19	Qtr 1 2018–19	3

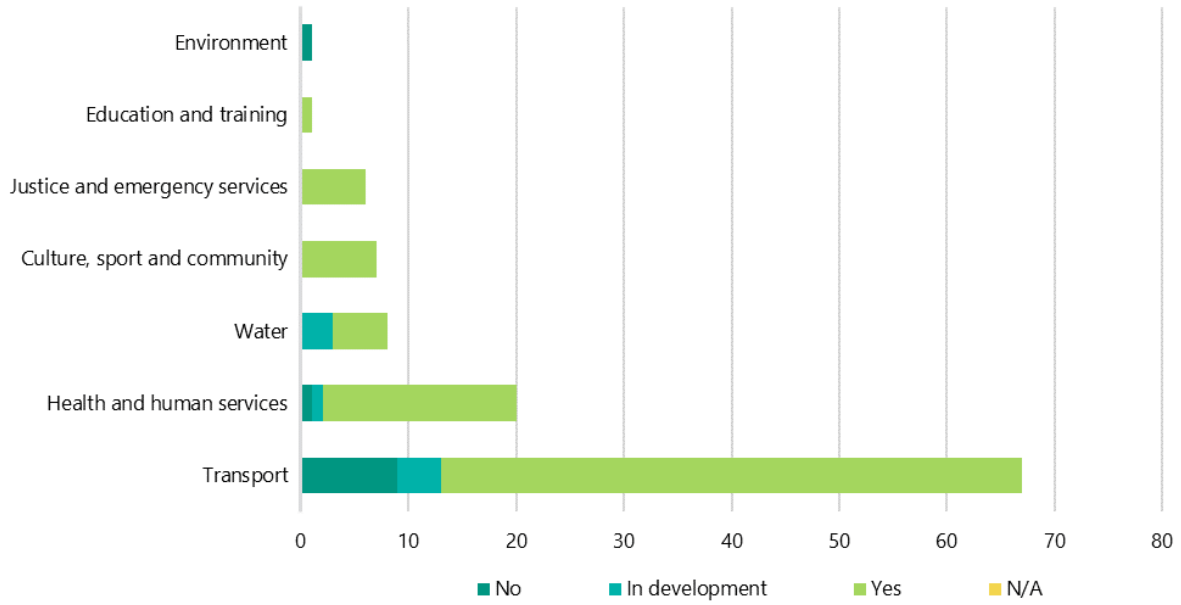
Source: VAGO.

2.6 Business cases, investment logic maps and benefits management plans

DTF requires that any project worth more than \$10 million (which therefore includes all major projects) develop a business case, as well as an investment logic map and a benefits management plan.

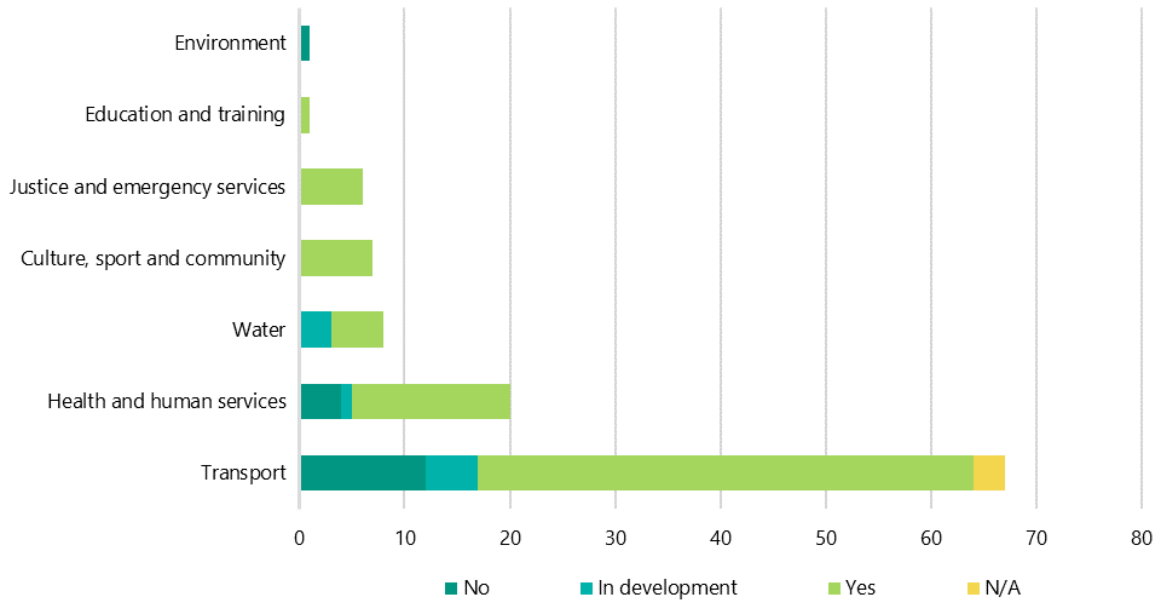
We asked the surveyed entities if they had developed these key documents for their projects. Figures 2P, 2Q, and 2R show the results.

FIGURE 2P: **Does the project have a business case?**



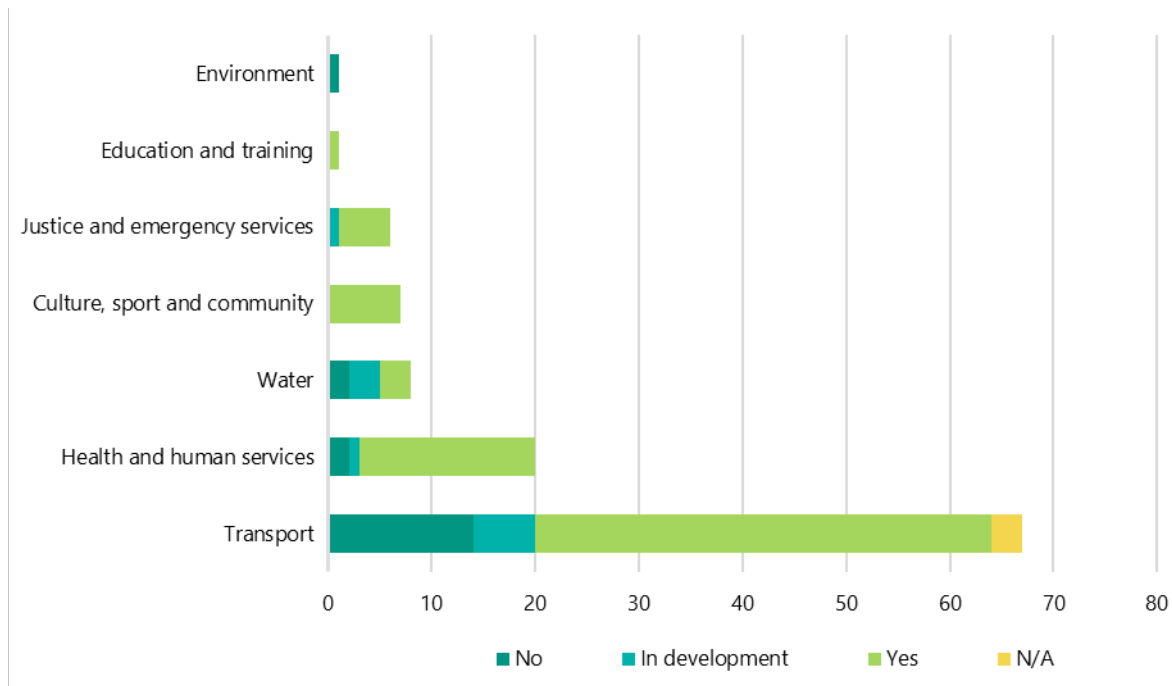
Source: VAGO.

FIGURE 2Q: **Does the project have an investment logic map?**



Source: VAGO.

FIGURE 2R: Does the project have a benefits management plan?



Source: VAGO.

The transport sector has the highest number of projects without a business case, with 13 projects or 19.4 per cent. Also in this sector, 26.6 per cent of major projects do not have an investment logic map and 31 per cent do not have a benefits management plan.

The absence of an investment logic map highly correlates with a missing benefits management plan. This is because DTF expects entities to use the investment logic mapping process to identify a project’s benefits and the measures they will use to assess a project’s success, which is then formalised in a benefits management plan.

According to the survey responses, the underlying reasons for the transport sector’s high rate of non-compliance with DTF’s requirements were:

- the information that a business case would have contained was presented to decision-makers in another format, such as:
 - approval granted through a Cabinet decision
 - approval granted through an annual works plan submission
 - the funding came from a budget announcement or the submission progressed outside the state budget cycle
- the project was included in the scope of another project's business case.

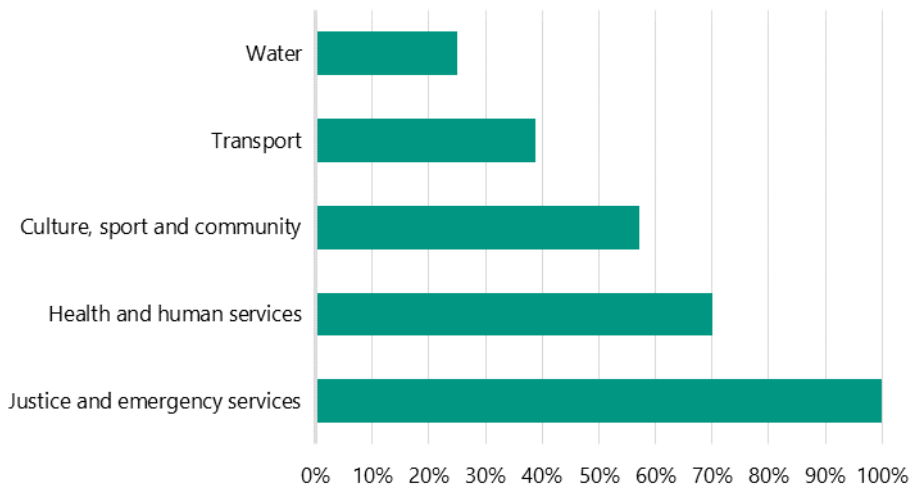
In other cases, respondents simply did not give a reason, or stated that they could not determine the reason as they could not locate relevant documents.

2.7 Impact of the COVID-19 pandemic on major projects

We asked the surveyed entities if the COVID-19 pandemic had affected their major projects.

Figure 2S shows the percentage of projects, by sector, where agencies reported that the pandemic has impacted the project.

FIGURE 2S: Percentage of major projects impacted by COVID-19 by sector



Source: VAGO.

For the 110 projects we surveyed, entities disclosed that 52, or 47.3 per cent, were affected by the pandemic. The pandemic mainly impacted projects' time and cost. In some cases, the impact was positive because works could be accelerated due to public facilities being closed.

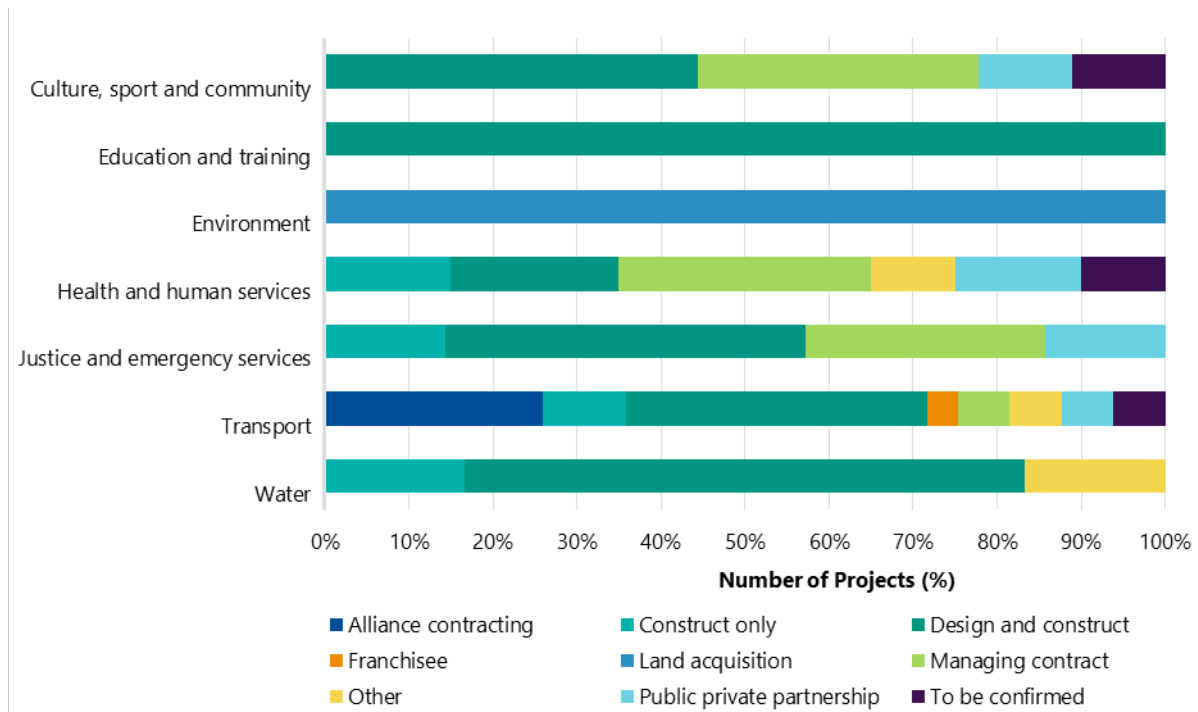
Our major projects performance dashboard provides more specific details about the pandemic's impact for each project.

2.8 Procurement models used by major projects

Our survey collected information about the main procurement models used in the major projects. A description of these procurement models is at Appendix B.

Figure 2T shows the percentage of projects using each procurement model, by sector.

FIGURE 2T: **Percentage of projects by procurement model by sector**



Source: VAGO.

Figure 2T shows that all sectors with multiple projects in our dashboard extensively use the design and construct procurement model.

The managing contract model is widely used in the culture, sport and community, justice and emergency services, and health and human services sectors.

The alliance and franchisee procurement models are only used in transport sector projects included in our dashboard. Public private partnerships are used by the justice and emergency, health and human services, culture sport and community and transport sector projects.

The environment sector only had one major project in the dashboard, so the land acquisition model is only relevant for the Melbourne Strategic Assessment program. Likewise, the education sector only had one project in our dashboard, the Shepparton Education Plan, which used the design and construct model.

APPENDIX A

Submissions and comments

We consulted with the relevant entities and considered their views when reaching our audit conclusions. As required by the *Audit Act 1994*, we gave a draft copy of this report plus the underlying data contained in a working copy of the major projects dashboard, to these entities and asked for their submissions and comments.

DJPR's response to this review has a reference to a feedback table. Following our acquittal of the feedback in this report, DJPR requested that we exclude the attachment, so it is not included.

Responsibility for the accuracy, fairness and balance of comments rests solely with the entity head.

Responses were received as follows:

DTF	38
Department of Education and Training	41
DH	42
DJPR	45
DoT	46



Department of Treasury and Finance

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D21/168266

Mr Andrew Greaves
Auditor General
Victorian Auditor-General's Office
Level 31, 35 Collins Street
MELBOURNE VIC 3002

Dear Mr Greaves

PROPOSED LIMITED ASSURANCE REVIEW – MAJOR PROJECTS PERFORMANCE

Thank you for your letter dated 8 August 2021, inviting the Department of Treasury and Finance (DTF) to respond to the proposed review: Major Projects Performance.

DTF notes the conclusions of the review and the recommendations directed at DTF including the Office of Projects Victoria (OPV). DTF accepts in full three recommendations, accepts in part one recommendation and does not accept one recommendation.

A proposed action plan for implementing the recommendations directed at DTF and OPV is attached to this letter.

DTF supports the overall intent for a more accessible data source available on-line for major capital projects. The level of detail and frequency proposed by DTF and OPV through an annual dashboard is aligned to information available in comparable jurisdictions and would support increased accessibility and useability of project information.

The current reporting of aggregated major capital programs in Budget papers is disclosed in a way that is consistent with the Government's staged funding decisions at the program level and protects the State's commercial interests and ability to achieve value for money.

DTF notes VAGO's conclusions in relation to the Budget paper No.4 State Capital Program. The primary purpose of Budget paper No.4 is as a budget estimates information paper to outline new capital investments and report on spending to date on existing projects, and it is not intended to be a performance reporting document. DTF will continue to improve the clarity and accessibility of data on State capital investments.

Thank you for the opportunity to comment on the proposed review.

Yours sincerely



David Martine
Secretary

27/8/2021



Response provided by the Secretary, DTF—continued

Department of Treasury and Finance, including the Office of Projects Victoria, action plan to address recommendations from the Major Projects Performance review

No	VAGO recommendation	Action	Completion date
Department of Treasury and Finance (DTF) and Office of Projects Victoria (OPV):			
1	<p>Develop and maintain a public-facing major projects performance dashboard that:</p> <ul style="list-style-type: none"> has at least the same data fields and update frequency as the Victorian Government IT dashboard shows scope, cost and time variance analysis against previously reported results identifies applicable project delivery entities in addition to the agencies identified in the budget papers 	<p>Partially accepted</p> <p>DTF/OPV will produce a public facing on-line dashboard on major capital projects on an annual basis to be published at the same time as the State Budget.</p> <p>DTF/OPV will collate and coordinate data to improve accessibility and useability of capital project information noting the data set will initially be a reduced number of data fields.</p>	By May 2022
2	To support implementation of recommendation 1, amend applicable guidance, including the Resource Management Framework, to collect a more comprehensive dataset from all entities that gives a more holistic view of project performance.	<p>Accepted</p> <p>DTF/OPV will update relevant DTF guidelines to enable data collection to facilitate production of a major capital projects dashboard, while minimising the additional reporting burden on departments and agencies.</p>	By end December 2021
3	Develop a repository of lessons learnt from major capital projects, including analyses of key themes from Gateway reviews, benefits realisation studies and PARs, and make this resource available to project teams across the public sector.	<p>Accepted</p> <p>OPV will improve knowledge management processes to facilitate sharing of insights and common themes to inform current delivery challenges and future project development. Work is currently underway and OPV has shared with VAGO the full lessons learnt project plan. The Construction Leadership Group is a forum at which lessons learned are currently exchanged amongst delivery agencies.</p>	By mid 2022
4	<p>Improve the consistency of disclosure of public sector entities' major projects by requiring:</p> <ul style="list-style-type: none"> Entities with aggregated capital programs to separately disclose any individual packages and sub-projects that are worth more than \$100 million Public non-financial corporations, such as water sector corporations, to disclose and report on any sub-projects worth more than \$100 million within their capital investment programs 	<p>Not accepted</p> <p>The current reporting of aggregated major capital programs in Budget paper No.4 State Capital Program, reflects the nature and timing of Government decisions on the staged funding of tranches for major capital programs across economic and social infrastructure programs.</p> <p>DTF considers separately disclosing individual package allocations within a program of works reduces the Government's ability to flexibly manage budgets to deliver overall program benefits and objectives as intended when deciding to fund as a program.</p>	N/A

Response provided by the Secretary, DTF—continued

DTF also considers disclosing disaggregated amounts within programs in certain circumstances at the time of an investment decision has the potential to prejudice the State's commercial position to obtain value for money from contractors for repeatable programs of works.

DTF will investigate opportunities in the water sector for improved clarity on funding and completion timeframe changes related to ongoing infrastructure programs.

5	<p>Improve data quality and their capacity to analyse capital project trends by:</p> <ul style="list-style-type: none"> Defining and implementing data quality assurance practices so entities align data formats and streamline data input processes to achieve more consistent reporting Improving data integrity and updating the State Resource Information Management System's asset module to report historical project data for easier trend and comparative analysis of projects over multiple quarters. 	<p>Accepted</p> <p>DTF/OPV will update relevant DTF guidelines to enable data collection to facilitate a more consistent and streamlined approach to data collection and analysis. Improvements will be implemented in stages over time.</p> <p>DTF will examine possible upgrade options to allow the State Resource Information Management System to report on historical data over multiple quarters.</p>	<p>By mid 2022</p>
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Department of
Education and Training

Office of the Secretary

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COR2183616

Mr Andrew Greaves
Auditor-General
Victorian Auditor-General's Office
Level 31, 35 Collins Street
MELBOURNE 3000

Dear Mr Greaves

Re proposed report: Major Projects Performance

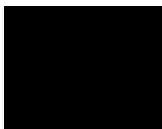
Thank you for your letter of 8 August 2021 and the opportunity to comment on the proposed report and data dashboard for this limited assurance review.

The Department is committed to timely, comprehensive and transparent reporting on the progress of its projects.

The Department provided feedback directly to the VAGO audit team on the proposed report.

Should you wish to discuss the Department's response, please contact Bella Stagoll, Executive Director, Integrity, Assurance and Executive Services on (03) 7022 0120 or Bella.Stagoll@education.vic.gov.au.

Yours sincerely



Jenny Atta
Secretary
27/ 08 / 2021

Your details will be dealt with in accordance with the *Public Records Act 1973* and the *Privacy and Data Protection Act 2014*. Should you have any queries or wish to gain access to your personal information held by this department please contact our Privacy Officer at the above address





Secretary

Department of Health

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DH Ref: BAC-CO-17635
VAGO File No: 34606 21

Andrew Greaves
Auditor-General
Victorian Auditor-General's Office
Level 31, 35 Collins Street
MELBOURNE VIC 3000

via e-mail: andrew.greaves@audit.vic.gov.au

Dear Mr Greaves

Proposed Limited Assurance Review – Major Projects Performance

Thank you for providing the Department of Health (the department) with the proposed report and interactive dashboard for the Major Projects Performance limited assurance review, and the opportunity to provide comments.

Reference to the recommendations directed to the Department of Treasury (DTF) and Office of Projects Victoria (OPV), should a public dashboard reporting be implemented, the department strongly recommends an extensive consideration of implications, including:

1. *Commercial-in-Confidence matters should not be compromised and to be exempted from reporting requirements.*
2. *Reporting requirements to be applicable to new approved projects. Legacy projects to be exempted from reporting requirements.*
3. *Streamlining of reporting requirements with existing major projects reporting to the Department of Premier and Cabinet (DPC), DTF and OPV. Existing reporting includes Quarterly Asset Investment Reporting (QAIR), Major Projects Performance Reporting (MPPR), Priority Delivery Initiatives (PDI) Recovery Tracker Reporting, Election Commitments (EC) Project Reporting.*

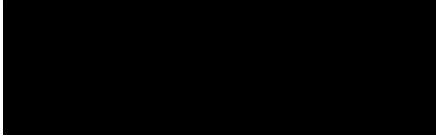
Reference to the contents in the proposed report and interactive dashboard, the department has identified some key findings as outlined in **Attachment 1**.



Response provided by the Secretary, DH—continued

The department appreciates the diligence and patience of your team when working with the department's staff on this review.

Yours sincerely,



Professor Euan M Wallace AM
Secretary

27/08/2021



Attachment 1

VAGO statement	DH Comments
<p>(Reference: page 3)</p> <p>The BP4 includes some variance explanations in footnotes. However, this information:</p> <ul style="list-style-type: none"> is generated by entities and not verified by DTF 	<ul style="list-style-type: none"> The Department understands that this is scrutinised and reviewed by DTF prior to publication.
<p>(Reference: page 4)</p> <p>Data errors (example using DH project)</p> <p>In our review of BP4s from 2014–15 to 2021–22 we found:</p> <ul style="list-style-type: none"> an incorrect disclosure of funding in 2017–18, with \$135 million for the Victorian Heart Hospital not disclosed and a correction made in the next financial year. 	<ul style="list-style-type: none"> Originally in 2016-17 BP4, it was reported separately: <ul style="list-style-type: none"> New project: <i>Victorian Heart Hospital (Clayton) with TEI of \$135 million</i> Existing project: <i>Victorian Heart Hospital – planning and early works (Clayton) with TEI of \$15 million</i> In the 2017-18 BP4, it was an oversight at point in time where only the ‘existing’ planning project was reported.
<p>VAGO interactive dashboard.</p>	<ul style="list-style-type: none"> Final version of attested data submitted to VAGO is not reflected. <p>Note: This has been raised with VAGO who advised that this is an oversight and will be addressed and reflected in the final report and interactive dashboard tabled in Parliament.</p>





Department of Jobs, Precincts and Regions

Ref: BSEC-2-21-15124

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Mr Andrew Greaves
Auditor-General of Victoria
Victorian Auditor-General's Office
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MELBOURNE VIC 3000

Dear Mr Greaves

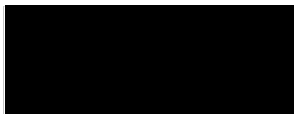
VAGO's Proposed report and data dashboard – Major Projects Performance

Thank you for your letter of 8 August 2021, providing the department with a copy of the proposed report and interactive data dashboard for VAGO's Major Projects Performance limited assurance review.

I note that VAGO has not made any recommendations to the department in the proposed report. Our feedback on the proposed report and data dashboard is enclosed. I appreciate the professional manner demonstrated by VAGO's team throughout the conduct of the review.

If you require further information, please contact Justin Perkov, Acting Director Audit & Assurance on 0491 614 371 or justin.x.perkov@ecodev.vic.gov.au.

Yours sincerely



Simon Phemister
Secretary

23/ 08/ 2021





Department of Transport

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Ref: BSEC-1-21-8809R

Mr Andrew Greaves
Auditor-General of Victoria
Victorian Auditor-General's Office
Level 31, 35 Collins Street
MELBOURNE VIC 3000

Dear Mr Greaves

Victorian Auditor-General's Office – Proposed Report – Major Projects Performance

Thank you for your letter of 8th August 2021 and your office's subsequent correspondence with the Department regarding the 'Major Projects Performance' Limited Assurance Review. The Department of Transport (DoT or the Department), along with the Major Transport Infrastructure Authority (MTIA), values the opportunity to review the proposed report and the interactive data dashboard and acknowledge the importance of reporting on major projects across Victoria.

The sustained investment in transport projects we are currently seeing across the eastern seaboard of Australia is unprecedented in recent history, creating significant resource pressures. This pressure is being felt across the globe with increased demand for construction resources. Projects have also become more complex as we retrofit them into built urban environments and utilise tunnelling to avoid impacting existing homes and preserve important environmental areas.

To mitigate these factors and continue to deliver the benefits of projects, DoT and the MTIA have introduced a number of initiatives including investment in up-front design and engineering, encouraging innovation through collaborative procurement models and investment in skills training. We are also at the forefront of the Construction Industry Leadership Forum (CILF), a joint forum of senior leaders from industry and the Victorian and New South Wales public sectors that drives improved collaboration across the sector.

DoT and the MTIA have invested significant time and effort in completing the surveys issued by VAGO. This is in addition to the significant effort applied to meeting the existing rigorous project funding requirements in place as part of the Department of Treasury and Finance (DTF) gateway review processes; the development of business cases; submissions to the Expenditure Review Committee; regular Cabinet scrutiny; and VAGO's annual financial audit of the Department of Transport's Annual Report and its annual audit of the State's finances.

The Department is of the view that the proposed report and dashboard lack the context and depth to provide an accurate snapshot of Victoria's record level of investment in transport infrastructure. Further, the manner in which data is presented in the proposed report and dashboard does not enable the reader to distinguish between a program of work or an individual project, and therefore has the potential to be confusing and misleading.



Response provided by the Secretary, DoT—continued

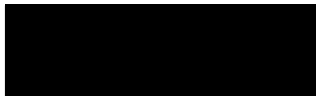
The proposed report and dashboard identify a number of cost, time and scope variations in relation to the delivery of transport infrastructure projects that would benefit from the inclusion of further context for the reader. For example, programs of work, such as the Car Parks for Commuters program, are displayed on the dashboard as both over time and cost. This does not represent the significant increase in scope that has occurred for this program, delivering more projects, at more locations that are all budget funded and have delivered significant social benefit.

The Department notes that VAGO has elected to report the Car Parks for Commuters program in the proposed report and dashboard. The Department maintains its view that this program comprises projects that are all under VAGO's \$100 million threshold for inclusion in scope and should be excluded from the proposed report and dashboard.

The Department is also concerned with the representation of projects within the dashboard at a regional level. Some small projects under the \$100 million threshold for this Limited Assurance Review will deliver significant benefit to a regional community and larger projects, such as the Melbourne Airport Rail, will deliver state-wide benefits. As the dashboard currently stands, it has the potential to create an impression that that some parts of the state are receiving greater benefits over other parts when this is not the case.

DoT and the MTIA are, and will continue, to take a pro-active approach to mitigating cost pressures whilst ensuring value for money and delivery of benefits sought from the program of transport infrastructure upgrades and improvements. We will also continue to work with DTF on the reporting of project progress and performance that adequately reflects the dynamic environment in which projects are funded and delivered in response to community need and the setting of State Budgets.

Yours sincerely



Padi Younis
Secretary
Department of Transport

10th September 2021

APPENDIX B

Acronyms and abbreviations

Acronyms

ASSAM	SRIMS asset management module
DFFH	Department of Families, Fairness and Housing
DH	Department of Health
DJPR	Department of Jobs, Precincts and Regions
DJCS	Department of Justice and Community Safety
DoT	Department of Transport
DPC	Department of Premier and Cabinet
DTF	Department of Treasury and Finance
DV	Development Victoria
GII	government infrastructure investment
HVHR	High Value High Risk
IT	Information technology
MPPR	Major Projects Performance Report
MTIA	Major Transport Infrastructure Authority
OPV	Office of Projects Victoria
PAEC	Public Accounts and Estimates Committee
PHRP	Public Housing Renewal Program
RMF	Resource Management Framework
SRIMS	State Resource Information Management System
TEI	total estimated investment
VAGO	Victorian Auditor-General's Office

Procurement Model

Explanation

Procurement Model	Explanation
Alliance	A risk sharing contract that binds all parties to work for the best of the project and cooperatively identify and resolve project risks. The project costs are cooperatively developed using an open book approach, with a gain-share/pain-share mechanism available to parties, offering a potential bonus if the project is delivered early or under expected cost.
Construct only	State engages builders to construct a design it has already developed and approved.
Design and construct	State engages firms to help design an asset to meet project needs and requirements as well as construct the approved design.
Franchisee	Under the public transport outsourcing arrangements (known as a franchise) the State can direct a Franchisee to undertake certain State-nominated works or projects. The Franchisee is compensated on a project cost plus regulated overhead basis. The Franchisee oversees and delivers all relevant project works.
Land acquisition	State purchases future project land on the property market or by using its compulsory acquisition powers.
Managing Contract	State procures a Managing Contractor to oversee and sub-contract out specific works to deliver an asset. The Managing Contractor oversees and delivers all relevant project works.
Public private partnership	A long-term agreement between the State and a private sector consortium to design, build, finance, and maintain (and sometimes operate) public infrastructure. These projects can range from economic infrastructure (such as toll roads or railways) to social infrastructure (such as hospitals, prisons and schools).

Abbreviations

BP2	<i>2020–21 Budget Paper No. 2: Strategy and Outlook</i>
BP4	<i>Budget Paper No. 4: State Capital Program</i>
COVID-19	Coronavirus
PARs	Project/Program Assurance Reviews
Qtr	Quarter
Yr(s)	Year(s)

APPENDIX C

About this assurance review

Who we reviewed

- Court Services Victoria
- Department of Education and Training
- Department of Environment, Land, Water and Planning
- Department of Families, Fairness and Housing
- Department of Health
- Department of Jobs, Precincts and Regions
- Department of Justice and Community Safety
- Department of Transport
- Department of Treasury and Finance
- Development Victoria
- Geelong Performing Arts Centre Trust
- Goulburn–Murray Rural Water Corporation
- Greater Western Water Corporation
- Kardinia Park Stadium Trust
- Melbourne and Olympic Park Trust
- Major Transport Infrastructure Authority
- Melbourne Water Corporation
- South East Water Corporation
- Suburban Rail Loop Authority
- VicTrack

What we assessed

- We assessed if:
- major project data collated and reported by DTF and OPV is timely, relevant, sufficient and fairly presented
 - DTF and public sector entities' reporting on major project performance to Parliament is clear and objective.

What the review cost

The cost of this review was **\$850 000.**

As part of this review we:

- held discussions with experts and other stakeholders on project performance matters
- collected and collated data on major capital projects (such as current and historical BP4s) from DTF, OPV and other public sources
- inspected and analysed original data sources and complementary data source documents to understand data quality and the type of data being collected and used by entities
- interviewed relevant officers from some reviewed entities
- inspected and analysed project ratings made by DTF and OPV as well as relevant self-assessments by reviewed entities
- surveyed 16 public sector entities responsible for or delivering 110 major projects to collect relevant data for a public-facing dashboard. We also required each entity's accountable officer to attest to the data's accuracy and correctness on the date that they provided it
- analysed the collected data using data analytics software and visualisation tools.

We also provided a copy of the report to DPC, as required by the *Audit Act 1994*.

Our method and approach for collecting data

A number of project delivery entities assisted the responsible entities (listed in the BP4) to collate specific types of project data for this review. There were seven entities with only one major project in 2019–20 or 2020–21:

- Department of Education and Training
- Department of Environment, Land, Water and Planning
- Greater Western Water Corporation
- Goulburn-Murray Rural Water Corporation
- Kardinia Park Stadium Trust
- South East Water Corporation
- Suburban Rail Loop Authority.

For entities listed in the BP4 with projects, these responsible entities' accountable officer (or delegate) was asked to formally attest to the accuracy and completeness of the data collected within the survey.

For projects where an entity is delivering a project on behalf of another entity listed in the BP4, we asked the delivery entity's accountable officer (or delegate) to formally attest to the accuracy and completeness of the data.

We cross-checked some surveyed data with data published in the BP4. We performed some data analytics on these results and imported these into Python and Microsoft Power BI to produce an interactive dashboard.

Selecting major projects to survey

We initially identified major projects to survey using the 2019–20 BP4 and the *2020–21 Budget Paper No. 3: Service Delivery*. After discussing our initial selection with the entities, we removed some projects that appeared in the budget papers as a single capital item if they were an ongoing program of capital works or an aggregation of minor projects.

Selecting major projects to survey

We initially identified major projects to survey using the 2019–20 BP4 and the *2020–21 Budget Paper No. 3: Service Delivery*. After discussing our initial selection with the entities, we removed some projects that appeared in the budget papers as a single capital item if they were an ongoing program of capital works or an aggregation of minor projects.

We added some projects that were not explicitly disclosed as separate major projects in the budget papers. Appendix D lists these projects.

Appendix E lists the projects that we did not include in the survey and dashboard.

APPENDIX D

Entities' project self-assessments










This appendix summarises the projects we included in this review and shows the relevant entities' self-assessments ratings. Figure D1 shows the rating definitions and Figure D2 lists all of the reviewed projects and their ratings.

FIGURE D1: Rating definitions for entities' self-assessments

Rating	Scope	Cost	Time
Red	Current approved project scope is at risk and requires action and a decision by the government	Project is likely to be more than 20 per cent over its current approved budget	Project is likely to be more than 6 months behind its current approved schedule
Amber	Scope risks are emerging but are being managed and no action or decision is required by the government at this point in time	Project is likely to be more than 11–20 per cent over its current approved budget	Project is likely to be 4–6 months behind its approved schedule
Green	Current approved project scope is clear and can be delivered within the current budget and schedule	Project is likely to be 0–10 per cent over its current approved budget	Project is likely to be 0–3 months behind its current approved schedule

Source: VAGO.

FIGURE D2: Performance self-assessment ratings for reviewed projects

Project	TEI (millions)	Estimated completion date	Ratings		
			Scope	Cost	Time
Court Services Victoria					
Bendigo Law Courts Development	\$152.40	Qtr 2 2022–23			
Wyndham Law Courts Project	\$271.13	Qtr 1 2024–25			
Department of Education and Training					
Shepparton Education Plan	\$140.00	Qtr 2 2021–22			

Project	TEI (millions)	Estimated completion date	Ratings		
			Scope	Cost	Time
Department of Environment, Land, Water and Planning					
Melbourne Strategic Assessment (Land acquisition component)	\$1 423.00	Qtr 3 2059–60	●	●	●
Department of Families, Fairness and Housing					
Big Housing Build	\$5 000.00	TBC	●	●	●
Building new homes to fight homelessness (statewide)	\$209.10	Qtr 2 2022–23	●	●	●
Carlton Housing Redevelopment Project	\$146.57	Qtr 4 2022–23	●	●	●
Heidelberg Redevelopment—600 units/sites (Heidelberg)	\$160.00	Qtr 4 2021–22	●	●	●
Public Housing Renewal Program (PHRP)—North Melbourne, Northcote and Preston sites	\$173.00	Qtr 4 2026–27	●	●	●
Department of Health					
Ballarat Base Hospital Redevelopment	\$541.60	Qtr 2 2027–28	●	●	●
Bass Coast Wonthaggi Hospital Expansion	\$115.00	Qtr 3 2022–23	●	●	●
Building a world-class hospital for Frankston families	\$562.00	Qtr 4 2024–25	●	●	●
Casey Hospital Expansion	\$139.78	Qtr 4 2019–20	●	●	●
Geelong Hospital—Major Upgrade	\$118.17	Qtr 2 2017–18	●	●	●
Goulburn Valley Health Redevelopment Stage 1	\$229.30	Qtr 1 2022–23	●	●	●
Joan Kirner Women's and Children's Hospital Sunshine	\$280.17	Qtr 4 2020–21	●	●	●
Latrobe Regional Hospital Redevelopment Stage 3A	\$217.00	Qtr 1 2023–24	●	●	●
Modernisation of metropolitan Melbourne Public Sector Residential Aged Care Services Strategy: Stage 3 Kingston Project	\$134.60	Qtr 4 2024–25	●	●	●
New Footscray Hospital	\$1 495.00	Qtr 1 2025–26	●	●	●
Northern Hospital Inpatient Expansion Stage 2	\$162.67	Qtr 1 2021–22	●	●	●
Pathway to 144 Acute Mental Health Beds	\$492.20	Qtr 3 2023–24	●	●	●

Project	TEI (millions)	Estimated completion date	Ratings		
			Scope	Cost	Time
Royal Victorian Eye and Ear Hospital Planning and Redevelopment	\$317.81	Qtr 4 2022–23	●	●	●
Victorian Heart Hospital Project	\$564.00	Qtr 2 2022–23	●	●	●
Warrnambool Base Hospital redevelopment	\$384.20	Qtr 4 2025–26	●	●	●
Department of Jobs, Precincts and Regions					
Geelong Convention and Exhibition Centre	\$174.00	Qtr 4 2024–25	●	●	●
Melbourne Arts Precinct Transformation	\$1 500.00	Qtr 2 2029–30	●	●	●
Melbourne Exhibition Centre Stage 2 Development (Southbank)	\$205.00	Qtr 1 2018–19	●	●	●
Department of Justice and Community Safety					
Cherry Creek Youth Justice Project	\$419.65	Qtr 1 2022–23	●	●	●
Chisholm Road Prison Project	\$1 118.53	Qtr 4 2021–22	●	●	●
Men's Prison System Capacity—Prison Infill Expansion Program	\$798.19	Qtr 4 2022–23	●	●	●
Women's Prison System Capacity	\$188.90	Qtr 2 2022–23	●	●	●
Department of Transport					
Additional VLocity Trains	\$340.00	Qtr 4 2023–24	●	●	●
Additional X'Trapolis Metropolitan Trains (metropolitan various)	\$103.50	Qtr 1 2020–21	●	●	●
Bayside Rail Improvement Project (Frankston–Werribee Line)	\$115.00	Qtr 2 2019–20	●	●	●
Car Parks for Commuters Program	\$485.62	Qtr 4 2024–25	●	●	●
City Loop Fire and Safety Upgrade Stage 2 and Intruder Alarm	\$382.09	TBC	●	●	●
Flinders Street Station Redevelopment	\$100.00	Qtr 2 2022–23	●	●	●
Great Ocean Road Program	\$255.00	Qtr 1 2020–21	●	●	●
Hall Road Upgrade Skye	\$282.50	Qtr 4 2024–25	●	●	●
High Capacity Metro Trains	\$2 176.00	TBC	●	●	●
Keeping Victorians Moving	\$174.63	Qtr 1 2023–24	●	●	●

Project	TEI (millions)	Estimated completion date	Ratings		
			Scope	Cost	Time
More E Class Trams and Infrastructure	\$215.46	TBC	●	●	●
More Regional Trains New VLocity trains	\$259.42	Qtr 4 2021–22	●	●	●
More Regional Trains Regional Network Development Plan	\$224.15	TBC	●	●	●
Murray Basin Rail Project	\$794.41	Qtr 2 2023–24	●	●	●
New Trams (metropolitan various) Stage 5 E-Class Trams 6091–6100	\$144.72	Qtr 4 2020–21	●	●	●
New Trams metropolitan various Stage 2 E-Class Trams 6051 to 6070	\$280.00	TBC	●	●	●
New VLocity Carriages for the Regional Network	\$250.60	Qtr 4 2021–22	●	●	●
Next Generation Trams	\$1 483.29	TBC	●	●	●
Nine Additional XTrapolis Trains	\$174.64	Qtr 3 2018–19	●	●	●
Road Maintenance Blitz	\$108.70	Qtr 1 2023–24	●	●	●
Tram Procurement and Supporting Infrastructure	\$804.21	Qtr 2 2019–20	●	●	●
Development Victoria					
Geelong Arts Centre Stage 3	\$140.00	Qtr 2 2023–24	●	●	●
Melbourne Park redevelopment stage three (Melbourne)	\$296.03	Qtr 4 2021–22	●	●	●
Melbourne Park redevelopment stage two (Melbourne)	\$338.00	Qtr 1 2019–20	●	●	●
Goulburn–Murray Rural Water Corporation					
Goulburn Murray Water Connections Project	\$2 139.00	Qtr 2 2020–21	●	●	●
Greater Western Water Corporation					
West Werribee Dual Water Supply Scheme	\$205.00	Qtr 4 2018–19	●	●	●
Kardinia Park Stadium Trust					
Kardinia Park Stadium Stage 5 Redevelopment	\$142.00	Qtr 4 2022–23	●	●	●
Major Transport Infrastructure Authority					
75 by 2025 (Level Crossing Removal) (metropolitan various)	\$6 550.00	Qtr 2 2025–26	●	●	●

Project	TEI (millions)	Estimated completion date	Ratings		
			Scope	Cost	Time
Ballarat Line Upgrade Stage 1	\$631.12	Qtr 3 2020–21			
Barwon Heads Road Upgrade (Barwon Heads)	\$365.00	Qtr 2 2023–24			
Caulfield to Dandenong conventional signalling and power infrastructure upgrade (metropolitan various)	\$608.12	TBC			
Chandler Highway Upgrade (Alphington, Kew)	\$125.42	Qtr 2 2019–20			
Cranbourne Line Duplication planning and development (metropolitan various)	\$765.00	Qtr 2 2023–24			
Cranbourne Pakenham and Sunbury Line Upgrades	\$539.00	TBC			
Drysdale Bypass (Drysdale)	\$117.38	Qtr 4 2019–20			
Echuca–Moama Bridge (Echuca)	\$173.25	Qtr 3 2021–22			
Frankston Line stabling (Kananook)	\$239.98	Qtr 3 2021–22			
Geelong Fast Rail	TBC	TBC	No self-assessments provided		
Gippsland Line Upgrade Stage 1 (regional various)	\$531.36	Qtr 3 2022–23			
Hurstbridge Line Upgrade Stage 2 (metropolitan various)	\$536.99	Qtr 2 2022–23			
Hurstbridge rail line upgrade (metropolitan various)	\$135.91	Qtr 1 2018–19			
Level Crossing Removal Program (metropolitan various)	\$6 759.02	Qtr 2 2022–23			
M80 Ring Road Upgrade (North and West Metropolitan Region)	\$668.26	Qtr 3 2022–23			
M80 Ring Road upgrade Sunshine Avenue to Calder Freeway (Sunshine North)	\$293.76	Qtr 3 2018–19			
Melbourne Airport Rail	TBC	Qtr 2 2029–30	No self-assessments provided		
Mernda rail extension project (Mernda)	\$575.00	Qtr 1 2018–19			
Metro Tunnel Project	\$12 255.14	Qtr 2 2025–26			
Metropolitan Network Modernisation Program (metropolitan various)	\$1 392.22	Qtr 2 2022–23			
Monash Freeway upgrade —EastLink to Clyde Road (metropolitan various)	\$282.88	Qtr 1 2018–19			

Project	TEI (millions)	Estimated completion date	Ratings		
			Scope	Cost	Time
Monash Freeway Upgrade—Stage 2	\$1 037.85	Qtr 4 2021–22	●	●	●
Mordialloc Freeway Upgrade (Braeside)	\$522.25	Qtr 2 2021–22	●	●	●
Network Transition Plan—Phase A (Statewide)	\$255.84	TBC	●	●	●
New Trains for Sunbury	\$1 973.00	Qtr 1 2023–24	●	●	●
North East Link	\$15 441.00	Qtr 4 2026–27	●	●	●
O'Herns Road Upgrade (Epping)	\$113.72	Qtr 3 2020–21	●	●	●
Plenty Road Upgrade Stage 2	\$144.19	Qtr 2 2020–21	●	●	●
Princes Highway Duplication Project— Winchelsea to Colac	\$349.19	Qtr 2 2019–20	●	●	●
Princes Highway East—Duplication Stage 3	\$236.43	Qtr 4 2023–24	●	●	●
Princes Highway East—Traralgon to Sale Duplication (regional various)	\$259.07	Qtr 2 2018–19	●	●	●
Shepparton Corridor Upgrade— Stage 2	\$314.12	Qtr 3 2022–23	●	●	●
Shepparton Rail Line Upgrade Stage 3	\$400.00	TBC	No self-assessments provided		
Streamlining Hoddle Street (Richmond)	\$112.53	Qtr 4 2018–19	●	●	●
Suburban Roads Upgrade—Northern Roads Upgrade and South Eastern Roads Upgrade (metropolitan)	\$2 208.94	Qtr 2 2025–26	●	●	●
Thompsons Road duplication (Lyndhurst)	\$123.24	Qtr 4 2018–19	●	●	●
Warrnambool Line Upgrade (regional various) Stage 1	\$348.00	Qtr 1 2022–23	●	●	●
Warrnambool Rail Line Upgrade Stage 2	\$260.00	TBC	No self-assessments provided		
Waurm Ponds Track Duplication Stage 2	\$899.20	Qtr 1 2024–25	●	●	●
West Gate Tunnel Project	\$6 700.00	TBC	●	●	●
Western Highway duplication—Ballarat to Stawell (regional various)	\$656.36	Qtr 2 2021–22	●	●	●
Western Roads Upgrade (Metropolitan Various)	\$986.81	Qtr 4 2020–21	●	●	●
Wyndham Vale Stabling Yard	\$164.26	TBC	●	●	●

Project	TEI (millions)	Estimated completion date	Ratings		
			Scope	Cost	Time
Yan Yean Road duplication—Stage 1 (Plenty)	\$125.96	Qtr 1 2019–20	●	●	●
Melbourne Water Corporation					
Hobsons Bay Main (HBM) Yarra Crossing Duplication	\$180.00	Qtr 4 2027–28	●	●	●
WTP 55E ASP Upgrade	\$244.00	Qtr 2 2024–25	●	●	●
WTP Primary Treatment Augmentation	\$384.00	Qtr 4 2024–25	●	●	●
WTP Treatment Capacity Increase	\$213.00	Qtr 4 2018–19	●	●	●
Yan Yean to Bald Hill Pipeline	\$113.00	Qtr 3 2023–24	●	●	●
South East Water Corporation					
Boneo Water Recycling Plant Stage 4 upgrade	\$131.00	Qtr 2 2021–22	●	●	●
Suburban Rail Loop Authority					
Suburban Rail Loop—Initial and Early Works (\$2.2B)	\$2 200.00	Qtr 3 2024–25	●	●	●

Source: VAGO.

APPENDIX E

Major BP4 capital investments not included in this review

Figure E1 lists the major capital investments from the 2019–20 BP4 and 2020–21 Budget Paper No.3: Service Delivery that we did not include in this review.

We did not include them because they were either aggregates of multiple projects (with each sub project having a TEI of less than \$100 million) or they were capital grants funds that had not yet been allocated to any particular project.

FIGURE E1: Major capital investments not included in this review

Major capital investment	TEI (millions)
Barwon Region Water Corporation	
Other works and services—corporate (regional various)	\$223.11
Sewer collection—main sewers (regional various)	\$100.49
Sewer collection—reticulation and other works (regional various)	\$133.31
Sewer collection—water reclamation and disposal (regional various)	\$115.09
Water supply—reticulation systems (regional various)	\$145.67
Water supply—transfer and major distribution systems (regional various)	\$150.91
Department of Education and Training	
Relocatable Buildings Program—providing relocatable buildings to meet growing demand (statewide)	\$101.27
TAFE Rescue Fund 2015–16 (statewide)	\$100.00
TAFE Facilities Modernisation Program	\$120.43
Building Better TAFEs Fund	\$100.10
Land acquisition	\$147.30
Land acquisition 2016–17 (statewide)	\$117.00
Land acquisition 2018–19 (statewide)	\$296.55

Major capital investment	TEI (millions)
New school construction (statewide) to open in 2020 (additional works)	\$624.83
New schools construction	\$122.40
Ready for school: kinder for every three-year-old—funding for facilities to support three-year-old kinder programs (statewide)	\$282.97
Department of Health and Human Services*	
Regional Health Infrastructure Fund	\$120.00
Regional Health Infrastructure Fund (regional various)	\$250.00
Metropolitan Health Infrastructure Fund	\$200.00
More help for Victorian mums and dads	\$123.00
Guaranteeing future energy supply	\$160.00
Department of Justice and Community Safety	
Public Safety—Police Response	\$121.96
Community Safety Statement	\$327.56
Prison capacity expansion	\$124.36
Department of Transport	
Continuing Towards Zero	\$237.20
Dandenong Corridor Readiness Works	\$276.50
Major Periodic Maintenance on the Regional Rail Network	\$287.91
Metropolitan Rail Infrastructure Renewal	\$1 625.08
Metropolitan road and intersection upgrades	\$117.00
Metropolitan and regional restoration and maintenance (statewide)	\$194.64
Optimising transport network performance—congestion package	\$102.54
Regional rail sustainability	\$105.60
Road Safety Strategy 2013-22	\$629.55
Road Safety Towards Zero	\$292.86
Department of Treasury and Finance	
Big Housing Build: Victorian Homebuyer Fund	\$500.00
Melbourne Water Corporation	
Drainage and flood projects (statewide)	\$103.68
Drainage and flood projects (statewide)	\$335.64
Eastern treatment plant projects (Bangholme)	\$304.28
Eastern treatment plant projects (Bangholme)	\$530.01
Land development projects (statewide)	\$371.94
Land development projects (statewide)	\$828.19

Major capital investment	TEI (millions)
Sewerage transfer projects (statewide)	\$562.25
Sewerage transfer projects (statewide)	\$351.43
Water production and storage projects (statewide)	\$204.37
Water production and storage projects (statewide)	\$160.74
Water quality projects (statewide)	\$118.14
Water quality projects (statewide)	\$121.10
Water transfer projects (statewide)	\$510.30
Water transfer projects (statewide)	\$367.73
Waterways condition projects (statewide)	\$172.33
Waterways stormwater quality projects (statewide)	\$187.78
Western treatment plant projects (Werribee)	\$555.76
Western treatment plant projects (Werribee)	\$650.90
South East Water Corporation	
Sewer growth—City of Casey (Casey)	\$158.16
Sewer reliability—other (metropolitan various)	\$146.53
Water reliability—other (metropolitan various)	\$190.09
Yarra Valley Water Corporation	
Community sewerage (metropolitan various)	\$114.20
Sewer growth (Craigieburn/ Mickleham/Kalkallo/Donnybrook)	\$175.29
Water reticulation main renewals (metropolitan various)	\$126.02

*Note: The Department of Health and Human Services is now the Department of Families, Fairness and Housing and the Department of Health.

Source: VAGO.

APPENDIX F

Water entities' major project disclosures in the BP4

Water entities are required to seek the Treasurer's approval for large capital infrastructure projects if they meet certain cost thresholds that DTF prescribes for them. If a project meets any of these cost thresholds, the entity must produce a business case and disclose it in the BP4.

Figure F1 shows that while six of the eight water sector projects we surveyed either had a business case or were developing one, these projects were not individually disclosed in the BP4.

FIGURE F1: Water sector projects' TEIs, approval thresholds, BP4 disclosures and business case statuses in 2019–20

Water entity	Project name	TEI (millions)	DTF approval threshold (millions)	Disclosed in 2019–20 BP4?	Business case?
Greater Western Water Corporation	Werribee West growth works	\$181.00	\$80.00 +	✓	✓
Goulburn–Murray Rural Water Corporation	Connections Project	\$1 099.99	Not applicable*.	✓	✓
Melbourne Water Corporation	HBM Yarra Crossing duplication	\$180.00	\$100.00 +	~	✓
	WTP 55E ASP Upgrade	\$213.00	\$100.00 +	~	In development
	WTP Primary Treatment Augmentation	\$384.00	\$100.00 +	~	In development
	WTP Treatment Capacity Increase	\$213.00	\$100.00 +	^	✓
	Yan Yean to Bald Hill Pipeline	\$113.00	\$100.00 +	~	In development
South East Water Corporation	Boneo Water Recycling Plant Stage 4 Upgrade	\$131.00	\$80.00 +	Partially	✓

* The government funded this project directly through the state budget process.

~ Business cases were not approved before the 2019–20 BP4 was published.

^ This project was aggregated into the 'Western Treatment Plant Projects' budget submission for 2019–20.

Source: VAGO, based on the 2019–20 BP4.

DTF told us that they expect water entities to individually disclose each project that the Treasurer approves. However, we note that this did not occur in the 2019–20 BP4 for six of the eight major projects in the water sector that we examined due to timing of business case approvals and aggregation of major projects into programs.

Figure F2 discusses some examples of the inconsistencies we found in water entities' disclosures.

FIGURE F2: **How water entities disclose major projects**

Water entities have many lower value, interrelated projects. In the BP4, disclosed program items can have from 10 to 60 smaller projects included within their TEI. The TEI for these smaller projects is usually less than \$5 million.

During the scoping of this review, we identified 33 major projects (worth \$100 million or more) across six water entities, using the information available in the 2019–20 BP4.

After discussions with DTF and the relevant water entities, we found that a number of these projects were yearly programs funded from regulated water tariff revenue rather than individual projects. As a result, we reduced our list to eight projects across four water entities.

For example, we identified that the six Barwon Region Water Corporation projects disclosed as \$100 million or more in the budget papers are ongoing works programs made up of 20 to 60 smaller-value projects. The TEIs of these smaller projects range from \$30 000 to \$80 million.

We noted a similar situation for Yarra Valley Water Corporation. The three programs that this entity disclosed in the budget papers had 15 to 60 smaller projects within them.

South East Water Corporation had four major projects according to the 2019–20 BP4. However, we found that only one was a major project (the 'Sewer System Growth—Boneo sewage treatment plant stage 4 upgrade' project).

South East Water Corporation did not explicitly disclose this project in the BP4. Instead, it included the project, which was valued at \$126 million, in an aggregated program of nine projects with a total TEI of \$136.83 million.

Using the budget papers, we noted that Melbourne Water Corporation was delivering 18 major projects in 2019–20. However, after discussions with Melbourne Water Corporation, we found that it was only delivering five major projects at the time of our survey. None of these projects are specifically disclosed in the 2019–20 BP4 or obviously part of the 18 major projects we initially identified. Melbourne Water told us that four were due to timing differences between business case approval and the BP4 publication dates, with the fifth project reported at an aggregate level.

Two of the 33 water sector projects that we first identified as major projects were disclosed as individual projects in the 2019–20 BP4 — Goulburn–Murray Water’s Connections Project and Greater Western Water’s Werribee West Growth Works.

The Victorian and Australian governments jointly fund the Connections Project. This makes it distinct from most water sector projects that water entities fund from the collection of regulated water charges. The Greater Western Water project is now complete.

Source: VAGO.

During this review, we also found that water entities’ project reporting approach makes the aggregate TEI of their disclosed work programs grow and shrink each year if they add or remove projects.

This reporting approach makes it impossible for an external user of public data to track their performance against an aggregated budget item each year.

We also found that water entities are more likely to disclose completed projects as single projects rather than aggregated projects. This is because not all projects within a works program finish at the same time.

This means that the most accurate public reporting on water projects only occurs when they are practically completed. This makes it impossible for Parliament to monitor their performance, even retrospectively, because they cannot check a previous budget for any initial TEI spend targets or estimated completion dates.

When major projects are aggregated into programs, there is no way of knowing their start date, estimated cost and estimated end date. Without this information, it is impossible to monitor their performance using publicly reported data.

APPENDIX G

Data sources used in this review

The table on the next page lists all the responses for our survey of entities in relation to their major projects. For the purposes of space, we have abbreviated the questions asked in the survey. You can download the full data set, including the full questions, at <https://www.audit.vic.gov.au/report/major-projects-performance>.

The table also uses abbreviations for the questions we have asked, which Figure G1 lists.

FIGURE G1: **Acronyms and abbreviations**

Appendix G acronyms and abbreviations

BMP	Benefits Management Plan
BP4	<i>Budget Paper No. 4: State Capital Program</i>
Est.	Estimate
ETE	Estimated total expenditure
FY	Financial year
HVHR	High Value High Risk
ILM	Investment Logic Map
Metro	Metropolitan
N/A	Not applicable
PAR	Project Assurance Review
PMM	Project Management Method
Qtr	Financial quarter
Reg	Regional
SA	Self-assessment

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This reporting approach makes it impossible for an external user of public data to track their performance against an aggregated budget item each year.

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Est.	Estimate
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ILM	Investment Logic Map
Metro	Metropolitan
N/A	Not applicable
PAR	Project Assurance Review
PMM	Project Management Method
Qtr	Financial quarter
Reg	Regional
SA	Self-assessment

Project		Business Case										Relevant Local Government Areas									
Name	SPR	SPR Description	YSP	YSP Description	Entity	Contracter	Sector	Process	PMF	Current Stage	Delivery Reg	Project Reg	Region	Region	Location	Hub	Bipoloid				
Bentley Highway Upgrade - 3 Stages (Stage 1, 2 and 3)	N	The Bentley Highway Upgrade in Victoria is the principal road link between Melbourne and Adelaide. The Victorian Government has a long history of investment in this road and it is a key asset for the State. The Bentley Highway Upgrade is a major infrastructure project that will improve the road's safety, reliability and capacity. The project includes the construction of a new 10.5km dual carriageway section, the widening of existing sections and the replacement of several bridges. The project is expected to be completed by 2025.	Y	The Bentley Highway Upgrade in Victoria is the principal road link between Melbourne and Adelaide. The Victorian Government has a long history of investment in this road and it is a key asset for the State. The Bentley Highway Upgrade is a major infrastructure project that will improve the road's safety, reliability and capacity. The project includes the construction of a new 10.5km dual carriageway section, the widening of existing sections and the replacement of several bridges. The project is expected to be completed by 2025.	MTR, VicRoads (New SP)	MTR Construction Section (Bentley Highway Upgrade) / John Holland Section 1B - Bentley Highway Upgrade / MTR Construction Section 1C - Bentley Highway Upgrade / MTR Construction Section 1D - Bentley Highway Upgrade	Transport	Design and Construct	Design and Construct Framework	Industry	Reg	N	South East Metropolitan region								
City West Water Supply Project	N	The City West Water Supply Project is a joint project between the Victorian Government and the City of West Melbourne. The project involves the construction of a new water supply main and the installation of a new water treatment plant. The project is expected to be completed by 2025.	Y	The City West Water Supply Project is a joint project between the Victorian Government and the City of West Melbourne. The project involves the construction of a new water supply main and the installation of a new water treatment plant. The project is expected to be completed by 2025.	City West Water Corporation	MTR Construction Section (City West Water Supply Project)	Water	Design and Construct	Design and Construct Framework	Water	Reg	N	South East Metropolitan region								
Network Transformation - Phase 2 (Brenbury)	N	The Network Transformation Project is a joint project between the Victorian Government and the City of Melbourne. The project involves the construction of a new network of water supply mains and the installation of a new water treatment plant. The project is expected to be completed by 2025.	Y	The Network Transformation Project is a joint project between the Victorian Government and the City of Melbourne. The project involves the construction of a new network of water supply mains and the installation of a new water treatment plant. The project is expected to be completed by 2025.	MTR, ACP	MTR Construction Section (Network Transformation Project)	Water	Design and Construct	Design and Construct Framework	Water	Reg	N	South East Metropolitan region								
New Trains to Sydney	N	The New Trains to Sydney Project is a joint project between the Victorian Government and the Commonwealth Government. The project involves the construction of a new high-speed rail line between Melbourne and Sydney. The project is expected to be completed by 2030.	Y	The New Trains to Sydney Project is a joint project between the Victorian Government and the Commonwealth Government. The project involves the construction of a new high-speed rail line between Melbourne and Sydney. The project is expected to be completed by 2030.	MTR	MTR Infrastructure Alliance (New Trains to Sydney)	Transport	Design and Construct	Design and Construct Framework	Transport	Reg	N	South East Metropolitan region								
Shepparton City Rail Upgrade - Stage 2	Y	The Shepparton City Rail Upgrade Project is a joint project between the Victorian Government and the Commonwealth Government. The project involves the construction of a new rail line between Melbourne and Shepparton. The project is expected to be completed by 2030.	Y	The Shepparton City Rail Upgrade Project is a joint project between the Victorian Government and the Commonwealth Government. The project involves the construction of a new rail line between Melbourne and Shepparton. The project is expected to be completed by 2030.	MTR	MTR Infrastructure Alliance (Shepparton City Rail Upgrade)	Transport	Design and Construct	Design and Construct Framework	Transport	Reg	N	South East Metropolitan region								
Don't Worry, Phoenix is a Priority	N	The Don't Worry, Phoenix is a Priority Project is a joint project between the Victorian Government and the Commonwealth Government. The project involves the construction of a new rail line between Melbourne and Phoenix. The project is expected to be completed by 2030.	Y	The Don't Worry, Phoenix is a Priority Project is a joint project between the Victorian Government and the Commonwealth Government. The project involves the construction of a new rail line between Melbourne and Phoenix. The project is expected to be completed by 2030.	MTR	MTR Infrastructure Alliance (Don't Worry, Phoenix is a Priority)	Transport	Design and Construct	Design and Construct Framework	Transport	Reg	N	South East Metropolitan region								
East Coast, Werribee Regional Expansion	N	The East Coast, Werribee Regional Expansion Project is a joint project between the Victorian Government and the Commonwealth Government. The project involves the construction of a new rail line between Melbourne and Werribee. The project is expected to be completed by 2030.	Y	The East Coast, Werribee Regional Expansion Project is a joint project between the Victorian Government and the Commonwealth Government. The project involves the construction of a new rail line between Melbourne and Werribee. The project is expected to be completed by 2030.	DP	MTR Construction Pty Ltd (East Coast, Werribee Regional Expansion)	Health and Services	Design and Construct	Design and Construct Framework	Health and Services	Reg	N	South East Metropolitan region								
877 552 627 Upgrade	N	The 877 552 627 Upgrade Project is a joint project between the Victorian Government and the Commonwealth Government. The project involves the construction of a new rail line between Melbourne and 877 552 627. The project is expected to be completed by 2030.	Y	The 877 552 627 Upgrade Project is a joint project between the Victorian Government and the Commonwealth Government. The project involves the construction of a new rail line between Melbourne and 877 552 627. The project is expected to be completed by 2030.	Water	Water (877 552 627 Upgrade)	Water	Design and Construct	Design and Construct Framework	Water	Reg	N	South East Metropolitan region								
877 Priority 7 Treatment Upgrade	N	The 877 Priority 7 Treatment Upgrade Project is a joint project between the Victorian Government and the Commonwealth Government. The project involves the construction of a new rail line between Melbourne and 877 Priority 7. The project is expected to be completed by 2030.	Y	The 877 Priority 7 Treatment Upgrade Project is a joint project between the Victorian Government and the Commonwealth Government. The project involves the construction of a new rail line between Melbourne and 877 Priority 7. The project is expected to be completed by 2030.	Melbourne Water	Melbourne Water (877 Priority 7 Treatment Upgrade)	Water	Design and Construct	Design and Construct Framework	Water	Reg	N	South East Metropolitan region								

To download this data sheet, please see the full report at <https://www.audit.vic.gov.au/report/major-projects-performance>

Project	Steering committee change approved based on project description and funding? (Y/N)	Number of steering committee changes approved based on project description and funding? (Y/N)	Scope change 1		Scope change 2		Scope change 3		Scope change 4		Scope change 5		Scope change 6		Scope change 7		Scope change 8		Scope change 9		Scope change 10		
			Description	Date change was approved	Description	Date change was approved	Description	Date change was approved	Description	Date change was approved	Description	Date change was approved	Description	Date change was approved	Description	Date change was approved	Description	Date change was approved	Description	Date change was approved	Description	Date change was approved	Estimated completion date after
Thames Water Upgrade (Melbourne, Vic)	N	N																					
Chisholm Road Paving Project	Y	1	2019-20 budget documents approved for 700 loads of 125t balls	24/07/2019														5,406	31/07/2021				
CityLink Phase 2 and Safety Upgrade Stage 2, and Interchange	Y	N																					
South of Geelong Water Connection Project	Y	N	The project is intended to be completed by the end of 2020. The project is intended to be completed by the end of 2020. The project is intended to be completed by the end of 2020.																				
Grimsbury Line Duplication (Melbourne, Vic)	Y	N	Contract award has been received which is currently under assessment by MTRV																				
Grimsbury Park and Sandringham and Sandringham Interchanges	Y	N																					
Traralgon Bypass (Traralgon, Vic)	N	N																					

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Project Name	Steering Committee (lead or sponsor) (in order of rank)	Approved Number of projects (in order of rank)	Scope change 1		Scope change 2		Scope change 3		Scope change 4		Scope change 5		Scope change 6		Scope change 7		Scope change 8		Scope change 9		Scope change 10		
			Description	Change was approved	Description	Change was approved	Description	Change was approved	Description	Change was approved	Description	Change was approved	Description	Change was approved	Description	Change was approved	Description	Change was approved	Description	Change was approved	Description	Change was approved	Description
More affordable rental housing	Y	N																					
Early Road Upgrade Stage 2	N	N	CVW report dated June 2021 reviewed and a contract under assessment by MBV																				
Northern Hospital Expansion Stage 2	Y	Y	No impact. This project is a state significant project and is not on the list of projects to be reviewed on site																				
Princes Highway Dualisation Project - Northcote to G/4	N	N																					
Princes Highway East - Traralgon to G/4	N	Y																					
Princes Highway East - Drouin to Stage 3	Y	N																					
Shepparton Rail Line Upgrade Stage 3	N	N	N/A to date. Project commencement for the 2023-4 financial year. Managing potential risk of the CVW report project may be incorporated into the contract ahead of contract award																				
Traralgon Health Services Program (Stage 1) - Northcote and Preston Sts	Y	Y	Project is approved for commencement. It is not clear whether a risk management plan has been developed for the project and/or whether the local council has approved the project when tendering planning applications.																				

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Project Name	Steering Committee or Board or in place?	Approved Number of changes approved over the period?	Description	Scope change 1		Scope change 2		Scope change 3		Scope change 4		Scope change 5		Scope change 6		Scope change 7		Scope change 8		Scope change 1		Scope change 2		
				Approved	Description	Approved	Description	Approved	Description	Approved	Description	Approved	Description	Approved	Description	Approved	Description	Approved	Description	Approved	Description	Approved	Description	Estimated date after
Shepparton Recreation Plan	Y	N																						
Project Victoria the 5.5m Northern Corridor	Y	N	Project Victoria the 5.5m Northern Corridor																					
Greater Melbourne Airport	Y	N	The project is currently in the design phase. The project is currently in the design phase. The project is currently in the design phase.																					
Suburban Roads Upgrade - Northern Corridor	Y	N	The project is currently in the design phase. The project is currently in the design phase. The project is currently in the design phase.																					
Urban Renewal Full Line Upgrade Stage 2	Y	N	Urban Renewal Full Line Upgrade Stage 2																					
Urban Renewal Track Duplication Stage 2	Y	N	Urban Renewal Track Duplication Stage 2																					
West Gate Tunnel Project	Y	N	West Gate Tunnel Project																					
Victorian Health Project	Y	L	Victorian Health Project																					

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Project	Scope change 1	Scope change 2	Scope change 3	Scope change 4	Scope change 5	Scope change 6	Scope change 7	Scope change 8	Scope change 1		Scope change 2	
									Date change was approved	Description	Date change was approved	Description
Project Name ERP Treatment Capacity Increase	Y	N	N	N	N	N	N	N	N	N	N	N
Details Contract awarded December 2018. Commission has issued of regional water bulk Stage 1. COWS for regional program report to be determined.	Y	N	N	N	N	N	N	N	N	N	N	N
Project Name WY19/20 Water Recycling Trial	Y	N	N	N	N	N	N	N	N	N	N	N
Details New Water Recycling Pipeline	Y	N	N	N	N	N	N	N	N	N	N	N
Project Name A pathway to lower water demand in the City	Y	N	N	N	N	N	N	N	N	N	N	N
Details Program business case under development. Initial studies are still being managed.	Y	N	N	N	N	N	N	N	N	N	N	N
Project Name Building water-efficient homes for Victorian households	Y	N	N	N	N	N	N	N	N	N	N	N
Details VIA - Project delayed approximately three months.	Y	N	N	N	N	N	N	N	N	N	N	N
Project Name City Parks for Communities Program	Y	N	N	N	N	N	N	N	N	N	N	N
Details COWS 12 did have some impact on the program, including some delay in implementation. The City Parks for Communities program is being delivered in partnership with the Department of Environment, Land, Water and Planning. The program was closely aligned with the priorities of the Government.	Y	N	N	N	N	N	N	N	N	N	N	N

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Project	Scope change 1	Scope change 2	Scope change 3	Scope change 4	Scope change 5	Scope change 6	Scope change 7	Scope change 8	Scope change 1		Scope change 2		
									TEI before (\$M)	TEI after (\$M)	TEI before (\$M)	TEI after (\$M)	
<p>Geelong Water Hub</p> <p>Time: 1/1/2018 to 31/12/2020</p> <p>Project description: The project is a major infrastructure project involving the construction of a new water treatment plant and associated infrastructure in Geelong. The project is a result of the Victorian Government's commitment to improve water services and infrastructure in the state.</p>	Y	N	N	N	N	N	N	N	N	N	N	N	
<p>Green Town Road Program</p>	Y	N	N	N	N	N	N	N	N	N	N	N	N
<p>Health and Aged Care Services</p> <p>Project description: The project involves the development and implementation of health and aged care services across the state. This includes the construction of new facilities, the procurement of services, and the implementation of new programs and initiatives.</p>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
<p>Keeping Victoria Moving</p> <p>Project description: The project involves the development and implementation of infrastructure and services to improve the transport system in Victoria. This includes the construction of new roads, bridges, and public transport facilities, as well as the implementation of new programs and initiatives.</p>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
<p>Laricide Resistant Hospital Acquired Infection Stage 1A</p>	N	N	N	N	N	N	N	N	N	N	N	N	N
<p>Melbourne City Centre Transformation</p>	Y	N	N	N	N	N	N	N	N	N	N	N	N
<p>Melbourne City Centre Transformation</p>	Y	N	N	N	N	N	N	N	N	N	N	N	N
<p>Orphan Law Courts Project</p> <p>Project description: The project involves the development and implementation of new law courts in Melbourne. This includes the construction of new facilities, the procurement of services, and the implementation of new programs and initiatives.</p>	Being funded	N	N	N	N	N	N	N	N	N	N	N	
<p>Orphan Law Courts Project</p> <p>Project description: The project involves the development and implementation of new law courts in Melbourne. This includes the construction of new facilities, the procurement of services, and the implementation of new programs and initiatives.</p>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	

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Project	Score change 3		Score change 4		Score change 5		Score change 6		Score change 7		Attaching officer position (agency completed)	Survey completed
	Estimated completion date after	Estimated completion date before	Est. completion date after	Est. completion date before	Est. completion date after	Est. completion date before	Est. completion date after	Est. completion date before	Est. completion date after	Est. completion date before		
Chesham railway upgrade (Melbourne, Vic)												27/07/2021
Chesham Road Paving Project												26/06/2021
City of the Goldfields upgrade Stage 2 and final 4km												09/09/2021
City of the Goldfields - 2020/21 Capital Works Program												15/09/2021
Coroner's Law Operation - 2020/21 (Melbourne, Vic)												22/07/2021
Coroner's Law Operation and January upgrades												22/07/2021
Develo Street (Dandenong)												27/07/2021

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Project	Scope change 3		Scope change 4		Scope change 5		Scope change 7		Agency	Agency website
	Estimated start date after	Estimated start date before	TI before (S)	TI after (S)	Estimated start date after	Estimated start date before	TI before (S)	TI after (S)		
More Regional Trains, New Varsity Trains										
More Regional Trains, Regional Network Development Plan										
Priority Mail Mail Project										
North East Link	30/06/2027	30/06/2027								
New Trains and Capacity for Bus Stage 2 (Class 7 Trains 4001 - 4079)										
Options need upgrade (top)										
New Trains and Capacity for Bus Stage 3 (Class 7 Trains 4081 - 4146)										
New Varsity Capacity (174 Regional Network)										

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Project Name	Scope change 3		Scope change 4		Scope change 5		Scope change 6		Scope change 7		Agency	Agency website
	Estimated completion date after	TI before/after	Estimated completion date after	TI before/after	Estimated completion date after	TI before/after	Estimated completion date after	TI before/after	Estimated completion date after	TI before/after		
Preparation of education plan											Department of Education and Training	13/02/2022
Phase 1: Project Plan & 2022-23 Business Plan - Planning & Resource Procurement											Department of Education and Training	17/02/2022
Review of water recycling plant Stage 4 upgrade											South East Water	13/02/2022
Suburban Road Upgrade - Northern Road Upgrade and Southern Road Upgrade (interim)											Department of Transport, Planning and Infrastructure	17/02/2022
Watermarked Hill Line Upgrade Stage 2											Water Corporation	17/02/2022
Water Ponds Tank Substation Stage 2											Water Corporation	17/02/2022
West Gate Tunnel Project											West Gate Tunnel Project	17/02/2022
West Gate Tunnel Project - Infrastructure & Supporting Infrastructure											West Gate Tunnel Project	17/02/2022
Victoria Health Hospital Project											Victoria Health	17/02/2022

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Project Name	Scope change 3		Scope change 4		Scope change 5		Scope change 6		Scope change 7		Director's Office	No. of projects	Survey completed
	Completed completion date after	Completed completion date before	TI before Date	TI after Date	Completed completion date after	Completed completion date before	TI before Date	TI after Date	Completed completion date after	Completed completion date before			
Western Highway Duplication - 5 Starwin Regional (R304)													
Water Utilities Dual Water Supply Scheme													
Network Transition Plan - Phase A (Strenuous)													
Water Trails for Landmark													
Shepparton Corridor Upgrade - Stage 2													
Wimmera Pipelines System Capacity													
Esso Coles (Northgate) Retail Expansion													
RTT VSE 2024 Upgrade													
RTT Primary Network Augmentation													

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Project Name	Scope change 3		Scope change 4		Scope change 5		Scope change 6		Scope change 7		Survey completed	Survey completed date
	Finalised completion date after	Finalised completion date before	Finalised completion date after	Finalised completion date before	Finalised completion date after	Finalised completion date before	Finalised completion date after	Finalised completion date before	Finalised completion date after	Finalised completion date before		
BT7 Treatment Capacity Increase												13/07/2022
Watermains line upgrade (before without stage 1)												12/06/2022
Hydramatic Water Storage Tank												13/07/2022
Pen Pines to Sand Hill Pipeline												12/05/2022
St. Albans to Moorabool Watermain												12/07/2022
Big Peering Field												12/07/2022
Building a world-class hospital for Fraxion families												12/07/2022
Out Pines to Commercial Program												12/07/2022

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Project	Scope change 3		Scope change 4		Scope change 5		Scope change 6		Scope change 7		Attaching officer position (agency)	Survey completed (date)
	Estimated completion date before	Estimated completion date after	Estimated completion date before	Estimated completion date after	Estimated completion date before	Estimated completion date after	Estimated completion date before	Estimated completion date after	Estimated completion date before	Estimated completion date after		
First Generation Trams											Director, Network, Design and Integration	19/07/2022
Construction of the new tram depot (Melbourne)											Director, Office of the Chief Executive	23/03/2022
Food Maintenance Bids											Director, Security, Health and Services	22/06/2022
The new social distribution (Lyons Road)											Director, Office of the Chief Executive	17/07/2022
Suburban Rail Loop - Phase 1 and 2 (100, 100 to 10,250)											Chief Executive, Infrastructure	22/06/2022
Watermain and Sewer Main Rehabilitation											Director, Health and Safety, OH&S	17/07/2022
Western Road Upgrade (Interchange to West)											Director, Office of the Chief Executive	28/07/2022
Yam Hoon Road Acquisition - Stage 1 (Priority)											Director, Office of the Chief Executive	17/07/2022

Auditor-General's reports tabled during 2021–22

Report title

<i>Integrated Transport Planning (2021–22: 01)</i>	August 2021
<i>Major Infrastructure Program Delivery Capability (2021–22: 02)</i>	August 2021
<i>Clinical Governance: Department of Health (2021–22: 03)</i>	September 2021
<i>Managing Conflicts of Interest in Procurement (2021–22: 04)</i>	September 2021
<i>Major Projects Performance (2021–22: 05)</i>	September 2021

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