



Australian Government

Australian Public Service Commission

Measuring public service productivity: a primer

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Research Note 03-25



Rising living standards in Australia relies on productivity growth, and the public sector's contribution to that growth is coming into focus

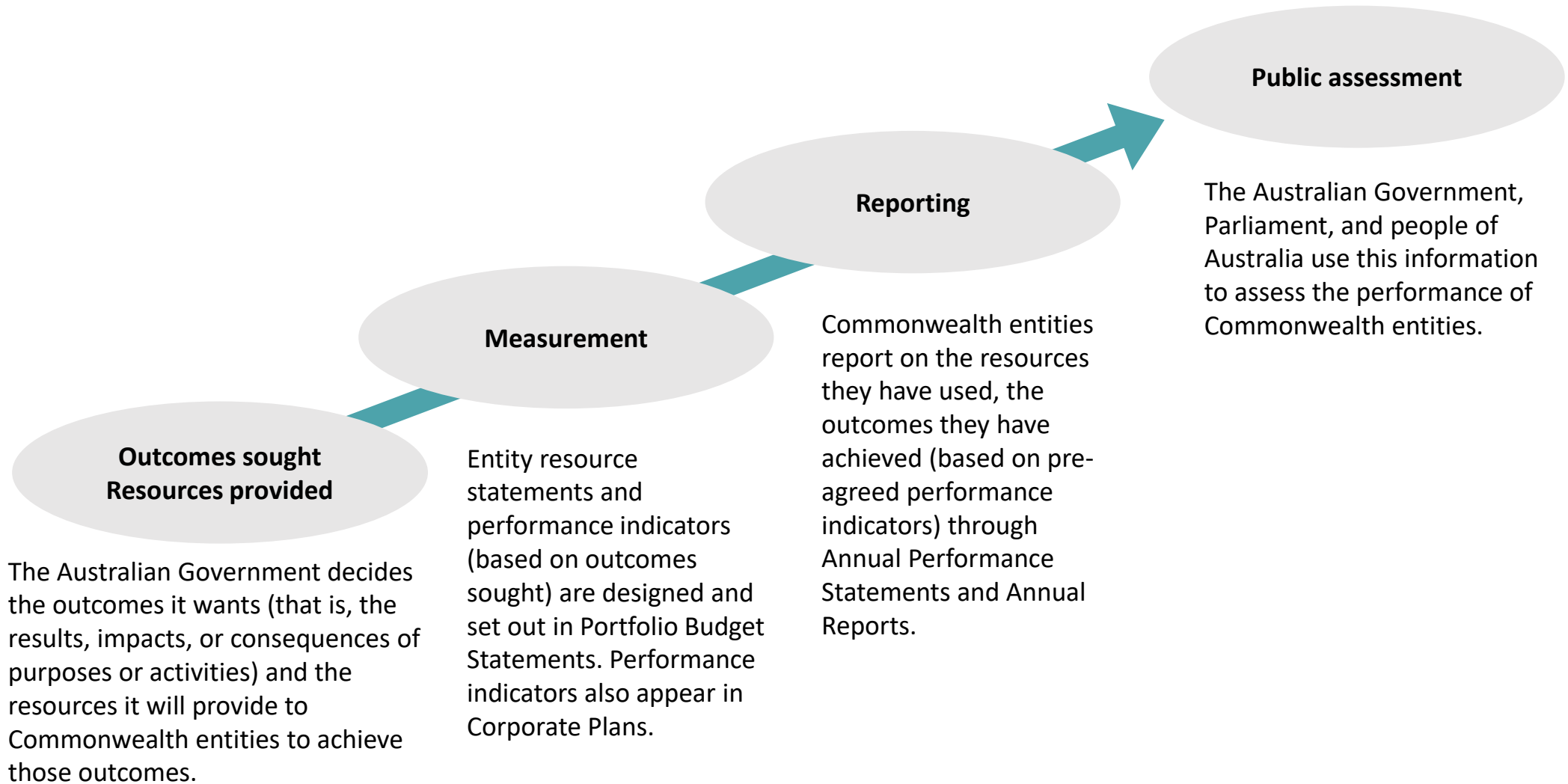
- Productivity growth is important because it results in higher living standards for Australians.
 - An Australian worker today can produce the same amount in one hour that it took them a whole day to produce in 1901.
 - This has meant that wages today can be higher than they were in 1901, even though working hours have fallen.
 - Australian workers today have more leisure, more buying power, and more goods and services available to buy compared to 1901.
- The public sector is a significant part of the Australian economy, comprising 17.6% of GDP in 2023-24.
- The public sector is also a significant employer, with 17.2% of all employed persons in Australia in June 2024.
- Public sector productivity has come to the fore recently due to factors including:
 - the rise of work from home and hybrid work patterns since the COVID-19 pandemic
 - budgetary constraints and ongoing skills shortages in Australia's broader labour force.
- Measuring public sector productivity would allow for more informed decisions around the trade-offs between current versus future productivity performance.



Source: Productivity Commission, [What is productivity?](#), Productivity Commission website, n.d., accessed 26 November 2024; Australian Bureau of Statistics (ABS), 'Table 5. Gross Value Added (GVA) by Industry', [Australian System of National Accounts](#) [data set], ABS website, 2024, accessed 6 December 2024; ABS, 'Key statistics', [Public sector employment and earnings](#), ABS website, 2024, accessed 21 February 2025; ABS, 'Table 1. Total All Industries – Trend, Seasonally Adjusted and Original', [Labour Account Australia](#), [data set], ABS website, 2024, accessed 5 March 2025; C Al-Khouri, '[Working from home has become normal in Australia. But is that a good thing? This is what you need to know](#)', ABC News, 9 August 2024, accessed 20 January 2025; Jobs and Skills Australia, [Current skills shortages](#), Jobs and Skills Australia website, n.d., accessed 20 January 2025.



The public sector governance, performance, and accountability regime creates a strong framework for measuring resources used and outcomes sought



Calculating the efficiency with which the public service uses inputs to achieve outcomes is difficult however because of measurement problems around outputs

Market sector vs public sector measurement regimes

- For the market sector:
 - labour inputs, such as hours worked, can be measured through labour force surveys
 - capital inputs, such as capital rental prices, can be estimated with assumptions of perfect competition and constant returns to scale
 - sales of goods and services can be measured, from which volumes and prices of market output can be measured.
- For the public sector, there are numerous sources of information on the inputs that public services use to deliver programs and policies, such as through:
 - the Australian Government's Budget Paper No. 4
 - financial statements in agency annual reports
 - ABS publications on Government Financial Statistics
 - workforce information through APSED public releases.

Public sector outputs: measurement issues

- Many public sector goods are created and delivered through joint public-private provision.
 - Agencies often use a mix of internal and external labour to produce their outputs.
 - The productivity performance of the external labour used may be incorrectly attributed to public sector employees.
- Many public sector outputs do not have sales of goods and services, making it difficult to measure output volumes and prices.
 - Education and health goods are often provided at no cost, or at heavily subsidised prices, to students and patients.
 - Some public sector outputs are also hard to measure, such as policy advice.
 - The [Commonwealth Performance Framework](#) focuses on Commonwealth entity performance outcomes, which differ conceptually from outputs.
- As with other service industries, increased public sector output can be considered improvements in the quality of delivered goods and services, and/or may lead to improved social outcomes. The value of such improvements are difficult to measure.



The Atkinson Review developed a method for directly measuring government output, however it does not capture knowledge worker output

The Atkinson Review's cost-weighted direct output measure...

- Due to the difficulty in measuring public sector outputs, governments have historically measured public sector output as equal to the value of public sector input.
- The UK's Atkinson Review (2005) argued that public service output should instead be measured by cost-weighted directly observed output, such as cost weighting the number of full time equivalent student enrolments of an education service. These direct outputs should be adjusted for quality changes over time.
- This review was implemented in the UK through the development of [UK public services productivity statistics](#). Independent reviews in [March 2016](#) and [March 2025](#) have continued with the Atkinson Review's methodology and updated it with more data sources.
- The ABS, in a similar vein, has produced experimental estimates of productivity for [school education](#), [higher education](#), and [hospitals](#). The Productivity Commission has produced [quality-adjusted productivity estimates for one third of Australia's healthcare sector](#).

...still has issues with measuring knowledge work output

- For knowledge work, directly observed output can be difficult to measure because:
 - knowledge workers create, consider, transform, and produce intangible information (e.g. through verbal advice given in a meeting), which by its nature is difficult to quantify
 - tangible output measures, such as the number of briefs written, do not control for quality nor for demand-side factors that would bias such measures
 - cost-weighting is difficult for knowledge work outputs that draw on multiple people and multiple teams, making it difficult to determine the individual contribution of each person or team.

Source: Productivity Commission, '[Non-Market Sector Productivity](#)', *Shifting the Dial: 5 year Productivity Review*, Supporting Paper No. 2, PC, Australian Government, 2017, accessed 5 March 2025; A Atkinson, [Atkinson Review Final report: Measurement of government output and productivity for the national accounts](#), report to the UK Government, Palgrave Macmillan, 2005, accessed 24 October 2024; C Bean, [Independent Review of UK Economic Statistics](#), report to the UK Government, 2016, accessed 15 April 2025; I Diamond, [National Statistician's Independent Review of the Measurement of Public Services Productivity](#), report to the UK Government, 2025, accessed 15 April 2025; Australian Bureau of Statistics, '[Measuring non-market productivity](#)', *Interpreting ABS productivity statistics*, ABS website, 2023, accessed 20 January 2025; Productivity Commission, [Advances in measuring healthcare productivity](#), Productivity Commission, Australian Government, 2024, accessed 20 January 2025; R Somani, [Public-Sector Productivity \(Part 1\) Why is it important and how can we measure it?](#), World Bank Group, 2021, accessed 28 February 2025; W Reinhardt, B Schmidt, P Sloep, and H Draschler, '[Knowledge Worker Roles and Actions—Results of Two Empirical Studies](#)', *Knowledge and Process Management*, 2011, 18(3): 150-174.



Historical APS work in this space has assessed the quality of the processes used to generate policy advice, as well as the quality of the advice itself



- In 1987, the Australian Government introduced a Financial Management Improvement Program. As part of this program, an evaluation strategy was introduced in 1988 that applied to Australian Government programs, with a focus on program outcomes and effectiveness. Policy advising work was exempt on the basis of the difficulties and expected cost in evaluating this work.
- In 1991 a joint working group was convened between central agencies and the APSC to examine ways to evaluate policy areas. This group recommended trialling policy management reviews within central agencies, covering:
 - the management of policy advice inputs (i.e. staff and knowledge management)
 - the process of policy analysis and advising
 - outputs/outcomes.
- From 1993 to 1995, five reviews were undertaken by PM&C, Finance, and Treasury. From these reviews, it was found that:
 - assessing policy advice inputs and processes was possible
 - assessing policy advice outputs by focusing on the quality of that advice was also possible, though involved judgment
 - assessing outcomes was difficult because of multiple factors leading to decisions, and the length of time that policy decisions may require to manifest as outcomes.



External work also focused on the quality of major policy decisions by governments



- From 2018 to 2022, the Evidence Based Policy Research Project developed a methodology to review the quality of major policy decisions.
- A selection of major policy decisions across Commonwealth and state governments were assessed against the following criteria developed by a University of Queensland academic:
 1. Establish need
 2. Set objectives
 3. Identify options
 4. Consider mechanisms
 5. Brainstorm alternatives
 6. Design pathway
 7. Consult further
 8. Publish proposals
 9. Introduce legislation
 10. Communicate decision
- While the Evidence Based Policy Research Project finished in 2022, the Susan McKinnon Foundation is continuing this work through a [successor program](#).
- This successor program focuses on the NSW Parliament's use of Statements of Public Interest (SPI) questionnaires attached to NSW Government bills. These SPI questionnaires address a bill's need, objectives, options, analysis, pathway, and consultation.
- The Susan McKinnon Foundation is supporting these processes through, among other things, publishing [Shadow SPI reports](#) and creating a [policymaking assessment framework](#), which has been used to [assess policymaking in the Australian energy sector](#).

Source: Evidence Based Policy Research Project, [Evidence Based Policy](#), Evidence Based Policy Research Project website, 2021, accessed 18 February 2025; Susan McKinnon Foundation, [Percy Allan Optimising the Statement of Public Interest \(SPI\)](#), Susan McKinnon Foundation website, 2024, accessed 18 February 2025; Susan McKinnon Foundation, [The Shadow SPI an initiative of the Susan McKinnon Foundation](#), Shadow SPI website, 2025, accessed 18 February 2025; Susan McKinnon Foundation, [Policymaking assessment framework](#), Analysis & Policy Observatory, 2025, accessed 14 March 2025; Blueprint Institute and The McKell Institute, [How the sausage is made: assessing Australian policymaking practices in the energy sector](#), Analysis & Policy Observatory, 2025, accessed 14 March 2025.



New Zealand developed a similar assessment process for its policy advice, using quality standards for written policy and other advice



- Introduced in 2019-20, the New Zealand Government's Policy Project has created a Policy Quality Framework that assesses the quality of written policy and other advice produced by New Zealand public service agencies for their Ministers.
- This framework assesses papers against the following domains:
 - context (why is the decision maker getting this paper advice, and where does it fit?)
 - analysis (is the paper clear, logical, and informed by evidence?)
 - advice (does the paper engage the decision maker and tell the full story?)
 - action (does the paper identify who is doing what next?).
- DPMC provides online tools and resources to help apply the frameworks, holds tailored workshops with agencies, and develops guidance for New Zealand public servants.
- Tools and resources include a checklist for reviewing papers in development, a guide on panels and processes for assessing policy advice papers, a checklist for administrators of these panels, and a paper scoring template.
- This work is supplemented by an ongoing Performance Improvement Framework process, which are ongoing assessments of an agency's current and future fitness for purpose and helps to identify strengths and areas of improvement.



Rather than evaluating knowledge worker outputs, modern APS work focuses on measuring the quality of engagement and use of knowledge workers



- The Department of Home Affairs is a large agency that combines knowledge workers and service delivery workers across many domains: cyber and critical infrastructure resilience and security; immigration; border security and management; counter-terrorism; the protection of Australian sovereignty; and in citizenship and social cohesion.
- Home Affairs began a Performance, Productivity and Flexible Work Project, co-sponsored by the Department of Finance, in 2022. This work included developing a “Measurement Methodology”, a series of productivity indicators designed to measure the relationship between flexible work, performance, and productivity.
- The original version of this work aimed to produce a picture of group-level performance outcomes, resourcing, and flexible work uptake built on team or divisional level data. There were difficulties however in the availability and intensity of data collection required for this approach. There were also difficulties in measuring performance outcomes and issues with trying to aggregate team level performance outcomes upwards.
- The project has instead developed a workforce engagement dashboard. This dashboard combines internal agency data on the use of flexible work arrangements, separation rates, leave usage, time management, work health and safety metrics, and resourcing with APS Employee Census data on:
 - employee engagement
 - impressions of immediate supervisors and SES management
 - communication
 - enabling innovation
 - wellbeing policies and support.
- This approach avoids having to measure outputs per se, and instead focuses on the quality and use of labour inputs into the knowledge work production process.



Joint UNSW Canberra and ATO work also examines ways to make better use of knowledge workers and public sector workers more generally in an age of hybrid work



UNSW
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**Public Service
Research
Group**



Australian Government
Australian Taxation Office

- UNSW Canberra's Public Service Research Group are collaborating with the Australian Taxation Office on a project that examines *Hybrid Working and Public Sector Productivity*.
- This project will investigate:
 - what does productivity mean in the context of the APS and hybrid working?
 - what are the elements that enable high performance and productivity?
- To measure productivity, the research team is focusing on team performance metrics and on how well outcomes are being met by teams, rather than outputs produced.
- Team performance will be assessed through:
 - measuring and assessing work tasks, team structures, team processes
 - the impact of different types of workspaces on performance
 - organisational context, such as the impact of resourcing, culture, and identity on individuals and team work.
- The ATO has identified internal teams that contain hybrid workers. UNSW Canberra researchers plan to run experimental interventions and conduct before/after analysis across the above team performance and outcome dimensions.



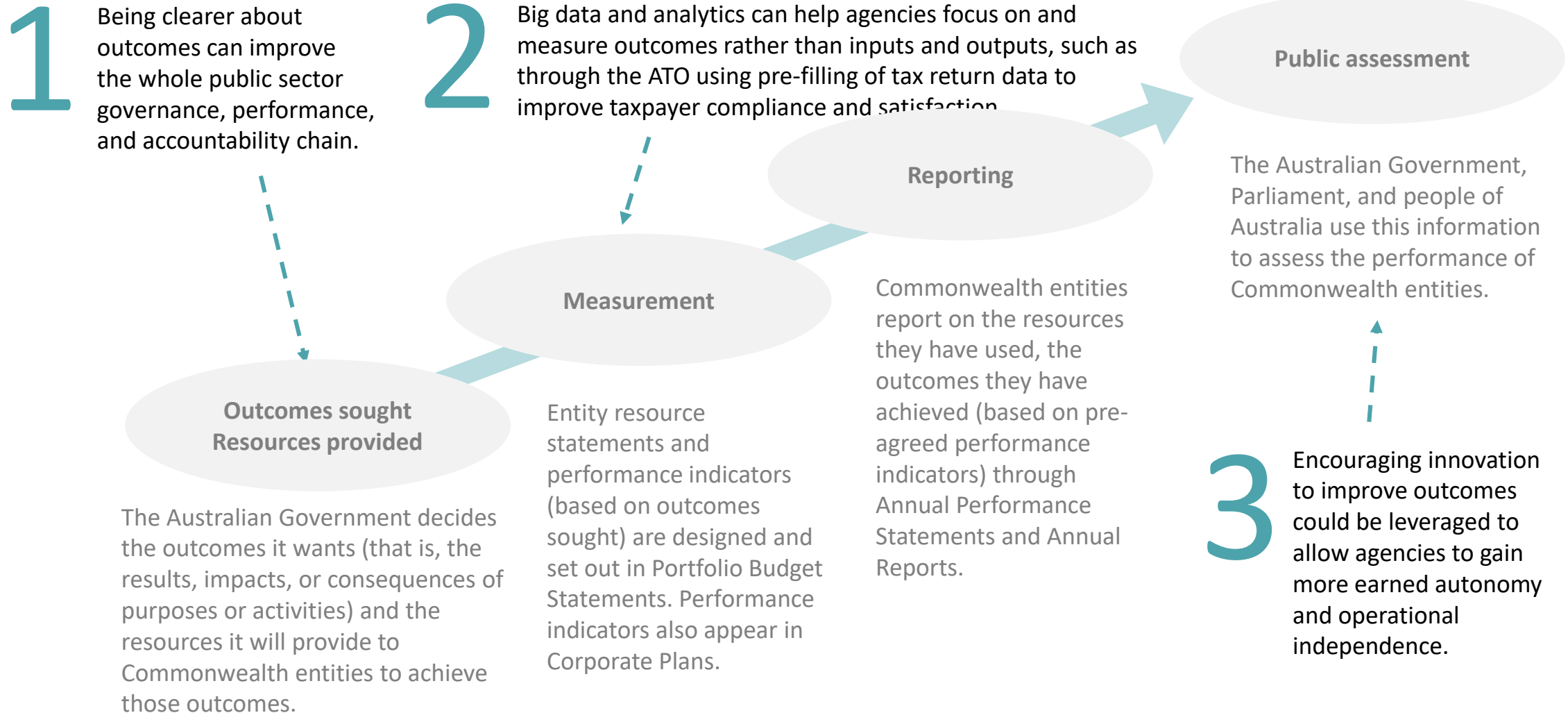
Further work could explore public service productivity at the team, agency, or sector level, rather than individual level



Team level	Agency level	Sector level
• The UNSW Canberra and ATO experiment could be expanded to include knowledge work-based teams as well as service delivery teams, with a focus on attempting to measure: - team-level output, with considerations around quality measurement of that output - impacts on organisational culture - impacts on knowledge spillovers.	• Agencies could consider supplementing their current performance reporting (that focuses on outcomes) with other views of organisational productivity. - This would require definition and measurement of outputs, and adjustments for quality over time. • There is also potential for important productivity outcomes to come from improving an agency’s external environment, such as streamlining or sunsetting the regulations that apply to it.	• Australia could consider the UK approach of measuring public service productivity by sector, leading over time to insights into overall public service productivity. • The care sector, including health, disability and veterans, could be a possible pilot study.



There are also opportunities to improve the overall public sector governance, performance, and accountability regime



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