Contents

A  A Platform for Modernizing the way Ontario Manages Provincial Expenditures: Summary of Findings ................................................................. 2
B  Review Mandate and Approach .................................................................. 4
C  Fifteen Years’ Historical Expenditure Analysis: What the Facts Tell Us ........................................................................................................ 7
D  A Framework for Better Public Finance Management in Ontario .................................................................................................................. 20
E  Specific Ideas to Set the Ball Rolling .......................................................... 29
F  Building the Modernization Action Plan ..................................................... 44

NOTICE

Ernst & Young LLP (EY) prepared the attached report only for Treasury Board Secretariat (“TBS” “Client”) pursuant to an agreement solely between EY and Client. EY did not perform its services on behalf of or to serve the needs of any other person or entity. Accordingly, EY expressly disclaims any duties or obligations to any other person or entity based on its use of the attached report. Any other person or entity must perform its own due diligence inquiries and procedures for all purposes, including, but not limited to, satisfying itself as to the financial condition and control environment of TBS, the Government of Ontario, and any of its funded operations, as well as the appropriateness of the accounting for any particular situation addressed by the report.

While EY undertook a thorough line by line review of government spending per the terms of agreement, EY did not perform an audit or review (as those terms are identified by the CPA Canada Handbook - Assurance) or otherwise verify the accuracy or completeness of any information provided to us of TBS, the Government of Ontario, or any of its funded operations financial statements. Accordingly, EY did not express any form of assurance on accounting matters, financial statements, any financial or other information or internal controls. EY did not conclude on the appropriate accounting treatment based on specific facts or recommend which accounting policy/treatment TBS, the Government of Ontario, or any funded operations should select or adopt.

The observations relating to all matters that EY provided to TBS were designed to assist TBS in reaching its own conclusions and do not constitute EY’s concurrence with or support of Client’s accounting or reporting or any other matters.

EY prepared the English language report. TBS is responsible for its translation into French.
A Platform for Modernizing the way Ontario Manages Provincial Expenditures: Summary of Findings

1. EY conducted a review over a six week period of Ontario Government expenditures for the fifteen years ending fiscal year 2017/18 based on data provided by the Ontario Treasury Board Secretariat. The Review covered expenditures and expenditure growth for every ministry, every major sector, every program, and collectively, for all transfer payment expenditures\(^1,2\). An extensive interview program with over 75 senior Government executives was engaged to support the Review, including elected and non-elected officials. In addition, the Review was supported by the Government’s Planning for Prosperity consultations that received over 15,000 submissions.

2. The mandate of the Review was to analyze expenditures, conduct selected jurisdictional benchmarking, and based on the data available, identify programs and operations for which efficiencies could be generated through more focused review and subsequent execution. Such opportunities should not result in involuntary job losses, and instead focus on efficiency and effectiveness improvements.

3. The general context within which the Review was conducted is one of achieving fiscal sustainability by the Government over the medium term, and the Review is one input for Government’s consideration. No specific target for efficiency dividends or expenditure reduction was set and none was considered. The Government has indicated an objective of efficiency gains in the order of four cents on the dollar; the findings of the Review are consistent with this objective.

4. Analysis of expenditures (2002/03 – 2017/18) reveals some key facts that indicate substantial growth in Ontario’s public sector:

   a) In real terms ($2018) total operating expenditures have increased by $46.4B or 55%. This means that per capita spending has increased a full $2,226 per person in today’s dollars, a 32% increase over 2002/03 in real terms.

   b) After adjusting for inflation, the compound annual growth rate (CAGR) of total operating expenditures is 3.0% and over the 15 years examined outpaced Ontario population growth by 1.9% (CAGR). Had expenditures increased in line with population growth, 2017/18 expenditures would have been $31.9B less, and in total, would have been $331B lower over 15 years.

   c) Provincial debt over that same period almost doubled, increasing 87% or $158B ($2018) to $338B and annual interest on debt charges grew $2.4B ($2018) to $12.6B per annum in 2017/18. Interest on debt is Ontario’s 4th largest expenditure.

\(^{1}\) Data for 2017/18 represents a point in time and was prior to finalizing the 2017/18 Public Accounts released on September 21, 2018.

\(^{2}\) Figures in the report may exclude consolidation adjustments. Figures may also exclude one-time adjustments to allow for comparability.
item, higher than total operating expenditure in the entire Ontario Public Service (OPS).

d) A striking finding is shown by the breakdown of expenditures that reveals real operating expenditure in the OPS has remained flat (growth at just 0.0% CAGR), while operating expenditure through Transfer Payments (TP) including to the Broader Public Service (BPS) has grown $46.3B or 99.8% of total real growth in operating expenditures. This means that for every one dollar spent in the OPS, nine dollars are spent through the 35,000 separate TP arrangements that the Ontario Government manages.

5. The sheer volume of payment arrangements coupled with the fact that more than 90% of total operating expenditure is spent through TP agreements suggests there is significant opportunity to transform the way Ontario manages these expenditures.

6. This is an opportunity characterized by capturing the significant investments already made in the sector. The most important finding of the Review is that not only can significant operating efficiencies be found to support a more sustainable expenditure pattern for Government, pursuing efficiencies in the manner and areas outlined would lead to significant improvements in outcomes. The beneficiaries of carefully planned and executed efficiency and effectiveness would be citizens, clients, businesses, employees, delivery partners, and taxpayers.

7. The Review focuses on four major dimensions to implement a modernized Ontario Government:

a) A better framework for public expenditure management that commits to evidence-based decision-making, a modern relationship with labour, a citizen-centered and digital-first mindset, modern risk-based regulatory management, renewed funding models that incent productivity and performance, a strong focus on intergovernmental coordination, and a clear understanding of the role of government acting as steward of taxpayer investment.

b) Strong leadership by the centre of government working with ministries and various delivery partners, to strengthen horizontal coordination and establish a renewed focus on improving the efficiency, productivity, and outcomes of the BPS and broader transfer payment partners, while at the same time delivering the most efficient OPS possible.

c) Major areas for Government to focus on to achieve efficiencies and improvements for both the OPS and through TP partners include: service delivery modernization, cost efficiency, individual and business supports, and one-time savings.

d) A Modernization Action Plan that would establish strong governance, clearly prioritize those opportunities for short term and longer term efficiency and performance, initiate immediate steps to execute the Plan, and most importantly of all, drive the realization of benefits for all Ontarians.
B  Review Mandate and Approach

8. There is no shortage of commentary on the state of Ontario’s public finances. From the statutory reporting of Ontario’s Auditor General3 or the Financial Accountability Officer4 who both report directly to the Ontario Legislature, to the Commission on the Reform of Ontario’s Public Services (the Drummond Report)5 in 2012, to recent publications from leading Canadian research entities such as the C.D. Howe6 Institute or the Fraser Institute7, to the regular analysis presented by debt rating agencies such as DBRS or Moody’s, there is general concern about the sustainability of Ontario’s fiscal position.

- “There was one overarching theme this year... the need to improve planning that supports timely and informed decision-making and oversight.” (Auditor General Annual Report, 2017)
- “The slower pace of economic growth results in more modest growth in Ontario’s revenues, which in turn, contributes to Ontario’s worsening budget deficit.” (Financial Accountability Office, Economic and Budget Outlook, 2018)
- “Unless policy-makers act swiftly and boldly to prevent such an outcome, Ontario faces a series of deficits that would undermine the province’s economic and social future. Much of this task can be accomplished through reforms to the delivery of public services that not only contribute to deficit elimination, but are also desirable in their own right.” (Commission on the Reform of Ontario’s Public services, 2012)
- “The government must act to bring the long-term cost of government in line with the revenue-raising capacity of the province.” (CD Howe, An Economic Program for Ontario, 2018)
- Ontario should deal with its fiscal challenges head on by reducing government spending. (Fraser Institute, Restoring Ontario’s Public Spending, 2018)

3 2017 Auditor General Annual Report
5 Commission on the Reform of Ontario’s Public Services, 2012
7 Fraser Institute. Restoring Ontario’s Public Finances, August 2018.
9. The current Review is complementary to other research and commentary, and takes a line-by-line look at the historical expenditures of the Ontario Government for the 15 year fiscal period 2002/03 to 2017/18. Its point of departure from previous assessments is to use the facts about how money has been spent over 15 years as a direct basis for how Ontario could realize a new strategy focused on efficiency, productivity, and results, including specific discussion of the enabling conditions that need to be in place to sustain performance. The Review proposes the development of a Modernization Action Plan for Government to consider as it works to address fiscal management over the coming years.

10. The Review’s mandate was clear and focused: examine 15 years of historical expenditure data, compare Ontario’s results to those in selected jurisdictions in Canada and internationally, and recommend areas for further examination by Government as it considers decisions about how it will manage Ontario’s fiscal position.

11. The Review has been conducted in the context of Government’s stated commitment that there should be no involuntary job losses as a result. This constraint has been respected fully.

12. The Review was conducted over a six week period in the late summer of 2018 and relied exclusively on various operational, financial, and program data collected from Ministries and Central Agencies by the Treasury Board Secretariat which, as is a key finding of the Review, is limited in some important ways. Publicly available information was also reviewed to bolster the analysis. A key recommendation going forward is for a relentless focus on data and analysis to strengthen the government’s ability to drive greater efficiencies and better outcomes.

13. The Review was not mandated to recommend a specific approach to achieving fiscal sustainability and had no connection with the Independent Financial Commission of Inquiry. The Review was conducted in parallel to the Planning for Prosperity initiative and the OPS Big Bold Ideas Challenge, and it incorporated important ideas from these efforts into the analysis.

14. The approach requested by Government and taken by the Review, was to use the available data to guide all conclusions (including about when and where further data are required), to focus on a relatively small number of factors and strategies that could have the most meaningful impact on future fiscal performance and service results, and to identify necessary enabling conditions and governance arrangements for the work that lies ahead. These factors are viewed as necessary to achieve any strategy Government will choose for fiscal management but are not, on their own, guarantees of success. That would come only if there is sustained commitment to evidence-based decision-making and continual attention to the modernization of how Ontario designs, funds, manages, and delivers its public sector responsibilities.
15. The Review’s contribution is:

a) A step-wise examination of the facts and identification of what can be done in response to these facts to pursue efficiency, productivity, and results.

b) Identification of where better evidence is required.

c) A roadmap for implementation.

16. The data show considerable investment has been made in Ontario’s public sector, primarily through the wide range of transfer payments that distribute the vast majority of Provincial expenditures. From an expenditure perspective, it is clear the Ontario public sector is characterized by the investments made outside the OPS. Any attempt to “bend the expenditure cost curve” in a way that will sustain fiscal results, must focus on realizing the value of investments made in the delivery agents that sit across the Province and whom deliver more than 80% of total public expenditure and more than 90% of direct operating spend.

17. The lasting result can achieve shorter-term efficiencies and longer-term modernization and productivity gains to deliver fiscal sustainability and a transformed, modern, public sector for Ontario.
Fifteen Years’ Historical Expenditure Analysis: What the Facts Tell Us

Where Ontario spends

18. Ontario spends its money in three main ways:

a) On the government ministries and operations known as the Ontario Public Service (OPS).

b) On a series of Transfer Payments (TPs) that go to individuals, businesses, and a wide range of consolidated entities outside of the OPS including hospitals, schools, colleges, and Agencies, Boards and Commissions in the Broader Public Service (BPS), to a range of entities that receive significant public funding but are not consolidated such as universities and municipalities, and a significant number of delivery agents and TP recipients that work at arms-length to Government.

c) Interest on debt.

The line by line review of Government of Ontario expenditures from 2002-03 to 2017-18 rests on a detailed analytical program that:

► Reviewed 15 years of financial records from the Government’s general ledger system, comprising over 233,000 lines of financial account data

► Reviewed 22,000 additional lines of financial information related to transfer payments made by the Government over the 15 year review period

► Reviewed an additional 11 years of financial data for the broader public sector entities (hospitals, school boards, and colleges), comprising 286,000 lines of data

► Compared 15 years of historical data including revenue, expenditure, GDP, population, inflation, and program outcome measures for three other Canadian provinces and three subnational governments globally

► Received and disaggregated over 800 individual files, and over 1.7GB of data

► Analyzed planned future operating and capital expenditures, spanning as far forward as 2027-28 in certain cases

► Reviewed over 120 reports, briefings, and background documents across ministries

► Met and consulted with representatives from the Office of the Premier, Cabinet Office, and from all ministries

► Reviewed over 15,000 submissions to “Planning for Prosperity: A Consultation for the People”

► Reviewed recent reports from Office of the Auditor General, the Financial Accountability Office, and other recent reports commissioned by the Government on a variety of topics

---

8 All expenditure data extracted from Government of Ontario financial systems and provided by TBS
19. Total government expenditure for the fifteen year period has grown from $95B to $144B in real terms; transfer payments grew by $46.3B (CAGR of 3.4%), interest on debt grew by $2.4B (CAGR of 1.4%), and direct OPS expenditures grew by $0.1B (CAGR of 0.0%).

![Figure 2 Total Government Expenditures FY2002/03-FY2017/18 (Real 2018 $)](image)

20. The review of historical operating expenditures (excluding interest on debt) can be summarized in three main points (see Figure 3):

a) Expressed in today’s dollars ($2018), total operating expenditures have risen 55% or $46.4B, at a compound annual growth rate of 3.0%.

b) Of this real growth, 0.2% has gone to the OPS, which represents less than 10% of current operating spend; 99.8% has gone to Transfer Payments, which represents more than 90% of current operating spend.

---

9 Forecast expenditures from 2018 Ontario Budget, Table 3.1; Forecast CPI from Oxford Economics
c) Of the real growth in TP, approximately 37% ($17.3B) has gone to individuals and business supports, and the remaining 63% ($29.0B) to various operations, of which 50% is spent on employee-related costs.

21. A sector-by-sector breakdown of expenditures for the major spending allocations reveals that the most significant proportion of spend is in the “Big Three” sectors: Health, Education, and Children, Community and Social Services. Although small in the overall context, growth in Environment, Resources, and Economic Development is a significant portion of the total growth,
and is largely driven by transfers for transit capital projects, business supports, energy price mitigation programs, and programs related to the Greenhouse Gas Reduction Act\textsuperscript{10}.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure5.png}
\caption{Figure 5 Compound Annual Transfer Payment Growth, Weight-Averaged by Sector FY02/03–FY17/18 (\$B, 2018)}
\end{figure}

22. Below is a stylized view of each of the major sectors and a breakdown of the proportion of each sector spent directly by the OPS and through transfer payments.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure6.png}
\caption{Figure 6 Total Operating Expenditure Growth by Sector, FY02/03-FY17/18 (Real 2018 \$)}
\end{figure}

23. See “Sectoral Transfer Payments” at the end of this section of the report for a more detailed analysis of sectoral spending.

\textsuperscript{10} Sectoral growth breakdown was weighted using the average of the FY2002/03 and FY2017/18 proportion of total expenditure
24. The 15 year expenditure growth has significantly out-paced population growth\(^\text{11}\) (expenditures CAGR is higher than population CAGR by 1.9% over 15 years). Had expenditures increased in line with population growth, 2017/18 expenditures would have been $31.9B less and, in total, would have been $331B lower over 15 years.

25. This is evident in some important sectors as well, such as:

a) Education real expenditure (K-12) has grown by 1.7% CAGR while at the same time total student enrolment has declined by 0.5% CAGR\(^\text{12}\).

b) Real expenditure in hospitals has grown by 2.3% CAGR in real terms while at the same time in-patient days have grown by 0.2% CAGR.\(^\text{13}\)

---

\(^{11}\) All population figures based on Statistics Canada data


\(^{13}\) Canadian Institute for Health Information, Report CMDB3, 2017
Jurisdictional benchmarking

26. Ontario’s 15 year\(^{14}\), Whole of Government expenditure (including debt service) CAGR of 2.9% is higher than both BC (1.8%) and Quebec (1.6%), as can be seen in the figure below.

a) Government expenditures as a portion of GDP have shrunk over the relevant 15 year time period for Ontario (CAGR of -0.7%), BC (CAGR of -2.8%), and Quebec (CAGR of -1.9%).

b) Ontario’s interest on debt is 9% of expenditures, compared to 5.3% in BC and 10.6% in Quebec.

c) In terms of operating expenditures per capita, Ontario’s 15-year CAGR is 1.8%; BC’s operating expenditures per capita CAGR for the same period is 0.7% and Quebec’s CAGR is 0.8%. Note that both BC and Quebec have gone through expenditure management programs in recent years.

Evidence-Based Expenditure Management in Quebec

In 2014, the Government of Quebec made a decision to address the trend of Provincial expenditures consistently exceeding revenues. The Government developed annual expenditure management strategies with the aim of balancing the Provincial budget by the 2015-16 fiscal year. A balanced budget was achieved via detailed reviews of program spending and a resulting limit on expenditure growth. Quebec focused on making evidence-based decisions in an effort to both generate one-time savings and promote ongoing spending restraint. Now, Quebec is making efforts to develop a culture of continuous review intended to strengthen the sustainability and quality of government initiatives based on priority needs and available resources. Expenditure programs are now subject to reporting requirements that must enable realistic assessment of program results – this requirement is designed to help the Government provide effective programming while avoiding duplication of efforts between departments.

---

\(^{14}\) For the purposes of jurisdictional comparisons, comparable data for other provinces was not available for FY2017/2018, so data series end at FY2016/2017. As a result, 15 year CAGR do not directly align with those provided elsewhere in this document.
27. At a sectoral level, Ontario expenditure has grown faster than either BC or Quebec in all four sectors considered, as shown in the figure below.

<table>
<thead>
<tr>
<th>Health</th>
<th>Education</th>
<th>Justice</th>
<th>Social Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ontario: 3.2%</td>
<td>Ontario: 2.3%</td>
<td>Ontario: 1.3%</td>
<td>Ontario: 3.2%</td>
</tr>
<tr>
<td>Quebec: 2.9%</td>
<td>Quebec: 1.0%</td>
<td>Quebec: 1.2%</td>
<td>British Columbia: 0.2%</td>
</tr>
<tr>
<td>British Columbia: 2.3%</td>
<td>British Columbia: (0.7)%</td>
<td>British Columbia: (0.5)%</td>
<td>Quebec: (0.3)%</td>
</tr>
</tbody>
</table>

Figure 9 Comparative Sector-by-Sector Compound Annual Growth Rates, FY02/03-FY16/17 (Real 2018 $)

a) Health sector expenditures per capita have grown at an identical rate in Ontario and Quebec (15 year CAGR of 2.1%), and at a lower rate (15 year CAGR of 1.2%) in BC. Similar demographics explain a significant portion of the similarity in sectoral expenditure growth.

b) Quebec (1.0%) and BC (-0.7%) have lower 15 year CAGRs than Ontario (2.3%) in terms of total education expenditures. Ontario spends more on education as a percentage of total government operating expenditures (28% in 2016/17) than either BC (17%) or Quebec (25%). However, both Quebec and BC have higher PISA scores (2015 results) than Ontario in Mathematics, Science, and Reading. Understanding BC and Quebec’s approach to managing education could point the way to improving the sustainability of the sector in Ontario.

c) Quebec (15 year CAGR of -0.3%) and BC (15 year CAGR of 0.2%) both have lower expenditure growth rates in social services than Ontario (15 year CAGR 3.2%). All three provinces have similar poverty rates (calculated as 50% of the national median income) after taxes and transfers\(^\text{15}\), but Quebec’s starting point for poverty is significantly higher than Ontario’s, while BC’s is approximately the same level. While differences in program delivery will account for a portion of the gap, further investigation into the strategies pursued by BC and Quebec should be carried out, while efforts are made to consider delivery models that may be driving systems costs in Ontario.

d) Ontario’s 15 year CAGR in the justice sector is 1.3%, higher than BC (-0.5%) and Quebec (1.2%). Ontario also spends more on justice on a per capita basis ($327) than BC ($266) and Quebec ($265). However, all three jurisdictions have very similar rates of police officers per 100,000 people (183 in Ontario, compared to 186 in BC, and 189 in Quebec)\(^\text{16}\).

---


A Strategy to optimize investment:
The call for action

28. And yet this is not a story of dire straits, it is a story about opportunity to capture the benefit of significant investments made historically through a concerted effort to modernize delivery systems in the BPS and transform the way Ontario citizens and businesses experience the relationship with their cities, schools, higher education providers, health care providers, transportation systems, regulators and the full scope of the public sector that affects every dimension of their daily lives.

29. The dividends owed to taxpayers who continue to make significant investments are simple to define:

a) Improved productivity in all public delivery systems as measured from the perspective of the citizen, taxpayer and client, rather than the perspective of the suppliers – the first and last test of every decision must be that it

results in greater levels of productivity and result for citizens, clients and taxpayers.

b) Through improved productivity, the capacity to focus more strongly than ever on delivering all public services and government responsibilities in the most modern, efficient and effective manner possible.

c) Better outcomes across the board.

30. Realizing substantial dividends is possible through some important foundational changes to the enabling conditions of how Ontario manages its public finances, coupled with on-going opportunities to drive day-to-day efficiencies in operations, which will underpin the sort of transformation in Ontario’s public sector that is possible.
Sectoral transfer payments

Below is a stylized view of sectors spending, split between what is directly spent by the OPS and what is spent through transfer payments. The pattern of the majority of spend occurring through transfer payments that is true at the whole-of-government level is also true at the sectoral level and, in fact, is more pronounced in the three largest sectors.

Health

The Health sector represents 42% of total government operating expenditure and substantially all of it is through transfer payments. Passed on through Local Health Integration Networks, about one-third of Health expenditures go to hospitals, or about 14% of total government operating expenditures.
**Education**

Education is the second biggest sector, representing 21% of total operating expenditure. As with Health, substantially all of that goes through transfer payments, largely to school boards, which in turn, spend 77% of funding on employees. Of the employee spending more than two-thirds, or $14.2B, is on teachers and teachers' assistants, representing more than 10% of total government operating expenditures.

*Figure 11 Ministry of Education and School Board Expenditures, FY17/18*
Social Services

95% of Social Services expenditures flow through transfer payments, but in this case as a combination of statutory transfers to individuals and transfer payments to delivery agents. Even with that split, almost 28% of sectoral spending still occurs through transfer payments to delivery agents, or just under 4% of total government operating expenditures.

Figure 12 Social Services Sector Transfer Payment Breakdown, FY17/18
Post-secondary and training

Just under 4%, or $5.1B, of total government operating expenditure goes to colleges and universities for operating costs, with an additional $0.8B in capital support for post-secondary institutions, and $1.4B in direct student support, a significant portion of which flows through to colleges and universities in the form of tuition payments.

Figure 13 Post-Secondary and Training Sector Transfer Payment and Program Breakdown, FY17/18
Justice

Justice is the only sector in which expenditures are primarily directly through the OPS and not transfer payments. Since Justice only makes up a small portion of total operating expenditures, any line item in this sector does not have outsize impacts on total government expenditures in the same way as sectors discussed above. However, a significant portion of Justice expenditures are still on salaries and wages, primarily for OPP officers and corrections personnel.

Figure 14 Justice Sector Transfer Payment and Community Safety and Correctional Services Expenditure Breakdown, FY17/18

Note: graphs not to scale

1 Community Safety & Correctional Services breakdown from MCSGS 14-year actual breakdown
A Framework for Better Public Finance Management in Ontario

How Ontario manages its data

31. The data show that nearly all of the increase in expenditure has gone into funding Transfer Payments which, by design, are at arm’s length. The evidence points to a more effective ability to manage the 15 year expenditure growth in the OPS to 0.0% in real terms, which is perhaps not surprising, as these are the expenditures over which Government can exert the strongest control and has done so repeatedly through a series of “efficiency dividend” exercises.

32. From an expenditure management perspective, this implies that any serious attempt to address expenditure growth in the Ontario public sector must focus on modernizing and ensuring better outcomes for delivery of programs. There can and should still be efficiencies in the OPS, particularly through modernization, but fiscal balance (should that be a policy objective) would need to strongly focus on what happens through TP expenditures.

33. From a data and governance perspective, this is made a much more difficult task by existing constraints on data:
   a) Government financial systems provide a comprehensive source of information for major program and standard account expenditures (defined as Salaries and Wages, Benefits, Services, Supplies and Equipment, Transportation and Communication, and Other) within the OPS, but has limited – if any – information on standard accounts within the BPS.
   b) There is limited standard account level information available for consolidated entities (Hospitals, School Boards and Colleges); combined with direct OPS expenditures, and this captures 45% of expenditure data; there is limited centralized data available on the remaining 55% of non-consolidated entities and other transfer payment recipients.
   c) There is poor information available about labour allocation from internal government Human Resources systems.
   d) The availability of standard account level data on OPS operations provides an indication about the efficiency and productivity of expenditures, but nowhere in the data at all, is there a sufficient basis of evidence to assess the productivity of expenditures.
   e) This is further exacerbated by the sheer volume of separate entities receiving TPs, which currently runs at nearly 35,000, up 18% from 2002/03.

34. Even when the data exist, the decentralized nature of governance makes it very difficult to get timely and relevant information to support on-going fiscal management. What information is received (in many cases, in duplicative formats) is not integrated in a centralized database to allow for comparative analysis. No private sector business would operate under such conditions, and neither should the Ontario government. Significant opportunity exists to invest in the necessary capacity and capability for Ontario to improve its various fiscal frameworks including throughout its planning, budgeting and forecasting requirements not just for the OPS, but particularly for the relationship with the BPS and other transfer payment recipients. New technologies such as blockchain, could be instrumental to supporting this requirement.
One of the most important conclusions from the Review is that there is a need for better data on public expenditures. This is particularly true given that the majority of expenditure through TPs is where Ontario has the weakest insight into efficiency, productivity and results. This is as much a cultural issue as it is a data availability issue, and ample evidence exists to indicate that much of the data reporting and oversight currently required does not provide decision-makers with the right information at the right time. A complex array of prescriptive compliance-oriented reporting should be replaced by centralized reporting only on those things matter most to the design, funding and delivery of results – namely, efficiency, productivity, and performance information.

The effective use of data in government: The Productivity Commission and The Report on Government Services in Australia

Initially founded as the Industries Assistance Commission in 1973, the Productivity Commission has a mandate to focus on ways of achieving a more efficient and productive economy, as the key to higher living standards. As an independent body that publishes its work and has a focus on advancing the Australian “community at-large,” the Commission is unique globally. Annually, the Commission publishes the Report on Government Services (ROGS), which provides information on the equity, effectiveness and efficiency of government services in Australia. ROGS is a national report on the spending at a federal and state level, and enables comparisons across states, informs planning and evaluation of policies, is used for budgeting and demonstrates government accountability.

As an example of the level of detail provided in ROGS, the Education section of the 2018 report included data on student enrolment, achievement, retention, and engagement by region and among target groups; operating expenditures by type; the cost of capital to the government for school facilities; standardized test results; front-line staff levels; and student:staff ratios by state.
36. Poor access to data and analysis on how every dollar of public funding is allocated and spent, and whether this has resulted in the most efficient and effective outputs and outcomes, impedes overall fiscal management. It also impedes Government's ability to prioritize its investments and budget allocations and weakens overall performance.

37. The result is that while Government understands and can report what it has made investments in, in the vast majority of cases it cannot assess whether the investment has maximized returns when measured in productivity and performance terms (i.e., how public money has been spent and what it has achieved). This must be changed, and beyond the short-term requirement to initiate a new expenditure management program, is the single most important thing Government can do from a financial management perspective.

38. This challenge is increasingly apparent the further expenditure management gets from the OPS but, paradoxically, it is where 90% of the operating money is spent and 99.8% of 15 year growth has occurred.

39. In addition, government decision-making processes have historically been biased towards incremental change for net new investments rather than comprehensive review and continual improvements to on-going funding that represents the vast majority of annual expenditure. This is exacerbated by decisions that are taken without full and comprehensive business cases that thoroughly assess the administrative and socio-economic impacts of decisions and clearly establish formal implementation plans and accountabilities for results. This has led to significant duplication of delivery mechanisms for the same purpose.

40. Poor data and analysis, coupled with a culture and incentives to always spend more and identify new investments, also make it exceedingly difficult for the collective position of ministers to defend whole of government strategies for fiscal management, in the face of strong incentives for individual ministers to spend more in their portfolios.

Commitment to evidence-based decision-making from the heart of Government

41. To a person, the elected and non-elected officials consulted as part of the Review indicated that a very strong and direct commitment to evidence-based decision-making is required. This should comprise two foundations:

a) Commitment to a robust data and analytics framework for decisions government faces including those about new and on-going funding requirements for all Provincial funding regardless of who the final delivery agent is. The framework established should result in the ability for decision-makers to understand precisely what demand and cost drivers are for all programs, functions and service channels. Most importantly, there must be assurance that policy, regulatory, funding, and delivery organizations are operating on a most efficient organizational basis, and that there is a clear understanding of results and how they are being improved continually. The focus should begin in high priority areas where the most significant expenditures are allocated and, over time, extend to all government expenditures. This should be led by Treasury Board Secretariat, working with ministry and external partners, to simplify, modernize, and enhance the data that underpins all Government decisions and on-going delivery of Provincial responsibilities whether directly or indirectly.

b) Thorough review of Cabinet processes and procedures to emphasize – and follow through on – evidence-based decision-making, strong forms of implementation planning as a prerequisite to any decision, and a clear and strongly reinforced commitment to the appropriate balance between collective and individual ministerial responsibility and accountability. This should be tied directly to an enhanced budget and expenditure management framework that emphasizes continual review and improvement to the base, as well as careful consideration of net new investments. In instances where processes and procedures are not followed, further investigation must occur to help ensure the objectives are being met.
Efficient regulatory management and approvals

42. The Province has extensive regulatory responsibility across nearly every sector of Ontario's economy. There is an opportunity to continue modernizing approaches to regulatory management with two key benefits such that it:

a) Reduces the external regulatory and administrative cost burden placed on Ontario businesses and individuals with real opportunity to provide efficiency gains back into the economy (i.e. positive cost-benefit returns).

b) Reduces the internal regulatory and administrative cost burden placed on the regulator from outdated and inefficient regulatory management, including for all internal processes where one government entity is regulating another (i.e. lowers the cost of government).

43. Ontario is moving to outcome- and risk-based regulatory management frameworks in nearly all major regulatory areas. A further simplification and modernization of regulation can be achieved, with stronger focus on self-regulation, and use of digital technology and data and analytics. This is tied to the Citizen-Centered and Digital First enabling condition outlined below, and should also focus on integrating regulatory data and analytics across ministries/regulators.

Renewed funding models for major programs

44. Across government, a significant number of transfer payments and external delivery agents rely on funding models for resource allocation across the province. Examples of funding models include the Grants for Student Needs (GSN) which determines over 90% of school board funding, the Health-Based Allocation Model which determines about 40% of provincial hospital funding, and the Child Welfare funding model, which allocates substantially all of the funding to Children’s Aid Societies.

45. Governments around the world are moving towards alternate arrangements for funding, including tying funding to the achievement of outcomes, and providing funding to individuals, who can then choose their service providers through a form of market activity and discipline.
46. Research from the OECD\textsuperscript{18}, for example, suggests that the most important factor in driving efficiency into public services is not necessarily engaging private sector actors as is often thought, but imposing competitive pressure on public sector providers. Competitive pressure can only be applied through the use of information – both around efficiency and ability to achieve outcomes, but only if that information is used. The information should be provided to citizens so they can choose which provider they receive services from; it should be also used by government to inform funding, increasing allocations to those providers that demonstrate value and efficiency in delivering outcomes and reducing allocations to those that do not.

47. The opportunity for Ontario is to engage in a comprehensive review of its various funding models and to introduce the notion of an “efficient price” for services in as many cases as possible. This would be a strong enabler of delivering the productivity gains necessary for optimizing the investments in the BPS and broader delivery agency environment such as with municipal service managers. At the same time, a focus on measuring outcomes to determine an efficient price would help determine which providers are most effective when it comes to service delivery and client outcomes. Key next steps should include:

\begin{itemize}
\item[a)] Develop an overall approach and set of principles to review funding models in the short-term and on an ongoing basis.
\item[b)] Improve the collection of data from transfer payment recipients, including the services they offer and deliver and their efficiency in doing so, and begin a focused collection of outcome metrics.
\item[c)] Consider the use of alternate approaches to funding, including direct funding to individuals and payment for outcomes.
\end{itemize}

The Government of New Zealand has taken an evidence-based approach to social services, gathering information on high-risk populations that will most benefit from early interventions to save costs down the line; this is enabled by paying for results and actively shifting funding to the delivery agents that are the most successful at delivering outcomes.

Details on the approach, including a guide to developing cost-benefit analysis in the context of social investments is available \textcolor{blue}{online}.  

\textsuperscript{18} OECD. \textit{Improving Public Sector Efficiency: Challenges and Opportunities.}
Clarity on intergovernmental relationships

48. Ontario receives approximately 17 per cent of its revenue from the Federal Government\(^{19}\). However, there is evidence that in some specific places federal transfers are not adequate to meet the growing costs of services, and are not allocated on clear and consistent principles, which has put Ontario at a disadvantage. Research from the Mowat Centre\(^{20}\) shows that Ontarians contribute $12.9 billion more to the federal government through tax revenue than the province or its citizenry receives in federal spending:

a) In particular, federal support for health care, as a share of provincial spending, has declined from historical levels and will continue to decline in future. In 2017-18, the federal decision to reduce the annual growth rate of the Canada Health Transfer lowered support that year by $1.1 billion nationally, or $418 million in Ontario alone.

b) The second largest transfer to Ontario, the Canada Social Transfer, grows at a lower rate than other major federal funding, and represents less than ten per cent of Ontario’s spending for related social programs. If the Canada Social Transfer had grown in-line with other major transfers, Ontario would have received nearly $600 million more in payments over the last five years.

c) In other areas, such as infrastructure transfers, federal programs impose significant costs and numerous restrictions on the Province, which can divert provincial spending away from priority areas and increase the administrative burden on provinces.

d) Finally, while recent new federal investments in labour market transfers have been provided on a principled and fair allocation basis, the majority of funding is still provided based on an outdated formula that disadvantages Ontarians. Ontario received only 30 per cent of national Labour Market Development Agreement funding in 2017-18, despite having about 39 per cent of the labour force population and 38 per cent of Canada’s unemployed.

49. A thorough review of federal transfers should be conducted, with an aim towards recovering the accurate level of federal funding owed to Ontario.

50. Similarly, the Province funds regional and municipal levels of government to deliver significant services such as in the social services and employment and jobs training sectors. A close examination of whether a renewed funding model and/or granting structure is available to drive value for money in this relationship is required.

A modern relationship with labour

51. The Review has taken very seriously the mandate committed to by the Government to ensure that there will be no involuntary job losses as a result of the opportunities identified.

---

\(^{19}\) Ontario Ministry of Finance.

\(^{20}\) Mowat Centre, “A Fair Fiscal Deal”, July 2018. This report is the source for the majority of data points in this section.
52. This is achievable through a two-pronged approach:

a) First, a commitment to a modern relationship with everyone whose employment is largely funded by Provincial expenditure that emphasizes capability, skills and an agile allocation of people to highest value work. This should be supported directly through a recruiting, re-training, and change management commitment to help ensure that any movements to new roles and responsibilities will be as smooth as possible from the employee’s perspective, and meet the expectations of high productivity and performance that enable people to thrive in their jobs and deliver exceptional results.

b) Second, a renewed approach to formal labour relations that invites labour to participate directly in the benefits of productivity improvement and better outcomes for Ontarians.

Gains Sharing in British Colombia

Gains Sharing (also called mutual gains bargaining) was implemented as a collective bargaining strategy in BC in 2012 under the title Cooperative Gains. Gains Sharing encourages all sides of a negotiation to come together to find solutions. In the public sector, this can be applied to finding productivity gains.

In BC’s case, the government published a mandate that public sector wage increases would only be allowed in those cases where labour and the employer found offsetting productivity gains – in other words, the funding envelope from the government would be held at zero. Conditions were placed under which productivity gains would be shared, including the inability to reduce services or raise costs on the general public and the necessity for all savings or productivity increases to be net new – that is, not previously identified. This approach helped BC manage public sector expenditure growth through a partnership with labour in a sustainable manner.

53. People are integral to every form of public service delivery in the Province. Providing employees with the tools and permission to focus on the front-line work they are experts at, without having to spend unproductive time on reporting obligations and internal administration, is not only empowering, it is more efficient. Gathering input and leveraging the experience and expertise of public servants to drive innovation and modernization can help to make services more efficient.
54. Taken together, labour is the single largest expenditure across government at $71B annually\textsuperscript{21}, and 71% of the OPS labour force is unionized\textsuperscript{22}. A 1% increase in compensation means an additional $710M in annual expenditures, which demonstrates the importance of being able to manage bargaining with the province’s labour partners.

55. Currently, however, control over negotiations is fragmented. The government has full control over negotiations with direct employees, significant control over employees in consolidated sectors (Hospitals, School Boards, and Colleges), and very little in the remainder of the BPS, including transfer payment recipients. Greater control over growth in negotiated compensation expense would help the government better manage expenditure growth. The government could choose to exercise direct control through a centralized collective bargaining regime and direct control over all wage agreements. Or it could choose to exercise indirect control by requiring all bargaining mandates and tentative agreements to be approved by government. The first option would give greater control at the expense of disrupting normal business practices, while the second would allow for smoother operations at the expense of the degree of control. Either option would take a significant amount of time to come into effect with the BPS and transfer payment recipients – where control is weakest now – taking the longest amount of time, due to the structural reforms required in those areas. There are also hybrid options where the government would only dictate or approve mandates for wages, with all other issues remaining the purview of local bargaining.

Citizen-Centered and Digital First

56. The vision for a Citizen-Centered and Digital First approach is not just about technology, but rather about the most modern approach possible to everything the Ontario public sector does.

57. Citizen-Centered and Digital First is a philosophy that would put the client at the centre of every policy, regulation, program, process and delivery model, regardless of whether that is for administrative functions inside and across public sector organizations, or, more importantly, for any time the end recipient of a service or benefit is affected. And it would put data at the heart of every decision about design, administration and execution of public services.

58. Citizen-Centered and Digital First speaks to the requirement to share data and information across ministries and delivery organizations to the maximum extent possible and as the default position; the inverse is true today and must be overcome through a modernized legislative framework that defines data and information sharing as a public interest, while still reflecting the absolute protection of individual privacy. This is particularly important for the use of data across ministries, and a thorough review and reform of Ontario’s information sharing and management legislation and framework should be completed as a priority.

\textsuperscript{21} Treasury Board Secretariat, Centre for Public Sector Labour Relations and Compensation

\textsuperscript{22} Ministry of Labour. 2018. Collective Agreements Database
59. It also speaks to the opportunity and requirement for the Ontario public sector to significantly accelerate its leadership position in the Ontario economy to capture and provide further opportunity for maximizing the impact of Ontario innovation in artificial intelligence, blockchain, machine learning, and associated technologies.

60. Most importantly, while investment in digital and data is required, it cannot be viewed as a cost centre – it is at the heart of what the Government must become.

Ontario’s modern role of government

61. The Review has been conducted with an eye to enhancing a general policy framework of modern government that would see the Province clearly commit to its role as:

a) Policy setter & system designer: overall strategy and vision for political economy; governance arrangements; overall regulatory frameworks, incentives, roles and responsibilities, standards and objectives.

b) System funder & steward: allocation of public resources including through choice of funding mechanisms such as lending and investment; untied block grants; transfer payments to intermediaries; purchasing, performance management, regulatory enforcement, capability & capacity management.

c) Direct deliverer: service provision to clients including operational services and capital infrastructure only in those situations where a higher value provider cannot be found.

62. The Review has identified a number of opportunities for Ontario to simplify and modernize its role as the steward of public investment and has been considered in three ways:

a) Accelerate the simplicity of Ontario’s regulatory frameworks across all ministries. This will have direct positive economic impact for Ontario businesses and, depending on the delivery model chosen, result in positive fiscal impacts and further improvement to risk-based regulatory governance.

b) Significantly simplify all processes and procedures inside the core of Government to greatly reduce self-imposed administrative burden.

c) Simplify and modernize the relationship between the OPS and its TP partners in the BPS and beyond by rationalizing all reporting requirements and focusing only on the things that matter most: fiduciary compliance, productivity of Provincial funding, and results achieved.

63. This last point is intrinsic to the overall vision established by the Review – namely, that the Province can help enhance the autonomy and expertise of its various delivery partners by greatly simplifying its expectations and getting out of the way of day-to-day operations and eliminating weak policy prescriptions (those that begin the process of aiming at outcomes without compelling useful reporting or tying funding to the achievement of targeted outcomes). At the same time, a clear commitment to a modern role of government, supported by the right data for evidence-based decision-making, a strong role for labour in generating the productivity and performance gains expected by Ontarians, and an across-the-board commitment to Citizen-Centered and Digital First thinking and action, will help enable better public finance and better government in Ontario.
Specific Ideas to Set the Ball Rolling

64. The Review proposes an overall strategy with two dimensions for Government to consider:
   a) Continue to drive efficiency and effectiveness improvements into the OPS through an on-going service delivery modernization, cost efficiency, and shareholder management strategy for Government operating assets and infrastructure.
   b) Serious examination of Transfer Payments with an aim towards:
      i) Service delivery modernization and cost efficiency as for the OPS into the BPS.
      ii) Medium-term reform to funding models to optimize the productivity of all delivery systems and capture the full benefit of government investments, including driving the consolidation of TPs.

65. With the benefit of considerable public consultation, and based directly on the evidence gathered during the Review, the following is an overview of each of the recommended hypotheses across four distinct categories:
   a) Service Delivery Modernization
   b) Cost Efficiency
   c) Individual and Business Supports
   d) One-Time Savings

66. This is consistent with the advice given to Government through the Planning for Prosperity initiative.

Planning for Prosperity Consultation

On August 29, 2018 the Government launched ‘Planning for Prosperity: A Consultation for the People’ and the OPS Big Bold Ideas Challenge as complements to the line-by-line review. The online consultation provided Ontarians with an opportunity to rank the importance and effectiveness of a range of government services. It allowed the general public and members of the Ontario Public Service to submit ideas related to the transformation of government service delivery and the path to fiscal sustainability.

The consultation was focused on receiving feedback in eight key areas:
   ▶ Children’s and Social Services;
   ▶ Education;
   ▶ Environment and Resources;
   ▶ Economic Development;
   ▶ General Government and Other Services;
   ▶ Health;
   ▶ Justice; and
   ▶ Postsecondary and Training.

Over the course of the consultation period, Ontarians made their voices heard, through over 15,000 submissions. Through an initial analysis of submissions, the respondents identified a number of key themes that were important to them, including:

▶ Programs and Services - Improving existing ones, exploring the better ways to deliver them, combining them where appropriate, and closing out the ones that do not achieve outcomes;
▶ Increasing the voice of stakeholders in decision-making; and
▶ Making government spending more transparent, while paying down the Provincial debt.
The comments received during the consultation period are reflected in the Review’s Framework for Better Public Finance Management. Thematically, Ontarians recognize:

**That evidence based decision-making is the foundation on which government should make decisions:**

- Look very carefully at the data to determine where a program or service is inefficient
- Engage in evidence-based transportation planning that relies on data from experts
- Ensure that evidence-based decision making is used a key principle for all policy making

**That a focused approach should be taken to managing people within the public service:**

- There is too much decentralization, duplication of work, and siloing of resources across government
- Centralizing resources and transforming the workforce
- There is a great wealth of experience each ministry has and there are [few] opportunities to collaborate in an agile manner to serve Ontario in a meaningful way

**That improved use of technology and data will allow for more efficient and effective delivery of public services:**

- Make more services available online
- Use modern IT to achieve cost savings across all government services
- Share data across ministries to improve citizen’s experience of government

**That government should rationalize its role in the delivery of services to ensure that every taxpayer dollar spent is used as effectively as possible:**

- Perform a comprehensive review and alignment of all government funding for businesses
- There is an opportunity to consolidate several small service providers in a geographical location to realize economy of scale and increase efficiency
- Consider means testing or co-payment so for some services so money goes further

Further and more detailed analysis of the suggestions put forward by survey respondents will follow as the government reports back on the findings of the Planning for Prosperity consultation.
67. As previously mentioned, the mandate of the Review was to analyze expenditures, conduct selected jurisdictional benchmarking, and based on the data available, identify programs and operations for which efficiencies could be generated through more focused review and subsequent execution. Such opportunities should not result in involuntary job losses, and instead focus on efficiency and effectiveness improvements.

68. The ideas identified in the following pages are based on the analysis of the evidence, and clearly point to the need for transformation and modernization. As such, while they would support the continual identification of day-to-day efficiencies that is part of ongoing budgeting in the Government, they are meant to be large-scale and cross-government – in fact, reaching past government into transfer payment delivery agents.

69. The ability to effectively implement the ideas below will require serious consideration on the part of Government about how to pursue and realize the potentially significant benefits associated with a relatively small number of concepts. In addition, ongoing internal and external consultation will be a precursor for success. Each idea presented will require further evidence to inform policy and legislative decisions and to understand service delivery impacts.

70. Pursuing any of the ideas presented below would be just the beginning of a process to achieve a fundamental shift in government towards a focus on the delivery of services based on their efficient price.

71. In each case, the government should move quickly to identify those opportunities that can be executed in the short term to show commitment, free up resources (including for reinvestment), inform forward planning, and begin the process of achieving a sustainable fiscal position.

72. As detailed business cases are completed, these should reflect what Government chooses as its priorities and expenditure path. Business cases should always consider, at a minimum:
   a) Service impacts and opportunities for improvement.
   b) Detailed financial evidence about investments, transition costs, and time to benefit realization.
   c) Analysis of the public impact, including direct impacts on recipients or clients, taking a citizen-centric view.
   d) Analysis of socio-economic impact.
   e) Consideration of the implementation risk and potential actions to mitigate those risks.
   f) Setting clear accountability so benefits can be realized.

73. These ideas are not new. In fact, many have been considered in detail by the Ontario government previously, but in light of the evidence around expenditures and their disconnect from results and outcomes, it is clear that taking decisive action is the only way forward to put Ontario on a sustainable fiscal footing.
Service delivery modernization

Modernizing all back-office and front-line services through digital-first, automation, the use of shared service models for all major functions across ministries and the BPS, and the optimization of Ontario’s public sector workforce

**Digital First**

A digital approach will both improve the services delivered to citizens, lower the internal administrative burden and cost of doing business, and open up new avenues for innovation and simplification of processes. This includes increasing the proportion of all Service Ontario transactions conducted on a digital platform, increasing the number of services online across government – starting with those that have the highest volume, and leveraging emerging technologies including blockchain, artificial intelligence and machine learning to improve service delivery and efficiency.

<table>
<thead>
<tr>
<th>What we know</th>
<th>What you could do</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Delivering services to the public online costs significantly less than in-person</td>
<td>• Enable greater uptake of digital services through reduced barriers such as information sharing, building capacity, and sharing staff across ministries</td>
</tr>
<tr>
<td>• A digital first transformation within government can also lower the internal administrative burden and cost of doing business, and enable better achievement of outcomes</td>
<td>• Improving digital services and experience through enablement of technologies such as a single digital ID and Blockchain</td>
</tr>
</tbody>
</table>

**Illustrative Example**

• Services provided online by Service Ontario cost 57% less\(^{23}\) than the same services provided in person, and yet only 30% of transactions are completed online\(^{24}\).  
• Determine the ten programs across government with the highest transactional volume and task the Ontario Digital Service with driving greater migration to online service; as legislative, regulatory, and policy barriers are identified, aggressively pursue their elimination to further enable online service delivery, and invest in necessary enabling platforms.

**Jurisdictional Comparator**

• The UK has launched Government as a Platform (GaaP) with more than 100 services across 26 departments and agencies currently using GaaP tools, guidance and components\(^{25}\).  
• Estonia has used Blockchain to protect national data, e-services and smart devices in both the public and private sectors. Blockchain is deployed in Estonia’s data registry, national health, judicial, legislative, security and commercial code systems\(^{26}\).

---

\(^{23}\) Data provided by Ministry of Government and Consumer Services  
\(^{25}\) GOV.UK, Blog - Government as a Platform  
\(^{26}\) E-Estonia, Estonian blockchain technology, Frequently Asked Questions
Back Office Efficiencies

Increasing the efficiency of, and therefore reducing the spend on, back office functions by aggressively expanding the client base for Ontario Shared Services (for Finance, HR, Supply Chain, and IT Services) to the BPS were applicable. There is also an opportunity to thoroughly test whether the cost of service for back office functions can be reduced and services improved through the use of Alternative Service Delivery arrangements.

<table>
<thead>
<tr>
<th>What we know</th>
<th>What you could do</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Consolidating key shared services functions (e.g., Finance, HR, IT, Supply Chain, etc.) can provide greater value to citizens and client organizations</td>
<td>• Expand existing Ontario Shared Services functions (Finance, Human Resources, Supply Chain) to clients in the BPS, and move I&amp;T support services across the BPS to I&amp;T clusters in place within the OPS</td>
</tr>
<tr>
<td>• Some jurisdictions within Canada (e.g. BC, NS) have already moved to a consolidated, broader public sector shared services model to reduce administrative spend</td>
<td>• Drive further cost reductions by considering Alternative Service Delivery (ASD) of certain functions to reduce the cost of providing service on a life-cycle basis</td>
</tr>
</tbody>
</table>

Illustrative Example

• Allow BPS entities to leverage I&T contracts negotiated by the OPS
• Encourage the close-to-700 delivery agents that receive transfer payments through Children and Youth at Risk to utilize Ontario Shared Services payroll and HR functions in order to lower the cost of hiring, onboarding, and paying employees

Jurisdictional Comparator

• BC’s implementation of a broader public Shared Services Organization realized efficiencies of approximately $100M on spending of $1B
• Nova Scotia realized savings of 31% through consolidation of its Finance, HR, IT Supply Chain and Asset Management functions

27 EY Experience
29 Shared Services and Alternative Service Delivery, Tools for Transforming Government FMI Presentation, November 2011
Process Optimization

Reduce the self-imposed administrative burden within the OPS, including cumbersome processes around tracking Key Performance Indicators, reporting, and chargebacks, by eliminating duplicative and non-value added processes. Consider the implementation of robotic process automation and Lean Management Systems where repetitive, routine tasks currently exist, resulting in savings from more efficient resource deployment, and minimizing manual data entry errors.

**What we know**

- Process Optimization refers to adjusting or optimizing processes in order to improve efficiency or effectiveness.
- Stakeholders believe the OPS and the BPS do not currently consistently apply leading practices or principles across processes.
- There are many examples of the application of Lean Management Systems, and Robotic Process Automation (RPA) to allow for great efficiency in resource deployment.

**What you could do**

- Implement RPA to reduce resource effort in transactional, repetitive processes.
- Reduce the internal administrative burden, including activities around reporting, compliance, delegation, etc.
- Optimize processes through techniques such as Lean Six Sigma.

**Illustrative Example**

- Deploy RPA to automate transactional and repetitive processes, like processing new employee paperwork and automating the onboarding process.
- Implement Lean Principles across functions such as performance reporting; as an example, all in-year budget forecasts at a branch level are prepared manually and then consolidated at a ministry level the same way.

**Jurisdictional Comparator**

- In the UK, HM Revenue & Customs has been working with robotics for a number of years and has deployed over 11,500 robots across nearly 60 processes, including its system for registering new employers.
- The Government of British Columbia has been applying Lean to transform the business of government since 2012 through Lean BC. Outcomes include developing tools to improve both simple and complex business processes and reduce red tape for citizens and businesses across British Columbia.

---

30 Interview with stakeholders, August-September 2018
31 GOV.UK, Cabinet Office, Blog, Civil Service Quarterly, Robots lend government a helping hand
32 LeanBC - Province of British Columbia - Government of BC
Workforce Optimization and Rostering

There is an opportunity to transform areas of the current workforce, include the skill mix and ratios across some professional areas to increase the flexibility of the workforce and reduce the utilization of premium worked hours. Additionally, there is an opportunity to implement a modernized talent management strategy, overall, to optimize the OPS and BPS workforce and reduce costs over time.

### What we know

- Salary and wages account for a significant, and in some instances growing, portion of expenditures.
- Overtime in the Health and Community Safety sectors is significant, and although it is to maintain service levels, the result is costly, and can have negative impacts on employee morale, increased turnover, increased number of sick days.
- Global trends in the future of work where digital, innovation, and flexibility are becoming the norm.

### What you could do

- Workforce transformation and improved scheduling practices and controls offer an opportunity to optimize the skills of Government employees and reduce wasted cost due to overtime premiums.
- Implement a rostering system to address costly premium worked hours resulting from overtime.
- Shift towards an agile workforce dynamic, where resources are deployed across programs and ministries.

### Illustrative Example

- Implement rostering improvements across the Ministry of Community Safety and Correctional Services to better deploy staff and reduce the use of overtime.
- The current mix of skills in Healthcare could be evaluated to address current challenges of capacity demands. This could include including optimizing the ratio of Registered Nurses (RNs) to Registered Practical Nurses (RPNs), optimizing the ratio of Full Time to Part Time resources, and aligning the staffing complement to the level of patient acuity.

### Jurisdictional Comparator

- Through the use of rostering, New South Wales was able to reduce overtime costs and accruals of additional days off in the health care system, while at the same time increasing fairness and transparency for staff.  

---

Consolidation of Transfer Payments

Reduce the cost of administration to both government and transfer payment agents by reducing the number of Transfer Payments agreements, and consolidate the total number of Transfer Payment agents, especially in high TP-volume programs, to reduce administration costs, increase value for money, enhance the client experience, and improve outcomes by making it easier to manage system-wide performance.

What we know

- The vast majority of government operating expenditures are through transfer payments, either directly to individuals or to entities that deliver services on behalf of government.
- To change the level or rate of growth of expenditures, the government will have to rethink how it funds transfer payment agents and who it funds to deliver services.

What you could do

- Rationalizing the source of transfer payments to individual service providers, to reduce administrative burden on both government and provider.
- Consolidate the number of transfer payment agreements, and the number of service providers that receive transfer payment funding, to further reduce the cost of administration, and focus on building a system of providers that puts the needs of the citizen first.

Illustrative Example

- In 2018, there were nearly 35,000 unique recipients of transfer payments across all ministries and programs.
- There are currently more than 20 health agencies across 11 priority areas; these organizations operate independent of each other, and most have leadership teams and back-office functional teams.
- Almost 1,000 different delivery agencies are funded by Employment Ontario in four regions across the province, with unclear results.

Jurisdictional Comparator

- The implementation of the National Disability Insurance Scheme in Australia resulted in a single body, co-funded by the national and state governments, to oversee the care for those with a significant disability. By implementing an insurance scheme (instead of payments from each states consolidated revenue funds) and merging the government agencies providing and overseeing care, early indicators suggest the scheme has resulted in simplified navigation for the disabled, better supports, and improved choice, while reducing the number of providers the government has to deal with directly.

---

34 Government of Ontario. Data provided by TBS.
35 Ministry of Health and Long-Term Care.
36 Government of Ontario. Data provided by TBS.
Cost efficiency

Reducing the direct cost of government through strategies such as procurement reform, fraud reduction, full cost recovery in suitable areas, stopping non-priority major capital projects, and eliminating or modifying overlapping programs

**Procurement**

Significantly reduce overall procurement spend including across government (including the Health Sector, Core OPS and Core BPS sectors) by optimizing whole-of-government procurement practices

### What we know

- There are several challenges across the supply chain operating model in government, including limited standardization, consolidation of contracts, and analytics that limit the ability to purchase efficiently
- Procurement transformation is a common initiative in government and commercial sectors, with an extensive record of finding cashable efficiencies

### What you could do

- Standardization of products purchased across programs, ministries, and the BPS
- Aggregation of spend across vendors to realize economies of scale through better contracting
- Establish sector led value-based procurement teams (Procurement Innovation Program) for complex and specialized items
- Centralize procurement analytics capabilities to identify areas to better manage spend

### Illustrative Example

- The Health sector presents a particularly large opportunity due to the high level of procurement related to consumables and specialized clinical materials; to the extent that other sectors provide institutional services, those institutions could leverage Health purchasing networks to lower their costs
- Standardization of products purchased across programs and ministries could leverage additional economies of scale and reduce per unit costs across the OPS and BPS
- Consolidation of contracts and aggregation of spend across vendors to further leverage economies of scale

### Jurisdictional Comparator

- Experience in the Health system in New South Wales has shown that savings of up to 14% per healthcare spend category is achievable
- Auckland City Council drove $168M (CAD) in procurement savings over two years on a $3.6b annual spend. Savings were achieved through conducting analytic analysis on existing spending, identifying categories that could be consolidated, and finding synergies across suppliers

---

38 EY Australia, August 2018
39 EY Experience with Auckland City Council
### Full-Cost Recovery

Recover the full cost of providing transactional services wherever a direct beneficiary of a service can be determined

<table>
<thead>
<tr>
<th>What we know</th>
<th>What you could do</th>
</tr>
</thead>
</table>
| - The *Commission on the Reform of Ontario’s Public Services* highlighted the opportunity to charge a full cost recovery fee for services provided by the Government  
- Civil Court related fees recover less than the cost of service, as an example  
- The balance of these costs are covered by the tax base | - Fully recover the costs of civil court-related fees through the user pay model  
- Identify additional programs which are currently not fee for service, which could adopt the user pay model  
- Perform costing analysis of programs for which fees are charged, to ensure full costs are recovered |

### Illustrative Example

- Government funds a number of regulatory activities through a cost-recovery framework, and should test whether those frameworks have been optimized to recover full costs and whether scope of cost-recovery could be expanded

### Jurisdictional Comparator

- The Australian government has a defined pricing model, with guidelines on cost recovery pricing, value-based pricing and commercial pricing. The model ensures that all pricing is based on transparency, efficiency, performance, equity, simplicity, and policy consistency

---

40 Australian Government Department of Finance, Charging for Commercial Activities
Underground Economy

Generate savings by reducing the impacts of fraudulent behaviour by aggressively targeting tax avoidance and enforcing the imposition and collection of excise taxes on tobacco

<table>
<thead>
<tr>
<th>What we know</th>
<th>What you could do</th>
</tr>
</thead>
<tbody>
<tr>
<td>- The underground economy includes illegal activities, tax avoidance and often constitutes work for cash that is not reported, illegal sale of goods and services, and misreporting of revenue to tax authorities</td>
<td>- Addressing the underground economy could provide increases in revenues as a result of increased tax collection on economic activity</td>
</tr>
<tr>
<td>- It is estimated that there is over $16B in underground economic activity in Ontario, with a significant tax gap resulting from this economic activity</td>
<td>- Key areas to focus on include the contraband tobacco market, targeting unreported or underreported income, and pursuing grey market gaming revenues</td>
</tr>
</tbody>
</table>

Illustrative Example

- Ontario Lottery and Gaming (OLG) estimates there are 2,000 – 3,000 “grey market” online gambling sites accessible in Ontario, accounting for approximately 90% of the market. By reducing the number of grey market operators in Ontario and increasing market share for OLG’s offerings, lower loss of revenues might be achieved
- Contraband tobacco represents more than one third of the total tobacco market in Ontario, and over 80% of all contraband tobacco in Canada. This translates into $750m in lost provincial revenue annually

Jurisdictional Comparator

- Australia has implemented the “Black Economy Taskforce”, a partnership between government agencies and the private sector to develop an innovative approach to target the underground economy
- The United Kingdom’s HMRC (Her Majesty’s Revenue Council) has created a tax evasion task force to tackle restaurants and fast food outlets who are at a high risk of evading taxes. The task force is made up of cross-functional specialists including tax and IT resources to target identified businesses

---

41 Ministry of Finance 2018.
42 OLG Fiscal 2017/18 Business Plan
44 Commonwealth of Australia, Black Economy Taskforce, Interim Report, March 2017
# Real Property and Infrastructure

Modernize the government's approach to real property and infrastructure by procuring and managing all infrastructure assets on a lifecycle asset management basis.

## What we know

- Each ministry manages its own capital assets, either directly or through contracted arrangement.
- Infrastructure Ontario (IO) also plays a role in the procurement, management, and contract management of a variety of capital assets.
- The BPS is left to manage their own capital assets, with limited guidance around standards, policies, or procedures.

## What you could do

- Adopt a more structured and effective asset management lifecycle process.
- Alignment of policies to allow for an enterprise-wide decision-making process.
- Centralized approach to management of real property.
- Regular reporting on utilization of assets and opportunities to consolidate and share across sectors.

## Illustrative Example

- Facilities management functions, which currently reside across the OPS in a majority of ministries could be consolidated to improve the coordination and effectiveness of real asset management.
- Creation of a centralized contract management function to assist the OPS and BPS in implementing consistent standards for the use of outsourcing arrangements for capital maintenance. This could be initiated using Ministry of Transportation experience in managing a large volume of contracts.
- Seeking opportunities to expand the AFP (Alternative Financing and Procurement) model where the size and scope of projects could lead to improved project outcomes based on a rigorous business case.

## Jurisdictional Comparator

- In Australia, the Department of Finance manages Property Services Coordinated Procurement (PSCP), which manages an external provider that assists with the development of a Whole-of-Government strategy around leased assets, and multiple Property Service Provider (PSP) contracts, which deliver facilities management across government.
- The Alberta Government in 2010 signed a public-private partnership (P3) agreement for the delivery of 10 new schools in the Calgary and Edmonton regions, projected to save $105M compared to the cost of delivering the schools through traditional delivery methods. The agreement also included financing for the 10 new schools and a 30-year maintenance term.

---

46 Government of Australia, Department of Finance. Property Services Coordinated Procurement.
Individual and business supports

Ensure government funding is directed to those that require it the most by providing universal supports for core programs only, and rely on means-tests for all other individual and business related programming.

### Rationalization of Business Supports

Generate savings by reconsidering and rationalizing all business tax credits and grant programs where evidence of incremental job creation or economic growth does not exist or the government cannot clearly point to a policy (e.g. innovation), market failure (e.g. natural monopolies), or competitive (e.g. electricity rate mitigation) rationale for continuing a program.

<table>
<thead>
<tr>
<th>What we know</th>
<th>What you could do</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The Government of Ontario currently spends significantly on Business Support programs in tax credits and grants</td>
<td>• Rationalizing of business support programs through reduction of tax credits and grant programs</td>
</tr>
<tr>
<td>• Recent reports from the Financial Accountability Office of Ontario and the Auditor General indicate that at best, it is unclear as to whether or not any of these programs can demonstrate incremental value</td>
<td>• Sustaining only those that produce incremental economic and desired regional outcomes, you could focus on creating the right conditions for investment and job creation as opposed to direct financial supports</td>
</tr>
</tbody>
</table>

### Illustrative Example

- The ten largest tax credits that fall into this category have a total value of $2.9B in 2018-19, largely aligned to The Ministries of Economic Development, Job Creation and Trade and the Ministry of Tourism, Culture, and Sport. Adjustments could be made to eligibility criteria to ensure they add incremental value to Ontario’s economy.  

- There are over $930M in grants and loans to businesses in the areas of economic development, innovation and growth that could be rationalized to ensure they are meeting intended outcomes.

### Jurisdictional Comparator

- According to data from Statistics Canada for every $100 generated by the economy, Ontario spends $0.40 on various forms of business supports. This is more than Alberta ($0.39) and New Brunswick ($0.29).

- Literature suggests that business supports may not have a demonstrable positive impact upon the economy, employment, and tax revenues because of the substitution effect: a positive impact in one place that is then typically offset by losses elsewhere in the economy.

---

48 EY Analysis based on data taken from The Effectiveness of Business Support Programs in Ontario, Financial Accountability Officer of Ontario.
49 Ibid.
Reconsider application of universality to all programs by developing a consistent set of principles to apply means-testing to selected programs

<table>
<thead>
<tr>
<th>What we know</th>
<th>What you could do</th>
</tr>
</thead>
<tbody>
<tr>
<td>► There are a number of benefit programs that are currently applied without</td>
<td>◗ Review programs to assess whether they are suitable for means tested eligibility</td>
</tr>
<tr>
<td>any means testing, which could shift to a means-tested eligibility formula</td>
<td>◗ Develop principle-based means tests for each selected program</td>
</tr>
<tr>
<td>where ability to pay is the threshold for receiving funding/support levels</td>
<td>◗ Where programs are means tested, assess tests for suitability, and/or consider the introduction of asset tests to assess eligibility</td>
</tr>
</tbody>
</table>

Illustrative Example

► Government should undertake cost-benefit analysis to ensure that means tests reflect policy priorities across programs that provide benefits on a discretionary basis

Jurisdictional Comparator

► Provinces that commit to means-testing such as through cost-benefit analysis include Alberta, Manitoba and Quebec
One-time savings

Maximizing the value of real and operating assets, to ensure that taxpayer investment being put to its most productive use for current and future generations.

**Monetize Operating Assets**

Evaluate all Government Business Enterprises (GBE’s) and other operating entities and consider monetizing assets through divestiture or the use of Alternative Service Delivery where the business case is positive and meets with Government policy priorities

<table>
<thead>
<tr>
<th>What we know</th>
<th>What you could do</th>
</tr>
</thead>
<tbody>
<tr>
<td>• While steps have been taken in recent years to maximize the value and revenue from GBE’s, further value could potentially be extracted from these assets if alternative policy frameworks were established</td>
<td>• Ontario currently holds assets that could be monetized to generate a one-time cash payout by selling all or a portion of GBEs and/or owned real estate</td>
</tr>
<tr>
<td>• Significant work has been conducted in recent years investigating the use of Alternative Service Delivery models to help commercialize a wide range of agencies and/or operations</td>
<td>• It is important to understand that the trade-off is foregoing future income; in light of the long-term impacts of monetization, robust business cases firmly rooted in evidence are required before proceeding</td>
</tr>
</tbody>
</table>

**Illustrative Example**

• GBEs could be evaluated across their operations; for example the LCBO liquidated their head office lands in downtown Toronto to generate $260 million for incremental investment in infrastructure\(^{52}\)

**Jurisdictional Comparator**

• The New South Wales government has undertaken an asset recycling program to help fund investment in core assets and better services\(^ {53}\). By selling property and assets deemed to be non-core, the NSW government has freed up capital for reinvestment in priority areas. A recent example of asset privatization is the Electricity Network Assets of Endeavour Energy for proceeds of $7.6B\(^ {54}\).

---


\(^{53}\) Asset Recycling Report, Property NSW, October 2016

\(^{54}\) Privatization in NSW: a timeline and key sources, NSW Parliamentary Research Service, June 2017
Building the Modernization Action Plan

A Modernization Action Plan for Government

74. A clear lesson from jurisdictions globally that have successfully transformed government and achieved sustainable fiscal outcomes is that there are no short-cuts. Realizing benefits requires a considerable level of sustained effort, discipline and a healthy dose of resilience to manage complex programs over time.

75. The first imperative is for Government to develop a detailed and comprehensive Action Plan that should:
   a) Articulate Government’s future spending path and key areas and targets that will frame the overall Plan and drive focus and effort in the short, medium and longer terms.
   b) Develop an overall roadmap that establishes what and when key decisions must be made to drive delivery of investment-ready business cases and implementation plans for specific targets. This must cover those targets that are to be realized in the immediate-to-short term, and those that require a longer development path.
   c) Identify and formally allocate accountability and responsibility for all dimensions of Plan implementation.
   d) Establish accountability and responsibility consistent with and reinforcing to the Mandate Letters for each Minister, and clearly articulate how those mandates fit into the overall expenditure management requirements of Government. The collective responsibility for achieving the fiscal plan must be clear and continually reinforced.
   e) Make it clear collective responsibility goes two ways. Treasury Board Secretariat and Cabinet Office must set the overall targets and frameworks, and then work alongside ministry partners and external partners to realize benefits on a sector-wide basis. The objective is not only to modernize delivery systems and achieve fiscal management targets, but also to enhance the culture of performance and mutual interest shared by central agencies and ministries.
   f) Focusing on the immediate-to-short term priorities, set clear expectations about what the benefits are, what specific targets are in quantitative terms, and specific time-lines for delivery.
   g) Establish the funding parameters and protocols for the Plan including how to release resources for re-investment from immediate-to-short term savings, how to allocate re-investment resources, and how to deliver returns against firm business cases and implementation plans.
   h) Make clear the linkages between the Modernization Action Plan and the on-going fiscal cycle and planning processes, including Cabinet and Treasury Board approvals.
Continued leadership by Ontario Treasury Board

76. For a period commencing immediately and lasting at least until such time as all fiscal reform opportunities have been realized, very strong focus from TBS must be emphasized to help drive the fiscal reform. The pace of change will be irregular and TBS can help lead government-wide transformation through its ability to:

a) Enable partner ministries through direct support to business cases and implementation plans that are robust and have strongly commercial footing.

b) Jointly lead and participate on delivery teams with various ministries for the detailed implementation plans and business cases for further data collection, analysis, solution design and development, and implementation including risk management.

c) Report on and make recommendations to Treasury Board ministers on implementation of various opportunities including for binding commitments to realizing benefits.

d) Procure and manage all necessary external support to deliver opportunities.

e) Integrate with on-going fiscal cycle and planning processes to ensure the fiscal sustainability plan is fully integrated with broader Government financial management processes.

f) Support investment in overall program, project and change management capability necessary to support all affected parties throughout the design, delivery, implementation, and on-going monitoring phases of work.

77. More than anything else, Treasury Board Secretariat must work in partnership with peer ministries and external partners to embed a culture for the highest standards of efficiency, productivity, and performance for all funded activities of the Government.
Expenditure Management in other jurisdictions

Ontario is certainly not alone in its pursuit of expenditure management, with significant programs having been undertaken by the European Commission, the UK Spending Reviews, the Australian Functional and Efficiency Reviews, and Canada’s own Deficit Reduction Action Plan.

For example, the European Commission’s 2014 experience suggests that targeted spending reviews typically deliver more sustainable results than “linear across-the-board” cuts to expenditures. The key success factors that were observed in these types of spending reviews include political commitment, anticipation of implementation, building of transformation capability, and performance culture at all levels of public service. The Commission found that successfully delivering savings via the spending review process involves significant time and resources and the willingness to address analytical, organizational, and political hurdles, and that a strong role for central leadership is required to achieve results.

Similarly, the UK National Audit Office promotes a framework for effective spending reviews. This framework would allow any new government to know what the baselines of performance and spending are, redefine objectives and reallocate resources according to its priorities, and quickly start to monitor progress, adjusting performance indicators or targets where necessary. A strong role for leadership from the centre of government including from Her Majesty’s Treasury is viewed as a prerequisite.

The framework has six key elements:

► Understanding the environment
► Setting priorities
► Understanding levers for action
► Allocating resources
► Monitoring performance
► Making improvements
Roadmap for Success

78. The immediate priorities are for Government to prioritize specific opportunities, picking enough of them to generate excitement in the reform opportunities, while at the same time freeing up resources that can be re-invested to support detailed business case development and necessary investments in the medium-to-longer term modernization of Ontario’s public sector.

![Implementation Roadmap](image-url)

- **Setup and Early Efforts Fall 2018-Spring 2019**
  - Detailed Modernization Action Plan
  - Immediate opportunities to free up resources for re-investment
  - Establish medium-term spending paths and establish multi-year plans

- **Medium-Term Opportunities Spring 2019-Spring 2021**
  - Development of Detailed Business Cases and Implementation Plans
  - Approvals and Legislation
  - Execution
  - Continual Engagement with Stakeholders
  - Benefits realization
  - Continual improvement

- **Long-Term Transformation Fall 2019-Spring 2022**
  - Transformative Opportunities
    - Conduct all necessary consultation and detailed analysis
    - Finalize detailed investment and business case
    - Implementation and benefit realization
    - Orderly change management and transformation activities

Process aligns with Government’s existing fiscal cycle and planning process, including Cabinet and Treasury Board approvals.

![Figure 17 Implementation Roadmap](image-url)
79. The implementation roadmap focuses on three main phases of work:

a) Phase 1 – Establishment of a clear mandate and initiate overall program management. This must include the appointment of key responsibility areas and accountabilities to deliver results including for jointly-managed projects between TBS and Ministries. Immediate preparation of detailed business cases and implementation plans for those areas Government decides are priorities, including for any “cash release” required to fund further investments and the transformation support required for the Modernization Action Plan.

b) Phase 2 – On-going development of detailed business cases and implementation plans for those priorities that require longer lead-time to execute. Central to this is a focus on establishing a strong form of benefits realization that is required to manage transformation over time. This has been absent in prior Ontario initiatives and is required for success.

c) Phase 3 – Longer-term and more fundamental reforms that require commitment and involvement of major operating dimensions of the transfer payment operators including those in the BPS and wider public delivery arena.

Conclusion

80. The Review has outlined a detailed examination of historical expenditures in Ontario over the last 15 years and has provided insight into how the province has arrived at its current fiscal position from the expenditure growth perspective. Importantly, it identified an opportunity for the Government to enable conditions for significantly stronger public financial management, to realize efficiencies in line with its objective for movement towards fiscal sustainability, and to achieve success through a Modernization Action Plan. Moving immediately to connect the themes and findings of this Review with the multi-year plans for ministries and the public sector as a whole, would be a very strong next step.
About EY

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization and may refer to one or more of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. For more information about our organization, please visit ey.com.

For more information, please visit ey.com/ca.

2875969

ey.com/ca

© 2018 Ernst & Young LLP. All rights reserved. A member firm of Ernst & Young Global Limited.