Drowning by Numbers

It's time to re-think performance measurement in the Government of Canada

by Mark Schacter

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I have a number in my head
Though I don't know why it's there
When numbers get serious
You see their shape everywhere
Dividing and multiplying
Exchanging with ease
When times are mysterious
Serious numbers are eager to please

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Executive Summary

The Government of Canada's approach to performance measurement and reporting, though founded on solid principles, is undermined by flawed implementation.

For the most part, the current performance measurement and reporting system – overseen by the Treasury Board Secretariat through the Policy on Management, Resources and Results Structures – does not fulfill its purpose of supporting Departments in "managing for results ... decision-making for results [and] accountability for results." Instead, a large performance reporting "machine" generates data that are too rarely of use to public sector managers, Parliamentarians and Canadians.

Key weaknesses in the performance measurement and reporting system are as follows.

1. The large number of performance indicators – more than 2,500 in total - implies an inefficient measurement and reporting system that produces plenty of data but little useful information about social and economic results achieved by public programs.

2. Many performance indicators in the system are seriously flawed. Three important problems identified in this paper are that i) many "expected result" statements from which performance indicators are derived are in fact descriptions of outputs rather than results; the indicators that flow from these result statements are irrelevant to the focus of the MRRS Policy on *results*; ii) many performance indicators are invalid; and iii) many performance indicators – even when based on properly formulated expected result statements, and even when they have an appreciable degree of validity – are incomplete.

3. Departments are required to develop performance targets and efficiency indicators which, in many cases, yield no useful information about program performance and are irrelevant from an operational perspective.

The flaws in the system suggest a continuing shortage of capacity in Departments and in the program sectors of the Treasury Board Secretariat (TBS) to implement performance measurement and reporting. A more manageable performance measurement system of narrower scope than the current one, but which consistently yields high-quality, results-oriented information on the performance of public programs, would make a much more valuable contribution to public management and accountability.

TBS should therefore scale down the performance measurement system to a size that is better aligned with Departments' current capacity to implement performance measurement and with TBS's own capacity to oversee the system, provide technical guidance to Departments and control quality.

Recommendations are as follows.

1. Significantly reduce the total number of performance indicators in the system. This could be accomplished by requiring Departments to develop performance indicators *only at the Program level of the PAA.*

2. TBS should strengthen its efforts to ensure the quality of expected result statements and performance indicators produced by Departments. Particular attention should be paid to the weaknesses identified above regarding improperly formulated result statements, invalid performance indicators and incomplete performance indicators.

3. Drop the requirement for Departments to provide performance targets and efficiency indicators.

4. TBS should strengthen the capacity of its program sector analysts to provide high-quality, consistent advice to Departments regarding the design of the PAA, development of result statements and development of performance indicators.

5. TBS should strengthen the capacity of the Expenditure Management Sector (which has responsibility for the MRRS Policy) to communicate with TBS program sector analysts so that their advice to Departments is consistent with the principles underlying the MRRS and the instructions for its implementation. TBS should also strengthen the capacity of the Expenditure Management Sector to communicate and with Departments regarding the MRRS Policy and implementation instructions, with a view to supporting shared understanding across Departmental staff and TBS program sector analysts.

1. Introduction

I counted: the Government of Canada publishes more than 2,500 performance indicators for its programs.[1] Allow just 10 seconds to review each measure and it would take you *seven hours* of non-stop studying to get through them all.

Consider the work that goes into a performance measurement system with so many moving parts. Time must be spent researching, developing and reaching agreement on each performance indicator. Data generated by the performance indicators have to be gathered, recorded, analyzed and interpreted. Information systems to manage the performance data have to be developed, installed and maintained.

The government does not – as far as I know– publish information on what it costs to run the performance measurement system. But here is a rough guess. There are 250,000 federal public servants. Assume each one devotes, on average, half a working day per year directly or indirectly to program performance measurement[2]. This implies 125,000 person-days, or 530 person-years[3]. Assume an average annual salary-plus-benefits per public servant of $100,000, and you get a total annual cost of $53,000,000. This *excludes* costs such as consulting fees (many Departments use consultants to help with performance measurement) and costs borne by organizations outside government to comply with performance reporting conditions attached to public funds.

The point of this "guess-timate" is to suggest that if performance measurement entails significant costs, then the performance measurement system should produce something significantly *useful* to Canadians and to the government itself. As the government's policy on performance measurement – the Policy on Management, Resources and Results Structures (MRRS Policy) overseen by the Treasury Board Secretariat (TBS) – states:

> The objective of this policy is to ensure that the government and Parliament receive integrated financial and non-financial program performance information for use to support improved allocation and reallocation decisions in individual departments and across the government.[4]

The Policy adds that performance measurement should support Departments in "managing for results … decision-making for results [and] accountability for results."[5] But consider this. In 2009 and 2013,

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[1] I read the performance-measurement sections of the most recently available Reports on Plans and Priorities (RPPs) of the 60 largest (by annual expenditure) federal organizations for which RPPs are published. The list accounted for 97 percent of the $253 billion federal budget. See Annex 1.

[2] Some public servants may devote virtually no time during the year to performance measurement. Others will devote very much more than half of a day; my assumed average seems to me to be safely conservative.
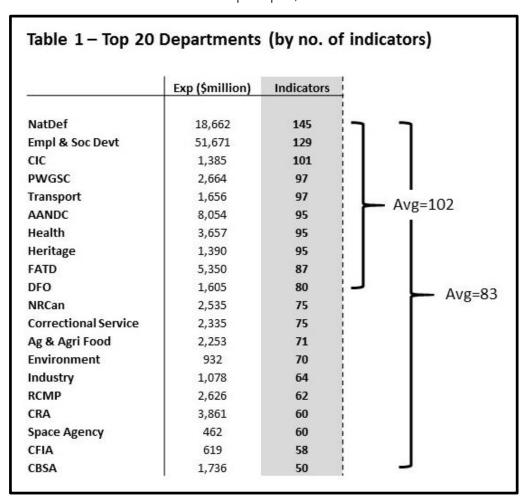
[3] 365 *minus* 104 weekend days *minus* 10 public holidays *minus* 15 vacation days *equals* 236 working days in a year. 125,000 *divided by* 236 *equals* 530.

[4] Para. 5.1

[5] Paras. 5.2.1, 5.2.2, 5.2.3

the Office of the Auditor General of Canada (OAG) reported on program evaluation in the federal government. In 2009 it reported that out of 23 evaluations reviewed, 17 "were hampered by inadequate data." By 2013 little had changed; OAG reported that 14 out of 20 evaluations suffered from "limited availability of ongoing performance information." Amid the flood of data from more than 2,500 performance indicators, Departments apparently found themselves short of useful information about program performance.

Although the OAG sample is small, the findings resonate with my observations from nearly 20 years of consulting in performance measurement and evaluation in the federal public sector (and elsewhere). What I have seen, read and heard convinces me that although the Canadian government's approach to performance measurement is founded on solid principles, it falls short in terms of usefulness.

Table 1 – Top 20 Departments (by no. of indicators)

	Exp ($million)	Indicators
NatDef	18,662	145
Empl & Soc Devt	51,671	129
CIC	1,385	101
PWGSC	2,664	97
Transport	1,656	97
AANDC	8,054	95
Health	3,657	95
Heritage	1,390	95
FATD	5,350	87
DFO	1,605	80
NRCan	2,535	75
Correctional Service	2,335	75
Ag & Agri Food	2,253	71
Environment	932	70
Industry	1,078	64
RCMP	2,626	62
CRA	3,861	60
Space Agency	462	60
CFIA	619	58
CBSA	1,736	50

Avg=102 (top group)

Avg=83 (bottom group)

My perspective on "usefulness" is grounded in "results-based management" – a concept central to the MRRS Policy, and a consistent theme of TBS's work on public management over the past two decades.[6] The idea is that managers should focus not only on what programs deliver, i.e. "outputs" (services, financial support, policy/research studies, etc.) but also on the contribution made by outputs

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[6] For example, see "Results for Canadians" published by TBS in 2000.

to social or economic results (or "outcomes") valued by Canadians (e.g. outcomes related to being healthier, safer, more financially secure, more capable, happier, etc.). As noted, the stated purpose of the MRRS is to enable Departments to manage, make decisions and be accountable for results. I argue that the MRRS is not living up to this objective.

This paper aims to provoke discussion about improving the government's approach to performance measurement. I describe what I believe are the main weaknesses of the current system and propose some remedies. Although the paper focuses on performance measurement in the Government of Canada, I expect that readers in other jurisdictions may find much of the analysis relevant.

2. Progress, But…

TBS has made major progress since the late 1990s in embedding a culture of results-based management in the Government of Canada. The MRRS Policy's requirement that Departments articulate corporate "strategic outcomes" and program-level "expected results" concentrates managers' minds on the extent to which programs make a positive difference for Canadians. I have seen the healthy impact of serious discussion about program results on the engagement and morale of public servants. The Policy's commitment to demonstrating that programs contribute to meaningful social/economic outcomes is fundamentally sound.

But the credibility of the MRRS Policy's foundational principles is being undermined by a failure of implementation. Thousands of indicators tell us far too little about the performance of public programs. An elephantine performance measurement system gives birth – once a year by way of the annual Departmental Performance Reports (DPRs) – to a mouse.

When faced with an administrative requirement seen as not merely burdensome but also of little relevance to the public good, public servants respond as rational people would be expected to do. They play the game; "feed the beast"; "tick the boxes". They participate in a paper exercise seen as having little connection to the programs they manage. This breeds cynicism, leaving public servants less receptive than they might otherwise be to arguments about the contribution of performance measurement to sound public management[7].

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[7] A strong statement of the cynical view is "Distinguishing the real from the surreal in management reform: suggestions for beleaguered administrators in the government of Canada," by Ian D. Clark and Harry Swain, *Canadian Public Administration*, Vol. 48, No. 4 (Winter 2005), pp. 453-476. Prior to writing the article the authors had been deputy ministers in the Canadian government.

3. Data Rich; Information Poor

Information helps a decision-maker choose one course of action over another; data do not.

The OAG findings cited above suggest a situation where data overwhelm information. There is other evidence, too, that casts doubt on the management relevance of the performance measurement system. To begin with, there is the simple fact that over 2,500 indicators pour into TBS every year. Even in a world where organizations are building capacity to work with "big data", I find it difficult to imagine how TBS – as overall manager of the public sector – could make sense of 2,500+ diverse performance indicators, especially given the questionable quality of many of the indicators (a point to which I will return).

To be sure, the total number of indicators relevant to each individual Department is smaller. But there too the numbers appear

Table 2 – Measurement Intensity, Top 20 Departments (by no. of indicators)

	Exp ($million)	$(million)/In
Space Agency	462	8
CFIA	619	11
Environment	932	13
CIC	1,385	14
Heritage	1,390	15
Industry	1,078	17
Transport	1,656	17
DFO	1,605	20
PWGSC	2,664	27
Correctional Service	2,335	31
Ag & Agri Food	2,253	32
NRCan	2,535	34
CBSA	1,736	35
Health	3,657	38
RCMP	2,626	42
FATD	5,350	61
CRA	3,861	64
AANDC	8,054	85
NatDef	18,662	129
Empl & Soc Devt	51,671	401

unmanageable. The average number of indicators per Department in the top 10 Departments (ranked by number of indicators) is 102 (Table 1). I don't believe there is a management team in any federal Department that would regard a performance measurement framework of 100 or so indicators as a useful aid to decision-making. The average for the top 20 Departments is 83.

That Departments produce indicators with too little regard to usefulness is suggested by the absence of an obvious relationship between the number of indicators and a Department's size (in total expenditure). Citizenship and Immigration Canada, with annual expenditure of $1.4 billion, has 101 performance indicators. Employment and Social Development Canada (ESDC), whose annual budget is 37 times greater ($52 billion) has 129 indicators. The Department of Finance and the National Research Council have 32 and 31 indicators respectively, but Finance's annual expenditure of $88

billion is 100 times greater than the NRC's $900 million. "Intensity" of performance measurement (total Departmental expenditure per indicator) among the top 20 Departments (by number of indicators) varies widely (Table 2). With 60 indicators covering $460 million of expenditure, the Canadian Space Agency is the most "measurement-intense" ($8 million of expenditure per indicator). ESDC is 50 times less measurement-intense ($400 million of expenditure per indicator).

But even if I dropped the objection of too many performance indicators – one could argue that there is no "right number" of indicators – an important problem remains. The quality of many indicators is low. In the following sections I highlight three pervasive quality issues concerning performance indicators in the RPPs: i) low (or no) validity; ii) incompleteness; iii) incorrectly specified results.

4. Error: Invalid

Validity is the most important quality criterion for a performance indicator. A valid indicator tells you something meaningful *in relation to what you want to know*; an invalid indicator does not, and is therefore useless. For example, if I were to ask for an indicator of a hockey player's performance, and you were to give me the player's shoe size, you would have given me a useless, invalid indicator. Yes, it is a *measure* of something (the player's feet), but it tells me nothing about what I want to know.

From the research done for this paper, and my consulting work, I have seen indicators used by dozens of Departments. Many have no closer a relationship to Departmental performance than a hockey player's shoe size has to his worth as a player. Table 3 provides examples of low-validity performance indicators from the latest RPPs. In the interest of brevity I provide only 20 examples (one for each Department in Tables 1 and 2); I could easily have produced more.

To appreciate the examples, it's necessary to understand some of the TBS rules regarding performance measurement and reporting. For the purposes of this paper, the key rules require each Department to:

- identify all its programs in a hierarchical diagram called a Program Alignment Architecture (PAA);

- articulate at least one "expected result" for each program; this should be a description of "an external consequence attributed to an organization, program, etc. that is considered to be significant in relation to its commitments";

- articulate at least one performance indicator for each expected result; the indicator should provide evidence of "progress towards the expected results articulated for a program."[8]

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[8] References to TBS's rules regarding performance measurement and reporting are taken from the 2015 version of "Instructions to Departments for Developing a Management, Resources and Results Structure."

All the performance indicators in Table 3 have low or no validity because they provide little or no evidence of achievement of the expected result. Consider the first example in Table 3 from National Defence. The expected result is:

NORAD defence capabilities reduce the risk of threats to Canada's security and sovereignty.

The performance indicator attached to this result should help answer the question, "Is the risk of threats to Canada's security and sovereignty reduced?" But the relationship between "percentage of established NORAD positions that have been filled" and "reduced risk of threats to Canada's security and sovereignty" is not obvious. The indicator is invalid; or, at best, has low validity.

Consider the fifth example in the table from Aboriginal Affairs and Northern Development. The expected result is:

Strengthened collaboration between governments and Aboriginal groups.

The performance indicator attached to this result should help answer the question, "Has collaboration between governments and Aboriginal groups been strengthened?" But what does "number of policies and processes in place …" tell us about the strength of collaboration? Little or nothing. Again, this is an indicator with low or no validity.

Table 3 – Low-Validity Performance Indicators – Examples from 2015-16 RPPs

Department	Expected Result	Performance Indicator
National Defence	NORAD defence capabilities reduce the risk of threats to Canada's security and sovereignty	% of established NORAD positions that have been filled
Employment and Social Development	Other government department programs are delivered seamlessly with effective oversight in accordance with partnership agreements	% of Customized Information Services calls answered within service level agreement standards
Citizenship and Immigration	The investment, entrepreneurship skills and ideas of successful applicants to the Federal Business Immigrants Program contribute to strengthening the Canadian economy	Number of Federal Business Immigrant principal applicants admitted to Canada
Public Works and Government Services	Alignment of federal departments and agencies' needs with capabilities of suppliers.	% of PWGSC Contract Value addressed by published National Goods and Services Procurement Strategies.
Transport	Research and analysis to inform Canadians on the state of transportation in Canada and advance innovation and technological advances in the transportation sector.	% of Grant/Contribution agreements involving multiple collaborators (aside from Federal government)
Aboriginal Affairs & Northern Dev.	Strengthened collaboration between governments and Aboriginal groups.	Number of policies and processes in place supporting strengthened collaboration between governments and Aboriginal groups.
Health	Official Language Minority Communities have access to health care services in the official language of their choice.	% of healthcare professionals who successfully complete Health Canada funded training programs.

Canadian Heritage	Decision makers are well-informed on issues related to the overall policy and regulatory framework for broadcasting and digital communications in Canada.	% of key policy advice provided, including advice in support of G-in-C activities in respect of the CRTC broadcasting licensing decisions that is delivered by legislative deadlines, or as required.
Foreign Affairs, Trade and Development	Govt. of Canada decision makers establish integrated and well-informed policies on how to advance Canada's interests and values.	Degree to which, on a scale of 1 to 5, the information, intelligence and advice provided by the department meet the quality criteria for content and relevance to Canada's interests and values.
Fisheries and Oceans	Aboriginal groups have the capacity to participate in aquatic resource and oceans management at a broad watershed or ecosystem level	Number of watershed/ecosystem-based Aboriginal Aquatic Resources and Oceans Management organizations
Natural Resources	Forest sector innovation is accelerated by the endorsement of an annual research plan by the forest sector innovation system	Annual research plan endorsed by the FPInnovations National Research Advisory Committee (NRAC)
Correctional Service	CSC manages the custody of offenders in institutions in a safe, secure and humane manner	% of upheld inmate grievances
Agriculture & Agri-Food	Production losses are mitigated by providing effective insurance protection	Value of agricultural products for which insurance coverage is offered as a % of the value of all agricultural products (excluding livestock)
Environment	Water resource decision-makers have the necessary information and stakeholder perspectives to make responsible and appropriate shared-resource decisions	% of survey respondents rating their satisfaction with Environment Canada's involvement on water boards and committees as 8 out of 10 or higher
Industry	Estates and matters are administered in accordance with insolvency legislation	% of enquiries and complaints responded to within service standards
RCMP	The rate and severity level of crime is reduced	% of Canadians who strongly agree/agree with statement "I am satisfied with RCMP contribution to a safe and secure Canada"
Canada Revenue Agency	Individual taxpayers have access to timely and accurate responses to their tax enquiries	% of individual callers who succeed in reaching the CRA telephone service
Space Agency	The Canadian scientific community uses space-based data to conduct their research.	Number of peer-reviewed papers related to data utilization produced in academia and R&D community in Canada.
Food Inspection Agency	Plant breeders develop new varieties for the Canadian market	% of plant breeders' rights applications that reach approval and are granted rights
Border Services	People and their goods that are inadmissible to Canada are intercepted at air ports of entry	% of people examined who are found inadmissible at air ports of entry

5. Error: Incomplete

Incompleteness is another prominent weakness in the performance indicators in the RPPs. An indicator might be valid but be missing information without which the indicator is of no use. Like an invalid measure, an incomplete indicator leaves you asking "So what?"

For example, an expected result for one of Environment Canada's programs is *Biodiversity goals and targets are integrated into federal, provincial and territorial strategies and plans that have an impact on biodiversity.* The related performance indicator is *Percentage of federal departments with natural resource or environmental mandates, provinces and territories that have identified and are implementing measures to enhance biodiversity.*

The indicator is valid because it is related to the result. But it is incomplete because it treats its units of account (Departments, provinces, territories, measures to enhance biodiversity) as equal, when of course they are not. Suppose all provinces/territories except Nunavut were implementing biodiversity measures. This would be 92 percent of provinces/territories, which looks close to the declared target of 100 percent by 2017. The difficulty is that Nunavut is by far the largest province/territory by surface area.[9] It is reasonable to assume that its impact on biodiversity could far outweigh that of other jurisdictions – a fact which the indicator ignores.

An identical problem results from counting "measures to enhance biodiversity". Some "measures" will have more impact on biodiversity than others. Suppose all Departments, provinces and territories chose to implement measures of a relatively minor nature. The 100 percent target would be achieved, but would that really be the desired result?

A numerator without a denominator is another common source of incompleteness. An expected result of one of Transport Canada's programs is *"A competitive marine transportation sector."* The related performance indicator is *"Tonnage handled by Canadian carriers (domestic)".* The amount of tonnage, without context, is not informative. It begs the obvious question, "Tonnage handled by Canadian carriers – *compared to what?*" Tonnage handled by Canadian carriers as a percentage of all domestic tonnage might have been more useful.

Table 4 provides 20 examples of incomplete performance indicators found in RPPs.

Table 4 – Incomplete Performance Indicators – Examples from 2015-16 RPPs

Department	Expected Result	Performance Indicator
National Defence	Defence Intelligence clients, both civilian and military achieve information superiority	% of intelligence products posted on classified systems within required timelines
Employment and Social Development	Canadians are able to access information about Govt. of Canada programs and services in the most accessible and convenient way	% of websites migrated to Canada.ca as part of the Web Renewal initiative
Citizenship and Immigration	Temporary residents' transitions to permanent residence strengthen Canada's long-term economic goals	Number of temporary resident principal applicants who transition to permanent residence in economic immigration categories
Public Works and Government	The federal government leverages tools and instruments to support simple and timely	Number of Govt. of Canada procurement transactions completed through the use of

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[9] Nunavut accounts for 21 percent of Canada's surface area. It is 370 times larger than the province of Prince Edward Island but the two are treated equally by this performance i.

Services	delivery of acquisition solutions for the federal government and suppliers.	PWGSC procurement instruments.
Transport	A competitive marine transportation sector	Tonnage handled by Canadian carriers (domestic)
Aboriginal Affairs & Northern Dev.	Canada fulfills its long-standing obligations to First Nations arising from treaties, and the administration of lands, Band funds and other assets.	Number of settlement offers extended to First Nation claimants.
Health	Acts as a catalyst to address current and emerging health issues and priorities.	Number of actions taken (e.g. Grant and Contribution signed) to respond to current and emergent issues.
Canadian Heritage	Arts and heritage organizations demonstrate sound organizational, administrative and financial health	Average number of tools developed by recipients of Strategic Initiatives funding to strengthen the business practices of arts and heritage organizations.
Foreign Affairs, Trade and Development	International actors are engaged and influenced to gain support for actions consistent with Canada's interests and values.	Degree to which, on a scale of 1 to 5, Canada's positions are reflected in bilateral agreements/initiatives.
Fisheries and Oceans	Anglers are engaged in consultative processes to instill responsibility for shared stewardship for resource conservation and enhancement	Number of consultative processes that anglers are engaged in by the recreational fisheries program
Natural Resources	Govt. of Canada's regulatory and legislative frameworks governing Canada's energy resources is renewed and continuously improved	Number of assessments and/or updates to energy regulations or legislation and/or Canada's energy regulatory or legislative frameworks
Correctional Service	The provision of efficient, effective mental health services to offenders that encourage individual responsibility, promote healthy reintegration and contribute to safe communities	% of inmates who received an institutional mental health service
Agriculture & Agri-Food	Industry has increased awareness of current agricultural risk management tools and mitigation strategies and has access to new or expanded business risk management tools	% of eligible participants using new tools that have been funded by AgriRisk Initiatives
Environment	Environment Canada and partners achieve near-term objectives for improvements in beneficial use impairments and environmental quality of the Great Lakes Basin ecosystem	Number of beneficial uses whose status is listed as "impaired" or "requires further assessment" for Canada's 17 Areas of Concern in the Great Lakes
Industry	Decision makers have access to informed analysis on domestic and international trade matters affecting the competitiveness of Canadian industries	Number of collaborative research or policy initiatives started or maintained
RCMP	Public safety and the integrity of Canada's political and economic systems are preserved	Percent of federal occurrences that can be considered solved (cleared, cleared otherwise or cleared by charge)
Canada Revenue Agency	Timely and effective processing of voluntary disclosure submissions	% of files completed compared to intake
Space Agency	Government organizations offer more diversified or cost-effective programs and services due to their utilization of space-based solutions.	Number of new government programs offering more diversified or efficient services.
Food Inspection	Effective preparedness to prevent, control,	Number of emergency preparedness

Agency	and eradicate trans-boundary diseases and emerging diseases	simulation exercises in which CFIA participates
Border Services	The position of the Minister of Public Safety and Emergency Preparedness and/or Minister of Citizenship and Immigration Canada position with respect to immigration status is represented and upheld at administrative proceedings before the IRB	% of decisions rendered by Members of the IRB and outcomes that align with the priorities of the Minister of Public Safety and Emergency Preparedness and/or the Minister of CIC

6. Error: Not a "Result"

As mentioned, the goal of the MRRS Policy is to have Departments focus on managing and being accountable for social and economic results rather than "outputs". This is why Departments must identify "expected results" for programs, and design performance indicators that show progress toward achievement of results.

For the MRRS to work as intended, results have to be properly formulated. If "expected result" statements used by Departments are defective, then so too are performance indicators that follow from them, as are the data and information generated by the performance indicators.

In the MRRS guidance TBS provides to Departments it is stated (correctly) that an expected result should describe a "type of knowledge, behavioural or state change (i.e. economic, social, environmental, etc.)". It gives examples of "clearly articulated expected results", including:

- increased Canadian-produced television shows;
- suicide rates among offenders in correctional institutions are no higher than in the general population;
- Canadians have increased understanding of their legal rights and obligations; and
- Canadians increase their amount of daily exercise.[10]

Many expected-result statements in the 60 RPPs reviewed for this paper do not follow the TBS guidance. The flawed result statements *do not describe results at all*. Instead they describe Departmental outputs such as services delivered, information provided, etc. This means that performance indicators related to those "results" (to the extent that the indicators themselves are not flawed – see above) provide managers with data on *program outputs rather than program results*. This undermines the basic purpose of the MRRS.

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[10] "Instructions to Departments for Developing a Management, Resources and Results Structure," p. 53

A frequent misrepresentation of an output as an "expected result" is some variation on the theme of "Target population has access to an output provided by the Department", as in this example from the Canada Revenue Agency:

Businesses have access to timely and accurate responses to their tax enquiries.

"Have access to" suggests a result. But "timely and accurate responses to tax enquiries" are what CRA *delivers.* They are *outputs*, not results. Rephrasing the output as something to which a target population "has access" does not magically transform it into a result! If the expected result were properly described it would – as the TBS guidance says – refer to a positive "change of state" among business owners *as a consequence of* receiving timely and accurate responses. For example, "Businesses are able to manage their tax affairs quickly, accurately and efficiently."

Not surprisingly, the related performance measure – "Percentage of accurately updated internal reference materials for taxpayer services agents" – relates to an aspect of *service delivery* (an output) rather than to a result ("change of state"). I am not suggesting that performance indicators related to outputs are unimportant. But the MRRS's stated purpose is to provide managers and the public with information about results. This will not be achieved if outputs masquerade as results in the RPPs.

Other misstated results are just straightforward descriptions of a Departmental output, as in this example from Health Canada:

Timely response to emerging food and nutrition safety incidents including foodborne illness outbreaks.

A "timely response" is what Health Canada delivers – it's an output. The question from a results perspective is, "what happens *as a consequence* of Health Canada's 'timely response' "? On this the performance indicator is silent. Table 5 provides 20 examples of non-results presented as results.[11]

Table 5 – "Non-Results" – Examples from 2015-16 RPPs

Department	Program	Expected Result
National Defence	Defence Combat and Support Operations	Command and control capability sufficient to achieve the strategic goals, outcomes and objectives is maintained and executed as required to conduct Defence Combat and Support Operations and deliver Defence services
Employment and Social Development	Service Network Supporting Government Departments	Canadians have easy, fast and convenient access to up-to-date government information over the phone as a first point of contact for general information on all Government of Canada programs, services and initiatives
Citizenship and Immigration	Migration Control and Security Management	Permanent residents have required documentation to re-enter Canada
Public Works and	Accommodation and Real	Local taxing authorities receive fair, equitable, and

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[11] Some expected results in Tables 3, 4, 6, 7 and 8 are also "non-results" but it was not the purpose of those tables to highlight that issue.

Government Services	Property Services	predictable payments on behalf of the Government of Canada, as contribution to the cost of local government.
Transport	Clean air from Transportation	Clean air regulatory framework (and policies) that align with international standards
Aboriginal Affairs & Northern Dev.	First Nations Individual Affairs	Registered Indians access programs, services and benefits to which they are entitled
Health	Food Safety and Nutrition	Timely response to emerging food and nutrition safety incidents including foodborne illness outbreaks.
Canadian Heritage	Attachment to Canada	Canadians across Canada have opportunities to participate in community events that are open to the public and free of charge.
Foreign Affairs, Trade and Development	Consular Services and Emergency Management	Canadians receive satisfactory routine consular assistance abroad.
Fisheries and Oceans	Compliance and Enforcement	Canada has the capacity to effectively administer and enforce the legislation, regulations, and other managing frameworks that govern Canadian waterways, fisheries, oceans, and habitat in a fair, predictable and consistent manner
Natural Resources	Market Access and Diversification	Rough diamond market access is supported through the efficient implementation of Canada's international obligations under the Kimberley Process Certification Scheme
Correctional Service	Institutional Management and Support	Institutional management is compliant with policy and law
Environment	Sustainable Ecosystems	Engagement of partners in projects involving targeted ecosystems
Industry	Small Business Research, Financing and Services	Small business and potential entrepreneurs access government information on business-related programs, tools and services
RCMP	Canadian Law Enforcement Services	Technical, forensic, investigative and educational activities support Canada's law enforcement community
Canada Revenue Agency	Taxpayer and Business Assistance	Businesses have access to timely and accurate responses to their tax enquiries
Space Agency	Space Exploration	Canadian astronaut corps is ready to assume any responsibilities on an expedition to the International Space Station
Food Inspection Agency	International Collaboration and Technical Agreements	International regulatory cooperation, relationship building and technical assistance activities that are in line with the CFIA's mandate
Border Services	Admissibility Determination	People and goods who are inadmissible to Canada are intercepted at ports of entry
Public Health	Health Promotion and Disease Prevention	Infectious disease surveillance information is available to support evidence based decision making

Numbers, Numbers, Numbers (and more Numbers)

We love numbers. Tables, pie-charts and graphs filled with numbers, trend lines, percentages and averages have an aura of authority, objectivity, truth and incontestability. They inspire confidence.

When numbers are used appropriately our confidence in them is justified. Quantitative analysis is worth the effort when it helps us understand something significant and meaningful about the world. But numbers can also be instruments of deception, persuading us that we know something when in fact we may know little or nothing at all. As Darrell Huff observed more than 60 years ago in his classic *How to Lie with Statistics*[12], "Many a statistic is false on its face. It gets by only because the magic of numbers brings about a suspension of common sense."

Important elements of the approach to implementing the MRRS Policy have come under the spell of the "magic of numbers" and, consequently, lack common sense. Two important examples are the requirements that Departments i) create targets for each performance indicator; and ii) measure the efficiency of all lowest-level programs in the PAA.

7. (mis)Targeting

Departments must set a target for each performance indicator. MRRS instructions state that targets are expected to help with "focusing the efforts of a program and motivating employees to innovate." Where this sanguine view comes from is not clear. Public management literature takes a skeptical position, concluding that targets are more likely to inspire employees to cheat than to innovate, As one author has observed (echoing an observation frequently found in the literature),

> ... there is a degree of inevitability about the presence of perverse incentives, behaviours, and gaming within targets-based public sector performance management. Evidence points towards an array of potential techniques for minimizing these issues, but as yet there appears to be no 'silver bullet' for eliminating such unintended consequences.[13]

Apart from technical concerns about these well-known targeting hazards – gaming, perverse behavior – there is a fundamental objection to across-the-board use of performance-targeting in the public sector. Recall that the MRRS Policy is built on the notion of measuring performance in relation to *results*, meaning that performance targets are supposed to reflect the likelihood of achieving "expected results". **But targeting is ill-suited, much if not most of the time, to measuring performance in relation to *results* as opposed to outputs.**

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[12] *How to Lie with Statistics*, by Darrell Huff, New York: W.W. Norton & Co., 1954. It is still in print and is the most widely read book on statistics ever published.

[13] "On Target? – Public Sector Performance Management: Recurrent Themes, Consequences and Questions," by Simon Guilfoyle, *Policing* (2012) Vol. 6 No. 3, pp. 250-260. See also "Governance by numbers: What have we learned over the past 30 years?" by Peter M. Jackson, *Public Money & Management*, January 2011, pp. 13-26. Jackson concludes that "Target-setting will have to be rethought and any replacement will have to be sufficiently sophisticated so as to minimize behavioural distortions without being too complex to manage. This will require more information than currently exists about the general unintended consequences of measurement systems."

Consider the example in Table 6 – a case where targeting appears, at first, to work well. The target refers to a range of service standards that the Canada Revenue Agency (CRA) has established for elements of its client service operations (such as call centers). The service standards cover items such as the percentage of individual callers who are successful in reaching the CRA telephone service. The target is that all of the service standards will be fully met.

Table 6 – Not an Outcome-related Target

Program	Expected Result	Performance Indicator	Target
Taxpayer and Business Assistance (Revenue Agency)	Taxpayers and businesses have access to the information and services they need to voluntarily comply with tax laws	% of service standard targets that are met for individual and business enquiries	100%

The target is useful and easy-to-understand. But its fatal weakness, from the results-oriented perspective of the MRRS Policy, is that it refers to an *output* rather than a result. Service standards relate to service delivery, which is an output. Service standard targets are therefore output targets; they say nothing about whether results are achieved. This same flaw will be found in targets attached to all "expected result" statements that are in fact output statements (and there are many more of these than the 20 examples in Table 5). Output targets in the public sector are analogous to production targets in the private sector; both suffer from results-blindness. Suppose a steel mill has a production target of 10,000 tonnes over a certain period of time. Meeting or exceeding the target has no necessary connection with achievement of the "expected result" – selling steel at a profit.

Table 7 – 10 Obscure Performance Targets – Examples from 2015-16 RPPs

Program (Department)	Expected Result	Performance Indicator	Target
Cultural Industries (Canadian Heritage)	Readers everywhere have access to a broad range of Canadian-authored books produced by Canada Book Fund recipients	Number of new Canadian-authored titles published by Canada Book Fund recipients	5500
Future Canadian Space Capacity (Space Agency)	Enhanced Canadian industry competitiveness	Number of Canadian companies successfully obtaining national/international work orders	100
International Engagement (Fisheries and Oceans)	International governance regimes that ensure sustainable resource management and healthy marine ecosystems and that reflect Canadian interests	Discussion with Greenland on joint management of northern shrimp and with the five Arctic Ocean costal States on high-seas fisheries of the central Arctic Ocean	100%
Market Access, Negotiations, Sector Competitiveness, and Assurance Systems (Agriculture and Agri-Food)	Agriculture, agri-food and agri-based value chains are able to adapt to industry challenges and opportunities.	Value of food and beverage shipments (billions of dollars)	105.37
Aboriginal Entrepreneurship (Aboriginal Affairs and Northern Development)	Creation and/or expansion of viable Aboriginal businesses	Number of Aboriginal businesses created and expanded through the support of Aboriginal Financial Institutions.	1000

Skills and Employment (Employment and Social Development)	Persons with disabilities have enhanced their employability, obtained employment, become self-employed or returned to school.	Number of clients with enhanced employability	4700
Science, Technology and Innovation Capacity (Industry)	New and innovative products, services and processes are commercialized by Canadian businesses.	Number of projects to date in which the recipient has commercialized a new product, service or process as a result of Industry Canada financing	204
Community Supervision (Correctional Service)	Offenders are reintegrated into the community as law-abiding citizens while under supervision	Percentage of time employed in the community	62.1 to 62.3
Diplomacy, Advocacy and International Agreements (Foreign Affairs, Trade and Development)	The negotiation of international trade agreements at the bilateral, regional and multilateral levels maintains or improves global market access for Canada.	Number of agreements concluded (including free trade agreements, air transport agreements and foreign investment promotion and protection agreements).	10
Substance Use and Abuse (Health)	Reduction in illicit drug use.	% of youth (aged 15-24) who abuse psychoactive drugs reduced	less than 23%

But what about cases where "expected results" are properly formulated as results (rather than outputs)? Here too targeting is problematic[14], though for different reasons.

Output (production) targets often have sound internal logic even if they don't fulfill the MRRS Policy's purpose of providing information about results. Output targets are likely to tell managers something useful when a production process is standardized and well understood. In the case of a government call center (the example in Table 6) managers probably have a very good idea of how many calls *should* be answered during a normal working day, or the maximum time a caller *should* be on hold before reaching an agent. So failure to meet a target sends a strong signal about a possible production problem to be investigated.

The situation with regard to results is fundamentally different because programs can only *influence* results, while they *control* outputs. The processes by which program outputs influence results will never come close (in the vast majority of cases) to being as well understood as the processes by which program activities produce outputs. As a consequence, performance targets related to results often have little or no meaning. It will rarely be obvious whether failure to meet a result target signals a possible problem or exceeding a target signals success.

Table 7 provides 10 examples of difficult-to-interpret performance targets found in the RPPs. Consider the first example. Why 5500? Where does this number come from?[15] What would it mean if the

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[14] Note that the Privy Council Office – over which the Prime Minister has direct ministerial oversight – seems to have unilaterally opted out of the requirement to publish performance targets. The words "not applicable" appear in the "Target" column next to all performance indicators in its RPP.

[15] A reasonable guess would be that it is an average drawn from historical program data.

program fell short of, or met, or exceeded the target? Would it be a sign of failure if only 4000 titles were published?

Uncertainty about the meaning of a result target is compounded when the expected result or performance indicator describes something over which the program has very little influence. The fourth item in Table 7 is a good example. The program targets $105.37 billion[16] in food and beverage shipments even though it's unlikely that the program's degree of influence over industry-wide food and beverage shipments is more than minuscule. If the level of influence is in fact very small then the both performance indicator and its associated target are meaningless.

8. Wasting Time on Efficiency

The MRRS instructions require Departments to "develop an efficiency indicator for each lowest level program" in the PAA. The instructions state that efficiency indicators are concerned "with the cost of producing something, usually a specific output" and add that efficiency indicators "usually consist of a ratio that measures cost per unit of work – often a transaction (e.g. cost per application processed)." Examples of efficiency indicators are provided, such as:

- cost per $ million in grants and contributions issued;

- cost per case handled;

- cost per 100,000 persons in population;

- cost per application processed.

Developing meaningful efficiency indicators requires the same understanding of the production process as was discussed already in relation to performance targets. Efficiency indicators will have a high degree of validity when a program's production process is i) well understood; and ii) highly standardized. Under these conditions managers will have a good idea of what it should cost, under normal circumstances, to produce a unit of output. In other words, they will know *what it means to be efficient*.

There are indeed public programs that fit these conditions. Programs involving processing of tax returns, social assistance payments and calls into a call center come immediately to mind. In these cases there is a well understood, "normal" set of circumstances that gives rise to a "normal", well-understood production process. Under normal circumstances in such programs, managers will know what it should cost to process a tax return, issue a payment, respond to an inquiry, etc. They have a

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[16] Note the target's absurd level of precision. The fallacy of "false precision" infects many performance targets in the RPPs. (The eighth item in Table 7 is another good example.)

clear, reliable, quantitative picture of what efficiency looks like. Given the obvious relevance of efficiency measurement to programs of this type it is likely that managers would be developing and tracking efficiency indicators whether or not they were required to by TBS.

But are standardized, well-understood production processes common to most public programs? I'm sure that most readers of this paper would say "no".

Consider the first example of an efficiency indicator in the MRRS instructions: "cost per $ million in grants and contributions issued". Try it out on a lowest-level Canadian Heritage program that provides "financial assistance in the form of grants and contributions for infrastructure projects for professional, not-for-profit arts and heritage organizations and municipal and provincial government and agencies with a mandate for arts and heritage, and equivalent Aboriginal peoples' organizations."[17]

In this case, program staff will no doubt receive a wide variety of funding proposals from a wide variety of organizations. The projects might be small or large, simple or complex, of short or long duration. The proponents themselves will be diverse, running the gamut from sophisticated provincial government organizations with staff experienced in submitting funding proposals to small NGOs and Aboriginal organizations that require significant assistance to complete their proposals. It seems unlikely under these circumstances that one could reliably calculate a "normal" cost for issuing a grant or contribution.

Suppose it took 30 person-days of Departmental time to process and make the first disbursement on a proposal from a two-person Aboriginal organization in a remote community for a $100,000 grant, and 25 person-days to do the same on a proposal from a provincial government agency for a $500,000 grant. Based on the TBS guidance, we would conclude that administration of the second proposal is *six times more efficient* than the first (50 person-days/$ million vs. 300 person-days/$ million).

Does this seem right? Or is it the case that working with a tiny and remote Aboriginal organization on a grant application *should be* more time-intensive than working with the provincial organization? If efficiency is expenditure per unit of output, then the units of output in this example are not comparable. Issuing a grant to the provincial organization is a fundamentally different undertaking than issuing a grant to the small Aboriginal organization in the remote community.

And what if – just to make things even less straightforward – one of the "expected results" of the program is that planning and management capacity of community arts organizations will be strengthened via time-intensive support from program staff for completing applications? Conclusion: there is no "normal" case here; no single number that says the program is "efficient" (or not).

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[17] This description of the Canada Cultural Spaces Fund is extracted from Canadian Heritage's 2015-16 RPP.

The public sector is full of programs like this: programs with multiple "expected results", diverse clientele and no standard, "cookie-cutter" way of getting things done. In order to produce efficiency measures for such programs you would have to assume a "normal" situation that would rarely have any relationship with reality. It's a dream to think that simple, reliable quantitative indicators can be produced that will tell us whether most programs are efficient or not.

Some readers will have noticed the irony in TBS's requirement for Departments to produce efficiency indicators. Making Departments put resources into production of efficiency indicators that serve no purpose is infinitely inefficient!

Table 8 provides 10 examples of lowest-level programs for which the development of efficiency indicators would be highly problematic.[18]

Table 8 – Wasting Time on Efficiency – Examples from 2015-16 RPPs

Lowest-level Program (Department)	Expected Result	Delivery Method
Science and Strategic Partnerships (RCMP)	Criminal investigations are supported by the National DNA Data Bank	Maintain National DNA Data Bank to provide law enforcement with evidence to link crimes with convicted offenders; provide scientific/technical review and strategic advice to senior management.
Counter Terrorism, Terrorism Event Response and Consequence Management Operations (National Defence)	Canada, Canadian interests and the safety and security of Canadians at home and abroad are protected from terrorist threats and activities	Conduct counter terrorism operations; deliver defence capabilities to prevent, pre-empt, disrupt and respond to terrorist activity.
Targeted Geoscience Initiative (Natural Resources)	Industry applies NRCan knowledge and/or techniques, enabling more effective exploration for as-yet undiscovered resources	Develop geoscience knowledge and techniques; provide industry with predictive models and techniques for deep mineral exploration
Science and Technology Policy and Analysis (Industry)	i) Engagement with key stakeholders in the development and implement of Government of Canada's science, technology and innovation priorities; ii) A broader understanding of science underpins science and technology policy	Provide analysis/advice and develop policies/programs to improve Canada's R&D capacity and excellence in Canada's innovation system; consult, collaborate and partner with key stakeholders outside and within government.
Species at Risk (Environment)	Status of listed species shows improvement upon reassessment	Publish recovery documents, identify critical habitat, ensure legal protection of wildlife species; manage funding mechanisms; participate in partnerships with other governments; manage advisory bodies.
Immigration Investigation (Border Services)	i) Immigration investigations are conducted against foreign nationals and permanent residents who are or may be inadmissible to Canada;	Investigate, report on and arrest foreign nationals and permanent residents who are or may be inadmissible to Canada.

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[18] I cannot comment on the actual efficiency indicators used by Departments because they are not made public.

	ii) Timely investigation of foreign nationals and permanent residents who are or may be inadmissible to Canada	
Opportunities Fund for Persons with Disabilities (Employment and Social Development)	Persons with disabilities have enhanced their employability, obtained employment, become self-employed or returned to school	Provide support to programs and services including job search support, skills development, wage subsidies and employer awareness initiatives to encourage employers to hire persons with disabilities.
Canada Cultural Spaces Fund (Canadian Heritage)	Arts and heritage organizations in a variety of communities have resources to build and improve facilities and infrastructure	Contribute to improvement of physical conditions for the arts and heritage; provide financial assistance for infrastructure projects for professional, not-for-profit arts and heritage organizations and municipal and provincial government and agencies and Aboriginal organizations.
Standards Development and Certification (Public Works and Government Services)	The federal government and industry use standards development and conformity assessment services in support of their interests in the economic, regulatory, procurement, health, safety and environmental areas and use these standards and programs to support consumer confidence.	Provide development of standards and conformity assessment services.
Spouses, Partners and Children Reunification (Citizenship and Immigration)	i) Spouses, partners and children are reunited with their sponsor in Canada; ii) Reunification applications for immediate family members are processed within published service standards.	Process reunification applications for granting permanent residence to immediate family members.

9. Conclusion

The Government of Canada's approach to performance measurement and reporting is founded on solid principles but undermined by flawed implementation. For the most part, the current performance measurement and reporting system does not fulfill its stated purpose of supporting Departments in "managing for results … decision-making for results [and] accountability for results." A large performance reporting "machine" generates data that are too rarely of use to public sector managers, Parliamentarians and Canadians. Furthermore, Departments are also required to create performance "targets" and "efficiency indicators" that are even less useful than the often-flawed data on which they are based.

Key weaknesses in the current performance measurement and reporting system are as follows.

1. The large number of performance indicators – more than 2,500 in total - imply an inefficient measurement and reporting system that produces plenty of data but little useful information

about social and economic results achieved by public programs.

2. Many performance indicators in the system are seriously flawed. Three important problems identified in this paper are that i) many "expected result" statements from which performance indicators are derived are in fact descriptions of outputs rather than results; the indicators that flow from these result statements are irrelevant to the focus of the MRRS Policy on *results*; ii) many performance indicators are invalid; and iii) many performance indicators – even when based on properly formulated expected result statements, and even when they have an appreciable degree of validity – are incomplete.

3. Departments are required to develop performance targets and efficiency indicators which, in many cases, yield no useful information about program performance and are irrelevant from an operational perspective.

The breadth and depth of weakness observed in the system – bloated performance measurement frameworks, flawed result statements and performance indicators, inappropriate use of performance targets and efficiency indicators – suggest a continuing shortage of capacity in Departments and in the program sectors of TBS to implement performance measurement and reporting.

10. Recommendations

The Government of Canada's performance measurement system attempts to do too much, and, for the most part, does it poorly. The recommended approach to improving the system is, therefore: *do less, and do it well*. A more manageable performance measurement system of narrower scope than the current one, but which consistently yields high-quality, results-oriented information on the performance of public programs, would make a more valuable contribution to public management and accountability.

TBS should scale down the performance measurement system to a size that is better aligned with Departments' current capacity to implement performance measurement and with TBS's own capacity to oversee the system, provide technical guidance to Departments and control quality.

Recommendations are as follows.

1. Significantly reduce the total number of performance indicators in the system. This could be accomplished by requiring Departments to develop performance indicators *only at the Program level of the PAA*.

2. TBS should strengthen its efforts to ensure the quality of expected result statements and performance indicators produced by Departments. Particular attention should be paid to the weaknesses identified above regarding improperly formulated result statements, invalid

performance indicators and incomplete performance indicators.

3. Drop the requirement for Departments to provide performance targets and efficiency indicators.[19]

4. TBS should strengthen the capacity of its program sector analysts to provide high-quality, consistent advice to Departments regarding the design of the PAA, development of result statements and development of performance indicators.

5. TBS should strengthen the capacity of the Expenditure Management Sector (which has responsibility for the MRRS Policy) to communicate with TBS program sector analysts so that their advice to Departments is consistent with the principles underlying the MRRS and the instructions for its implementation. TBS should also strengthen the capacity of the Expenditure Management Sector to communicate and with Departments regarding the MRRS Policy and implementation instructions, with a view to supporting shared understanding across Departmental staff and TBS program sector analysts.

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[19] Departments such as Canada Revenue Agency, Employment and Social Development Canada, Canada Border Services Agency (among others) would almost certainly continue using targets and efficiency indicators for programs where these instruments are appropriate, even if the requirement were to be dropped.

Annex 1 – MRRS Information for Top 60 Departments (by Expenditure)

SO = Strategic Outcome; Pr = Program; S-Pr = Sub-Program; SS-Pr - Sub-Sub-Program; In = Indicators

Source: 2015-15 Reports on Plans and Priorities

	Exp ($000,000)	SO	Pr	S-Pr	SS-Pr	Pr/SPr/SSPr	In
Finance	87,616	1	3	14	0	17	**32**
Empl & Soc Devt	51,671	4	7	40	7	54	**129**
NatDef	18,662	2	6	26	73	105	**145**
AANDC	8,054	4	14	38	0	52	**95**
TBS	7,365	1	4	11	0	15	**33**
FATD	5,350	4	9	26	0	35	**87**
CRA	3,861	2	6	21	0	27	**60**
Health	3,657	3	13	25	12	50	**95**
Veterans	3,577	3	5	15	16	36	**41**
InfraCan	3,322	1	6	0	0	6	**27**
PWGSC	2,664	1	8	31	5	44	**97**
RCMP	2,626	3	5	14	25	44	**62**
NRCan	2,535	3	9	31	0	40	**75**
Correctional Service	2,335	1	3	13	15	31	**75**
Ag & Agri Food	2,253	2	6	29	0	35	**71**
CBSA	1,736	1	7	18	0	25	**50**
Transport	1,656	3	15	38	12	65	**97**
DFO	1,605	3	24	21	0	45	**80**
Shared Services	1,473	1	1	4	0	5	**11**
Heritage	1,390	3	7	34	0	41	**95**
CIC	1,385	4	11	35	2	48	**101**
PSEP	1,123	1	4	9	3	16	**44**
Industry	1,078	3	8	21	0	29	**64**
NSERC	1,063	1	3	15	0	18	**40**
CIHR	985	1	2	4	0	6	**16**
Environment	932	3	9	30	5	44	**70**
NRC	896	2	2	12	0	14	**31**
SSHRC	692	2	4	10	0	14	**29**
Justice	631	2	3	2	6	11	**25**
CFIA	619	1	4	14	0	18	**58**
PHAC	615	1	3	9	5	17	**49**
Parks	612	1	5	19	0	24	**47**
Comm for Judicial Affrs	511	1	3	5	0	8	**18**
Space Agency	462	1	3	9	18	30	**60**
StatsCan	380	2	5	18	0	23	**48**

ACOA	288	1	3	8	0	11	20
EDA-Quebec	248	1	3	7	0	10	19
FED_S_Ont	207	1	3	9	0	12	34
Dir of Pub Prosecutions	168	2	4	0	0	4	6
WD	160	1	3	10	0	13	35
OSFI	143	2	3	6	0	9	23
Nuclear Safety Comm	132	1	5	18	0	23	29
IRB	121	1	4	0	0	4	11
PCO	119	1	4	9	0	13	17
Chief Electoral Officer	97	1	3	0	0	3	20
Lib & Archives	96	2	5	0	0	5	8
Cda Sch of Pub Service	85	1	1	0	0	1	3
PSC	84	1	3	8	0	11	22
NEB	71	1	2	2	0	4	8
Courts Admin	68	1	2	0	0	2	2
NFB	60	1	2	4	0	6	26
FinTRAC	49	1	2	0	0	2	5
NPB	47	1	4	0	0	4	6
Info & Priv Comms.	36	2	4	0	0	4	14
Cdn Nor Ec Dev Agency	31	1	2	4	0	6	11
Supreme Court	31	1	2	0	0	2	9
Env Assessment Agcy	31	1	2	0	0	2	5
TSB	29	1	4	0	0	4	28
Status of Women	29	1	2	0	0	2	5
Cdn Transp. Agency	28	1	2	0	0	2	6
Totals	**$227,850**	**101**	**301**	**746**	**204**	**1,251**	**2,529**

That is why a man with numbers
Can put your mind at ease
We've got numbers by the trillions
Here and overseas

from "When Numbers Get Serious"
words and music by Paul Simon, (c) 1983

About the Author

Mark Schacter is a public-management consultant and author based in Ottawa, Canada. For more than 20 years he has advised governments, NGOs and international organizations on practical and policy issues in governance, accountability, performance measurement, evaluation, risk and strategy. He is also an accomplished trainer, having designed and led workshops on topics such as governance, performance measurement, evaluation, strategic planning and risk management.

In the 1990s Mark was on the staff of the World Bank at its headquarters in Washington DC; he worked in Africa, Asia and Eastern Europe to help strengthen the governance and accountability of major public institutions, and to support reforms in private sector development. Subsequently, he occupied senior positions at the Institute On Governance and the Conference Board of Canada, both in Ottawa, before launching his consulting firm, Mark Schacter Consulting, in 2003.

Mark has a BA from Yale University, an LL.B. from Oxford University and an MBA from the University of Ottawa.