CONFIDENTIAL
BUSINESS CASE:
CAPITAL PROJECT MANAGEMENT AND DELIVERY

KPMG

Manitoba Fiscal Performance Review

Phase 2 Report
Business Case – Capital Project Management and Delivery

Notice

This Phase 2 report (the "Report") by KPMG LLP ("KPMG") is provided to The Province of Manitoba's Treasury Board represented by the Minister of Finance ("Manitoba") pursuant to the consulting service agreement dated July 14, 2016 to conduct an independent fiscal performance review (the "Review") of core government spending (except the Department of Health) for Manitoba.

If this Report is received by anyone other than Manitoba, the recipient is placed on notice that the attached Report has been prepared solely for Manitoba for its own internal use and this Report and its contents may not be shared with or disclosed to anyone by the recipient without the express written consent of KPMG and Manitoba. KPMG does not accept any liability or responsibility to any third party who may use or place reliance on our Report.

Our scope was limited to a review and observations over a relatively short timeframe. The intention of the Report is to develop business cases for select areas of opportunity. The procedures we performed were limited in nature and extent, and those procedures will not necessarily disclose all matters about departmental functions, policies and operations, or reveal errors in the underlying information.

Our procedures consisted of inquiry, observation, comparison and analysis of Manitoba-provided information. In addition, we considered leading practices. Readers are cautioned that the potential cost improvements outlined in this Report are order of magnitude estimates only. Actual results achieved as a result of implementing opportunities are dependent upon Manitoba and department actions and variations may be material.

The procedures we performed do not constitute an audit, examination or review in accordance with standards established by the Chartered Professional Accountants of Canada, and we have not otherwise verified the information we obtained or presented in this Report. We express no opinion or any form of assurance on the information presented in our Report, and make no representations concerning its accuracy or completeness. We also express no opinion or any form of assurance on potential cost improvements that Manitoba may realize should it decide to implement the options and considerations contained within this Report. Manitoba is responsible for the decisions to implement any options and for considering their impact. Implementation will require Manitoba to plan and test any changes to ensure that Manitoba will realize satisfactory results.

Table of Contents – Capital Project Management and Delivery

Purpose and Objective

1.1 Organizational Needs and Desired Outcomes

The Province of Manitoba through its various departments is responsible for the planning, budgeting and delivery of a range of captial projects aimed at sustaining or improving the infrastructure needed to deliver effective service to Manitobans. Valued at over $1 billion annually, the nature, scale and distribution of capital works varies significantly from year-to-year and department-to-department making for a complex portfolio to manage and control.

The Government has stressed the importance of ensuring future capital investment decisions are made in the context of: stimulating the economy, providing value for the public good, and financial sustainability over the longer term. This requires good governance and stewardship at all stages of the capital project lifecycle.

While some good practices exist, inconsistency in process, information and approach between and within departments and agencies makes capital investment prioritization, rationalization, budget oversight and the evaluation of project outcomes and value for money difficult and time consuming.

This business case focuses on medium to longer-term transformation options for Government to consider to:

1. Take a strategic, long-term approach to identifying, prioritizing and funding core government capital needs and projects, within the context of limited fiscal resources;
2. Leverage alternative financing and procurement models to deliver large-scale infrastructure projects more effectively and efficiently, and in a timely manner;
3. Improve captial efficiency by managing cash flows, risks and contingencies, controlling amortization and interest costs, and exploring options for cost containment/avoidance;
4. Enhance the consistency and effectiveness of project planning, budgeting, management and delivery practices to improve visibility and oversight throughout the investment cycle; and
5. Enhance the transparency and defensibility of plans, decisions and programs by focusing on value for money and accountability for results (individual projects, and overall capital spend).

Purpose and Objective

1.2 Description of Approach

This business case was developed to define a strategy for aligning and strengthening capital project planning, management and delivery practices across the provincial government. Work was completed in five steps, leveraging information collected in the Phase 1 opportunity assessment, documentation provided in Phase 2 by departments with capital spend, and discussions with Treasury Board Secretariat staff.

1. Current Practice Review	2. Leading Practice Review and Goal Setting	3. Gap Analysis and Initiative Development	4. Strategy and Options Evaluation	5. Complete Business Case
– Confirm key project management activities within departments and agencies. – Identify supporting processes and information flows. – Highlight underlying issues, limitations and pain points impacting capital performance.	– Consider leading practices based on a review of peer organizations across Canada and globally. – Educate stakeholders on leading/advanced practice highlighting benefits/implications. – Set goals and objectives based on provincial objectives and 'fit'.	– Conduct gap analysis of current state vs. leading practice and goals and objectives. – Identify gaps and improvement options.	– Assess options focused on addressing identified gaps and goals and objectives. – Identify preferred option and considerations (e.g., risks).	– Produce improvement roadmap staging initiatives based on alignment with goals and objectives and resource constraints. – Complete business case for review and consideration.

Strategic Context

2.1 Problem/Opportunity Statement

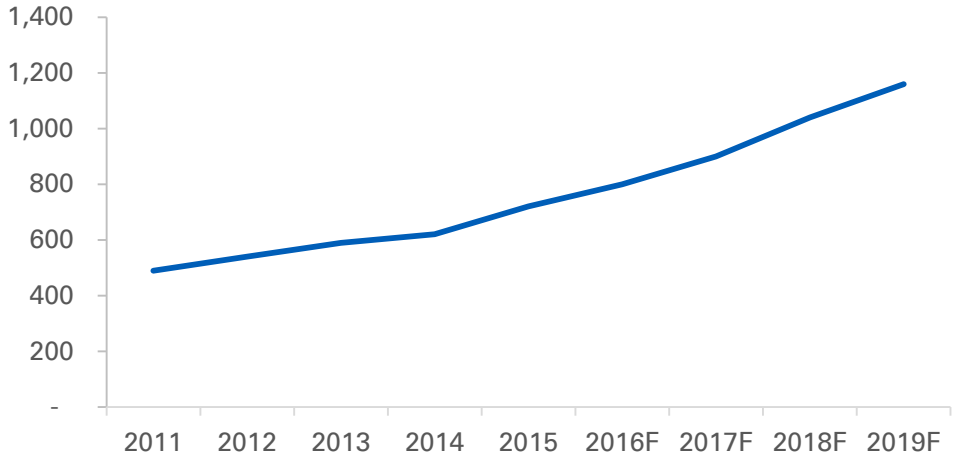
Manitoba's new Government committed to spend at least $1B on infrastructure in 2016/17, which includes roads and bridges, flood protection, hospitals, schools, universities and colleges, as well as municipal projects and other infrastructure.

Over $800M has been included in core government 2016/17 appropriations for principal, amortization and interest related to capital investment. KPMG noted in Phase 1 that costs related to capital assets have increased significantly – by $151.6M over 5 years (42.9%) related to amortization and interest, which is growing at an unsustainable rate of over **$30M per year** (approximately 10% per year).

"With the growth in the capital investment and debt over the last number of years, the growth in debt servicing costs has been dramatic. Continued capital investment at similar rates of growth into the future will result in unsustainable growth in capital-related debt servicing costs. The resulting pressure to pay for the debt results in bigger deficits and erodes the ability to pay for front-line services."

Manitoba Budget 2016

Principal, Amortization and Interest Growth ($ millions)



Source: Reproduced from Manitoba Budget 2016

Strategic Context

2.1 Problem/Opportunity Statement

In Canada as a whole and across provinces, while past capital investments are significant, it is generally acknowledged that they have traditionally not kept up with asset deterioration and shifting service commitments, resulting in an "infrastructure gap." A consistent theme in studies from various organizations is the large and growing size of Canada's infrastructure gap. Estimates of the size of the infrastructure gap vary significantly. The Canadian Infrastructure Report Card (January 2016) estimated that $388 billion or one-third of municipal infrastructure in Canada was rated as fair, poor or very poor.

Given the Province's current fiscal constraints, the value of investment is unlikely to increase significantly over the near term, requiring the Province and departments to be vigilant stewards of available capital funds. This ultimately requires excellence in managing capital projects over their entire lifecycle, spanning from the objective identification and prioritization of needs and opportunities, to the strategic allocation of available funds, to the effective design and delivery of capital works.

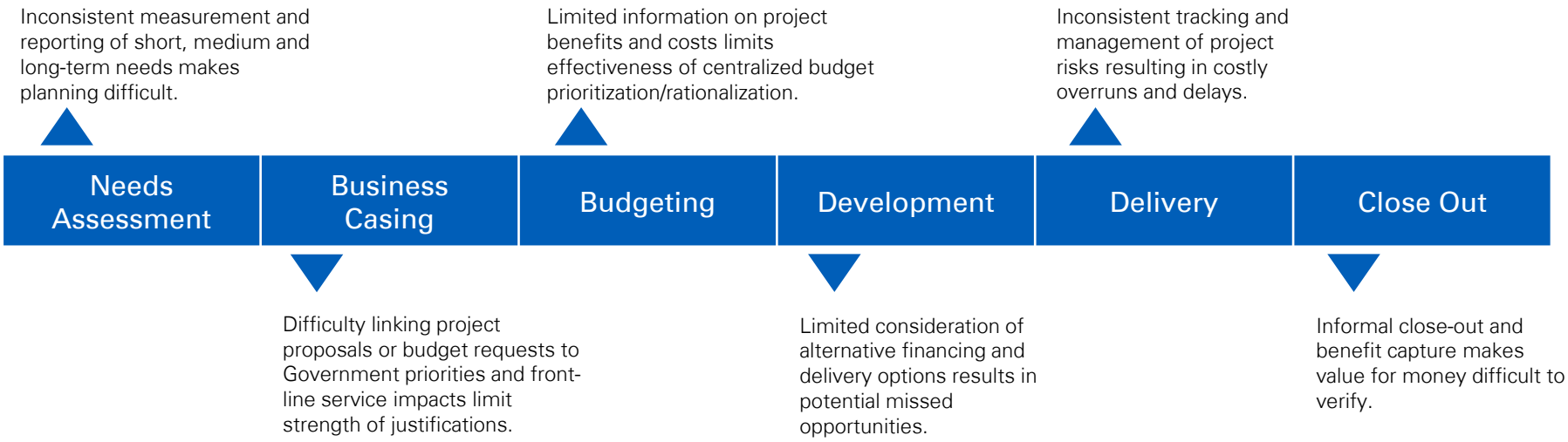
While some good practices exist in Manitoba, there is room for improvements, drawing from leading practices in other jurisdictions.

At a government-wide level, there is no long-term capital plan and process/criteria for prioritizing projects, or measuring intended outcomes.

Government also lacks a broad toolkit of financing and procurement strategies to help deliver large-scale infrastructure in a timely manner to enable growth and quality of life. Follow-up on actual-versus-intended results is limited, and does not typically inform future project decisions.

2.1 Problem/Opportunity Statement

At a department level, there is inconsistency in process and approach between and within departments and agencies, making capital investment prioritization, rationalization, budget oversight and the evaluation of project outcomes and value for money difficult and time consuming.



2.2 Strategic Alignment with Government Priorities

Manitoba relies on infrastructure to support the effective delivery of public services to Manitobans, and to enable quality of life, and economic and social well-being. Sustaining and adapting this infrastructure to meet current and evolving needs and priorities requires an ongoing stream of capital investment.

The following Government strategic outcomes are based on the May 2016 Throne Speech and subsequent announcements. Effective capital planning, management and delivery directly or indirectly contributes to achieving all of these outcomes. These contributions have been shaded in blue (target and improve effectiveness of spend) and maroon (eliminate waste and reduce inefficiency), respectively.

Strong job and economic growth	Prudent fiscal management as a foundation for sustained growth	Effective, efficient programs and services are delivering value for money	Investment in education to create future opportunities	Manitoba is clean and green and its natural heritage is preserved and protected	Sustainable development of natural resources (agriculture, mining, forestry)
Protection and safety of Manitobans	Strategic infrastructure investments to facilitate economic growth and trade	Quality healthcare and services for Manitobans	Support to vulnerable Manitobans	Government and communities across Manitoba work in partnership	Government is transparent, accessible and engaging

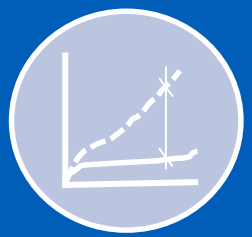
Manitoba has noted the benefits of strategic infrastructure investments (i.e., stimulate the provincial economy, generate employment, increase household and business incomes and boost productivity over the longer term), but at the same time has also stressed the importance of ensuring investment decisions are financially sustainable over the long term. This requires a more effective and long term planning process to guide and direct infrastructure investments, as well as improved oversight of delivery of projects.

2.3 Cost Drivers for Change

The Province is faced with several challenges impacting its ability to effectively and efficiently plan-for and deliver needed capital investments. Factors such as an aging asset base, a growing infrastructure gap, greater complexity, shifting priorities and climate change are all driving costs and the needed level of investment, and are contributing to the significant financial pressures on the Government.

Aging Asset Base

Manitoba's social infrastructure is aging and was not designed to support the demands of modern service delivery. Schools, hospitals, housing and care facilities require modernization and retrofit to meet the conservation, access, utilization and technology requirements of today and tomorrow.



Infrastructure Gap

Years of deferral and underinvestment in the maintenance and renewal of many provincial infrastructure assets have degraded service and resulted in significant backlogs of required work. Addressing this deficit will take time – a targeted and sustained capital program is needed to manage risk and maximize return on investment.

Growing Complexity

Growing numbers of large and complex capital projects are challenging current provincial resources and traditional ways of delivering capital works. Innovation and new thinking are needed to maximize the value of capital investments, improve on-time/on-budget performance, and manage risks and liabilities throughout the delivery process.

Shifting Priorities

Government priorities are shifting, along with the public's demand for service. Changing expectations have created misalignment in how capital investment is targeted and budgets are set. A structured, transparent budget rationalization process is needed to effectively target sustainable investment and defend plans and spending decisions.

Climate Change

Extreme weather and changing climate have increased the pressure on provincial infrastructure systems, impacting their reliability and longevity in supporting the delivery of key services. Incidents of damage and service disruption due to overland flooding and extreme weather are growing, placing increased strain on already stretched resources.

2.4 Scope and Key Assumptions

The following assumptions and constraints were applied in completing this business case:

- Review will include the full capital project lifecycle from the initial identification and communication of needs, to project and business case development, to budget allocation, to design, to capital project delivery, to project close-out and transfer to operations.
- Organizational options for project management and delivery will focus on core government only.
  - In-scope:
    - All Departments with significant capital appropriations, including Health, Seniors and Active Living.
    - Core government funding for physical infrastructure (e.g., highways, hospitals, schools).
    - Sustaining capital and new capital investment.
    - Department transfers to major third parties (including municipalities, post-secondary institutions, regional health authorities, school divisions) for capital requirements.
  - Out-of-scope:
    - Land, machinery and equipment, furniture, leases;
    - Information technology (e.g., hardware, software);
    - Crown corporations (e.g., Manitoba Hydro);
    - Independent offices of the Legislative Assembly; and,
    - Direct third-party delivery partner involvement (e.g., municipalities, regional health authorities, school divisions, post-secondary institutions).

3.1 Fiscal Performance Review Framework and Evaluation Criteria

The figure below presents a dashboard approach to provide a summary overview at a high level for decision-makers in applying the Fiscal Performance Review Framework and Evaluation Criteria to capital project management and delivery.

Key Evaluation Criteria for Capital Project Management and Delivery		
Alignment		Better alignment of efforts and investments with Government priorities.
Economy and Efficiency		System currently lacks formal reporting and baseline measures. Potential for cost avoidance savings and greater efficiencies.
Effectiveness		Opportunity to focus investments and improve results, like on-time, on-budget delivery.
Implementation/ Transition Risk		Requires significant effort and new ways of doing business and will likely encounter some resistance in certain departments. Also, considerable amounts of capital projects are delivered outside of Core Government and removed from direct control.

Supplementary to utilizing the Fiscal Performance Review Framework, in assessing options across different aspects of capital project management and delivery in section 4, we utilize the Evaluation Criteria in the Fiscal Performance Review Framework. For this assessment, note the following:

 = very high (VH)

 = high (H)

 = medium (M)

 = low (L)

 = very low (VL)

3.1 Fiscal Performance Review Framework and Evaluation Criteria

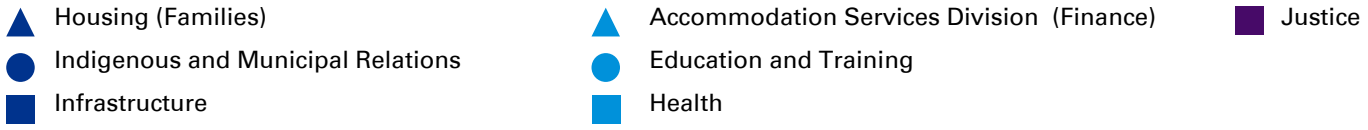
The Capital Project Management and Delivery review was structured around a six stage framework to help categorize project management activities and support systematic review and evaluation of practices, needs and supports. This framework is based on the capital project lifecycle and is meant to ensure that all stages of the capital project value chain – and their respective dependencies – are considered in shaping strategies for improvement.

Stage	Needs Assessment	Business Casing	Budgeting	Development	Delivery	Close Out
Description	Definition of needs and required outcomes.	Project definition and justification of investment based on value.	Prioritization of projects and allocation of resources.	Development of delivery strategy and design.	Project/program monitoring and controls.	Value capture and transition to operations.
Key Questions	How are gaps in service identified and evaluated for action? How are short and long-term asset performance, needs and priorities defined and communicated?	How are project options developed and assessed? How are budget requests justified and communicated? How much effort is put into scoping and options development? How are deferral options/timing sensitivities considered?	What level of information is typically provided with budget requests? How are projects/programs compared and prioritized? How is budget rationalized and distributed between departments?	How are alternative delivery options evaluated and considered? How is contingency allocated and managed? How is budget information updated – are priorities reassessed?	What levels of project oversight and control exist? How is contingency managed? How is work progress monitored and communicated? How are changes to budget handled?	How is benefit/outcome realization/value for money evaluated and communicated? How are inventory and Operations & Maintenance requirements captured? How are operating budgets and resourcing set/ adjusted?

3.2 Current State

Our review of current capital project planning, management and reporting activities in departments shows that while many areas of good practice exist, there are also widespread inconsistencies within and between departments and many opportunities for improvement. Ratings were performed and results are presented using a standard capability maturity model (refer to the pages that follow for department-specific observations). Note that in addition to departments we assessed, there is also a Canada-Manitoba Infrastructure Secretariat (created in 1994), with responsibility for administering matching federal, provincial and local contributions under various funding programs across the Province. This has been renamed to Manitoba Strategic Infrastructure Secretariat and appears to have 11 staff, including an Assistant Deputy Minister and Senior Financial Officer.

Maturity	Needs Assessment	Business Casing	Budgeting	Development	Delivery	Close Out
Optimized – i.e., utopian state of continual improvement						
Managed – i.e., process is aligned with and measured against priorities						
Defined – i.e., process are documented and standardized across the organization						
Structured – i.e., general consistency in approach because "that's how we do it"						
Basic – i.e., some good practices, but approach is all over the map						



Source: Derived from information provided by Manitoba.

3.2 Current State

Findings from the assessment are consolidated and summarized below. As mentioned, while several areas of good practice exist, there is widespread variation in approach across departments, making the consistent evaluation, capture and reporting of project, program and portfolio information difficult and time consuming. The review also shows a clear disconnect between activities performed and information tracked at a department level, and information shared and reported across the Province.

Stage	Needs Assessment	Business Casing	Budgeting	Development	Delivery	Close Out
Provincial Level	– Limited visibility and use of capital needs and trends in budget planning.	– Inconsistent verification of project scoping and justification.	– Limited rigour and formality in how funding requests are prioritized or budgets are set.	– Inconsistent verification of project scoping, justification and delivery method.	– Limited visibility and control in how projects are tracked and managed.	– Inconsistent capture and validation of outcomes and value for money.
Department Level	– Evaluation type and approach set by department. – Siloed assessment largely focused on technical issues and short-term priorities. – Limited sharing of needs information at provincial level. – Most practices documented but no verification.	– Rigour and content set and varies significantly by department. – Options analysis is largely focused on comfortable vs. possible approach. – Limited sharing of business case justification at provincial level. – Some practices documented but no verification.	– All departments respond to similar budget request, but the level of information and back-up provided varies significantly. – Submissions are pre-screened and tied to expected allocation, not overall need. – Some practices documented but no verification.	– Rigour and approach set and varies significantly by department. – Limited consideration of alternative delivery options. – Limited sharing of status information at provincial level. – Some practices documented but no verification.	– Rigour and approach set and varies significantly by department. – Limited consistency in metrics and controls. – Limited sharing of performance information at provincial level. – Some practices documented but no verification.	– Rigour and approach set and varies significantly by department. – Limited consistency in metrics and reporting. – Some practices documented but no verification.

3.2 Current State

Observations used in rating each of the departments are presented below. It is important to recognize that the assessment is based on a review of department-provided information and input from Treasury Board Secretariat staff, not on department-specific interviews.

Department or Division	Overall Assessment
Housing (Families)	- As a whole, Manitoba Housing had the highest average maturity rating of the areas examined. There was consistent use of templates and standardized contracts and documents, as well as standard processes and process flow diagrams. Manitoba Housing also had the only instance of continuous improvement activity in the form of a Kaizen (i.e., lean processes) event and report.
Indigenous and Municipal Relations	- Indigenous and Municipal Relations (IMR) did not provide sample agreements, though the documents they did provide included standardized processes and a process flowchart, and relevant capital program policies. IMR provided thorough capital project application procedures, engineering, design, survey and subdivision requirements, and project checklists.
Infrastructure	- Infrastructure provided a comprehensive capital plan covering the Province's roads, bridges, airports, highways and waterways. The other documents provided included mostly procurement and contract management procedures. There seemed to be few documents related to Needs Assessment, Business Casing, Budgeting, and Project Close-Out, so it was difficult to gauge the maturity of the organization in those areas.
Accommodation Services (Finance)	- Accommodation Services Division provided a wealth of data and information across the six areas of maturity assessment. This included standard operating procedures, standard contract templates, process descriptions, a project risk assessment form, many project delivery procedures, and close-out forms.
Education and Training	- Education and Training provided extensive project planning documents, a long-term capital plan detailing school renovations and expansions, and a monitoring document for projects over $10M. The Department's documents were thorough, but light on Needs Assessment and Business Casing documents.
Health	- Health documents reflected moderate maturity and seemed to be stronger in the areas of Needs Assessment and Business Casing, and less so in Development, Delivery and Close-Out. Documents provided included templates for capital project planning and detailing equipment specifications. Health also provided a multi-year capital planning document, as well as some standard processes and agreements for delivery.
Justice	- Justice provided only a multi-year capital plan.

3.3 Options at a High-Level

Improvement options are structured around bringing Manitoba and its departments in line with leading practice for public sector organizations, as defined in the table below. While this will ideally lead to all departments progressing to an advanced state, it is recognized that the benefits associated with these improvements may vary significantly by department and area of focus, creating a number of options for moving forward.

Needs Assessment	Business Casing	Budgeting	Development	Delivery	Close Out
- Overarching governance, monitoring and control regime aligned with the work's risk and complexity. - Organizational capability, capacities and supports for delivering a range of projects.					
- Integrated service framework linking corporate goals and objectives, service outcomes, and asset performance. - Clear and documented performance measures tied to service objectives. - Centralized measurement and reporting of asset performance, investment needs and forecasts.	- Robust business casing framework supporting the consistent capture, evaluation and presentation of investment requirements and considerations. - Lifecycle costing and estimating standards setting minimum requirements for rigour and analysis.	- Consistent and robust reporting of budget requests with links to supporting business case information. - Transparent process for prioritizing projects based on business priorities and value. - Mechanism to evaluate and stage projects based on resourcing, logistics and risk of deferral.	- Objective means of evaluating delivery options based on technical and business requirements. - Value-engineering standards for major projects. - Re-evaluation of priority based on robust costing deliverability, and asset management requirements.	- Defined project initiation and chartering process defining roles and responsibilities, risk management requirements and definitions of success. - Common project delivery methods, reporting and controls aligned with project risk and complexity.	- Consistent close-out process evaluating delivery, outcomes and value for money. - Centralized evaluation of project outcome and performance information at close-out. - Common mechanism to capture and update asset and service records.

4.1 Assessment of Options

To support objective evaluation, improvement options have been broken into Improvement Initiatives focused on advancing different aspects of the capital planning, management and delivery functions within Government. Initiatives A and B cover the entire capital project planning and delivery process and should be implemented fully in order to achieve the desired benefits for Manitoba. Initiatives C through H focus on enhancing key aspects of capital project planning or capital project delivery, and can be implemented on a piecemeal basis within various departments to create proportional benefit. Further details on each initiative follows.

Needs Assessment	Business Casing	Budgeting	Development	Delivery	Close Out
A. Stage Gating – Overarching governance, monitoring and control regime aligned with the work's risk and complexity					
B. Centralized PMO – Organizational capability, capacities and supports for delivering range of projects					
C. Project Justification and Service-Based Needs – Integrated service framework linking corporate goals and objectives, service outcomes, and asset performance – Clear and demonstrated performance measures tied to service objectives – Centralized measurement and reporting of asset performance, investment needs and forecasts	D. Common Business Casing Framework – Robust business casing framework supporting the consistent capture, evaluation and presentation of investment requirements and considerations – Lifecycle costing and estimating standards setting minimum requirements for rigour and analysis	E. Value-Based Budgeting – Consistent and robust reporting of budget requests with links to supporting business case information – The budget process for prioritizing projects based on business priorities and value for money – Mechanism to evaluate and stage projects based on resourcing, logistic and risk of deferral	F. Effectiveness Review – Objective means of evaluating delivery options based on technical and business requirements – Value engineering standards for major projects – Re-evaluation of priority based on robust costing deliverability, and Asset Management requirements	G. Project Delivery System – Defined project initiation and chartering process defining roles and responsibilities, risk management requirements and definitions of success – Common project delivery methods, reporting and controls aligned with project risk and complexity	G. Project Delivery System – Consistent close-out process evaluating delivery outcomes and value for money – Centralized evaluation of project outcome and performance information at close-out H. Asset Onboarding – Common mechanism to capture and update asset and service records

4.1 Assessment of Options

A. Stage Gating

Stage Gating is a technique used to formalize oversight, management and controls at key stages within the project lifecycle. Under this approach, projects are broken into stages reflecting key points in the development and delivery process. These stages are separated by formal reviews or "gates", which must be passed in order for the project to proceed to the next stage in its lifecycle. Appendix A includes an illustration of a stage gating process and sample project dashboard. Reviews are completed by a "Gate Committee," which re-evaluates the project value and business case, based on information compiled through the previous step. By standardizing governance, controls and minimum work required to support each gate, risks are managed, and project visibility, transparency and defensibility is improved throughout the investment lifecycle.

In the context of the Province, stage gating requirements and oversight would be established at the Government level, but the stage gating process and Gate Committee reviews would be completed and managed within each department. The framework would focus initially on major capital projects, but could expand over time to cover other works.

Key benefits:

1. Demonstration and tracking of project alignment with Government priorities resulting in greater value-creation.
2. Improved project oversight, risk management and controls at all stages of development and delivery enhancing on-time/on-budget performance of major works.
3. Stage gates provide Government with an opportunity to revisit project approvals based on more detailed planning and precision of cost estimates.
4. Enhanced reporting and insight into the project status and performance throughout the lifecycle improving confidence and avoiding surprises.

Implementation steps:

1. Establish framework, governance and controls.
2. Define gate requirements and reporting templates.
3. Pilot and refine framework and requirements.
4. Educate and train project managers.
5. Identify and train Gate Committee(s).

Evaluation Criteria			
Alignment	VH	Effectiveness	VH
Economy	VH	Implementation Risk	M
Efficiency	VH	Capacity & Capability	M

Financial and Operational Impacts	
Financial: H	Operational: M

4.1 Assessment of Options

B. Centralized Project Management Office/Function

A Project Management Office (PMO) provides centralized support for project management and delivery. Generally, this includes taking on the ownership, governance and oversight of the project management system, the development and introduction of a project management framework and supporting policies, standards, procedures and tools, and the training and capacity-building of project management personnel. Some PMOs also take on the responsibility for planning and delivering projects, taking on some or all of the project oversight and management function.

A PMO would be established to serve as a resource for project management across the provincial government. Responsibility would include the standardization of project management activities, the development and implementation of a common framework, standards and controls, and the training of project management staff and resources. While it is impractical for this group to take on province-wide delivery, there would be benefits to maintaining a group of specialized resources who could take on the delivery of large and/or complex projects and provide consultation and support to department project managers on regular works.

Responsibilities for long-term capital planning and alternative financing strategies could also be assigned to the PMO, or alternatively, reside with Treasury Board Secretariat.

We understand that the role of the Manitoba Strategic Infrastructure Secretariat is evolving and they have been tasked with responsibility for developing a project ROI (return on investment) measurement tool. The Secretariat could possibly take on the role of a central PMO.

Key benefits:

1. Improved project management practices across departments.
2. Increased focus on leading practice, capacity-building and continuous improvement.
3. Improved capacity and expertise to lead and manage risk through delivery of large and unique projects.
4. (If applicable) Specialized expertise and advice on long-term planning and alternative financing and procurement strategies to help inform Government decisions.

Implementation steps:

1. Confirm scope and mandate, and establish governance and coverage.
2. Organize and deploy capacity and resources (could be reallocated from within the system; initially, alternative financing expertise will need to be acquired).

Evaluation Criteria			
Alignment	VH	Effectiveness	VH
Economy	M	Implementation Risk	M
Efficiency	M	Capacity & Capability	M

Financial and Operational Impacts	
Financial: H	Operational: L

4.1 Assessment of Options

C. Project Justification and Service-Based Needs

Before proposing new infrastructure, departments should consider how future service delivery models are evolving (i.e., will services be delivered without physical infrastructure) and options to better utilize existing infrastructure (e.g., can existing infrastructure be repurposed, better utilized, or shared?). This type of analysis should help to reduce the number of new builds and related amortization and interest costs. In addition, knowing the relationship between infrastructure performance and service outcomes is critical to evaluating asset effectiveness and capital investment needs. While infrastructure condition can adversely impact service delivery and drive capital investment, other factors such as capacity, accessibility, safety and regulatory compliance can also lead to required spending. Service-based needs assessment involves taking an integrated look at an asset's performance in meeting current and projected service objectives to identify the gap or "need," which must be addressed. Looking at things in this context helps in the development of integrated, holistic solutions which maximize front-line service impact.

In the context of the Province, central agencies should challenge the justification for projects, particularly new builds. Service measures and performance criteria would also be established for major asset classes improving the evaluation and reporting of infrastructure-related issues, gaps and risks to front-line service.

Appendix A includes a sample service-based needs framework.

Key benefits:

1. Rigorous project need justification analysis should help to reduce the need for new builds and related amortization and interest costs.
2. Ability to measure and articulate current and desired levels of service, and infrastructure attributable gaps in service.
3. Clear understanding of the service-cost relationship and front-line service implications and trade-offs associated with increasing or decreasing investment.

Implementation steps:

1. Establish guidelines for project need justification and service framework and hierarchy.
2. Produce service measures and evaluate current level of service and recent performance trends.
3. Determine cost to sustain current level of service and impacts of increasing or decreasing levels of service.
4. Establish level of service targets for each measure and evaluate gaps and needs.

Evaluation Criteria			
Alignment	VH	Effectiveness	VH
Economy	M	Implementation Risk	M
Efficiency	M	Capacity & Capability	M

Financial and Operational Impacts	
Financial: H	Operational: L

4.1 Assessment of Options

D. Common Business Casing Framework

A business case is a structured document which captures and informs decision-makers of the reasoning for initiating a project to address a specific need. While many frameworks exist, a business case generally includes three main sections, focused on: clearly articulating the purpose, need or desired outcome; systematically evaluating the options (including alternative financing and delivery options) for achieving that outcome; and then rationalizing the resourcing and other considerations needed to implement the best option. From a practical perspective the level of information, rigour and analysis contained within a business case should be proportional to the supported project's size, complexity and risk to the organization.

In the context of the Province, governance and oversight of the business casing function could rest with Treasury Board Secretariat, or a central Project Management Office (PMO). A business casing framework and template would be established and introduced with analysis and information requirements tied to project size and complexity. In addition to improving the rigour applied in business case development, standardizing structure and content will improve reporting, and streamline and support the evaluation and prioritization of capital funding requests.

Appendix A includes a sample business casing framework.

Key benefits:

1. Common approach and expectations surrounding how capital projects are defined, scoped and justified, and budget requests are communicated.
2. Minimum requirements for rigour and analysis in capital project definition.
3. Clear understanding of capital, operating and logistical implications associated with capital project approval.

Implementation steps:

1. Develop and introduce a common, scalable business casing framework, template, and supports.
2. Establish business casing process and supporting governance and controls.
3. Pilot and refine framework and requirements.
4. Educate and train department management and staff and other provincial stakeholders.

Evaluation Criteria			
Alignment	VH	Effectiveness	VH
Economy	VH	Implementation Risk	H
Efficiency	VH	Capacity & Capability	L

Financial and Operational Impacts	
Financial: H	Operational: H

4.1 Assessment of Options

E. Value-Based Budgeting

In an infrastructure context, value is created when investment contributes to key business and service objectives. Value-based budgeting involves allocating available funds to the group of projects which maximize value creation. Generally speaking, this is accomplished by evaluating prospective projects relative to a common set of qualitative and quantitative criteria to assess the respective benefit realized through completing each piece of work, and then ranking projects based on their relative benefits and costs to identify investment priorities. The preliminary ranking of projects is considered against key government objectives (e.g., fiscal sustainability) and the final ranking of projects is forwarded to decision-makers for consideration of budget approval. A key consideration when evaluating projects for budget approval is the state of project "readiness." Projects in the early conceptual stages of planning lack sufficient detail and credible cost estimates upon which to base decisions. Appendix A illustrates a sample prioritization process and criteria for scoring and ranking projects.

In the context of the Province, governance and control of the budgeting process rests with Treasury Board Secretariat. We understand that Manitoba is interested in measuring the ROI of projects. Project ROI measurement for infrastructure is complex and still in its early stages; most jurisdictions use a combination of qualitative and quantitative criteria that includes cost-benefit analysis to evaluate project value.

Value-based budgeting could initially be used to allocate funding to major (large-scale) projects, and then be expanded over time to include programs and smaller projects.

Key benefits:

1. Improved alignment of capital spending with Government priorities (feeds into long-term capital plan).
2. Increased understanding of the risks and sensitivities associated with deferring or accelerating planned works.
3. Transparent and defensible evaluation of relative priorities across all departments.
4. Increased visibility into backlog and short-term needs and priorities.

Implementation steps:

1. Confirm focus and approach.
2. Establish process governance and controls.
3. Develop framework and value-rating model.
4. Pilot and refine model on limited portfolio.
5. Deploy approach for large projects and expand over time.

Evaluation Criteria			
Alignment	VH	Effectiveness	VH
Economy	VH	Implementation Risk	M
Efficiency	VH	Capacity & Capability	M

Financial and Operational Impacts	
Financial: H	Operational: L

4.1 Assessment of Options

F. Effectiveness Review

As capital projects progress through their lifecycle, information is collected and analysis is performed, improving the certainty and confidence in their associated business cases. In many organizations projects are approved before a reasonable level of study and analysis has been performed, leading to risk and uncertainty in the cost and scope information on which decisions are made.

While this uncertainty is often managed using contingencies, setting and retaining excessive contingency through the design and delivery of major works can tie up precious resources for years, negating any return that they are able to create. Also, in some cases conceptual and detailed design reveal major issues in assumptions that compromise project viability and limit or negate the value of completing the work.

Effectiveness Review is part of the stage-gating process, and formalizes the revisiting of major project business cases before they proceed to tender. It also formalizes minimum requirements for value-engineering, consideration of alternative service delivery, and provides the opportunity to manage and re-adjust contingencies based on a clear understanding of risk.

In the context of the Province, this initiative would introduce a late-stage reassessment of major capital projects prior to construction, providing the opportunity for a "sober second thought" based on a clear understanding of risks and value.

Key benefits:

1. Alignment of spending with Government priorities.
2. Reliable and robust information to support decision making.
3. Assurance that value-improvement and alternative delivery options are considered and included in decision making.
4. Provides an "exit strategy" in the event that scope and/or costs increase significantly.

Implementation steps:

1. Confirm review objectives and approach.
2. Introduce common methodologies surrounding application of value-engineering and alternative delivery review.
3. Evaluate and update business cases for "Development" stage projects based on prescribed reviews.
4. Revisit prioritization and spending decisions based on outputs.

Evaluation Criteria			
Alignment	VH	Effectiveness	VH
Economy	VH	Implementation Risk	M
Efficiency	VH	Capacity & Capability	M

Financial and Operational Impacts	
Financial: H	Operational: M

4.1 Assessment of Options

G. Project Delivery System

A Project Delivery System (PDS) is a formalized and integrated collection of standards, procedures and tools that support the effective planning, management and delivery of projects within an organization. A PDS can support one or more of the project lifecycle stages, providing support in project definition and scoping, chartering and delivery planning, monitoring and control, and close-out. Where present, procedures and tools would be designed to align and support each stage of Stage Gating (see Initiative A).

In the context of the Province, governance and oversight of the project delivery system will be centralized within Treasury Board Secretariat or the Project Management Office (see Initiative B). Under this initiative a standard, scalable toolset will be developed and deployed for use on capital projects across all departments. In addition to standardizing and introducing structure and support to the project management workflow, the PDS will also streamline and enhance the collection and reporting on capital project information, improving oversight and control throughout the project lifecycle.

Appendix A includes a sample Project Delivery System.

Key benefits:

1. Standardized framework, procedures, and controls guiding the successful delivery of capital projects.
2. Common initiation, monitoring and close-out practices providing access to reliable and up-to-date information.
3. Documented procedures supporting training, capacity-building, and succession planning among staff and external resources.

Implementation steps:

1. Confirm mandate, scope and coverage.
2. Establish governance and oversight.
3. Develop and introduce a common, scalable project controls framework, tools and supports.
4. Introduce Provincial PM "network", training and capacity-building program.

Evaluation Criteria			
Alignment	VH	Effectiveness	VH
Economy	VH	Implementation Risk	VH
Efficiency	VH	Capacity & Capability	VH

Financial and Operational Impacts	
Financial: H	Operational: M

4.1 Assessment of Options

H. Asset Onboarding

Asset Onboarding supports the smooth and effective transformation from project delivery to asset operations. While some projects produce infrastructure which is similar to an organization's existing assets, others introduce new and complex systems and technologies which are more difficult to absorb. Adopting a standard approach to Asset Onboarding can be effective in ensuring that valuable information is captured while it's still fresh, and that staff have the knowledge and resources needed in order to operate, maintain and manage new assets.

In the context of the Province, Asset Onboarding would have three primary purposes. First, it would ensure that needed information and knowledge is transferred to the Province to ensure the asset's effective, long-term maintenance and operation. Second, it would ensure that information needed to support effective asset management and financial reporting is captured and loaded into provincial information systems. Third, it would formalize the post-project review process to assess service outcomes and benefits realization and evaluate value for money. Treasury Board Secretariat or the PMO would be responsible for developing central expectations and guidelines of departments.

Key benefits:

1. Improved readiness for take-over of new and complex infrastructure by Government staff.
2. Streamlined capture and exchange of inventory data for use in operations and maintenance, and financial reporting.
3. Formalized post-project evaluation of value for money and benefits realization.

Implementation steps:

1. Confirm coverage and scope.
2. Develop and introduce Onboarding Plan template and planning methodology.
3. Develop common requirements and specification for transferring asset inventory, operations and financial information.
4. Develop and introduce post-project evaluation methodology and reporting template.

Evaluation Criteria			
Alignment	H	Effectiveness	M
Economy	M	Implementation Risk	M
Efficiency	M	Capacity & Capability	M

Financial and Operational Impacts	
Financial: L	Operational: H

4.2 Strategic Alignment with Desired Outcomes

Each Improvement Initiative supports Manitoba's desired outcomes in several dimensions. The following table presents alignment based on the implementation of each initiative to maximize benefits realized at the provincial level.

Initiative	Evaluation Criteria					
	Alignment	Economy	Efficiency	Effectiveness	Implementation Risk	Capacity & Capability
A. Stage Gating	VH	VH	VH	VH	M	M
B. Centralized PMO	VH	M	M	VH	M	M
C. Project Justification and Service-Based Needs	VH	M	M	VH	M	M
D. Business Casing Framework	VH	VH	VH	VH	H	L
E. Value-based Budgeting	VH	VH	VH	VH	M	M
F. Effectiveness Review	VH	VH	VH	VH	M	M
G. Project Delivery System	VH	VH	VH	VH	VH	VH
H. Asset Onboarding	H	M	M	M	M	M

4.3 Directional Financial and Operational Impacts

Once transformation is implemented, each Improvement Initiative should result in positive short and long-term financial and operational impacts, which support Manitoba's goal of fiscal sustainability and front-line service sustainability. The following table presents expected directional impacts associated with implementation of each of the Improvement Initiatives.

Initiative	Long-Term Financial and Operational Impact	
	Financial Impact	**Operational Impact**
A. Stage Gating	**H** – Reduces financial risk by introducing oversight and controls at key stages in the project lifecycle.	**M** – Reduces operational risks by involving operational perspectives in Stage Gate reviews.
B. Centralized PMO	**H** – Reduces financial risk by establishing central oversight and expertise.	**L** – Improves resource effectiveness and utilization by enhancing staff capability and competency.
C. Project Justification and Service-Based Needs	**H** – Improves needs justification and visibility of asset-service relationships, as well as supporting creation of optimal strategies for meeting long-term needs.	**L** – Improves insight into operational issues impacting asset performance and levels of service.
D. Business Casing Framework	**H** – Improves credibility of cost estimates and justification of capital investment based on Government priorities and return on investment.	**H** – Improves operational planning by including operational impact and funding requirements as a basis for project selection and justification.
E. Value-based Budgeting	**H** – Improves spending effectiveness and reduces waste by focusing investment on Government priorities and projects ready to proceed.	**L** – Improves efficiency of budget preparation and approval process.
F. Effectiveness Review	**H** – Improves spending effectiveness and reduces financial risk by confirming viability, delivery method, budgets and risks before going to tender.	**M** – Reduces operational risk by confirming delivery model and operational and hand-over requirements.
G. Project Delivery System	**H** – Improve efficiency and effectiveness of delivery and reduces project risk by standardizing procedures, reporting and controls.	**M** – Enhances scrutiny and improves staff competencies through enhanced training on appropriate project management practices and tools.
H. Asset Onboarding	**L** – Improves future spending effectiveness and value realization by formalizing and capturing lessons learned through post-project reviews.	**H** – Improves effectiveness by enhancing hand-over and operational readiness at acceptance of new or enhanced assets.

5.1 Preferred Option

Consider moving forward with each of the Improvement Initiatives identified in the previous section to build central infrastructure expertise and a more rigorous and effective long-term planning process to guide and direct sustainable infrastructure investments, as well as improved oversight of delivery of projects and intended outcomes.

Specifically, implementation of the Improvement Initiatives will work together to help the Government of Manitoba:

- Extend oversight, good governance and stewardship across all stages of the capital project lifecycle;
- Improve capital effectiveness by closely aligning spending with Government service and business priorities;
- Take a more strategic, long-term approach to identifying and funding core government capital needs and projects, within the context of limited fiscal resources and sustainability;
- Leverage alternative financing and procurement models to deliver large-scale infrastructure projects more effectively and efficiently, and in a timely manner;
- Improve capital efficiency by managing cash flows, risks and contingencies, controlling amortization and interest costs, and exploring options for cost containment/avoidance;
- Enhance the consistency and effectiveness of project planning, budgeting, management and delivery practices to improve visibility and oversight throughout the investment cycle; and
- Enhance the transparency and defensibility of plans, decisions and programs by focusing on value for money and accountability for results (individual projects, and overall capital spend).

Implementation of considerations will be an evolutionary process, with each year building upon previous improvements to deliver better information and results as rigour and structure is introduced, data is standardized, and experience is gained and lessons learned.

5.1 Preferred Option

Initially, consideration should be given to initiatives that help to reduce the number of new capital builds and contain growing amortization and interest costs, including:

1. **Asset rationalization (identified in Phase 1).**
   - Certain assets may provide an opportunity for sale (and one-time revenues) without affecting front-line services (e.g., government buildings) and certain assets may be appropriate for transfer to municipalities. With a net book value of tangible capital assets of approximately $12.5 billion, asset rationalization may help to reduce pressures on growing amortization charges.
2. **Reconsider previously approved, but not yet committed, projects.**
   - It may be possible to defer some previously approved projects and costs (that have not yet gone to tender).
3. **Ensure projects are ready for decision (Initiative C – Project Justification and D – Business Casing Framework).**
   - More rigorous, upfront analysis, and central challenge, of the justification for new project builds should help to reduce the number of new build project proposals.
   - Standardizing and formalizing business casing requirements, and screening out projects that are still in the conceptual stages of planning, will focus and limit investment considerations and provide decision-makers with confidence in the credibility and reliability of information before them.
   - Incorporating consideration of potential alternative financing and delivery strategies within the business case for a project may help to ensure critical large-scale projects get funded in a timely manner.

5.1 Preferred Option

4. **Focus investment (Initiative E – Value-based Budgeting).**
   - Long-term capital planning and project prioritization will improve the alignment of spending with key Government objectives, such as: addressing the infrastructure deficit and promoting a better balance between maintenance and new capital spend, containing escalating amortization and interest costs, and ensuring long-term fiscal sustainability. It will also provide greater transparency surrounding how funding decisions are made.
   - Only projects ready for decision (i.e., supported by a rigorous business case) should be evaluated and prioritized based on a combination of pre-defined and agreed to quantitative and qualitative criteria, for example: alignment with key government priorities and commitments; facilitates trade and commerce; affordability; value/ROI; risks; health and safety.
   - Government should consider how projects will be compared and scored across a variety of different asset types, and projects versus programs, to help test and inform the overall approach before it is used during the next budget development process.

5. **Improve oversight and control (Initiative F – Effectiveness Review, and Initiative A – Stage Gating).**
   - Expanding project review and rationalization throughout the project lifecycle will allow decisions to be revisited as projects progress through key stages.
   - Projects with significant cost escalation following detailed planning can be revisited before proceeding to tender, which should help to contain amortization and interest costs.

6. **Standardize and formalize approach and centralize specialized expertise (Initiative G – Project Management Framework, and Initiative B – Centralized PMO)**
   - Standardizing and formalizing project management activities and establishing a centralized centre of excellence will improve the effectiveness of project delivery, improve spending certainty, and reduce project-related risks and liabilities.

5.2 Risks

Based on our past experience in completing similar work we have identified the following risks and challenges which warrant consideration as Government works to advance its capital Improvement Initiatives.

Risks	Likelihood	Impact	Mitigating Actions
New Ideas and Ways of Thinking — While the Province is no stranger to project management, this will be the first time that that it is being viewed and strategically aligned across the Government of Manitoba.	**High**	**Low**	— Establish a common vision around capital project management reporting so that efforts can be appropriately targeted. — Engage staff and stakeholders in the planning process to build buy-in and support for the new ways of thinking. — Provide guidance and support to ensure that department efforts are consistent with expectations and requirements.
Lack of Capacity/Skills — Treasury Board Secretariat and/or department staff may have limited capacity and skills needed to implement Improvement Initiatives in a timely manner.	**High**	**Medium**	— Prioritize Improvement Initiatives for focus and implementation (KPMG has provided suggested priorities in the Preferred Option section). — Coordinate involvement and consultation across tasks and deliverables to meet input requirements, while avoiding repetition and "meeting overload".
Resistance to Change — While enhancements will build upon current practice, they may result in activity and operational changes resulting in resistance or push-back from staff and stakeholders.	**Medium**	**High**	— Understand and carefully plan and manage required business change to achieve desired outcomes and mitigate implementation risks. — Develop and execute a communication and engagement plan early to guide and build organizational involvement, awareness-building and adoption or resultant change.

5.2 Risks

Risks	Likelihood	Impact	Mitigating Actions
Existing Systems and Data — Effective project planning and management relies on accurate and complete information. While departments maintain data, it varies significantly in make-up and quality.	**High**	**Low**	— Clearly define project planning and management information requirements. — Understand and interpret the current state of project data, systems and tools. — Align data and collection and management activities with core business practices to improve the reliability and sustainability of the information base.
Misalignment of Drivers and Priorities — Needs assessment and project rationalization have been focused at the department level, making Government-wide prioritization difficult.	**Medium**	**High**	— Standardize how Government priorities are communicated and applied in evaluating investment need and priority. — Introduce practices and tools capable of leveraging this information in provincial-level budget rationalization, planning and decision-making.

5.3 Implementation Plan Framework at a High-Level

	Initial 12 months	1 – 2 years	> 2 years
A. Stage Gating	— Develop central Stage Gating framework and supporting logistics. — Recast unfunded projects based on current status within continuum.	— Introduce governance structure, roles and responsibilities and Stage Gating Committees within departments. — Monitor and adjust.	— Monitor and reinforce Stage Gating requirements.
B. Centralized PMO	— Confirm mandate and responsibilities (versus departments), and allocate resources. — Develop long-term capital plan and prioritization process (if applicable), and strategy for providing centralized project management support to departments.	— Implement (internal to Government) prioritization process and long-term capital plan for 2018/19 budget process. — Develop project management framework and supporting policies, standards, procedures and tools, and the training and capacity-building of project management personnel. — Monitor and adjust for decisions.	— Monitor progress and adjust as needed.
C. Service-Based Needs	— Define "services" and rating criteria – focus on departments with large capital spend (core departments). — Start to capture information on current level of service and trends.	— Develop guidelines for departments. — Focus on rigorous needs justification for major projects. Evaluate cost of service delivery and establish targets and gaps for core departments. — Expand approach to other departments.	— Monitor and adjust as needed.
D. Business Casing (BC) Framework	— Develop BC Framework and content requirements. — Produce BC Guidelines. — Introduce BC validation process to core departments.	— Core departments produce business cases for major 2018/19 capital project proposals. — Screen projects – only those projects ready for decision (complete BC) should be considered in budget process. — Complete validation of business cases to prepare for prioritization.	— Roll-out BC requirements to other departments. — Monitor and adjust as necessary.

5.3 Implementation Plan Framework at a High-level

	Initial 12 months	1 - 2 years	> 2 years
E. Value-based Budgeting	— Engage key stakeholders in establishing prioritization criteria and weights. — Pilot roll-out/proof of concept applied to current year budget process (if possible).	— Apply prioritization process to major 2018/19 capital projects. — Expand to all programs/smaller projects post 2018/19 budget process.	— Refine model and weightings and adjust as necessary.
F. Effectiveness Review	— Establish effectiveness criteria. — Introduce secondary review (at Class C estimate) for non-committed (major) works.	— Expand secondary review to all projects. — Integrate with Stage Gating process. — Monitor and adjust as necessary.	— Monitor and adjust as necessary.
G. Project Delivery System	— Introduce framework and minimum requirements for "core" departments. — Define extended requirements.	— Develop and introduce extended requirements to other departments. — Monitor and adjust as necessary.	— Monitor and adjust as necessary.
H. Asset Onboarding		— Develop and implement onboarding requirements for projects. — Monitor and adjust as necessary.	— Monitor and adjust as necessary.

KPMG

Appendix A – Sample Tools/Templates for Improvement Initiatives

Source: KPMG

Appendix A – Sample Tools/Templates for Improvement Initiatives

Sample Stage Gating Framework

— A Stage Gate process divides the lifecycle of a major capital project into stages, with specific points for decision-makers to revisit approval based on more detailed information, and before continuing to subsequent stages.

— Each of these stages has different needs, and the individuals responsible for governance may change to meet differing commercial and technical requirements.

— Decision-makers need to receive regular, reliable, predictable information in order to make good decisions that bring greater certainty of reaching project objectives, as well as clarity over the progress and challenges. It is not enough simply to get reports; information must be acted on and challenged through various project phases.

Idea Generated	Need Defined	Project Justified	Budget Allocated	Project Developed	Project Delivered	Project Closed
Stage	**Needs Assessment**	**Business Casing**	**Budgeting**	**Development**	**Delivery**	**Close Out**
Sample Gate Questions	• Is there a current/ expected gap in service? • Is it aligned to organizational priorities? • What are the short/long-term risks? • What is the approx scope, size and timing of required intervention?	• What technical and delivery options are available? • What are the capital and operational requirements? • What is the best option? • What are the investment requirements?	• What are the benefits and costs? • How does this rank relative to other required investments? • What happens if we defer work? • How do we best accommodate this work?	• What are the technical/ implement requirements? • What is the required resourcing? • What is the required cash-flow? • What is our delivery plan?	• Have we completed work? • Have we met the technical requirements? • How have we tracked vs. Plan? • Have we met hand-over requirements?	• Have we met intervention requirements? • Have we successfully transferred to operations? • How are me managing residual risks? • Have we achieved value-for-money?
Deliverables	• Investment Placeholder • Project Brief	• Valid Business Case	• Capital Budget • Spending Plan	• Preliminary/ Detailed Design • Delivery Plan	• Completion Report • Hand-Over Report	• Acceptance Certificate • Project Audit

Appendix A – Sample Tools/Templates for Improvement Initiatives

Sample Project Dashboard

Predictability comes from effective monitoring and reporting systems, and requires information that is not just historic, but dynamic and forward looking, complete with strategies for addressing any risks or challenges that may occur. Certainty, meanwhile, means that leaders should have a narrow range of possible outcomes, making final decisions simpler.

Systems should offer:

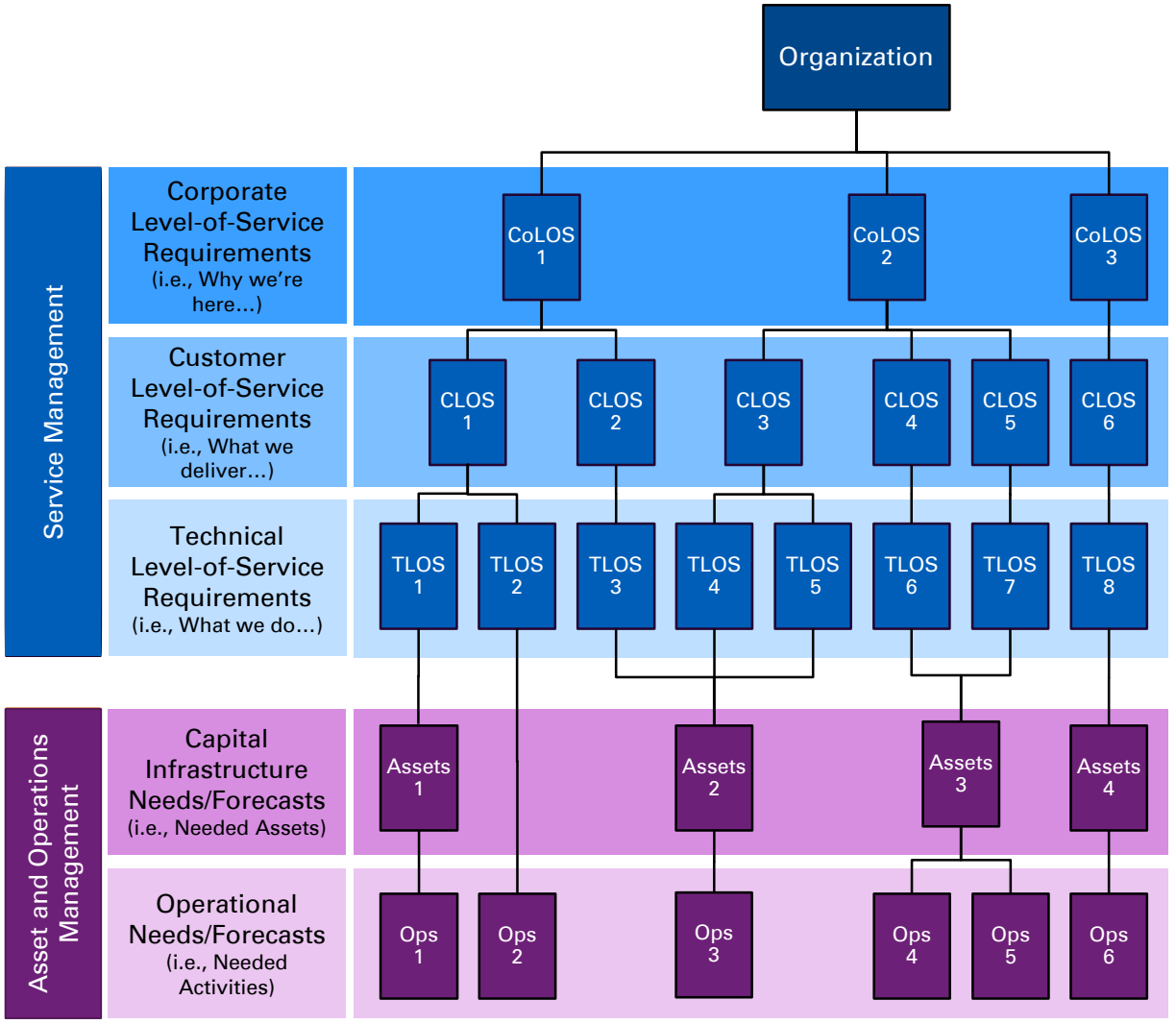
- Consistency and clarity: reports are provided to a strict schedule in a specified and consistent format, using dashboards that compare status to performance objectives and metrics for a wide range of variables, highlighting any variations.
- Performance versus plan: reports should compare expenditure categories against plan or budget, but also provide estimates of "earned value" against plan.
- Change protocol: report and dashboard variables should not be revised without approval from decision-makers.
- Early warnings: clearly-presented, concise dashboards that include comparisons of status against broad project objectives, as well as key risk factors, provide upfront information regarding any potential pressures on performance metrics.

#	Project Parameters	Metric	Status	Potential Impact	Mitigation Strategy
1	Cost	Planned vs Actual		Cost overruns due to inaccurate estimating	Improved contingency planning and risk analysis
2	Scope	Design vs Actual		Scope creep caused by poor integration with Operations	Consult Operations personnel during advanced planning
3	Schedule	Milestones reached			
4	Procurement	Approvals			
5	Regulatory	Approvals			
6	Stakeholders	Acceptance			
7	First Nations Relations	Acceptance			
8	Safety	# of Incidents			
9	Environmental	Approvals		Geo-technical delays could hinder project schedule	Review contracting model

Source: KPMG – Building on success; learning from failure (2015)

Sample Service-Based Needs Framework

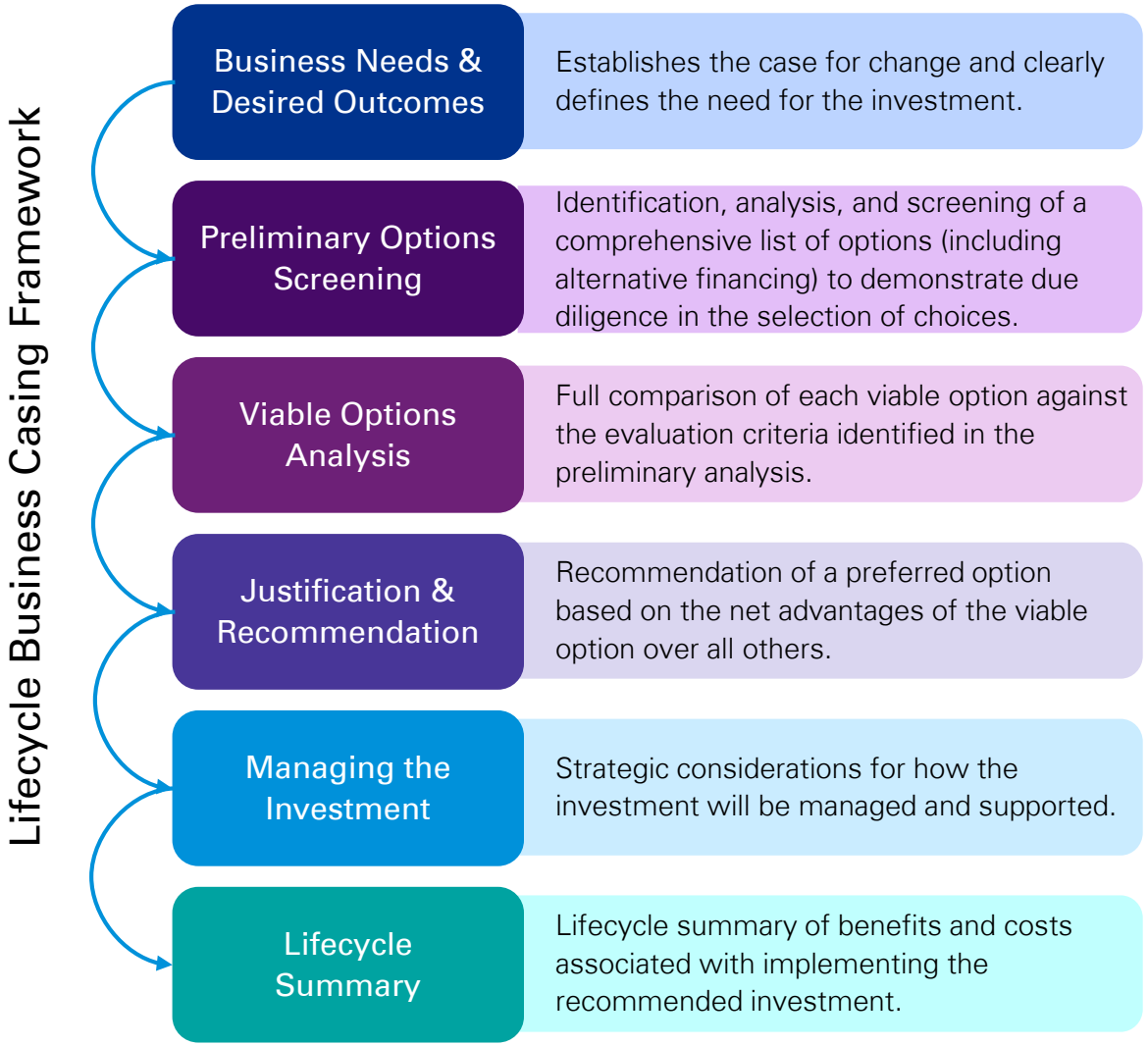
An integrated, service-based needs framework identifies linkages between physical infrastructure and the services it supports. Risk analysis is used to identify and evaluate service gaps and enhancement opportunities.



Sample Business Casing Framework

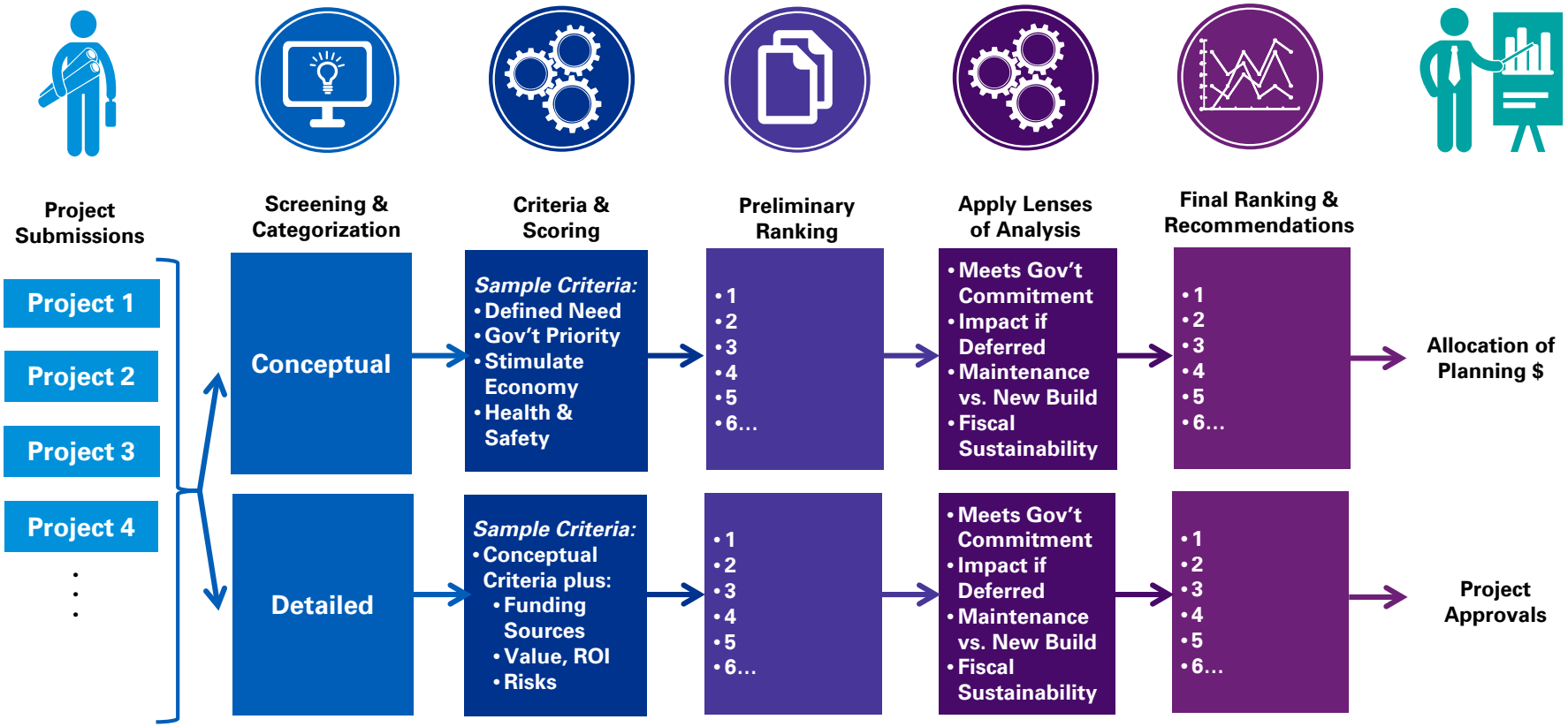
A structured business casing framework provides an effective platform for evaluating project options and defining scope, budget, schedule and lifecycle management requirements.

We suggest applying the business case framework to all projects prior to proceeding for an investment decision by Treasury Board and Cabinet.



Appendix A – Sample Tools/Templates for Improvement Initiatives

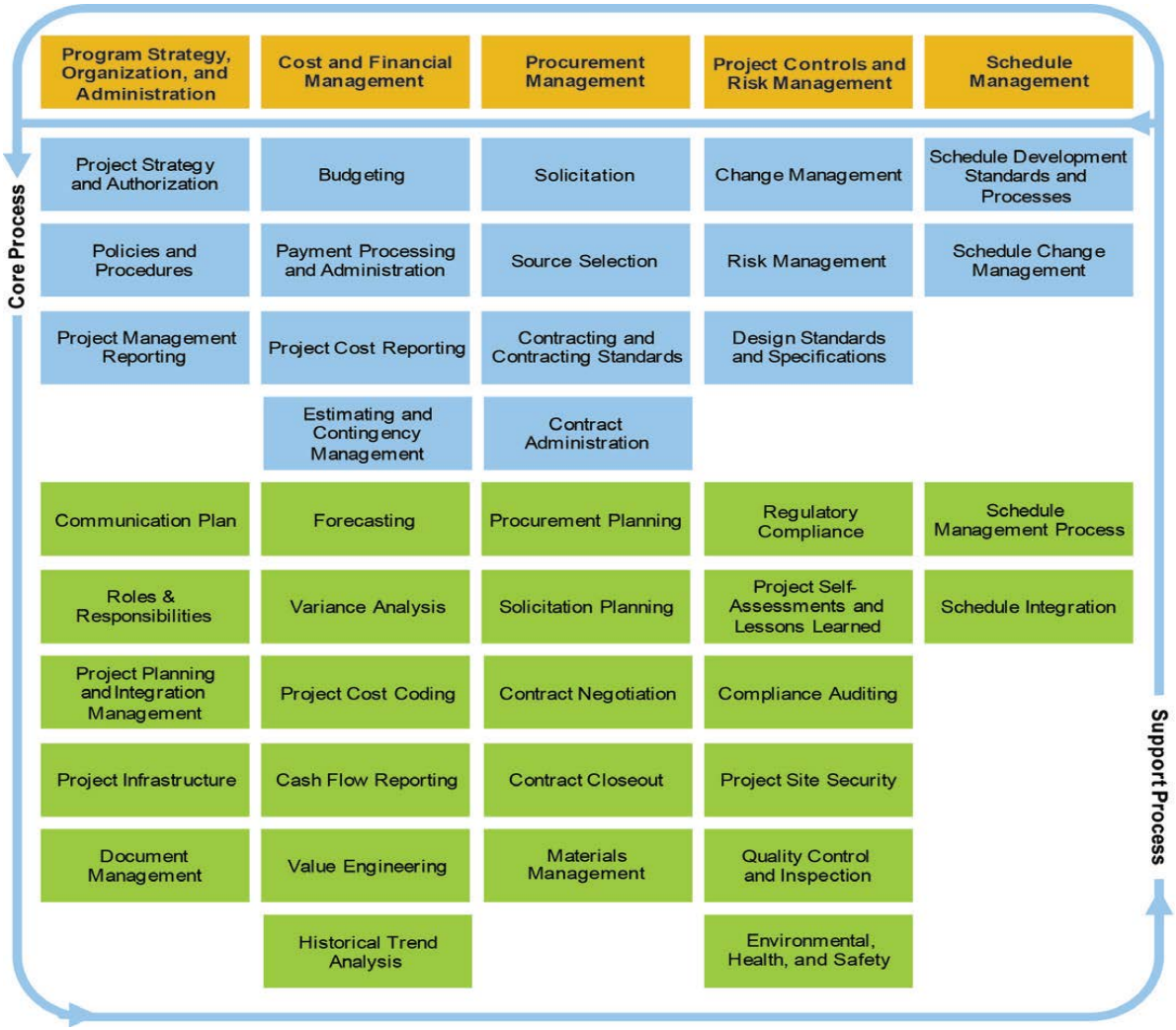
Sample Prioritization Process



Appendix A – Sample Tools/Templates for Improvement Initiatives

Sample Project Delivery System

A robust Project Delivery System creates an effective platform for capital project set-up, monitoring and control. Core and supporting processes guide planning, management and reporting throughout the capital delivery stage.



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