

REPORT FOR THE MINISTRY OF CITIZENS' SERVICES:

Information Management / Information Technology Capital Investment Management

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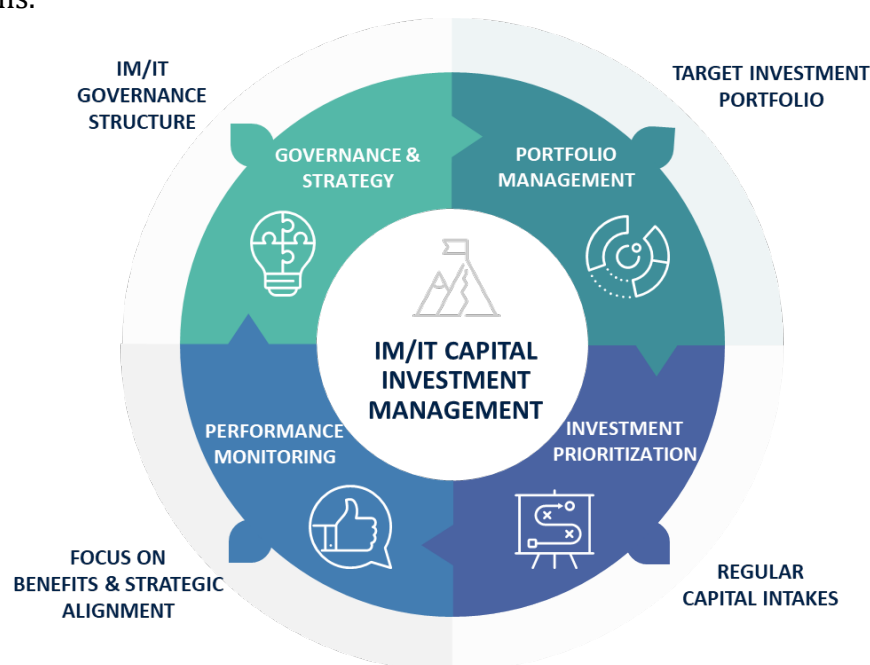
Executive Summary and Overall Conclusion

The Government of British Columbia (Government or Province) utilizes technology to help deliver services and meet the continuously evolving needs of citizens, businesses, and its employees. The B.C. Government is undertaking a digital transformation to improve how it uses technology to enable the delivery of public services in a simpler, more effective manner. The COVID-19 pandemic has highlighted the importance of technology and data in building economic and social resilience.

Internal Audit & Advisory Services conducted this advisory engagement to assess how the Information Management and Information Technology (IM/IT) minor capital investment process and its governance structure support the objectives of the Government's IM/IT strategic direction.

The Office of the Chief Information Officer leads digital transformation and strategy across the Government. This includes making capital investment decisions to adopt technologies and integrate their use into the Government's business processes and operations.

With the rapid changes and growing demand for technology, selecting the right investment and realizing the expected benefits can be challenging. During our engagement, we identified opportunities to improve the governance, planning and monitoring of the IM/IT minor capital investment process. A governance structure that integrates accountabilities, strategy, policies and standards, and relevant information to support decision-making can support investment planning and decisions.



Source: Internal Audit & Advisory Services

More well defined, documented and communicated investment selection and performance monitoring processes can help improve investment management and support the realization of expected benefits.

Although the scope of our engagement focused on IM/IT minor capital investment, the general governance structure and need for an overarching strategy and process can be applied to other areas of IM/IT investment in the future.

We would like to thank the management and staff of the Office of the Chief Information Officer, who participated in and contributed to this review, for their cooperation and assistance.



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Introduction

The Government of British Columbia (Government or Province) uses Information Management and Information Technology (IM/IT) to support its critical functions including the delivery of services to citizens. IM/IT assets are obtained through capital investments and the acquisition or development of these assets can vary significantly in size, scope and complexity.

While technological advancement provides opportunities for the Province to improve its service delivery, it can also present challenges. One of the persistent challenges is that capital investments in IM/IT often fail to realize their anticipated benefits. Various studies have indicated that realizing anticipated benefits from IM/IT investment is a common challenge that is not unique to the Province, or even the public sector.

In fiscal 2019/20, the Province invested \$607 million¹ on IM/IT capital, of which core Government spent \$149 million² and other Government entities spent \$458 million.³ Managing those investments is therefore a critical process that must align with the Province's policies and financial control practices.

IM/IT capital investments are categorized as either minor or major. Minor capital is any project budgeted at less than \$10 million per fiscal year and/or less than \$20 million for multiple years. Major capital is for all projects that exceed these thresholds and requires Treasury Board approval. This engagement focused on the IM/IT minor capital investment process for core government, which is governed by the IM/IT Capital Investment Management Framework (IM/IT CIMF).

The annual budget for IM/IT minor capital investment has increased by 102% in the past five years (from \$55M in fiscal year 2016/17 to \$111M in fiscal year 2020/21) as more services move to digital platforms and those platforms are continuously improved.

¹ Core Government refers to the ministries and legislative offices that make up the core operations of Government. Capital additions to 'Computer Hardware/Software', Public Accounts 2019/20

² Actual Capital Disbursement by Classification: 'Information Systems', Public Accounts 2019/20

³ The other Government entities include the Crown corporations and agencies that are part of the Government reporting entity and the school districts, universities, colleges, institutes, and health organizations sector.

Roles and Responsibilities

The IM/IT minor capital investment process involves ministries and central agencies, as well as oversight boards and committees.

The Office of the Chief Information Officer (OCIO) is a central agency that leads strategy, policy and standards for telecommunications, information technology, IT security and management of the IM/IT investment portfolio for the Province.

Within the OCIO, the Digital Investment Office (DIO) manages IM/IT minor capital investment including intake, prioritization, and performance monitoring.

The Digital Investment Board (DIB) is a deputy ministers' committee that approves IM/IT minor capital investments and manages the minor capital budget as approved by Treasury Board.

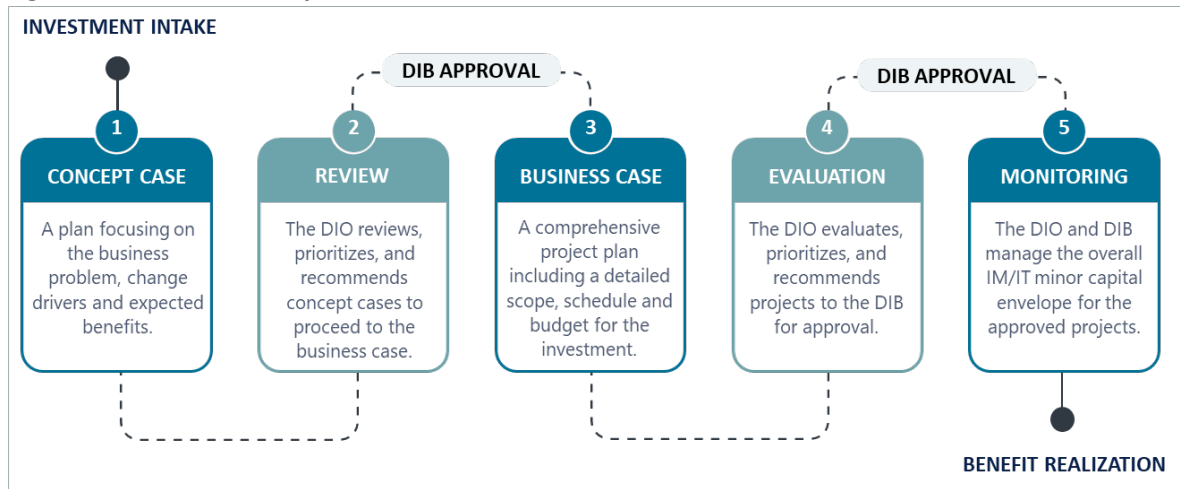
Ministries submit funding requests to the DIB through the DIO and are responsible for managing their individual projects and reporting progress on ongoing capital projects.

Minor Capital Investment Process

The IM/IT minor capital investment process starts with the capital intake process. The purpose of the capital intake process is to identify capital demand across Government.

The IM/IT CIMF outlines the following key steps in the minor capital investment process:

Figure 1: IM/IT Minor Capital Investment Process



Source: Adapted from the IM/IT CIMF

The DIO reviews and prioritizes the concept cases, focusing on the business problem and value that a proposed solution is expected to provide. The reviewed concept cases are recommended to the DIB for approval to proceed to developing a business case that articulates solutions to the problem and defines scope, timeline and budget. The DIO then reviews and prioritizes business cases, which are presented to the DIB for the funding approval. Once approved, ministries are responsible for the successful execution of projects and periodic reporting back to the DIO and the DIB on progress.

Purpose, Scope and Approach

The purpose of this advisory engagement was to assess whether the IM/IT minor capital investment management process supports the objectives of the Government's IM/IT strategic direction and will be completed in two phases. This is phase 1 which focussed on the responsibilities of central agencies and oversight bodies. Phase 2 will focus on the roles and responsibilities of ministries.

This engagement was forward-looking to support ongoing improvements in the IM/IT minor capital investment process. Internal Audit & Advisory Services (IAAS) examined and made recommendations related to the following areas: governance and strategy, IM/IT investment management and prioritization, and performance monitoring.

Our approach included:

- reviewing policies, standards and process-related documentation;
- reviewing industry practices such as the IT Governance Institute's Val IT Framework and Project Management Institute's Benefit Realization Framework;
- conducting interviews with key management, staff and stakeholders; and
- reviewing a selection of capital investment projects in progress.

This advisory engagement was conducted by IAAS and fieldwork was completed in December 2020. The OCIO is required to develop and submit an action plan in response to the recommendations provided, including the timeframe for implementation.

IAAS conducts an annual follow-up process to assess the OCIO's progress to address its action plan in response to the recommendations given.

1.0 Governance and Strategy

Governance is the structure and processes that support the realization of overall objectives and the strategies to achieve them. Effective governance for IM/IT capital investment coordinates the implementation of vision and strategy across Government. The governance structure for IM/IT investment should include defined accountabilities, common policies and standards, and a strategy for investment; this is supported by information to understand the IM/IT needs across Government.

Figure 2: IM/IT Governance Structure



Source: IAAS

We examined these components of the governance structure for IM/IT minor capital investment and how they support the Government's digital vision and goals as well as its IM/IT investment strategy.

1.1. Governance and Accountabilities

Having a central framework and IM/IT investment process can help create consistency in how investments are selected and evaluated and can support alignment with broader needs and priorities across Government.

In 2019 the Province launched the **Digital Framework**, which sets out a plan to harness technology and improve ways of working to make Government more modern, reliable and responsive to British Columbians' expectations. As part of this framework, the OCIO established guiding principles, focus areas and priorities actions and integrated a strategic, long-term vision for digital transformation.

The **Digital Framework** sets an overarching direction and priorities to accelerate the Province's transformation to a digital Government.

The IM/IT CIMF outlines the governance and accountabilities for IM/IT capital investment in the Government and provides an overview of the process.

To refine and improve the process, the IM/IT governance structure underwent several changes over the years including the boards and committees involved and some of their related accountabilities; however, the IM/IT CIMF has not been reviewed and updated since 2017. An outdated framework can create confusion with processes and accountabilities amongst stakeholders, which can lead to an ineffective investment process that may not achieve its intended results. Key committees, offices and agencies in the IM/IT CIMF should be updated so that their accountabilities and responsibilities are understood by stakeholders.

There is a growing emphasis being placed on the OCIO to manage the underlying architecture of IM/IT across Government. IM/IT funding decisions are not consistently made in a coordinated manner, as the authority for those decisions depend on the source of funding that is used. For example, there are differences in the approval process and accountabilities depending on whether the source of funding is from ministry budgets, or funding requests are made to the OCIO or Treasury Board Staff.

Developing Government's IM/IT strategic direction and managing its architecture requires the OCIO to consider not only the development of IM/IT infrastructure and systems, but also their operation and maintenance. The OCIO's current scope of visibility primarily relates to its responsibility for the IM/IT minor capital investment process. Broader visibility over other areas of IM/IT spending is necessary to help the OCIO address its increased expectations. This is becoming increasingly important as the landscape of IM/IT changes and more systems are funded through operating budgets.

Recommendation:

- (1) The OCIO should ensure the IM/IT Capital Investment Management Framework and other relevant documentation are up to date to reflect accountabilities and responsibilities of key committees, agencies and offices based on their scope and mandate.
-

1.2. Policies and Standards

The IM/IT industry is marked by a rapid rate of change based on the pace of technological advancement. Digital practices, standards and tools must therefore be continually adapted in order to respond to emerging needs and leverage opportunities. Further, these documents are complex and interrelated, which can make it difficult for users to find the right information or fully understand their applicability if they are not defined and linked in a logical way.

Recently, as part of Government's digital transformation, the OCIO has developed and updated various digital policies, standards, and procedures and created a repository for these resources on the Digital Government webpage. However, we found it is unclear what policies and standards ministries should consider and how they can be incorporated throughout the IM/IT capital investment process. In addition, the applicability of the documents varies depending on certain factors, such as the maturity of policies and standards (e.g. version, effective date), type of project, or stage of investment. For example, during the 2021/22 minor capital investment intake, there was an expectation that ministries consider new standards when developing their capital investment proposals, but there were no specific templates or tools provided to ministries to guide them on how to apply those standards. Without contextual guidance and practical tools, there is a risk that common policy and standards may not be followed as intended.

The OCIO has taken an iterative approach to developing and updating policies, standards and procedures and making them more accessible to ministries. This approach fosters collaboration and continuous improvement, but also increases the importance of maintaining the list of resources and links to ensure ministries are referencing and applying the most current policies and standards. For the IM/IT capital investment process, the DIO can support this by updating and clearly outlining each relevant resource's purpose, intended users, applicability and maturity. Links to relevant investment policy and standards should also be embedded in the IM/IT capital investment website. This will help ministries understand what materials are relevant to their projects and how they support overall IM/IT investment planning and management.

Recommendation:

- (2) The OCIO should develop specific guidance and practical tools to support consistent implementation of policies and standards. References to applicable resources should be embedded into the capital investment website to support understanding and applicability.
-

1.3. Investment Strategy

The Province has a limited and defined budget to respond to rising technology demands. A cohesive investment strategy can help Government identify investment priorities and optimize strategic decisions on investment in IM/IT.

The OCIO leads the strategic IM/IT planning process and ensures the alignment with Government's strategic plan. Ministries are expected to use the Digital Framework and its priority actions as a foundation to develop their own plans for IM/IT. However, ministries indicated that it was not always clear how the Digital Framework and its priority actions are expected to translate into investment for both ministry IM/IT budgets and the minor capital investment process.

Clear direction from the OCIO provides valuable support for ministries during IM/IT planning and financial budgeting. There is an opportunity for the OCIO to articulate strategic direction and priorities for IM/IT and how it impacts investment decisions.

Recommendation:

- (3) The OCIO should translate the Digital Framework and priorities into a specific investment strategy.
-

1.4. IM/IT Infrastructure and Spending Information

Access to accurate and fulsome data and information is an integral part of developing a comprehensive IM/IT investment strategy. This includes an assessment of the current IM/IT environment and infrastructure, as well as related spending information across Government.

A comprehensive picture of existing systems, applications and their associated costs would allow the Province to identify needs and develop an investment strategy to increase efficiency and sustainability by reducing duplications of systems and pooling existing resources. It can also create a mechanism for risk management by providing the information to identify potential system risks before issues arise.

In 2016, the OCIO implemented the Copperleaf C55 Asset Investment Planning & Management (C55) solution to enable end-to-end investment management. C55 was intended to provide information on IM/IT asset health, investment and the spending profile of the entire IM/IT portfolio. The system relies on regular updates and reviews from stakeholders to make the data useful. Since implementation, some of the functionalities in C55 have been underutilized and input data is inconsistent or incomplete. This further disincentivized users from regularly inputting and maintaining data.

There is an opportunity for the OCIO to address this need for information by developing an IM/IT health check. This includes a proactive process to periodically survey ministries to gather and assess the information about current IM/IT infrastructure, systems, resources and capacity perspectives. In the long-term, a system-based repository would provide an optimal source to gather and access this information. The OCIO should work with ministries to identify potential users and the health check components. For example, the health check can include requesting information on existing systems and applications and their purposes, dependencies on other systems, and ease of maintenance. The collected data should then be refined, verified and shared with ministries to improve data quality and availability over time.

Spending information is key to helping the OCIO develop its investment strategy. Spending information should include both capital and operating expenditures and should be sufficiently detailed to allow the OCIO to understand what opportunities and challenges currently exist. We found that the OCIO does not have adequate access to cross-Government spending information, such as system-level maintenance costs, licensing and subscription fees incurred by different ministries. Access to this information is critical for the OCIO to identify IM/IT spending trends and needs across Government.

As a result of this limited availability and access to information, the OCIO is unable to identify specific needs when developing its investment strategy and cannot assess if, and to what extent, the IM/IT capital investment decisions are addressing Government needs and priorities.

Access to necessary information requires cooperation and support from ministries and central agencies. The OCIO should work with these groups to explore options to access necessary financial information, such as an information sharing agreement.

Recommendations:

- (4) The OCIO should develop a health check process to gather, assess and verify information on current IM/IT infrastructure, systems, resources, and capacity.
 - (5) The OCIO should identify key financial information necessary to support its governance and strategic function and work with central agencies and ministries to access the necessary information.
-

2.0 IM/IT Capital Investment Planning

Investment in technologies can bring better services to British Columbians, allow greater access to information and support better business outcomes. IM/IT capital investment management involves establishing structured management processes and sufficient resource capacity so that an organization can maximize its investment benefits.

The shift to adopt modern technology calls for a comprehensive approach to planning and selecting investments based on their value propositions. With an emphasis on investing in assets that are leverageable and scalable, today's investment decisions can create opportunities for further investment in the future. Therefore, investment evaluation is an integral part of the planning process to make decisions among competing priorities with limited budget and resource capacities in Government.

2.1. Portfolio Management

IM/IT portfolio management involves managing investments through balancing benefits, risks and its alignment with current strategies and priorities. The goal of portfolio management is to ensure that an organization realizes benefits across its various investments and evaluates and prioritizes them within resources and funding constraints. Good portfolio management starts with defining investment categories and setting a target allocation mix based on the investment strategies and priorities:

- **Investment category** – a collection of the investments being considered that share similar purpose or benefit.
- **Target allocation mix** – a set of investment targets reflecting how competing needs will be balanced amongst limited resources by establishing an estimated range of allocations for each investment category.

A portfolio requires categories of investment with differing levels of complexity (e.g. project scope and size) and flexibility in funding to adapt to changing needs and environments. Based on the established targets, investment opportunities are categorized, prioritized and managed actively throughout their lifecycle. The result of the portfolio can then be measured and evaluated periodically against the established targets to respond to change in needs and priorities.

The OCIO develops a three-year capital plan for IM/IT minor capital investment, with a 10-year outlook, providing a balance in planning between both short- and long-term horizons. The capital plan is intended to set the IM/IT investment objectives for the next three years and plan how the minor capital budget will be allocated and managed. While the capital plan establishes the overall allocation of funding, we did not find a clear investment strategy through the use of defined investment categories or a target allocation mix. The DIO has categorized investments as maintenance, modernization and transformation; however, these categories are not clearly defined.

Currently, investment decisions are primarily driven by the availability of funds in the minor capital budget without specific target allocations. Without a target portfolio mix, it is not clear how investment decisions are balancing competing needs within Government. This may impact the Government's ability to assess outcomes of the IM/IT investment portfolio and progress made towards addressing those different needs.

As a starting point, we identified three broad investment categories that OCIO should consider for managing its investment portfolio. These are based on IM/IT investments that support:

- The OCIO's IM/IT strategic initiatives (e.g. **common components** or shared services);
- Ministry needs based on Service Plans (e.g. public-facing service improvements); and
- Government priorities that are urgent in nature (e.g. emergency relief programs).

A **common component** is a reusable product or service solving a common problem across government. Examples include identity management, payment processing and notification tools.

The IM/IT investment needs of ministries may align with one, or both, of these investment categories. For example, a Government priority system may address a unique need that is not leverageable with existing systems. Conversely, a ministry may develop a payment system that can be used by other ministries with common users.

The DIO should create a target investment portfolio based on the IM/IT investment strategy. Having defined investment categories and target allocation helps balance differing priorities and short- and long-term IM/IT investment needs. The allocations should be revisited and adjusted periodically based on performance results and environmental changes (e.g. changing Government priorities or technology trends). In addition, the portfolio management plan should be communicated to ministries so that they clearly understand how competing priorities are being balanced when investment decisions are made.

Recommendation:

- (6) The DIB should establish an investment portfolio with defined investment categories and a target allocation mix, based on the IM/IT investment strategy.
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2.2. Investment Intake

The OCIO's three-year capital plan is based on investment proposals submitted by ministries through the concept case intake process or ad-hoc requests. The DIO administers the concept case intake process and supports ministries' investment proposal development. This process was designed to identify capital investment needs across Government on an annual basis in addition to ad-hoc requests to accommodate Government priorities that are urgent in nature.

C55 was intended to streamline the investment planning process by reducing the timeline taken for concept and business case development, review, and approval. The first intake using C55 took place in 2016 to plan capital investments for the 2017/18 fiscal year.

The DIO did not complete another investment intake until 2020 due to high demand and a fully allocated three-year budget from the first intake and priority ad-hoc projects. This resulted in ministries deferring their capital projects or pursuing other avenues for funding, where the DIO would not have visibility over funding provided. Without a regular intake process, there is a risk of accumulated technology impairments or emerging technology opportunities which the Government may not take advantage of. This can result in increased operational cost, potential IT security risks for aged systems and can impact modern service delivery. The DIO should implement a regular (i.e. annual), predictable intake of investments. To help ensure this, as part of its capital plan, the OCIO should earmark a portion of its annual funding to invest in emerging technology and address current needs that arise.

During the most recent investment intake, requests for concept cases were made in July 2020 and were due in September. Ministries noted that it can be challenging to conduct due diligence in the two-month window between when an intake is announced and concept cases are due, particularly if concept cases are prepared for multiple projects. This short window can also make it difficult on the DIO staff who review and prioritize cases. One ministry commented that the project teams did not have sufficient time to consult with required subject matter expert groups and, in some cases, did not receive a response at all. Ministries can begin preparing for concept cases prior to the intake announcement and are responsible for ensuring they have sufficient time to conduct their due diligence; certainty of a regular, predictable intake process will help support planning and preparation.

To improve this process, the DIO should consider allowing ministries to submit concept cases throughout the year. The DIO can then review and prioritize the submitted cases on an ongoing basis. While final investment decisions would be made at a pre-defined time each year, a year-round intake of concept case can alleviate time and resource constraints for both ministries and the DIO.

Recommendation:

(7) The DIO should implement a regular and defined intake of investments.

2.3. Evaluation and Prioritization Process

The DIO is responsible for reviewing and evaluating submitted concept cases and business cases. Cases are then prioritized based on the anticipated benefits and any risks that may impact the realization of those benefits. Concept and business cases require formal approval to proceed to the next stage of the minor capital investment process. The prioritized investments of each stage are brought forward to the DIB for final review and decision.

A documented evaluation process can assist in outlining the key activities and roles and responsibilities during the investment evaluation and promotes consistency in the evaluation process. The IM/IT minor capital investment process document should include procedures for the initial intake, the evaluation and prioritization of investments, as well as information about when to follow up with ministries for additional information.

We found that the DIO's process document is outdated and does not provide clear descriptions of roles, responsibilities, or process steps. The current staff were not able to speak to specifics on certain aspects of the process document due to staff turnover and the last intake occurring three years ago. Key steps in the evaluation process may be missed or performed inconsistently if guidance documents and process map are not well-explained and up to date.

Once concept and business cases are evaluated, the DIO prioritizes these investments and recommends projects for approval to the DIB. There was a lack of documentation to support DIO's rationale for project prioritization and investment ranking decisions from the previous intake in 2016. A lack of documentation makes it difficult to demonstrate that the DIO has conducted its due diligence and that funding decisions are substantiated. It is important for the DIO to retain a record of key decisions and contextual information to support investment decisions. The DIO should update internal process maps and guidance to help staff to make consistent analysis and decisions, and document review analysis and rationale to support funding decisions.

Recommendation:

- (8) The DIO should update its internal process document and guidance to ensure consistent analysis and retain records to support funding decisions.
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2.4. Evaluation Criteria and Copperleaf C55 Value Measures

A robust evaluation process requires consistent and repeatable evaluation and scoring criteria for different portfolio categories. To address this need, C55 was implemented and a **Value Framework** was developed to assist with the consistent evaluation and funding allocation decisions across Government. Through extensive consultation with ministries, the DIO identified 49 value measures, including a series of benefits and risks, and mapped those value measures against the Province's 2016/17 Strategic Plan. Based on the value measures selected and assumptions about project risks and benefits, a numerical score is assigned to each project which supports the evaluation of projects based on that score.

A **Value Framework** is a system to identify the optimal set of investments that deliver the greatest value to the organization while respecting funding, resource and timing constraints.

Overall, we found that the value measures are not currently supporting the prioritization as they were intended. Ministries indicated that they struggled to select appropriate value measures for their projects and had a general lack of understanding on how the value measures were scored. There is no limit on the number of value measures that can be selected, so it is possible for ministries to select more value measures even if the relevance to the projects may be low. Focusing on the numerical score may create a potential bias when ministries are inputting their value measures.

Value measures are linked to the Government's strategic plan and show how projects support those priorities. The risks and benefits of projects are quantified in part, using numerical assumptions (i.e. income levels, the cost of health care). Government's strategic plan, as well as the numerical assumptions built into the value measures change over time and therefore must be regularly updated. The value measures and underlying assumptions have not been updated since C55 was implemented in 2016. As a result, the scoring of projects may not be an accurate and reliable representation of their current estimated value.

There is an opportunity for the DIO to consider short-term actions to address some of the challenges with the value measures. This includes identifying key value measures that align with overall investment strategy and limiting the number of values measures for ministries to select, to reduce potential bias for increasing scores.

The DIO ranks projects based on their value measure scores as an initial screening tool for investment decisions. However, there are other factors considered as part of evaluating project proposals including project management capacity and past performance. These factors did not have established criteria, weighting or metrics and therefore may not have been consistently applied, which can lead to inappropriate investment prioritization. The DIO should develop a systematic evaluation process to facilitate consistent prioritization of IM/IT minor capital investments.

Some ministries felt that there was an opportunity for more proactive communication and transparency in the evaluation process. Ministries were uncertain about what information and the level of detail the DIO and the DIB expect at the concept and business case stages. This uncertainty can increase the time it takes for ministries to prepare cases and for the DIO to review and follow up with ministries for additional information. The DIO should clarify and communicate expectations with ministries to help streamline the intake and evaluation process.

This engagement required an understanding and assessment of how C55 is being used to support the capital investment process but did not review the capabilities and functionality of the system itself. In the long-term, the OCIO will need to assess whether C55 has the capability to support its current and future needs.

Recommendation:

- (9) The DIO should develop a systematic evaluation process to facilitate consistent IM/IT investment prioritization.
-

3.0 Performance Monitoring

Performance monitoring is a set of processes and tools used to determine how well a project or program is meeting its intended outcomes and deliverables. Having fulsome and accurate performance data allows for the identification of projects that may not meet their intended objectives and informs decision-making on corrective actions that may be necessary.

When ministries prepare and submit their business cases for IM/IT capital investment, they are required to identify benefits and risks of the investment. The DIB approves funding for ministry IM/IT capital projects, based on the benefits and risks outlined in the business case. While individual ministries remain responsible for overall project management, the DIB has a responsibility to monitor the progress toward benefits realization and make optimal decisions on continuous investment. It is therefore important that the DIB, the DIO and ministries work collaboratively to maximize Government's investment in IM/IT capital.

3.1 Monitoring Process

A well-defined performance monitoring process is essential for setting clear guidelines and employing a consistent process on the assessment of the value-for-money of IM/IT investment across an organization. Effective performance monitoring ensures the DIB has a comprehensive picture of ongoing projects to support the oversight responsibilities and reinforce the importance of project management skills and capacity.

On a quarterly basis, ministries provide a performance report to the DIO for any ongoing projects. The performance report includes information on overall project status, spending to date and key milestones. Some projects may have additional reporting requirements, as deemed necessary by the DIB. The DIO is responsible for reviewing the reports, following up with ministries if necessary and reporting back to the DIB on project performance and any potential impact on the minor capital budget.

The DIO requires ministries to provide complete and accurate information in performance reports so that they can effectively assess projects and provide reliable information to the DIB. Ministries indicated that they are unclear on how their performance reports are reviewed and evaluated, and what the outcome of the review may be, including any potential impact on their funding. This uncertainty can create a risk that ministries may avoid reporting information that could impact their funding status.

The DIB is accountable for establishing a framework to monitor the progress of approved projects and identifying opportunities to improve on the implementation of IM/IT project to achieve the greater value for investments. It was not clear what actions, if any, may be taken as part of the quarterly reporting if a project was not meeting expectations as outlined in the business case. The DIB should also establish a set of performance-dependant actions it may take when reviewing performance monitoring reports. Examples of performance-dependant actions may include status quo, additional reporting requirements, or ceasing funding altogether. This can help create accountability and transparency in the management and oversight of IT-enabled projects and would enable the DIO to more easily identify when a project should be reviewed and to support the DIB's oversight responsibilities.

In our review, we did not find a standardized performance monitoring process for the DIO staff to follow when reviewing IM/IT minor capital investment performance. This creates a risk that processes are employed inconsistently. Establishing a performance monitoring process will help the DIO apply a consistent approach to its assessment of quarterly performance reports. There was insufficient documentation to verify the review process such as performance analysis and relevant decisions made by the DIB. Documentation relevant to the monitoring process should be retained to support due diligence conducted and decisions made.

The DIO can improve its performance monitoring by creating a standardized performance monitoring process that includes a risk-based approach to reviewing projects. This would involve periodically reviewing a sample of projects based on common risk factors, such as project duration, scope, budget or delivery method. A risk-based monitoring approach can increase the efficiency of monitoring activities by focusing on projects that may have a greater risk of not realizing expected benefits.

The DIO should proactively communicate the process to ministries so that it is well understood and seek feedback from stakeholders to continually improve the process.

Recommendations:

- (10) The DIB should establish a series of performance-dependant actions to support its oversight function for monitoring project performance.
 - (11) The DIO should standardize performance monitoring by implementing a risk-based approach.
-

3.2 Monitoring Scope and Benefit Management

When developing an effective performance monitoring process, it is important to determine what performance metrics to monitor and how to assess performance within those areas. An effective monitoring approach includes performance indicators that measure the actual delivery of benefits compared to the planned benefits.

The scope of performance monitoring for approved minor capital investments currently focuses on quantitative factors that assess progress against the approved timeline and budget of the project. This financial monitoring also provides feedback on the progress of IM/IT capital spending, which supports the DIB in making timely decisions and adjustments in its management of the minor capital budget.

The DIO's current performance monitoring does not include other factors that formed part of the DIB's original decision to approve funding based on the business case. The DIO is currently re-assessing its quarterly performance monitoring process. In its revised reporting, the DIO should include the evaluation of a broader range of metrics. This could include strategic plan alignment, adoption of **Digital Principles**, or benefit indicators such as improvements in service delivery and capabilities. The regular assessment of such information would facilitate evidence-based decision making throughout the project lifecycle and further the oversight of IM/IT investment as a whole.

Digital Principles guide the day-to-day work of BC public servants and contractors who are designing, developing, and delivering services in the Province.

In addition to ongoing performance monitoring, the DIO is in the process of developing close-out reporting requirements. As this process has not been established, we did not assess its design during our engagement. Reporting at the completion of a project can provide an opportunity to make an overall assessment of how the project was managed, the benefits realized and gather any lessons learned which can be used to improve subsequent projects.

Depending on the nature of the project, it may take multiple years to determine if certain benefits were fully realized. The DIO could supplement its plan for close-out reporting by conducting post-implementation reviews to gather updated information on benefit realization. This can support a comprehensive performance monitoring process and provide further insight into lessons learned for future projects.

Recommendation:

- (12) The DIO should expand the scope of performance monitoring to include a broader range of metrics to support the assessment of benefit realization.
-

4.0 Communication

A centralized process for managing IM/IT minor capital investment can help create consistency in an environment with limited funding to support wide range of competing needs. Within that process, each group has varying responsibilities and often work independently to fulfill those responsibilities. Communication plays an important role in increasing understanding of the investment process and collaboration which in turn, helps support the realization of benefits.

The OCIO has focussed on active communication with ministries and other stakeholders. This includes preparing additional resources, sharing information on external and internal webpages, hosting the monthly Digital Framework update sessions and allowing ministries to provide feedback on the drafting of IM/IT policies and standards. Ministries also commented that the DIO is helpful with providing support and clarity throughout the minor capital investment process. However, as highlighted throughout this report, there are still opportunities to improve communication about the strategic direction and process changes.

Effective communication for the IM/IT minor capital process should provide ministries with an understanding of the process, including the purpose of, and expectations for each stage of the minor capital process. It should also help ministries understand the nature and location of tools and resources available to support them through the process. The DIO can improve its existing communication by proactively providing greater clarity to ministries to help them better understand information requirements and how that information is used by the DIO and DIB for decision making.

Two-way communication should be encouraged to support stakeholder collaboration and share lessons learned that can help improve the investment process. The DIO should communicate the investment strategy and target portfolio to ministries, once established. The DIO and DIB can also promote greater two-way communication by soliciting feedback about the process from ministries and applying lessons learned to continuously improve to the IM/IT minor capital process

Recommendation:

- (13) The DIO should provide ministries with greater communication about the expectation and purpose of information requirements for the investment planning and performance monitoring processes, including changes resulting from recommendations in this report.
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Appendix A - Summary of Recommendations

1	The OCIO should ensure the IM/IT Capital Investment Management Framework and other relevant documentation are up to date to reflect accountabilities and responsibilities of key committees, agencies and offices based on their scope and mandate.
2	The OCIO should develop specific guidance and practical tools to support consistent implementation of policies and standards. References to applicable resources should be embedded into the capital investment website to support understanding and applicability.
3	The OCIO should translate the Digital Framework and priorities into a specific investment strategy.
4	The OCIO should develop a health check process to gather, assess and verify information on current IM/IT infrastructure, systems, resources, and capacity.
5	The OCIO should identify key financial information necessary to support its governance and strategic function and work with central agencies and ministries to access the necessary information.
6	The DIB should establish an investment portfolio with defined investment categories and a target allocation mix, based on the IM/IT investment strategy.
7	The DIO should implement a regular and defined intake of investments.
8	The DIO should update its internal process document and guidance to ensure consistent analysis and retain records to support funding decisions.
9	The DIO should develop a systematic evaluation process to facilitate consistent IM/IT investment prioritization.
10	The DIB should establish a series of performance-dependant actions to support its oversight function for monitoring project performance.
11	The DIO should standardize performance monitoring by implementing a risk-based approach.
12	The DIO should expand the scope of performance monitoring to include a broader range of metrics to support the assessment of benefit realization.
13	The DIO should provide ministries with greater communication about the expectation and purpose of information requirements for the investment planning and performance monitoring processes, including changes resulting from recommendations in this report.

Appendix B - Abbreviations

C55	Copperleaf C55 Asset Investment Planning & Management
DIB	Digital Investment Board
DIO	Digital Investment Office
Government or Province	Government of British Columbia
IAAS	Internal Audit & Advisory Services
IM/IT	Information Management and Information Technology
IM/IT CIMF	IM/IT Capital Investment Management Framework
OCIO	Office of the Chief Information Officer