

ANNUAL INFORMATION RESOURCE INVESTMENT AND EXPENDITURE PLAN

2023 - 2024

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2022-2023 Expenditure Budget
**Annual Information Resource Investment
and Expenditure Plan 2023-2024**

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MESSAGE FROM THE MINISTER OF CYBERSECURITY AND DIGITAL TECHNOLOGY



The Ministère de la Cybersécurité et du Numérique is proud to present the 2023-2024 Information Resource Investment and Expenditure Plan. With projected investments of \$7.71 billion for the 2023-2033 period, this plan demonstrates that information resources represent a strategic value to the State.

The increased use of information resources is a major input to the government's digital transformation. In fact, the year 2023-2024 will reflect the government's desire to accelerate the digital shift of the State and its institutions. It is therefore essential to ensure optimal use of information resources to enable public bodies to offer citizens the best services at the lowest possible cost.

This plan outlines the contribution of information resources to government activities and addresses strategic data such as major projects in progress and the status of government assets, including those of the health and social services, education, and higher education networks.

Éric Caire

INTRODUCTION

In accordance with section 16.1 of the *Act respecting the governance and management of the information resources of public bodies and government enterprises* (chapter G1 .03), the Minister of Cybersecurity and Digital Technology must send to the Chair of the Conseil du trésor an investment and expenditure plan for the information resources of public bodies.

The purpose of this plan is to present a profile of interventions by the Québec State in the areas of information resources with respect to the following elements:

- the contribution of information resources to the activities of the State and the alignment of the strategies referred to in paragraph 1 of Section 13 of the *Act respecting the governance and management of information resources of public bodies and government enterprises* with the guidelines determined under the second paragraph of section 21.
- information on planned investments and expenditures in information resources by public bodies.
- particulars concerning information resource projects with total estimated costs above a government-determined threshold, as well as other projects that are of governmental interest.
- an inventory of public body information assets, including an assessment of their soundness.

This information resource investment and expenditure plan also presents the information resource workforce and context for the major initiatives of the Ministère de la Cybersécurité et du Numérique (MCN) so as to provide the reader with a comprehensive view of information resources within the public administration apparatus.

The data is generally presented by ministerial portfolio, with the exception of data from public bodies in the higher education network. The intervention strategies, as defined in the information resource investments and expenditures section, correspond to the categories that public bodies are required to use to describe the activities and projects included in the programming of their investments and expenditures in information resources. These same categories are used for accountability purposes.

The Information Resource Investment and Expenditure Plan of Public Bodies is included with the estimates, which are tabled in the National Assembly in accordance with section 45 of the *Public Administration Act* (chapter A 6.01).

CONTRIBUTION OF INFORMATION RESOURCES TO STATE ACTIVITIES

January 1, 2023 was the first anniversary of the founding of the MCN. Its creation confirmed the government's desire to better coordinate government action on digital transformation and cybersecurity.

This first year of activities was characterized by the evolution of the governance framework, the consolidation of practices, and the realization of a series of initiatives aimed at promoting excellence in the area of information resources.

Information resources represent a strategic value to the State. Investments and expenditures planned for 2022-2023 amount to \$4,689.7 million. Considering the importance of the expenditures and investments in information resources, it was essential to ensure optimal use of these resources in order for public bodies to offer the best services to citizens at the lowest possible cost. This is why the MCN has put in place the Government Benefits Management Framework for Information Resource Projects, hereafter referred to as the "Benefits Management Framework." Considering that information resource initiatives and projects must enable public bodies to generate benefits, these benefits need to be defined in order to estimate, measure, and even reinvest them. The Benefits Management Framework is therefore an essential tool in this regard. The Framework came into force on June 15, 2022 following the publication in the *Gazette officielle du Québec* of [Order no. 2022-01 of the Minister of Cybersecurity and Digital Technology dated May 27, 2022](#) (French version linked here). It is in line with key measure 16 of the Government Digital Transformation Strategy 2019-2023, which provides for the development of such a framework including mechanisms and reusable tools to support benefits management. Qualified information resource projects of public bodies are subject to it.

In order to ensure the proper governance of information resources and their connected projects, the government and the Minister of Cybersecurity and Digital Technology have determined the Rules for the Management of Information Resource Projects and the Rules for the Planning and Management of Information Resources respectively, which came into force on July 13, 2022. The Rules for the Planning and Management of Information Resource Projects set out, among other things, the terms and conditions for managing information resource projects, the types of projects that require authorization, and the authority for approving a given project. The Rules for the Planning and Management of Information Resources provide for the terms and conditions relating to planning tools and accountability, as well as the criteria to be considered in support of project authorizations and monitoring.

The MCN has also reviewed its method of allocating the envelopes for investments in information resources, as stipulated in the Québec Infrastructure Plan (QIP), in order to prioritize the interventions of public bodies according to various criteria, including cybersecurity, adherence to the services provided by the government ministry, and opportunities for mutualization.

As a reference in digital transformation and new technologies, the MCN acts as an indispensable intermediary and provides cutting-edge services to public bodies in order to accelerate the digital transformation of public administration by sharing exemplary experiences in digital transformation. With this in mind, on April 1, 2022, the fourth collection of Baromètre numériQc was conducted among public bodies.

In the spring of 2022, information was also collected to obtain a preliminary profile of the use of artificial intelligence in Québec's public administration.

A framework agreement has been signed on July 27, 2022 with Université Laval's International Observatory on the Societal Impacts of Artificial Intelligence and Digital Technology, which will enable the MCN to obtain additional support for the implementation of the Strategy for the Integration of Artificial Intelligence in Public Administration 2021-2026.

Since the launch of the Strategy, actions aimed at increasing its visibility in the Québec ecosystem and abroad have been carried out, including the MCN's participation in the positioning of Québec in the field of artificial intelligence at the international level¹ thanks to the collaboration of the Ministère des Relations internationales et de la Francophonie. The Strategy for the Integration of Artificial Intelligence in Public Administration was developed with the expertise of an advisory committee made up of stakeholders from public bodies involved in this rapidly growing field².

¹ These include the International Economic Forum of the Americas; the Organization for Economic Cooperation and Development; and the United Nations Educational, Scientific and Cultural Organization.

² Commission de l'éthique en science et en technologie; Ministère de l'Économie, de l'Innovation et de l'Énergie; Ministère de la Justice; Ministère de l'Emploi et de la Solidarité sociale; Chief Scientist of Québec; Secrétariat à l'accès à l'information et à la réforme des institutions démocratiques; Société québécoise d'information juridique; International Observatory on the Societal Impacts of Artificial Intelligence and Digital Technology.

INFORMATION RESOURCE INVESTMENT AND EXPENDITURE PROGRAM

Section 13 of the *Act respecting the governance and management of the information resources of public bodies and government enterprises* stipulates that, for the purposes of the development of government-wide information resource planning, a public body must establish an information resource investment and expenditure program and describe how amounts allocated to information resource investments and expenditures will be used.

1. Probable information resource investments and expenditures

According to the Information Resource Investment and Expenditure Program and Balance Sheet, transmitted on June 15, 2022, the total probable investment and ss reported by public bodies from all funding sources is \$5,166.8 million for FY 2022-2023. Investments and expenditures are higher than the forecast published in the 2022-2023 Annual Information Resource Investment and Expenditure Plan, which predicted expenditures of approximately \$4,689.7 million. This variance is due to a significant increase in information resource investments of 16.6% as well as an increase in expenditures of 7.8%.

Table 1: Summary of investments and expenditures on information resources by public bodies subject to the *Act respecting the governance and management of the information resources of public bodies and government enterprises* (in millions of dollars)

Information Resource Investment and Expenditure Review							
	2019-2020 ^A	2020-2021 ^A		2021-2022		2022-2023	
	Updated June 15, 2022*	Updated October 31, 2021	Updated June 15, 2022*	IRIEP 2022-2023	Updated June 15, 2022*	IRIEP 2022-2023	Updated June 15, 2022*
Expenses	2,677.1	3,069.0	2,995.4	3,317.3	3,274.6	3,437.3	3,706.0
Investments	932.7	1,276.4	1,265.3	1,284.2	1,046.9	1,252.4	1,460.8
Total	3,609.8	4,345.4	4,260.7	4,601.5	4,321.5	4,689.7	5,166.8

IRIEP: Information Resource Investment and Expenditure Plan

A: Adjusted actual data

*Official data submitted as of June 15, 2022, taking into account requests for retransmission from public bodies since that date, if any.

Note: Due to rounding, amounts may not add up to the total shown.

2. Annual information resource investment and expenditure planning

The Information Resources Investment and Expenditure Program tracks the choices made by public bodies covered by the *Act respecting the governance and management of the information resources of public bodies and government enterprises* for fiscal year 2023-2024 and the three subsequent fiscal years.

A public body's programming must be based on its continuously updated information resource response portfolio and be consistent with its investment and expenditure strategies, including its digital transformation plan scheduled for development in 2023, the status of its information assets, and the availability and capacity of its resources, including its human resources.

For fiscal year 2023-2024, the sum of planned information resource expenditures and investments, for all public bodies subject to the *Act respecting the governance and management of the information resources of public bodies and government enterprises*, is estimated at \$5,151.3 million. Of this amount, 74.6% is expenditures and 25.4% is investments.

The portion attributable to the health and social services network, the education network, and the higher education network comprises 38.7% of total expenditures and investments.

Table 2: Annual information resource investment and expenditure planning³ (in millions of dollars)

	2023-2024			2024-2025			2025-2026			2026-2027		
	Forecast			Projection 1			Projection 2			Projection 3		
	Expenditure	Invest.	Total	Expenditure	Invest.	Total	Expenditure	Invest.	Total	Expenditure	Invest.	Total
Grand total	3,843.6	1,307.7	5,151.3	3,835.9	1,131.3	4,967.2	3,839.4	974.7	4,814.1	3,472.2	881.2	4,353.4

The data in Table 2 predate the formation of the new ministerial portfolios created on October 20, 2022. Consequently, projections derived from official data submitted as of June 15, 2022, and taking into account retransmission requests from public bodies since that date, are presented in aggregate (under Total).

3. Intervention strategies

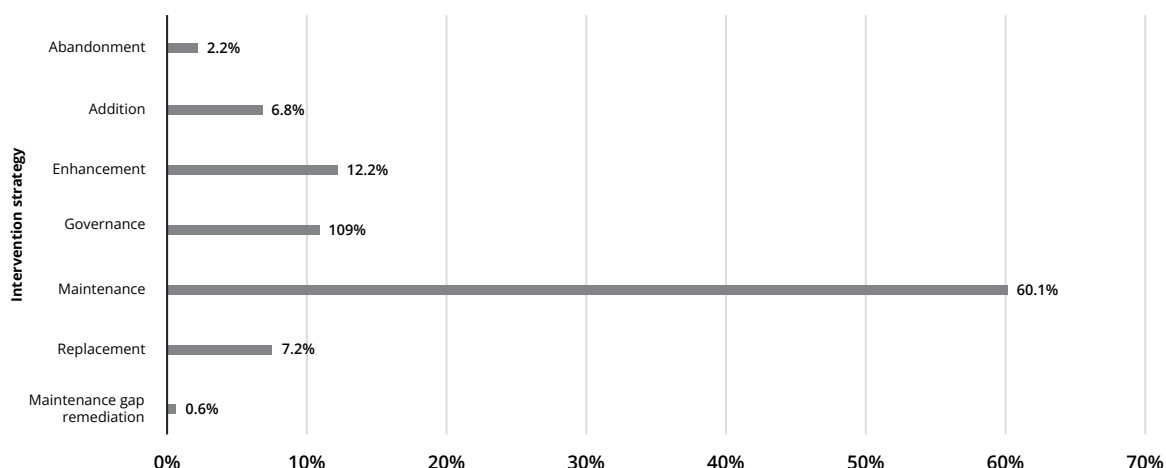
In order to describe the initiatives and projects included in the programming of their information resource investments and expenditures, public bodies are required to classify them according to intervention strategies. There are seven intervention strategies that correspond to the categories that public bodies must use:

- Addition: action that aims to acquire or design new information assets.
- Enhancement: action that modernizes, increases, or enhances the service potential of an information asset.
- Maintenance: action that aims to maintain the performance of an information asset and prevent it from becoming obsolete.
- Replacement: action to replace all or part of an information asset, normally at the end of its useful life.
- Maintenance gap remediation: action to address a backlog in the maintenance of an information asset.
- Abandonment: action aimed at disposing of an information asset deemed obsolete or no longer meeting the objectives pursued.
- Governance: action to ensure the sustainability of management and planning operations to implement the organization's strategic information resource objectives.

Intervention strategies are designed to allocate financial resources based on organizational needs to address or prevent obsolescence, or to acquire new assets so as to better support service delivery to citizens and enterprises.

³ Expenditures do not include the amortization of information resources of public bodies or the payroll and financial costs of government ministries and budgetary agencies.

Figure 1: Annual planning from 2023-2024 to 2026-2027 of information resource investments and expenditures by type of intervention strategy*4



4. Annual planning of investments in the Québec Infrastructure Plan – Information Resources Sector (QIP-IR)

The QIP-IR indicates, over a ten-year period, the investments required to carry out information resource projects and activities to be financed by a contribution from the Gouvernement du Québec. It is important to note that only investments in information resources by public bodies subject to the *Public Infrastructure Act* (Chapter I-8.3) are included in the QIP-IR. Thus, the investments planned in the QIP-IR are included in the investments in information resources presented in Table 3.

For the decade 2023-2033, information resource investment needs were collected by the MCN from public bodies. The allocation rate was assigned to public bodies in accordance with current and projected interventions, the capacity of the public body to carry out the work, the growth in needs related to the delivery of public services, and in accordance with government orientations and priorities in terms of information resources.

In the context of the digital transformation of the State, the challenges associated with the electronic delivery of public services are proving to be among the most significant. For the development of QIP-IR 2023-2033, the MCN has reviewed its methodology for analyzing the information resource programming of public bodies, with a view to ensuring the creation of value for public administration and services to citizens. A systematic analysis of the programming of public bodies has been carried out in order to prioritize interventions, particularly those related to maintenance, projects authorized by the government or the Conseil du trésor, and cybersecurity interventions.

Planned investments in QIP-IR 2023-2033 allocated to each public body total \$7,715.2 million. These planned investments for 2023-2033 represent an increase of \$142.4 million over QIP-IR 2022-2032, which was set at \$7,572.8 million. Table 3 shows the breakdown by ministerial portfolio for QIP-IR 2023-2033.

The portion attributable to the health and social services network, the education network, and the higher education network represents 35.8% of total planned investments.

4 Allocation percentages are established in accordance with the programming reported by the public bodies.

**Table 3: Ten-year information resource investment planning by ministerial portfolio for 2023-2033
(in millions of dollars)**

Portfolio	QIP 2023-2033
Municipal Affairs and Housing	16.9
Agriculture, Fisheries and Food	73.8
Treasury Board and Government Administration	103.3
Executive Council	8.2
Culture and Communications	92.2
Cybersecurity and Digital Technology	773.0
Economy, Innovation and Energy	12.0
Education	68.9
Employment and Social Solidarity	139.4
Higher Education	21.9
Environment, Fight against Climate Change, Wildlife and Parks	61.3
Family	86.7
Finance	1,070.5
Immigration, Francization and Integration	61.9
Justice	231.4
French Language	5.5
International Relations and Francophonie	3.5
Natural Resources and Forestry	57.0
Health and Social Services	868.8
Public Security	129.5
Tourism	23.3
Transportation and Sustainable Mobility	236.1
Labour	10.0
Education Network	957.1
Higher Education Network	787.6
Health and Social Services Network	1,021.0
Procurement	794.3
Grand total	7,715.2

Note: Due to rounding, amounts may not add up to the total shown.

5. Rate of completion of information resource initiatives

The *Public Administration Act* establishes a results-based management framework based on respect for the principle of transparency, requiring public bodies to be accountable for their performance and the achievement of their results. In this context, the rate of realization of investments in information resources measures the capacity of a public body to carry out its interventions within the limits of the budgets that have been provided.

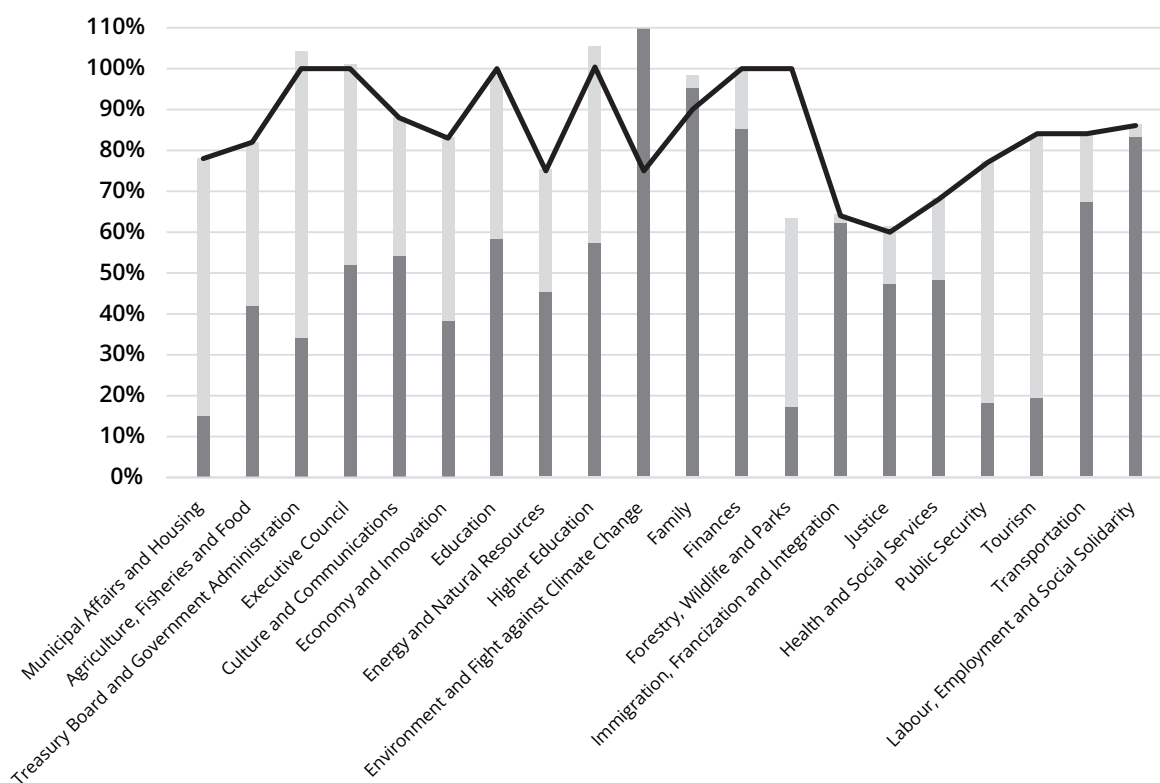
As part of the activities of the sub-committees of the Information Resources Governance Committee created under section 12.1 of the *Act respecting the governance and management of the information resources of public bodies and government enterprises*, this indicator has been revised. The new indicator must measure more precisely the performance of public bodies according to the intervention strategies stipulated in their programming.

Thus, the rate of realization of investments in information resources financed by the Gouvernement du Québec is calculated according to the ratio of realized interventions to programmed interventions, based on the intervention strategies, i.e., maintenance or enhancement of assets. The indicator is calculated according to the following formula:

$$\sum \frac{\text{Actual intervention strategies for information resource investments, in \$}}{\text{Programmed intervention strategies for investments of the public body's last authorized information resources budget, in \$}} \times \text{Relative weight of the strategy in \%}$$

The calculation takes into account all strategies programmed by the public body. A sliding scale is applied for overprogramming greater than 10.0%.

Figure 2: 2021 Achievement rate 2022 information resource investments by portfolio⁵



⁵ Based on the composition of the information resource portfolios for the year 2021-2022

INFORMATION RESOURCE PROJECTS

The MCN plays a leading role in information resource governance by being responsible for recommending information resource projects for the various public bodies for which authorization from the Treasury Board or the government is required. In addition, the MCN provides public bodies with guidance and support in the preparation of files related to information resource projects for authorization purposes.

The MCN also ensures that the information resource projects of public bodies are reported in the Information Resource Project Dashboard. This French-language dashboard is published on the Internet at the following address: www.tableaubordprojetsri.gouv.qc.ca.

The dashboard shows the status of projects costing more than \$500,000 that are in the execution phase. It provides a view of projects by portfolio and by public body and provides detailed information on the performance of these projects, including their scope, costs, and timelines. As of February 2023, a total of 155 projects have been posted on the site, including 36 targeted projects⁶.

As of February 2023, 2,538 information resource projects were considered active in the governmental administration network, including 35 projects at the MCN. The health and human services (36.2%), higher education (23.8%), and education (11.2%) portfolios reported the most active projects.

By the end of 2022, 258 projects were declared completed, with 35.7% by the higher education portfolio, 20.5% by the health and human services portfolio, and 14.0% by the education portfolio.

Table 4: Number of completed projects by portfolio

Portfolios	Number of completed projects* (in thousands)
Municipal Affairs and Housing	3
Agriculture, Fisheries and Food	4
Executive Council	1
Culture and Communications	6
Cybersecurity and Digital Technology	1
Education	36
Employment and Social Solidarity	12
Higher Education	92
Family	1
Finance	16
Immigration, Francization and Integration	5
Justice	8
French Language	1
International Relations and Francophonie	1
Natural Resources and Forestry	4

⁶ A project is targeted if it meets one of the following three criteria: a project designated as being of government-wide interest under section 16.3 of the Act respecting the governance and management of the information resources of public bodies and government enterprises; a project included in the portfolio of priority projects referred to in paragraph 3 of section 12.9 of the said Act; or a project for which the Conseil du trésor or, as the case may be, the government is the authority responsible for granting authorization at the end of the preliminary project stage or at the end of the planning phase under an order in council made under the first paragraph of section 16.2 of the Act.

Portfolios	Number of completed projects* (in thousands)
Health and Social Services	53
Tourism	3
Transportation and Sustainable Mobility	11
Grand total	258

* Corresponds to the number of interventions entered in the Integrated Information Resource Management System.

When deemed necessary by the government, certain large-scale, multi-jurisdictional projects may be designated as of governmental interest. The projects so designated currently underway are those shown in Table 5.

Table 5: Projects designated as of government interest

Project name	Government ministry or public body	Description of the project	Date of designation
Integrated Resource Management Business Solutions (IRBMS) - Phase SGR7 Payroll System	MCN	The purpose of the SGR7 phase is to modernize the government payroll system by replacing the current system. This project will better support the administration of employee compensation and benefits programs and make compensation management more efficient.	June 2018
Québec Digital Identity Service (QDIS) Program: First project: Improved Access to Electronic Services - Business and Citizens Second project: Citizen Digital Identity	MCN	The QDIS program will streamline access to government online services, while limiting the personal information disclosed on the basis of consent to share information to the essentials. The scope includes the implementation of a digital wallet to support citizens' digital identity.	May 2020
Consolidation of Data Processing Centres (DPC) and Optimization of Processing and Storage	MCN	The DPC program aims to consolidate the data processing centres of public bodies as well as those of institutions in the health and social services, education, and higher education networks.	June 2020
Facial Recognition	SAAQ	The facial recognition project aims to introduce a facial recognition solution for the optimization of the Société de l'assurance automobile du Québec's photo bank.	November 2021

In addition to the QDIS and DPC projects, a fourth major government transformation project is being implemented by the MCN, the Government Telecommunications Network (GTN). Linked to the Government Digital Transformation Strategy 2019-2023 (GDTs), the GTN will offer, when completed, a range of advanced telecommunications services.

INFORMATION RESOURCE ASSETS

1. Inventory of information assets

Public bodies subject to the *Act respecting the governance and management of the information resources of public bodies and government enterprises* must have and maintain an inventory of information assets and conduct an annual assessment of their status.

The information asset inventory is a permanent record of information assets that must be established and maintained by each public body. Information assets include computer systems, infrastructure services, and technology components.

Each of the listed infrastructure systems and services is subject to an annual soundness status assessment by the owning public body. The results of the analysis of this inventory enable the implementation of appropriate measures to ensure the security of information and the continuity of services offered by the State.

In the current context, characterized by the increased use of information resources in the context of telecommuting, the speed at which new technologies render implemented systems obsolete, and the increase in cyberattacks, knowledge of the inventory of public bodies' information assets and their status is essential to enable the deployment of appropriate measures to ensure, among other things, information security, the continuity of the services offered by the State, and the transformation of these services.

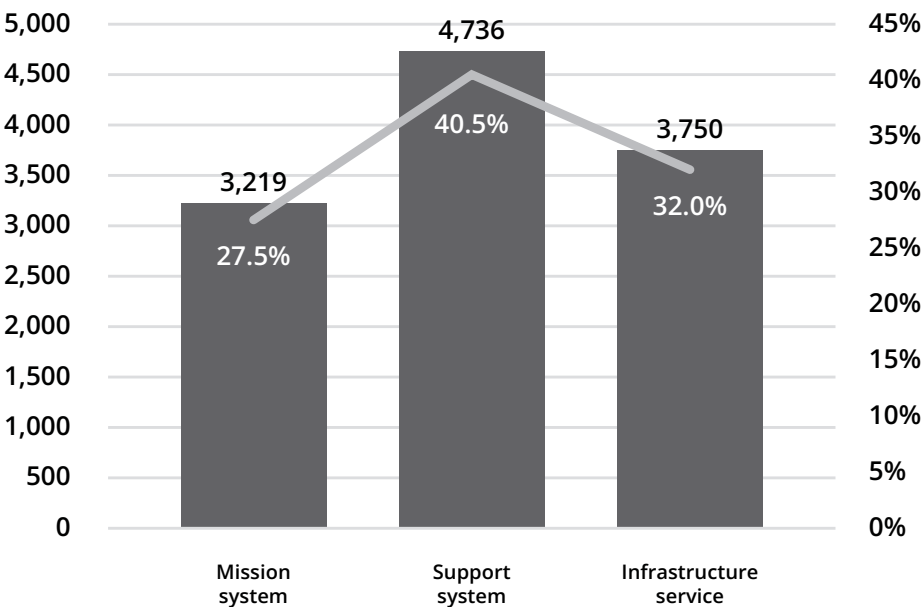
Table 6: Definition of IT assets

Type	Subtype	Definition
Computer system	Mission system	A system that operates within the core field of activity of a public body and is its <i>raison d'être</i> .
	Support system	A system that supports the common processes of a public body (e.g., resource management, procurement management, communications management, legislative management).
Infrastructure service		An integrated set of configuration elements, which may include hardware and software, that is designed to meet a need or achieve a goal.
Technological components	Software	A set of software components and related data that provides instructions to a computer about what to do. The software is organized according to a software architecture and is deployed on a technological infrastructure.
	Hardware	Physical components of a computer system in the form of hardware. These elements are workstations, servers, network equipment, storage equipment, telephony, and printers.

The inventory of information assets of all public bodies was completed at the end of 2021. It included for the first time data from public bodies in the health and social services, education, and higher education networks. As a result, 11,705 assets were identified in the Information Resources Asset Collection System (IRACS). According to the Information Resource Planning and Management Rules, the next data collection is scheduled for January 15, 2024.

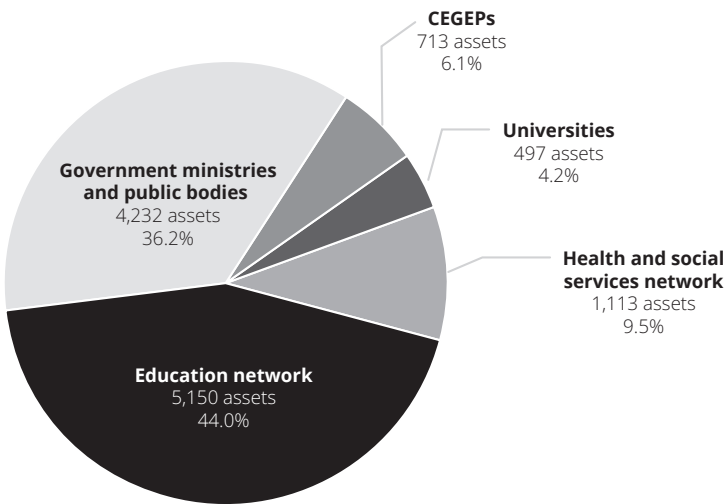
Of the 11,705 systems listed by asset status, 3,219 systems are mission systems (27.5%); 4,736 are support systems (40.5%); and 3,750 are infrastructure services (32.0%).

Figure 3: Distribution of information assets by system type in 2021



Public bodies in the education network had 5,150 assets, or 44.0% of reported assets. Public bodies in the higher education network had 1,210 assets, or 10.3% of reported assets. Of these assets, a larger number belonged to CEGEPs (713 assets, or 6.1% of all reported assets) than to universities (497 assets, or 4.2% of all reported assets). Finally, the public bodies in the health and social services network reported 1,113 assets, or 9.5% of the assets listed in the IRACS.

Figure 4: Distribution of information assets by type of public body in 2021



Government ministries and public bodies, excluding public bodies in the health and social services, education, and higher education networks, reported 4,232 assets, compared to 3,992 assets in 2020.

2. Information asset soundness status

The information assets listed are assessed for their soundness status according to the business and technical aspects. The business soundness status is intended to assess mission or support systems, while the technical soundness status assesses the status of infrastructure services according to the criteria listed in Table 7.

The soundness index, based on a scale of 1 to 5, provides a single, comparable measure of the soundness status of systems and services. The scale is ascending, meaning that a score of 1 reflects a very unsound status, while a score of 5 reflects a very sound status.

With the next data collection for the information asset inventory scheduled for January 2024, no updates to this data have been made since 2021.

Table 7: Soundness status assessment criteria and index

Business soundness status	Technical soundness status	Indicator	
Alignment with current needs	Alignment with the architecture	Index	Status
Alignment with future needs	Technological sustainability		
Ease of support	Ease of evolution	5	Very sound
Business documentation	System performance	4	Sound
Information security needs	Technological expertise	3	Satisfactory
	Technical documentation	2	Unsound
	Compliance with security measures	1	Very unsound

In 2021, the average information asset soundness index was 3.5 out of 5.

Table 8: Information asset soundness index

	2019	2020	2021
	Index		
Government ministries and public bodies	3.4	3.5	3.5
Education	–	–	3.6
Higher education	–	–	3.7
CEGEP	–	–	3.8
University	–	–	3.6
Health and social services	–	–	3.4
Total	3.4	3.5	3.5

Generally, infrastructure services have a higher soundness index than other types of systems. In 2021, infrastructure services had an index of 3.9 out of 5, while it was 3.4 for mission systems and 3.3 for support systems. The situation was similar in 2020 and 2019 when infrastructure services had a higher soundness index than the other system types achieved.

Table 9: Average index by system type

	2019	2020	2021
	Index		
Mission system	3.2	3.2	3.4
Support system	3.3	3.3	3.3
Infrastructure service	3.7	3.8	3.9
Total	3.4	3.5	3.5

An information asset is considered obsolete when its soundness index is below 2 out of 5. In 2021, the obsolescence rate for information assets across all public bodies was 4.8 percent. This rate saw a 1.9 percentage point decrease from 2020 when it was 6.7 percent.

INFORMATION RESOURCE WORKFORCE

Since 2020, all public bodies subject to the *Act respecting the governance and management of the information resources of public bodies and government enterprises* have been required to produce their information resource workforce portrait. Published annually, the information resource workforce and consultant portraits identify the number of internal and external resources and vacancies within public bodies.

The 2021 data is presented in four membership groups to respect their distinct repositories and to insert scalable data for the public bodies to which this situation applies. The membership groups are defined as follows:

- Membership group 1: Public bodies subject to the *Act respecting the governance and management of the information resources of public bodies and government enterprises* and whose personnel are appointed under the Civil Service Act. Consists of 73 public bodies.
- Membership group 2: Public bodies subject to the *Act respecting the governance and management of the information resources of public bodies and government enterprises* and whose personnel are not appointed under the Civil Service Act, with the exception of public bodies in the networks. Consists of 41 public bodies.
- Membership group 3: Education network (73 public bodies), which includes mainly school service centres and school boards, and the higher education network, which includes CEGEPs (48 public bodies) and universities (19 public bodies). Consists of 140 public bodies.
- Membership group 4: Health and social services network, which includes various types of public bodies (healthcare facilities, healthcare communication centres, non-budgetary organizations, and pooled procurement groups). Composed of 49 public bodies.

In 2021, public bodies having produced their portrait reported a total of 23,874 information resources, including 19,041 internal resources (79.8%) and 4,833 external resources (20.2%). This is an increase of 4.4% (1,006 resources) over the previous year. Membership group 1 employed a larger workforce of 10,589 people, or 44.4% of all reported information resources.

Table 10: Distribution of information resources* by group

	2019		2020		2021	
	No.	%	No.	%	No.	%
Group 1	9,536	79.4	10,108	44.2	10,589	44.4
Group 2	2,475	20.6	2,839	12.4	3,064	12.8
Group 3	–	–	5,808	25.4	5,930	24.8
Education	–	–	1,998	8.7	2,046	8.6
CEGEP	–	–	877	3.8	909	3.8
University	–	–	2,933	12.8	2,975	12.5
Group 4	–	–	4,113	18.0	4,291	18.0
Total	12,011	100%	22,868	100%	23,874	100%

Due to rounding, amounts may not add up to the total shown.

* Internal and external resources.

In 2021, there were 2,467 vacancies, which corresponds to a vacancy rate of 11.5%. This compares to a vacancy rate of 9.6 percent in 2020, with 1,960 vacancies. The increase in the vacancy rate of

1.9 percentage points (507 positions) between the last two data collections may be related to the current environment of labour shortages and the resulting recruitment challenges affecting the information resource sector.

Table 11: Distribution of information resource vacancies by group

	2019			2020			2021		
	Internal and vacant	Vacant	% vacancies	Internal and vacant	Vacant	% vacancies	Internal and vacant	Vacant	% vacancies
Group 1	7,591	842	11.1	7,938	971	12.2	8,296	1,162	14.0
Group 2	2,233	233	10.4	2,440	144	5.9	2,604	239	9.2
Group 3	–	–	–	5,832	284	4.9	6,070	377	6.2
Education	–	–	–	2,095	122	5.8	2,174	149	6.9
CEGEP	–	–	–	915	57	6.2	964	75	7.8
University	–	–	–	2,822	105	3.7	2,932	153	5.2
Group 4	–	–	–	4,288	561	13.1	4,538	689	15.2
Total	9,824	1,075	10.9	20,498	1,960	9.6	21,508	2,467	11.5

Membership group 4, comprising public bodies in the health and social services network, has the highest vacancy rate at 15.2% or 689 vacancies.

Table 12 shows the change in the information resource workforce from 2015 to 2021 for Membership group 1.

Table 12: Membership group 1: Changes in internal and external resources and vacancies

Resources	2015	2016	2017	2018	2019	2020	2021
Internal	5,889	5,973	6,185	6,427	6,749	6,967	7,134
External	2,976	2,388	2,297	2,552	2,787	3,141	3,455
Total	8,865	8,361	8,482	8,979	9,536	10,108	10,589
% Internal	66.4	71.4	72.9	71.6	70.8	68.9	67.4
% External	33.6	28.6	27.1	28.4	29.2	31.1	32.6
Vacancies	486	707	876	991	842	971	1,162
Internal and vacant	6,375	6,680	7,061	7,418	7,591	7,938	8,296
% of positions vacant	7.6	10.6	12.4	13.4	11.1	12.2	14.0

Table 13 shows the information resource workforce from 2019 to 2021 for Membership group 2.

Table 13: Membership group 2: Changes in internal and external resources and vacancies

Resource	2019	2020	2021
Internal	2,000	2,296	2,365
External	475	543	699
Total	2,475	2,839	3,064
% Internal	80.8	80.9	77.2
% External	19.2	19.1	22.8
Vacancies	233	144	239
Internal and vacant	2,233	2,440	2,604
% of vacancies	10.4	5.9	9.2

Table 14 presents the information resource workforce in 2020 and 2021 for public bodies in Membership group 3. There are 73 public bodies in the education network, 48 in the "CEGEP" category, and 19 in the "University" category.

Table 14: Membership group 3: Internal resources, external resources, and vacancies in public bodies in the education and higher education networks

Resources	2020				2021			
	Gr. 3	Education	Higher education		Gr. 3	Education	Higher education	
			CEGEP	Univ.			CEGEP	Univ.
Internal	5,548	1,973	858	2,717	5,693	2,025	889	2,779
External	260	25	19	216	237	21	20	196
Total	5,808	1,998	877	2,933	5,930	2,046	909	2,975
% Internal	95.5	98.7	97.8	92.6	96.0	99.0	97.8	93.4
% External	4.5	1.3	2.2	7.4	4.0	1.0	2.2	6.6
Vacancies	284	122	57	105	377	149	75	153
Internal and vacant	5,832	2,095	915	2,822	6,070	2,174	964	2,932
% of vacancies	4.9	5.8	6.2	3.7	6.2	6.9	7.8	5.2

Table 15 shows the information resource workforce in 2020 and 2021 for public bodies in Membership group 4.

Table 15: Membership group 4: Internal and external resources and vacancies

Resources	2020	2021
Internal	3,727	3,849
External	386	442
Total	4,113	4,291
% Internal	90.6	89.7
% External	9.4	10.3
Vacancies	561	689
Internal and vacant	4,288	4,538
% of vacancies	13.1	15.2

CYBERSECURITY ENHANCEMENT PROGRAM

Given a stated commitment to digital transformation, information protection is paramount to maintaining citizen confidence in digital services as well as addressing modern cyber threats and attacks. As such, as part of the 2022-2023 Expenditure Budget, the MCN was allocated \$100.0 million, \$30.0 million for FY 2022-2023 and \$70.0 million for 2023-2024.

This envelope aims to support public bodies in the deployment of cybersecurity projects and has enabled the launch of the Cybersecurity Enhancement Program (CEP).

The financial contributions allocated under the CEP primarily support initiatives aimed at compliance with governmental obligations, including security standards issued by the Government Cyber Defence Centre, deployment of government cybersecurity services, and deployment of the Government Cyber Defence Network.

In order to obtain the funds, public bodies must submit a consolidated action plan to the MCN so that the latter can assess the eligibility of the initiatives submitted.

The entire \$30.0 million for FY 2022-2023 has been allocated to support 360 cybersecurity initiatives at 83 public bodies.

Table 16: Distribution of cybersecurity enhancement program allocations (in millions of dollars)

Cyber Defence Operations Centre	As of February 8, 2023	
	Amounts requested (\$M)	CEP allocation (\$M)
Municipal Affairs and Housing	-	-
Agriculture, Fisheries and Food	-	-
Treasury Board and Government Administration	0.2	0.1
Executive Council	0.2	0.1
Culture and Communications	0.4	0.3
Cybersecurity and Digital Technology	6.1	4.6
Economy, Innovation and Energy	0.3	0.2
Education	0.4	0.3
Higher Education	19.1	14.3
Natural Resources and Forestry	1.4	1.1
Environment, Fight against Climate Change, Wildlife and Parks	0.04	0.03
Family	1.3	1.0
Finance	0.4	0.3
Immigration, Francization and Integration	-	-
Justice	4.4	3.3
Régie de l'assurance maladie du Québec	1.8	1.4
International Relations and Francophonie	0.6	0.4
Health and Social Services	0.6	0.5
Public Safety	0.1	0.0
Sûreté du Québec	0.1	0.1
Tourism	-	-
Transportation and Sustainable Mobility	1.4	1.1

	As of February 8, 2023	
Cyber Defence Operations Centre	Amounts requested (\$M)	CEP allocation (\$M)
Employment and Social Solidarity	0.3	0.3
Reserve		0.5
Total requested	39.3	
Total CEP allocation (75% rate)		30.0

BENEFITS MANAGEMENT OF INFORMATION RESOURCE PROJECTS

The Benefits Management Framework, which came into effect on June 15, 2022, is the result of collaboration between the MCN, the Secrétariat du Conseil du trésor and the public bodies, following recommendations from the Information Resource Governance Committee and its Resources, Performance, and Governance Evolution subcommittee.

The Benefits Management Framework aims, among other things, to provide a framework for the management of the benefits of qualified projects;⁷ to define the expected benefits of information resource projects, in particular the improvement of service quality, the reduction of delays, and the reduction of costs; and to monitor the performance of public bodies based on the benefits estimated from the authorization of an information resource project. It also defines the key elements for determining expected benefits, avoided costs, targets to be achieved, and measurement indicators. It proposes an approach to facilitate the optimization of resources and the achievement of strategic objectives of public bodies through benefits management.

Since the adoption of the Benefits Management Framework, qualified information resource projects within the meaning of the Rules for the Management of Information Resource Projects are subject to it and public bodies have until April 1, 2023 to comply. However, all qualified projects for which the authority responsible for granting authorization is the Treasury Board or the government must comply with the rules from the time of publication of the Framework.

In addition, the Benefits Management Framework will support the prioritization of projects by public bodies and the MCN in order to fund the projects with the greatest benefits for citizens and businesses. It will therefore be an indispensable tool in this regard and will enable the MCN to monitor the performance of public bodies in terms of governance of information resources and improvement of public services.

⁷ A qualified project is a project that involves a total cost that is equal to or greater than \$500,000 and that corresponds to one or more of the following situations: the addition or implementation of a new information system, solution, or business service that may cover development, acquisition, or registration; the replacement of an information system; the addition of functionalities or the improvement of an information system, solution or business service; or the introduction of new services in technological infrastructures.

GESTION DES BÉNÉFICES DES PROJETS EN RESSOURCES INFORMATIONNELLES

Le cadre de gestion des bénéfices qui est entré en vigueur le 15 juin 2022 est le résultat d'une collaboration entre le MCN, le Secrétariat du Conseil du trésor et les organismes publics, à la suite de recommandations du Comité de gouvernance en ressources informationnelles et de son sous-comité Ressources, performance et évolution de la gouvernance.

Le cadre de gestion des bénéfices vise, entre autres, à encadrer la gestion des bénéfices des projets qualifiés⁷, à définir les bénéfices attendus des projets en ressources informationnelles, notamment l'amélioration de la qualité des services, la réduction des délais, la réduction des coûts, et à suivre la performance des organismes publics en fonction des bénéfices estimés à partir de l'autorisation d'un projet en ressources informationnelles. Il définit, en outre, les éléments clés de la détermination des bénéfices attendus, les coûts évités, les cibles à atteindre et les indicateurs de mesure. Il propose une approche pour faciliter l'optimisation des ressources et l'atteinte des objectifs stratégiques des organismes publics grâce à la gestion des bénéfices.

Depuis l'adoption du cadre de gestion des bénéfices, les projets qualifiés en ressources informationnelles au sens des Règles relatives à la gestion des projets en ressources informationnelles y sont assujettis et les organismes publics ont jusqu'au 1^{er} avril 2023 pour s'y conformer. Cependant, tous les projets qualifiés dont l'autorité responsable d'accorder l'autorisation est le Conseil du trésor ou le gouvernement doivent s'y conformer depuis sa publication.

En outre, le cadre de gestion des bénéfices permettra d'appuyer la priorisation des projets par les organismes publics et le MCN afin de financer les projets les plus porteurs de bénéfices pour les citoyens et les entreprises. Il sera donc un outil indispensable à cet égard et il permettra au MCN de suivre la performance des organismes publics en matière de gouvernance des ressources informationnelles et d'amélioration des services publics.

⁷ Un projet qualifié est un projet qui implique un coût total qui est égal ou supérieur à 500 000 \$ et qui correspond à l'une ou à plusieurs situations suivantes : l'ajout ou l'implantation d'un nouveau système d'information, d'une nouvelle solution ou d'un service d'affaires pouvant couvrir le développement, l'acquisition ou l'abonnement, le remplacement d'un système d'information, l'ajout de fonctionnalités ou l'amélioration d'un système d'information, d'une solution ou d'un service d'affaires ou l'introduction de nouveaux services en infrastructures technologiques.

