Government Guidance and Governance Control Layer (GGCL) – Canada's Federated AI Service Framework by Jamie Atkinson, Toronto, Canada

Preamble: In 2025, Canada's Auditor General exposed a crisis in government service delivery: the Canada Revenue Agency (CRA) call centres gave correct answers to individual tax questions only 17% of the time, with business tax or benefits queries answered accurately just 54% of the time1. Fewer than one-third of responses were complete2. Callers also faced long waits – only 18% of calls were answered within the 15-minute standard, and most waited an average of 31 minutes3 4. These failures, rooted in an over-3,600-page Income Tax Act that "virtually no one can understand"5, make it clear that incremental fixes (like hiring more agents) won't solve the problem6. The Government of Canada acknowledged this crisis – launching a 100-day plan to improve CRA service (reallocating staff and even piloting an AI chatbot for common questions)7 – but a more fundamental solution is needed.

Enter the GGCL Framework: The Government Guidance and Governance Control Layer (GGCL) is a comprehensive strategy to modernise and integrate Canada's public service delivery using cognitive AI, while preserving the country's federated governance structure. Its mission is straightforward yet ambitious: every inquiry from a citizen should receive a timely, accurate, and complete answer, and every internal request between federal and provincial offices should be handled with consistent, lawful information. To achieve this, GGCL establishes a federated network of sovereign AI "tenants" – AI assistants dedicated to individual government departments or ministries (federal and provincial) – all governed by shared protocols for communication, oversight, and accountability. Each AI tenant operates under the authority and laws of its jurisdiction (for example, a CRA Tax AI for federal tax questions, and separate AI systems for each province's tax or benefit programs). GGCL defines how these AI tenants interface securely and predictably with one another when needed, enabling cooperation across Canada's government layers (federal–provincial, or department–department) without compromising jurisdictional sovereignty. The scope of GGCL spans all major service domains (taxation, benefits, health insurance, permits, etc.) at both the federal level (e.g. CRA, Service Canada, IRCC) and the provincial/territorial level (e.g. Revenu Québec, Service Ontario), and even municipal or interjurisdictional contexts where applicable. By turning our massive, hard-to-navigate rulebooks into a friendly, reliable digital guide available 24/7 in both official languages, GGCL aims to make nightmares like the 2025 CRA call centre fiasco a thing of the past.

Article 1: Purpose and Scope

Purpose: The GGCL framework's purpose is to fundamentally improve public service delivery across Canada by leveraging artificial intelligence in a controlled, federated manner. It seeks to ensure that every citizen inquiry is answered promptly and correctly, with the same authority as if delivered by a seasoned expert, and that inter-governmental information exchanges are consistent and lawful. In short, it transforms how Canadians get information from their governments – eliminating erroneous advice and endless referrals – while upholding the rule of law and respecting each government's jurisdiction.

How It Works in Brief: GGCL will accomplish this via a network of specialised AI assistants ("tenants") deployed in each participating government entity. Rather than one monolithic super-system, each federal department and each province/territory operates its own AI, trained on its specific statutes, regulations, and services. For example, at the federal level, CRA would have a "TaxAI" handling income tax questions, Employment and Social Development Canada might have a "BenefitsAI" for EI or CPP queries, IRCC an immigration assistant, etc. Similarly, each province would have AI assistants for provincial domains (e.g. a "RevenuQC-AI" for Quebec taxes, "ServiceON-AI" for Ontario services, etc.). Each AI tenant is essentially a digital civil servant for its jurisdiction – it knows only what it is permitted to know under that government's laws and data access rules, and it provides information exactly according to the current laws, policies, and official guidelines of its jurisdiction.

Federated Yet Integrated: What makes GGCL powerful is that these AI tenants don't work in isolation. The framework defines shared protocols and governance that allow them to interoperate seamlessly when a question or task overlaps jurisdictions. For instance, if a citizen asks a question that involves both federal and provincial elements ("How will my provincial disability payments affect my federal taxes?"), the relevant AI systems will communicate behind the scenes – the provincial AI will supply the needed provincial information (e.g. the definition and amount of the provincial payment) to the federal TaxAI, which will then provide an integrated answer covering both federal tax treatment and provincial context, all in one go. Throughout this process, each AI only speaks to the part of the answer governed by its own laws, ensuring that the response a citizen gets is the same as they would receive if they contacted each office individually – except now it's delivered as a single, coherent answer in one interaction. This federated approach means Canada can maintain its decentralised governance (each government retains control over its data, decisions, and AI), while citizens experience a unified service interface that transcends bureaucratic silos.

Scope: The GGCL framework applies across all major service domains in Canada. This includes (but isn't limited to):

Taxation (personal and business taxes at federal and provincial levels);

Benefits and Social Services (EI, CPP, OAS federally; provincial social assistance, child benefits, etc.);

Healthcare Coverage (e.g. provincial health insurance plans like OHIP, and federal health benefits for certain groups);

Permits and Licensing (from federal immigration visas to provincial driver's licences or municipal permits);

Any area where citizens or officials seek information or decisions involving government rules.

It is designed for use at the federal level and all provincial/territorial levels, and by extension can be adapted for municipalities or inter-municipal cooperation if needed. The framework explicitly supports cross-jurisdictional queries – situations where answering a question requires knowledge from more than one jurisdiction's purview – by enabling a secure query/response exchange between the respective AI tenants.

Importantly, GGCL is not a separate "service" citizens must learn, but a behind-the-scenes layer that will be embedded in existing service channels:

Online: Government websites and portals can integrate the AI assistant to answer user questions in real time.

Telephone: Call centres can use the AI to either assist human agents or as an interactive voice response chatbot after hours, giving the same quality answers.

In-person: Frontline staff at Service Canada or provincial offices can consult the AI to help answer citizens' queries quickly and accurately.

New channels: as technology evolves (mobile apps, messaging platforms, etc.), the GGCL AIs can be made accessible there too, offering consistent answers everywhere.

By covering the broad scope of services and channels, GGCL aims to ensure Canadians "get it right the first time," no matter how or where they ask their question. The following table highlights the contrast between the status quo and the GGCL-enabled future for common service situations:

Service Challenge (Status Quo)

Solution Under GGCL

Fragmented information: Citizens must contact multiple offices for a complete answer (e.g. federal CRA for taxes, then provincial agency for related benefits), often receiving partial or mismatched information.

Integrated answers: One query yields a coordinated response. The AI network fetches all relevant pieces from federal and provincial sources, then presents one complete answer, avoiding runaround8 9.

Inconsistent advice: Answers depend on which agent you reach; information can conflict between departments.

Single source of truth: All AI responses use up-to-date laws and official guidance. Answers are consistent across departments and regions because each AI contributes its expertise by the letter of the law, yielding identical conclusions10 11.

Delays and limited hours: Service depends on human availability (8-5 on weekdays). After-hours questions wait, and peak times cause backlogs (as seen with CRA's 31-minute waits)12.

Instant 24/7 service: AI tenants are available around the clock. Most routine queries are answered in seconds, drastically cutting wait times. Complex questions can be queued for human follow-up, but acknowledgment is immediate.

Opaque reasoning: Callers get an answer but often not the rationale. It's hard to know if advice is trustworthy, and there's no record for appeal if it's wrong.

Transparent and traceable: AI answers come with citations to laws/regulations (e.g. "According to Income Tax Act, s.__, ...") and are logged. Users see why that answer was given, and if needed, a transcript can be reviewed by supervisors or used in appeals13 14.

Privacy concerns if data is shared ad hoc: Currently, when one agency needs info from another, it often requires manual processes and raises privacy questions.

Privacy-by-design collaboration: AIs exchange only the minimum necessary data, through secure APIs, under pre-defined agreements. Personal data stays within its home jurisdiction; only relevant facts (with consent and legal authority) are shared, all under encryption and audit trails.

Through these measures, GGCL directly addresses the service gaps identified by the Auditor General and years of citizen frustration. It seeks not just to patch the system, but to re-engineer service delivery for the 21st century – making government assistance accurate, fast, accessible, and equitable across Canada.

Article 2: Guiding Principles

GGCL is built on foundational principles that reflect Canada's commitment to good governance, bilingual service, and the rule of law. These principles guide the design, implementation, and operation of the entire framework:

2.1 Rule of Law & Accuracy

Absolute fidelity to laws and policies. Each AI in the GGCL network acts as a digital civil servant, meaning it is programmed to apply statutes, regulations, and official policies exactly as a conscientious human officer would – no improvisation, no "making up" rules. This ensures that all information provided is legally sound and authoritative. In practice, when a Canadian asks a complex question (say, a tax deduction eligibility), the AI's answer will explicitly reference the relevant sections of legislation and government guidelines. For example, it might say: "According to the Income Tax Act, section X, and CRA Bulletin Y, you qualify for [Deduction] because …". By design, the AI cannot invent, change, or bypass rules – it has access only to official, vetted sources.

This principle directly addresses the Auditor General's finding that accuracy was often sacrificed under pressure to handle calls quickly15. Under GGCL, accuracy is paramount and built into the system's functioning – the AI always prioritises giving a correct and complete answer over giving a quick but wrong one. Moreover, the rule-of-law principle means that if a question spans multiple jurisdictions, each AI only provides answers for its jurisdiction's portion of the question. For a question about how a provincial program affects a federal benefit, the provincial AI will supply the provincially-defined facts (e.g. what the provincial benefit amount is, or how it's classified), and the federal AI will use that information strictly within the parameters of federal law to produce the final answer. No single AI steps outside its legal domain. This way, no matter which government office an answer comes from, it will be consistent with what any other office would say on the same facts, because each piece is anchored in the same lawful definitions16 17. Canadians will no longer encounter the frustration of conflicting answers; the law itself is the single source of truth for the AI network.

2.2 Transparency & Accountability

Every AI decision is transparent and traceable, and humans remain accountable. GGCL mandates that every interaction with an AI assistant is logged and explainable. When an AI provides an answer – whether to a citizen's query or an internal memo – it must include a brief rationale or reference. For example, an answer about a tax credit will note something like, "(Reference: ITA 2025, c.1, s. 118)" to show the legal basis. These references make the AI's reasoning visible and verifiable in real time[18] [19]. All such interactions are stored in secure audit logs accessible to oversight authorities (e.g. the Office of the Auditor General and internal auditors).

This level of transparency means any advice given by AI can later be reviewed to ensure it was correct and complete. It fundamentally changes oversight: instead of conducting after-the-fact mystery shopper calls (as the Auditor General did to find only 17% accuracy[20]), auditors can continuously sample the AI logs to verify accuracy at scale, or trace the exact source of any erroneous advice. Essentially, the AI always shows its work, and there's a permanent record.

Crucially, introducing AI does not remove human responsibility for government services. GGCL is explicit that for every AI tenant, there is a corresponding human authority who supervises it and remains accountable for its performance. Each department or agency deploying an AI must maintain a team of human experts (e.g. senior program analysts or policy advisors) who curate the AI's knowledge base and update it whenever laws or policies change, and who monitor the AI's outputs. These experts handle exceptions and edge cases: whenever the AI is unsure or encounters a scenario not covered in its training, it must flag or defer to a human. For instance, if someone presents a novel situation that the AI can't confidently match to a rule, the AI might respond, "I'll need to have a specialist review this scenario; I've recorded your question for follow-up." The query is then escalated to a designated human officer, and the AI assists that officer by compiling relevant info and references.

Citizens will always have the right to speak to a human or have a human review an AI's answer. The system will make this option clear (e.g. "Not sure about this answer? You can request a review by a human officer."). If a person disagrees with or doesn't understand an AI response, the responsible department must ensure a human addresses their concern, using the AI's log as supporting documentation. This maintains accountability: just as one can appeal a decision by a human official, one can question an AI-provided answer and get human reconsideration. The final accountability for decisions and advice remains with the government officials, not the technology.

To reinforce accountability, GGCL includes regular public reporting on system performance. Metrics such as accuracy rates, completeness of answers, average response times, and number of queries handled without human intervention will be published. Departments' annual reports will include these measures, allowing Parliament and the public to track improvements (for example, seeing that "this year, the TaxAI responded to 5 million inquiries at 98% verified accuracy, vs. a baseline of 17% in 2025"). This transparency builds trust: Canadians can be confident that when an AI says "Yes, you are eligible for this benefit," it's not a black-box answer – it's one that can be traced to the law, double-checked, and if necessary, challenged through normal procedures (with the AI's records forming part of the evidence for any appeal).

2.3 Data Privacy & Sovereignty

Data stays under the control of its rightful government owner; sharing is minimal, lawful, and secure. In a country with divided jurisdiction like Canada, privacy and sovereignty are paramount. GGCL's architecture is designed so that each AI tenant can access only the data that its government already has legal authority to use, and nothing more. There is no giant unified database. For example, the federal TaxAI can retrieve someone's tax filings from CRA databases, but it cannot directly read provincial social assistance records; a provincial AI can confirm a fact to the TaxAI if lawful (e.g. "yes, this person received $X in social assistance last year") but the TaxAI can't rummage through provincial databases on its own. This respects established data-sharing agreements and privacy laws at every step.

When AI tenants need to communicate, they do so on a "need-to-know" basis with full encryption and auditing. A requesting AI will send a structured query to another, including metadata about who is asking and under what authority. For instance, if the federal Employment Insurance AI needs to verify provincial income support for a benefits calculation, its query to the provincial AI carries proof that it's an authorized federal system asking under a certain clause of a federal-provincial agreement. The provincial AI then checks: Is this request permitted under my province's privacy laws and our agreement with the feds? If yes, it will reply with precisely the information allowed (e.g. "Income support for SIN 123-456-789 in 2024 was $5,000"), and nothing more. It won't share unrelated data like health information or other family details, keeping personal data siloed in its home jurisdiction. All inter-AI messages are encrypted in transit, and tagged with their source, destination, timestamp, and purpose. These tags enable oversight agencies to later confirm that, for example, the only data shared between CRA and Quebec's system was what was authorized, and used only for the intended case.

By embedding privacy and sovereignty constraints into the very code and protocols, GGCL ensures compliance with the Privacy Act (federal) and provincial privacy legislation (like Ontario's FIPPA, Quebec's privacy laws, etc.) by design. No AI can override these rules – even if a user asks a question that would require unauthorized data, the AI will respond that it cannot provide that information. Moreover, any personal data that does need to pass between systems (which is kept to a minimum) is handled transparently and can be subject to audit or consent frameworks as required by law.

This approach maintains the federated integrity of Canada's governance: provinces control their citizens' data and AI outputs, the federal government controls its own, and they only cooperate through well-defined interfaces rather than pooling data. Canadian sovereignty is also respected in a broader sense. If, say, international tax information is needed (outside the current GGCL scope, but conceivable for things like foreign income queries), the framework would require explicit enabling by Canadian authorities and adherence to international agreements – nothing crosses borders unless our laws permit it. In summary, GGCL treats privacy and jurisdictional boundaries as inviolable. Citizens' personal information will not be centralized or misused; they remain protected by the same privacy rights, even as service becomes more unified.

2.4 Service Quality & Inclusivity

Every Canadian deserves high-quality service – fast, accessible, and equitable – and GGCL is built to deliver exactly that. At its core, this framework is customer-service oriented, aiming to vastly improve the day-to-day experience of interacting with government. Key aspects of this principle:

Timeliness: People should receive answers when they need them. Under GGCL, if a taxpayer in rural Alberta has a question at midnight, they can get an immediate answer from the AI (which is effectively always "on call"). This 24/7 availability eliminates the frustration of having to wait for office hours or endure long hold times. The end goal is to virtually eliminate wait times for informational queries – a dramatic change from the status quo where less than one-fifth of calls were answered within 15 minutes[21].

Accuracy & Completeness: Building on the Rule of Law principle, service quality means getting it right the first time. A partial answer that omits key details can be just as bad as a wrong answer (forcing the person to call back or, worse, leading them to act on incomplete information). GGCL mandates that AI responses must be complete – covering all relevant angles of the question asked. If, for some reason, an AI cannot give a complete answer (for example, maybe the question requires a piece of personal information not provided), the AI

should clearly state what additional info is needed or suggest next steps, rather than just giving a half-answer. The system's performance will be measured on first-contact resolution: the expectation is the vast majority of queries (target 95%+) are fully resolved in one interaction, without the citizen having to re-contact or clarify further.

Plain Language and User-Friendly Explanations: Government information is notorious for jargon. GGCL AIs are required to phrase answers in clear, simple language that a layperson can understand, without altering the legal meaning. One of the benefits of AI is that it can be instructed to automatically include definitions or explanations for technical terms. For instance, if an answer mentions "net income for Section 118 credits," the AI might add a brief parenthetical: "(i.e. income after RRSP contributions and union dues are subtracted)". This way, citizens are not left puzzled by terminology. The AI essentially acts as a translator between bureaucratic language and everyday understanding, empowering citizens with comprehension of their own affairs.

Bilingual Service: In line with the Official Languages Act, all public-facing aspects of GGCL are fully bilingual (English and French). Users have the choice of official language, and the quality of service will be equal in both. To achieve this, each AI tenant will be trained on content in both languages or have access to high-quality translation resources so that an answer given in French is just as complete and accurate as one in English (and vice versa). A citizen in Quebec can ask in French and get the answer with French legal references (including provincial Civil Code references if needed), and a citizen in BC can ask in English and get the English version; and each could also get the other language upon request.

Inclusive & Accessible Design: GGCL embraces the principle of "accessible by default", aligning with the Accessible Canada Act and WCAG 2.1+ guidelines. All answer outputs should be available in formats that accommodate people with disabilities – for example, the text that screen readers can read easily, options for large text display, high-contrast modes, etc. If the AI provides a written summary or documentation to a user's email, those documents should be accessible PDFs or text. For users who cannot engage through text or standard web interfaces (such as some people with visual or cognitive impairments, or those without internet access), the framework ensures alternative access. This includes phone-based interaction (where speech-to-text and text-to-speech technology allows a person to call a number and "talk" with the AI assistant, effectively getting the same answers as through chat) and in-person mediation (where a service counter worker uses the AI on a citizen's behalf, ensuring that even those uncomfortable with technology still benefit from the AI's capabilities). Additionally, special attention is given to Canadians in remote or Indigenous communities – ensuring the system works in low-bandwidth

environments and can handle queries in either official language even when regional dialects or phrasing might differ.

Consistency Across Channels: Whether someone uses a web portal, a mobile app, calls by phone, or visits an office, the information they receive through GGCL will be consistent. This prevents the situation where, for instance, a website FAQ says one thing but a call centre agent says another. Since the AI tenants form a unified knowledge network, any channel that taps into this network gets the same vetted information. This consistency builds confidence: citizens learn that they can trust answers from the government because it won't matter whom or how they asked – the answer would be the same.

By adhering to these service quality and inclusivity principles, GGCL aims to dramatically boost public trust and satisfaction. If a system can reliably give people the correct answers or guide them through the correct process on the first try, it not only saves time and reduces frustration, it also encourages compliance (people are more likely to follow rules if they actually understand them) and reduces downstream problems (like mistakes on forms that later have to be fixed). In essence, every Canadian – regardless of region, language, or ability – should receive the same high standard of service. That is the bar GGCL sets, and meeting it is essential to its success.

Article 3: Federated AI Architecture

To turn these principles into reality, GGCL defines a modular, federated AI architecture tailored to Canada's governmental structure. The architecture specifies how the various AI assistants are set up (sovereign in their domains), and how they all communicate and cooperate. The major elements of this architecture are:

3.1 Sovereign AI Tenants per Jurisdiction

Under GGCL, each major government entity gets its own AI assistant, which we call an AI tenant. These tenants are "sovereign" in that each is fully under the control of its home jurisdiction and limited to its jurisdiction's knowledge.

At the federal level, every department or agency that provides public-facing information or services will have an AI assistant specialized in its domain. For example:

CRA's "TaxAI" could handle tax-related inquiries (personal income tax, business tax, GST/HST questions, etc. under federal tax law).

Service Canada's "BenefitsAI" might cover EI, CPP, OAS, and other federal benefits programs.

IRCC's "ImmigrationAI" could help with immigration and citizenship questions.

Health Canada's "HealthRegAI" might field questions on federal health regulations, drug approvals, etc.

And so on for other domains (e.g., "TransportAI" for Transport Canada services, "EnvironmentAI" for environmental regulations, etc.).

At the provincial/territorial level, each province or territory would deploy AI assistants for its key service areas. For example:

Ontario might have "ON-TaxAI" (for Ontario tax credits, provincial income tax where applicable, etc.), "ServiceOntario-AI" (for driver's licenses, health cards, vehicle registration, etc.), "OHIP-AI" (for Ontario health insurance queries).

Quebec could have "RevenuQC-AI" (for provincial taxes since Quebec collects its own income tax), "RAMQ-AI" (for Quebec health insurance), etc.

Smaller provinces might combine domains into one assistant if appropriate, or have multiple smaller ones.

Municipal or Other Agencies: While the initial focus is federal and provincial, the architecture is extensible. Large municipalities or specific intergovernmental service bodies could also have AI tenants that plug into the network in the future (for instance, City of Toronto could eventually have a "TorontoCity-AI" for municipal services, which could coordinate with provincial/federal ones for questions like property taxes vs. income taxes, etc.).

Each AI tenant is trained on the body of knowledge relevant to its authority: its governing statutes, regulations, official policies, procedural guides, forms, and anonymised historical Q&A examples. Importantly, each has technical and data safeguards so that it cannot access information from other tenants or jurisdictions on its own. It only knows what its jurisdiction "knows." This is akin to each AI being in its own secure vault – capable within its space, but needing permission and protocols to reach outside.

This design mirrors Canada's political structure: no single AI holds all the power or information. Instead, like government departments themselves, each AI is an expert in its field and accountable to its jurisdiction's rules and leadership. However, citizens often

need integrated answers spanning these silos – that's where the next part of the architecture comes in.

3.2 Shared Interoperability Protocols

To connect these disparate AI tenants in a coherent way, GGCL establishes common protocols for communication. Think of this as a standard language and set of rules that all governmental AIs speak to each other, ensuring they can "plug and play" seamlessly. Key facets of this interoperability layer:

Standardised Query/Response Format: The protocol defines how an AI should format a request to another AI and what a response looks like. For example, if one AI needs data from another, it might send a JSON-formatted query like: {"requester": "CRA-TaxAI", "action": "DATA_REQUEST", "subject": "Person SIN 123-456-789", "dataNeeded": "Provincial social assistance income for 2024", "authBasis": "Section X of Info-Sharing MOU"}. The receiving AI (say, Ontario's social services AI) recognizes the structure, verifies the authBasis, and if all is good, responds in a similarly structured way: {"responder": "ON-SocialAI", "status": "SUCCESS", "data": {"2024_assistance_income": 5000}, "source": "Ontario Benefits System", "confidence": "verified"}. The exact technical schema would be detailed in the protocol docs, but the essence is: everyone uses a common "grammar" for inter-AI communication.

Uniform Data Standards: The protocol also includes a dictionary of terms and units so that, for instance, "income" or "date of birth" are understood uniformly by all systems. If one system says date "2024-05-01", the other knows it's YYYY-MM-DD format, etc. This avoids miscommunication due to format differences. It's similar to how different branches of government agreed on sin numbers or company numbers as common identifiers; here we ensure AIs align on data definitions.

Security Handshakes and Credentials: Each AI tenant will have a digital certificate or credential proving its identity, much like government services have today (e.g., secure tokens). When one AI calls another, it must authenticate itself as an authorized government system. The protocol might use a zero-trust security model – meaning even though it's government talking to government, nothing is trusted by default, everything must be verified. The requesting AI signs its request with its private key; the receiving AI checks that signature against a registry of trusted government AI credentials. This prevents any rogue system or external hacker from posing as a government AI. It's akin to how all government emails might be signed or all internal network calls require a VPN – here each AI verifies the others.

Error and Exception Handling: The interoperability rules also define how to handle cases where an AI cannot or should not answer a request – for instance, if the request is not permitted by law, or the data doesn't exist. Standard error codes (like "NOT_AUTHORIZED" or "DATA NOT FOUND") and fallback behaviors are specified. If Ontario's AI replies "NOT_AUTHORIZED" (maybe a consent is missing), the federal AI knows to either inform the user that certain information couldn't be obtained or ask if they can provide documentation themselves. This ensures that even when one AI can't help another, the user-facing side can still handle it gracefully.

This common protocol layer is what unifies the federation, technically speaking. It's comparable to how the internet works: many independent networks can talk to each other because they use the same TCP/IP protocols. Here, many independent AI systems across federal and provincial governments can interoperate because they follow GGCL's API and data standards22 23. It avoids a chaotic scenario where every province builds something incompatible. Instead, no matter which vendor or platform is used underneath, as long as they implement the GGCL interface standards, the AIs can mesh into one functional network.

Notably, using a standard protocol also simplifies adding new participants. If tomorrow a new territory or a municipal service wants to join, they build or configure their AI to the established protocol and immediately it can "speak" to the rest (subject to the governance permissions). This makes the architecture scalable and future-proof – we're effectively defining the rules of engagement now, to accommodate innovation later.

3.3 Unified User Experience ("One Front Door")

(This is an enhancement drawn from best practices, ensuring the architecture benefits citizens in a user-centric way.) While each AI tenant runs separately, GGCL is designed so that from the citizen's perspective, the multiple AIs act as one. The architecture supports a unified front-end interface that can route user queries to the right AI(s) on the back-end without the user needing to know who does what.

In practical terms, Canadians will interact with what feels like a single government virtual assistant – for example, a chatbot on Canada.ca or a voice assistant on a toll-free number – and that assistant, behind the scenes, will engage any relevant AI tenants. This orchestration could be managed by a central "OrchestratorAI" or simply by the integrated capabilities of the AI systems themselves in a hub-and-spoke model. If you ask a very broad question ("I just moved to a new province, what government things do I need to take care of?"), the front-end will break it down and simultaneously consult multiple AIs: the

federal tax AI (about updating address for taxes), the destination province's health insurance AI (about getting a new health card), perhaps the driver's licensing AI, etc. It then compiles the answers into a coherent step-by-step guidance for the user.

The "one front door" approach is essential so that users don't need to figure out which AI tenant to contact. Much like you dial one number for a general call centre and they internally transfer you, here you ask one assistant and it internally fetches from the right sources24 25. Canada can maintain distinct systems per jurisdiction but still present an integrated face to the public.

From an architecture standpoint, this means:

Discovery & Routing: The system must identify which AI tenant (or tenants) can answer a given user question. This likely involves a central registry or knowledge graph of topics tied to jurisdictions. For instance, "driver's licence" is known to be a provincial matter, so a query about that routes to the province's service AI; a query about "EI benefits" is known federal (ESDC AI); a question that mentions both "income tax" and "disability assistance" triggers both CRA and provincial social services AIs. This routing can be handled by a specialized component or by an advanced language model that's aware of jurisdictional responsibilities, orchestrating queries accordingly.

Aggregation of Responses: If multiple AIs provide pieces of an answer, the architecture must merge them for the user. Perhaps the OrchestratorAI does this by waiting for all needed responses, then constructing a combined answer. The final answer will indicate the sources of each piece (transparently, e.g., "Provincial info confirms X; federally, Y applies..."), but delivered as one message. The aim is a seamless narrative rather than making the user talk to one AI then another.

Consistent Interface: All AI tenants must adhere to user interface guidelines so that their outputs can be rendered uniformly. Whether the user is in a chat window, on a smart speaker, or reading an email summary, the style should be coherent. The protocol might extend to "presentation" standards (for example, how to phrase disclaimers, or how to insert citations in an answer) to ensure consistency.

By building the user experience layer into the architecture, GGCL ensures that integration is not just behind-the-scenes but also felt by the user as convenience. They won't experience the famous "silo effect" of government; the architecture effectively hides the silos while keeping their integrity.

3.4 Federated Governance Committee

To oversee the technical and cooperative aspects of this architecture, GGCL establishes a Federated AI Coordination Committee. This committee is a governance body composed of representatives from:

Key federal stakeholders (for example, Treasury Board Secretariat (digital government and CIO), Department of Justice (to advise on legal compliance), Service Canada, CRA, etc. – essentially departments leading service delivery and data governance).

Every participating province and territory (likely from their executive or CIO offices, or lead service delivery ministries).

Possibly observer seats or input from municipalities (through Federation of Canadian Municipalities or similar) if the scope is expected to extend municipally.

Role of the Committee: This is not a political decision-making table, but rather a technical and policy coordination table. It manages the evolution of the shared protocols (Article 3.2) and the resolution of any issues that arise in cross-jurisdictional operations. Responsibilities include:

Maintaining and Updating Standards: As technology or needs evolve, the committee can update the interoperability standards. For example, if a new more secure encryption method emerges, the committee can mandate its adoption across all AI systems. Any changes must be agreed upon collectively (respecting that no single government can impose new requirements unilaterally on others).

Onboarding New Participants: If a province or a department wants to join the network or make a significant change to their AI setup, the committee reviews the plans to ensure compatibility and adherence to GGCL principles. They might set certification tests for a new AI tenant before it's allowed to go live connected to others.

Data Sharing Agreements and Legal Alignment: The committee also serves as a forum to discuss and align the legal frameworks enabling the data exchanges. If, for example, a province has stricter privacy rules that prevent a certain data item from being shared even though the federal side is asking for it, the issue can be raised here. The committee might facilitate creating a new Memorandum of Understanding or a legislative tweak to resolve the impasse – or find a technical workaround that satisfies both (e.g., maybe the data can be transformed or aggregated in a way that's acceptable). In essence, it's a place to catch policy mismatches early and sort them out amicably.

Monitoring and Enforcement: The committee will get reports on how well the systems are interoperating. If one party consistently isn't following protocol (say, their AI is not responding in the standard format or is requesting more data than allowed), the committee can call that out and push for compliance. This is peer governance: everyone has agreed to the rules, and everyone holds each other accountable to them.

Shared Learning: It also becomes a community of practice. Members can share best practices, technical improvements, and even collaborate on investments (like jointly funding a new translation module that everyone can use, or bulk-purchasing cloud services for economies of scale).

This coordinated governance is analogous to federal-provincial working groups that manage programs like the Canada Pension Plan or health accords. It respects that provinces are sovereign in their realm by giving them an equal seat at the table for any decisions that affect them. The federal government cannot, for example, change the data protocol or require new data sharing without provincial agreement (and vice versa). Thus, the technology framework is backed by a cooperative federalism model of decision-making, which is familiar in Canadian intergovernmental relations. By formalising this, GGCL ensures that the federated system remains harmonious – it's a partnership, not a top-down system.

3.5 Continuous Learning & Knowledge Sharing

Technology aside, a major value of an AI system is that it can learn from patterns. GGCL architecture includes mechanisms for continuous learning and updates across the network:

Each AI tenant will keep track of questions it couldn't answer confidently or cases where it had to defer to a human. These instances are golden learning opportunities. The AI flags knowledge gaps; human supervisors then update the AI's training data or rules. For example, if many people start asking about a new benefit that wasn't in the system, the AI notes the trend, and that info gets fed back to the department to provide updated content for the AI (and possibly to improve public comms).

If an AI in one jurisdiction learns something that could be relevant to others, there's a channel for sharing that update. For instance, say Ontario's assistant sees confusion about a new provincial credit that also affects federal taxes. Ontario updates its AI about the new credit rules; through the interoperability setup, it can send a notice to CRA's TaxAI that "a new provincial credit exists named X, which may impact line Y on federal return".

The TaxAI can then incorporate that into its logic proactively. In the past, such cross-awareness might lag; here it can be near-instant.

Broadcasting changes: Whenever a law or policy changes, the responsible department's AI is updated (after human curation) and can broadcast a "policy change notice" to the network. E.g., if the federal government changes the Child Benefit formula, the federal BenefitsAI would update and send out a structured alert that all provincial AIs might listen for (since some provinces have integrated child benefits or need to know for their social assistance calculations). This doesn't mean provinces automatically adjust anything, but their AIs will at least be aware of the changed federal context when conversing with the federal AI.

The analytics from AI interactions (with privacy respected) will provide unprecedented insight into what Canadians find confusing or where services are lacking. The GGCL architecture will include dashboards or reports for managers that aggregate common queries, unresolved queries, regional differences in questions, etc. This can guide everything from staff training priorities to actual policy simplifications. Essentially, the AI network serves as a continuous audit of service clarity: if 10,000 Canadians ask the same question that indicates a misunderstanding of a rule, that's a strong signal to maybe simplify that rule or improve the guidance around it. Under GGCL, these insights are shared with policy makers regularly, closing the feedback loop.

From a technical view, continuous learning will be carefully supervised. These AIs are not unchecked machine learning systems on live data; they have a controlled learning pipeline. New trends are identified, but any change to what the AI will say (its model, its knowledge base) goes through a human validation process within each jurisdiction to ensure it's correct and policy-compliant. Only then is that new knowledge activated for public use.

In summary, the federated architecture doesn't just statically answer questions; it evolves. It learns day by day, improving itself, and sharing those improvements across the federation where relevant. This ensures that GGCL keeps up with real-world changes – be it new laws, new programs, or new kinds of user needs – in a nimble yet controlled fashion. The result is a living system that gets smarter and more helpful over time, across all of Canada.

Article 4: Shared Standards and Trust Model

To maintain a high-performance, trustworthy AI network, GGCL sets rigorous shared standards that all AI tenants must meet. These standards cover accuracy, language, accessibility, security, and ethical considerations – forming a "Trust Model" that assures both users and officials that the system behaves responsibly. Below are the key pillars of these standards:

4.1 Accuracy and Completeness Benchmarks

GGCL demands excellence in the quality of information each AI provides. Concretely, the framework will establish measurable benchmarks such as:

Accuracy Rate: e.g., 95% or higher of AI-provided answers must be factually and legally correct. This means if an AI answers 100 random real user questions, at least 95 of those answers should fully align with the authoritative source (law/policy) and ground truth for that query. This benchmark is dramatically above the 17% figure that spurred these reforms26 – in fact, GGCL is explicitly about obliterating that gap.

Completeness Score: a similar benchmark that the vast majority of answers cover all pertinent points of the user's question. If, say, a user asks "What do I need to apply for Employment Insurance and how long does it take?", a complete answer would list the required documents/information and provide the timeline; an answer that only gave the timeline but not the required documents would be incomplete. The standard might set, for example, 90%+ completeness in responses (acknowledging there may be rare edge cases where the AI can't complete due to missing user info).

Response Time: although not directly a measure of accuracy, speed is part of quality. Each AI should answer within a few seconds for straightforward queries. If a query is complex and requires cross-AI coordination, the system should still aim to respond faster than a human agent would (perhaps under 30 seconds even for multi-part answers). Service standards for response time will be defined (e.g., median response under 2 seconds for single-domain Qs, under 10 seconds for multi-domain).

Testing & Validation: Before an AI tenant goes live to the public, it must be rigorously tested against these benchmarks. This involves running it on a large set of test questions (including actual historical inquiries and specially crafted edge cases) and checking results. Only if it meets the benchmark (e.g., hits that 95% accuracy target consistently) is it approved for launch. Post-launch, continuous monitoring (random sampling of real interactions compared to expected answers) is used to verify it stays at high accuracy.

Local Evaluation: Each AI is evaluated in the context of its domain. You wouldn't measure a health AI on tax questions, for example. The Oversight Board (see Article 5) will oversee an independent validation process to ensure no one is marking their own homework overly generously. Each jurisdiction might do its internal QA, but cross-checks by an independent body or peer review by another jurisdiction's experts can provide confidence.

Dealing with Under-performance: If any AI tenant falls below the standard – say a new law causes confusion and the AI's accuracy dips – GGCL requires swift action. The AI's functionality might be temporarily scaled back: for example, it could switch to "assist mode" where it provides a draft answer along with references but asks a human to review before finalizing to the user, or it might display a disclaimer and prompt the user to double-check with a human until the issue is resolved. The responsible department must retrain or update the AI promptly to return it to compliance. In extreme cases, the Oversight Board could recommend pulling an AI offline (and reverting to human service) until fixes are made.

Public Accountability: These benchmarks won't be hidden. Part of building trust is letting Canadians know what performance to expect. The government can publish these standards and even report actual performance against them. For instance, a public dashboard might show "TaxAI current accuracy: 98%, audited last month" or "ServiceBC-AI completeness: 96%". When people see these numbers – and certainly when Parliament sees them – it ensures pressure remains to keep quality high. The agencies cannot quietly accept lower performance, because the system of measurement and transparency forces issues into the light for correction.

Continuous Improvement: Because the content each AI deals with can change (tax laws updated, new programs launched), maintaining accuracy is not a one-time task but ongoing. GGCL likely will mandate periodic re-evaluations (like a quarterly test on new questions, or whenever a major update is rolled out, do a regression test). The 95% benchmark could even be raised over time if consistently exceeded. In an ideal state, we approach as close to 100% accuracy as possible, acknowledging that some small margin of error might always exist (even if just due to ambiguous user questions or unanswered new scenarios – which should trigger improvements).

In sum, GGCL treats accuracy and completeness as non-negotiable metrics – a dramatic shift from a world where being right only 17% of the time was considered "business as usual"[27]. Under this framework, anything less than near-excellence triggers corrective action by design.

4.2 Bilingual and Accessibility Standards

Official Languages Equality: All GGCL AI services facing the public will be fully bilingual (English and French). This standard is more than just having a translation feature – it means that the AI is trained and tested in both languages so that it can understand questions and provide answers in either language with equal proficiency. For instance, if a legal term has different nuances in French vs English, the AI for a federal department must know both vocabularies deeply. The framework will leverage a shared terminology database that contains approved bilingual terms for government programs and titles (ensuring the AI doesn't, say, translate the name of a program incorrectly). It will also ensure that if one language version of content is updated (say an English policy doc changes), the French version is simultaneously updated so the AI doesn't end up giving outdated info in one language.

Where a jurisdiction primarily operates in one official language (e.g., Quebec's provincial AI might primarily use French internally), the architecture will enable translation support so that if an English query comes to a French-trained system, it can either translate on the fly or call a federal translation AI service. The goal is that a user should never hear "Sorry, that information is not available in [French/English]" – it should always be available in both. Performance in each language will be tracked to ensure the quality remains equal; for example, accuracy must be 95%+ in English and also 95%+ in French, measured separately.

Additional Languages: While official bilingualism is the standard, the framework could be extensible in the future to support other languages via integration (for example, an Indigenous language pilot or multilingual capabilities for newcomers), but those are beyond the current scope which focuses on official languages and accessibility.

Accessibility (Disability Accommodation): GGCL AIs must comply with modern accessibility standards (at least WCAG 2.1 AA, aiming for AAA where possible). This includes:

Accessible Outputs: All AI-generated content (text answers, attached documents, forms) should be formatted for screen readers (using proper tags, alternate text for any elements, etc.). If the system provides dynamic content, it should be navigable via keyboard (for those who can't use a mouse) and understandable by assistive technologies.

Multiple Modalities: Users should be able to receive information in their preferred format. For example, a visually impaired user might opt to get an answer as an audio response or a

Braille display. The system can convert the text answer to speech on phone or possibly send a Braille-ready file to a Braille device. Deaf users who use TTY or text phones should have equal access to the chatbot. If someone has cognitive difficulties, the plain language approach helps; possibly a simplified mode can be included.

Consistency and Predictability: For neurodiverse users (like those on the autism spectrum who might rely on routine), the AI's interaction style should be consistent and not overly colloquial or changing. It should not produce flashing content that could trigger seizures (no unnecessary animations, etc.).

Testing with Users: Part of the standard should require user testing with persons with disabilities during development. In effect, have people using screen readers or other assistive devices try out the AI service and give feedback that is then addressed before launch.

Channel Inclusivity: Recognizing not everyone has internet or is comfortable with chatbots, GGCL mandates that the AI services be accessible through traditional channels (like phone and in-person assistance). The standard here is that the same knowledge powers those channels. For instance, a call to a 1-800 number might be answered by an AI voice agent that uses the same backend as the web chatbot. If someone walks into an office, the employee at the desk can type the question into an internal AI portal and then convey the answer verbally or in print to the person. This ensures that even if someone never uses a computer, they still benefit from the improved accuracy and speed of the AI system.

By adhering to bilingual and accessibility standards, GGCL ensures the AI revolution in service delivery leaves no one behind. It upholds Canada's values of linguistic duality and inclusion. In fact, in some ways it can exceed the current human-centred system: for instance, it's often hard to guarantee that every front-line agent across Canada is fluently bilingual or has deep training in accessibility – but an AI can be built from the ground up to excel in both languages and to format output accessibly every single time. This will help ensure that services in French are as quick and accurate as in English (an area where historically there have been disparities) and that persons with disabilities find the new system a significant improvement over patchy accommodation in traditional call centres.

4.3 Security and Data Integrity Standards

Security is paramount when government services go digital at scale. GGCL sets strict security requirements so that the AI network remains robust against cyber threats and data breaches:

Secure Hosting Environments: Each AI tenant must run in infrastructure that meets government security classification needs. For federal systems, this could mean a cloud or data center certified for at least Protected B data (since personal data is involved), possibly up to Secret if sensitivity demands. Provinces would similarly use their secure government IT infrastructure or accredited cloud services. Essentially, no running the main service on consumer-grade servers; it's in vetted, monitored environments.

Encryption: All data at rest and in transit associated with GGCL must be encrypted. This means databases storing conversation logs or personal details use strong encryption. Communications between AI tenants (the API calls) are encrypted end-to-end. Also, any backups or secondary storage have encryption, with keys managed according to government standards.

Access Controls: The AI systems will have strict access controls. Only authorized personnel can modify the AI's knowledge base or configuration (protected behind multi-factor authentication, etc.). The AI itself, when accessing data, uses system accounts with the principle of least privilege – for example, TaxAI might connect to a database that only lets it retrieve certain fields it needs, not everything. Each action the AI takes on data leaves an audit trail.

Intrusion Detection and Monitoring: Given this will become a critical system, continuous monitoring for unusual activity is mandated. If an AI tenant suddenly starts making abnormal requests (which could indicate a breach or misuse), alarms should trigger. Security teams (federal and provincial) will have dashboards to watch the health and integrity of the network. Periodic penetration testing and "red team" exercises will be required to probe for weaknesses.

Tamper-proof Logs: The record of what the AI told people (the logs) is sensitive since altering it could cover up mistakes or mislead audits. GGCL will require those logs to be tamper-evident or digitally signed so they cannot be altered without notice. The notion of digitally signing each answer (with the AI's credential) can also allow verification that an answer presented in an appeal or complaint is exactly what was originally given.

Secure Development Lifecycle: The AI software itself must be developed and updated using secure coding practices. Models and algorithms should be checked for vulnerabilities (for instance, to adversarial inputs). Dependencies (like any open-source components) must be vetted. Regular updates and patching are enforced.

Disaster Recovery and Redundancy: The standards also likely include provisions for high availability. Since citizens may rely on this at all hours, there should be redundancy (multiple instances across data centers) and a disaster recovery plan. If one province's AI goes down, there might be a failover instance or at least a mechanism to inform users and route urgent queries to human support in the interim.

Traceability: As mentioned, every cross-AI transaction gets a unique ID and timestamp. This means if there's ever a dispute ("Province X's AI says it gave the data, Fed AI says it never got it"), there's an immutable trace to investigate. This traceability also helps in incident response – one can reconstruct exactly what happened if a problem arises, which is crucial for debugging and forensic analysis.

Joint Security Governance: The federal CIO (or equivalent authority) will coordinate with provincial CIOs through the committee (Article 3.4) to ensure these standards remain up-to-date with emerging threats. The threat landscape in AI (like prompt injection attacks, data poisoning) is evolving; the standards will be revised as needed. For example, if quantum computing starts threatening current encryption, the committee would mandate a move to quantum-resistant algorithms for GGCL communications.

In essence, GGCL's security standards ensure the public can trust the system not only to be correct, but also to be safe and reliable. People should be able to use the AI service with confidence that their personal information won't leak and that malicious actors can't hijack the system to give false info. By adopting a "zero-trust" philosophy internally (verify everything) and layering defenses, the framework mitigates risks ranging from external hackers to internal misuse.

4.4 Ethical Use and Human Override

Embedding ethics and human oversight into automation. Even as GGCL automates information delivery, it adheres to Canada's ethical guidelines for AI use in government, notably the Directive on Automated Decision-Making (ADM) and related Treasury Board policies. Key points:

Human-in-the-Loop for Decisions: If an AI's output has a direct effect on a person's rights or benefits (an "administrative decision"), the default is that a human must be involved in that decision. For instance, the AI might draft a response to a taxpayer's adjustment request, but a human officer should approve it before it's issued, unless/until laws are changed to allow straight-through automated decisions. So, while answering general questions can be fully automated, anything that goes beyond advice into actual decision

(like approving an application, calculating a payment, etc.) triggers human oversight as per impact level. This is consistent with the ADM Directive which classifies systems by impact and requires higher levels of human intervention for higher impacts.

Explainability and Recourse: As established, every AI output comes with an explanation (citations). If someone is affected by an AI-assisted decision, they have the right to an explanation of how that decision was reached. The logs and rationale provide that. Moreover, individuals maintain the right to challenge or appeal decisions – the presence of AI doesn't remove existing recourse avenues. If anything, appeals may be easier because the AI will have clearly documented the basis for a decision, whereas a human might not always articulate it fully.

Fairness and Bias Mitigation: The AI must serve all groups equitably. The framework requires testing for potential bias in the AI's performance. For example, does it understand accents or dialects equally well in speech? Does it give shorter or less detailed answers to one official language community vs the other? Does it perhaps fail to address scenarios more common in a certain region or demographic because of training data gaps? Such issues must be identified and corrected. This involves using diverse training data, conducting bias audits, and possibly including community feedback loops. If any systematic bias is discovered (say, the AI is less effective in Indigenous communities due to certain phrasing of questions), the Oversight Board (Article 5) and the responsible department must act – retrain the model, add specific content, or otherwise fix the disparity.

No Profiling or Secondary Use: The ethical rules will likely include that the AI does not misuse the data it gets. For instance, if a user asks about unemployment benefits, the system should not quietly infer other things about them (like "maybe this person also will default on loans") and then pass that info on. The AI does not profile citizens beyond what is needed to answer their query, and it doesn't feed personal data into some unintended analysis. Also, data from interactions won't be used to, say, target enforcement unless explicitly allowed and transparently done (and even then, under separate legal authority).

Avoiding Over-Reliance: The AI should be upfront about its role. Citizens will be informed they are interacting with an AI (no deception it's a human), and told of any limitations (for example, a disclaimer that "This answer is based on current information and is not a legal decision" in cases where applicable). This transparency helps people understand when they definitely need a human (like complex appeals). It also sets proper expectations – reducing the risk that people blindly trust an AI even if their situation is one of the rare

exceptions. The presence of easy human escalation (as mentioned in Principles) also guards against over-reliance – if in doubt, the system encourages human double-check.

Compliance with Administrative Law Principles: The ADM Directive emphasizes values like legality, procedural fairness, and reasonableness. GGCL operationalizes these. For example, reasonableness in administrative decisions is supported by the AI providing a rationale referencing proper authority (so decisions aren't arbitrary). Procedural fairness is supported by providing information on how to get human help or appeal. And legality is basically the first principle of GGCL (rule of law) anyway.

Ethics Oversight: The framework could include an ethics committee or consultative group (possibly as part of the Oversight Board's function) to continuously evaluate the AI services from an ethical standpoint. They would review things like: are there any unintended negative societal impacts? Is the AI being used only for its intended scope? Are certain queries raising privacy concerns (like if someone tries to game the AI to get info about someone else)? Policies will be in place to handle such scenarios (e.g., AI detects someone asking for another person's data and refuses).

Human Override: At any point, a designated human official must be able to intervene or override an AI decision. If an AI system somehow starts behaving erratically or giving suspect answers (perhaps due to a bug or external manipulation), operators can pull it from service and revert to human fallback. If an individual case is delicate or unique, a human can override the AI's suggested response and craft a custom one (with the AI's help in gathering info, perhaps). This is analogous to an autopilot in a plane – extremely useful in routine situations, but a pilot can take control whenever needed. The AI logs should flag whenever a human override happened for traceability, but the capacity must be built-in.

By weaving these ethical and oversight considerations throughout, GGCL ensures that AI is used as a tool for civil servants rather than a replacement of them28 29. It embraces technology to assist and speed up service, but keeps human values and judgment at the centre for the cases that need them. The result is a system that Canadians can trust – knowing that it's accurate and fast, but also that it's fair, accountable, and subject to human judgment and Canadian law at all the right points.

Article 5: Oversight and Continuous Improvement

Implementing the GGCL framework is not a one-off technical project; it requires ongoing oversight, evaluation, and refinement. To that end, robust governance mechanisms are put

in place to monitor performance, enforce standards, and drive continuous improvement across the AI network:

5.1 Establishment of a GGCL Oversight Board

The Government of Canada will establish a GGCL Oversight Board (hereafter "the Board") to supervise the operation of this AI service layer. This Board could either be a new dedicated entity or an extension of an existing body (for example, an expanded role for the Office of the Auditor General, or a special unit within Treasury Board Secretariat working with provincial auditors general). It will include representatives or liaisons to ensure all jurisdictions are involved in oversight – possibly a federal chair with provincial members, or a collaborative multi-party structure.

Mandate of the Board:

Audit & Compliance: The Board will audit the AI systems on an ongoing basis to ensure they meet the GGCL standards (Article 4) and adhere to all principles (Article 2). This includes auditing accuracy via sampling responses, reviewing logs, ensuring protocols (Article 3) are being followed (no excessive data sharing, no unauthorized queries), and checking that bilingual and accessibility obligations are fulfilled. The Auditor General's participation would ensure independent verification. In essence, the Board acts as the eyes of the public and Parliament to verify the claims of the system. If any shortcomings are detected, the Board has the authority to demand corrective action (and if severe, recommend suspension of an AI's service until fixed, as noted earlier).

Performance Reporting: The Board will compile regular reports (e.g., annual or semi-annual) on key metrics – accuracy rates, average response times, first-contact resolution percentages, usage volumes, etc. – for each AI tenant and the system as a whole. These reports will be made public and tabled in Parliament (and relevant provincial legislatures as needed). The idea is to maintain transparency about whether GGCL is delivering on its promises. For example, a report might highlight "This year, the federal TaxAI handled 4.2 million inquiries with 97% audited accuracy and an average response time of 4 seconds. In comparison, last year's human-run call centres answered ~1 million calls with 70% accuracy and average wait 30 minutes." Such comparisons illustrate progress. If any metric is lagging, the report would note that and possibly what is being done to address it.

Issue Resolution: The Board provides a formal channel for escalations. If a citizen or an official identifies a potential problem in the AI's operation that isn't resolved at the departmental level, they can bring it to the Board. For instance, if there were complaints

that the system consistently misinterprets a particular Indigenous name spelling in documents, and it's not fixed quickly, the Board can investigate and ensure remedial steps. It acts as an independent overseer to whom concerns can be raised, ensuring accountability beyond the implementing departments themselves.

Auditor General's Role: The federal Auditor General (and potentially provincial auditors general in their domains) will likely be integral to oversight. The 2025 Auditor General report that highlighted the old system's failures sets a baseline; going forward, the AG could perform an annual review of GGCL's performance against promised outcomes30 31. They might also examine the integrity of the system (for compliance with laws, absence of bias, etc.). Their findings would be reported to Parliament – effectively, the AG becomes a guarantor that AI-based services are held to the same or higher standard as traditional services.

5.2 Continuous Auditing and Feedback Loops

Regular Monitoring: The Board (and associated oversight teams) will not wait for annual reports; they will monitor continuously or in frequent intervals. Initially, when the system is new, quarterly reviews might be prudent. These could scale back to semi-annual or annual once the system is mature and proven stable. The reviews will cover questions like:

Is each AI hitting the 95% accuracy and other targets? (If not, which topics are causing errors?)

Are users getting complete answers, or are we seeing many follow-up questions indicating confusion?

How many queries are being escalated to humans, and is that number trending down (as AI improves) or up (a sign of possible trouble or increased complexity in queries)?

Are there any signs of "drift" – where an AI's performance worsened perhaps due to a content update that introduced errors?

Are there differences in performance between languages or regions? If a provincial AI is noticeably underperforming compared to others, why?

User Feedback: GGCL can incorporate user feedback mechanisms – e.g., after an interaction, ask the user "Did this answer your question? [Yes/No]" or even a short survey. The Oversight Board can use this feedback data to gauge satisfaction and spot issues that

pure accuracy stats might miss. A pattern of "no" responses on certain query types would prompt investigation and improvement.

Adaptive Policy Feedback: The Board will aggregate systemic issues and pass them to policy owners (as touched in Article 3.5). For example, if the AI logs reveal that thousands of people are asking a question that stems from a confusing letter or form they received, the Board might recommend the responsible department to clarify that communication. If the AI frequently has to explain a particular regulation in an elaborate way, maybe that regulation or its public guidance could be simplified. This process effectively turns the AI into a diagnostic tool for bureaucracy: it shines light on what people struggle with, and that information can drive policy simplification or better public information campaigns.

Ethical and Bias Review: As part of continuous improvement, the Board may commission periodic bias audits (for example, have an independent team probe the system for bias by sending a battery of test queries or analyzing outcomes by demographic if data allows). If any biases are found, they feed back into updates for the AI training or content. The Board can also ensure compliance with evolving ethical norms – like if new regulations or guidelines on AI come out (e.g., a new algorithmic transparency law or updated privacy requirement), the Board drives the implementation of those in GGCL.

5.3 Incremental Rollout and Evaluation

GGCL will be implemented in phases, under close oversight, to manage risks and build confidence gradually. The Oversight Board will play a key role in gating these phases:

Pilot Phase: Initially, one or a few AI tenants will be launched in a limited capacity. For example, CRA might deploy the TaxAI for a subset of general tax questions on its website, or a province might pilot an AI assistant for health card inquiries. This pilot is carefully monitored. The Board evaluates the results: Did it meet the accuracy benchmark in real use? How was the user feedback? What issues arose?

Gradual Expansion: If pilots are successful, the Board authorizes expansion: more topics, more users (e.g., open it to all website visitors, then to phone lines), and more jurisdictions coming online. Each expansion is a decision point. The Board will ensure that before, say, turning off any parallel human service or before adding another province's AI to the network, things are stable. This incremental approach means if something goes wrong, it affects a smaller scope and can be fixed before scaling up.

Parallel Run and Redundancies: In early stages, traditional channels will run in parallel with the AI service. For example, even if the AI chatbot is answering questions, the call

centre might still be fully staffed as a backup. As confidence grows (demonstrated by the AI meeting targets), resources can be rebalanced (call centre can shorten hold times by handling fewer routine queries, focusing on complex ones). The Board will likely recommend when it's appropriate to officially replace certain functions with AI versus keep humans primarily in the loop.

Full Deployment: Eventually, with Board approval, GGCL could become the default backbone for information services across the federal government and all provinces/territories. Even then, oversight remains, and the Board will continue to evaluate performance but by that point with an eye more towards optimization and innovation rather than proving the concept.

Every step of the rollout will be communicated to the public to maintain trust. For instance, during pilot, government might label it "beta service – help us test our new virtual assistant". Post-pilot, an announcement: "Now providing AI-assisted service – with X% improved response times – but you can always reach a human if needed" to reassure.

The incremental approach ensures that public buy-in and political oversight keep pace with technology. Instead of a big bang where if something failed it would shake confidence, we have progressive validation. It also allows training public servants and adjusting workflows gradually (the workforce transformation aspect: staff get used to the AI assisting them before it handles more by itself, etc., see next section).

5.4 Workforce and Training (Empowering Public Servants)

(While not explicitly in the original GGCL outline, effective oversight includes ensuring the people running the system are prepared – an insight drawn from human-in-the-loop best practices.)

For GGCL to succeed, public servants must be equipped to work with and supervise the AI tenants. The Oversight Board, in collaboration with central agencies (like TBS and Public Service Commission) and provincial counterparts, will ensure there is a comprehensive training and change management program in place. Key elements:

Digital Training for Staff: Front-line service staff and their managers will be trained on how to use the AI tools, how to interpret AI outputs, and how to intervene when necessary (e.g., how to escalate a chat to a human, how to correct the AI if it provided an incomplete answer). Rather than replacing employees, the AI becomes a tool on their desk – training ensures they know how to leverage it effectively (just as they would be trained on a new IT system).

New AI Specialist Roles: Oversight includes tracking that departments hire or assign the necessary new roles, such as:

AI Product Managers – to liaise between policy and tech, ensuring the AI is up to date with the latest rules.

Data Analysts – to analyse AI logs and metrics for continuous improvement and identify any anomalies or biases.

AI Trainers/Content Curators – to refine the AI's knowledge base, incorporating feedback and new information.

Ethics or Privacy Officers – to regularly review compliance with privacy and fairness in the AI's functioning. These roles might be new positions or added responsibilities for existing staff, but they are crucial for the "human governance" of the AI. The Board will check that these teams are in place and functioning.

Culture Shift and Support: The oversight process also monitors how well the public service is adapting. If issues like employee resistance or misuse of the AI (e.g., over-reliance or being too deferential to the AI) are noted, the Board can recommend additional training or guidelines. The idea is to foster a culture where staff trust the AI for routine stuff but stay engaged and ready to step in for the tough stuff – seeing the AI as a colleague, not a threat. Success stories and champions (officers who improved their office's service with AI help) will be highlighted to encourage adoption.

Workforce Metrics: The Board may also keep an eye on workforce metrics: Has the volume of work per staff shifted as expected (less time on FAQs, more on complex cases)? Are citizens getting escalations handled in a timely way by humans? If, for example, humans are now dealing with 10% complex cases but each such case is taking longer (since they're harder), does the agency need more expert staff or better tools? Oversight extends to ensuring the human side of service delivery continues to meet standards in tandem with AI deployment.

The ultimate goal is a human–AI synergy: routine queries handled by AIs frees up humans to give more attention to cases that need empathy or complex judgment, which in turn improves overall service. Oversight ensures that this balance is achieved and maintained, and that employees are not left behind in the transformation.

5.5 External Advisory and Partnership Oversight

(Another enriched element reflecting the need for broad input.)

To continuously improve and stay on the cutting edge, the Oversight Board may draw on external expertise:

Advisory Panel: A panel of academic experts, industry leaders, or public representatives could be attached to the Board to provide independent advice or reviews. For example, AI ethics scholars might review whether the explanations given are truly understandable; cybersecurity experts from the private sector could suggest improvements to defenses, etc.

Partnership Governance: If any part of the AI solution involves vendors or external partners (say a cloud provider or a software vendor supplying the AI platform), the Board ensures that partnerships are managed in the public interest. Contracts should have clauses enforcing GGCL standards (no private exploitation of data, required service levels, etc.). The Board would have the right to audit vendor compliance too. Essentially, any external collaborator is held to the same high standard under Board oversight.

Public Transparency: The Board may recommend publishing certain datasets or summaries (respecting privacy) as open data. For instance, releasing statistics of queries by topic (with personal details removed) could enable civic developers or researchers to suggest further improvements or build complementary tools. Openness can catalyse an ecosystem of innovation around GGCL – e.g., maybe someone builds a voice assistant in another language that uses the public GGCL API.

All these measures ensure that oversight is not just inward-looking but also receptive to outside input and scrutiny, thereby bolstering the legitimacy and effectiveness of GGCL over time.

Article 6: Implementation, Structure and Universality

The GGCL framework is intended to be adopted as a formal, enforceable strategy across Canadian governments. This section outlines how it will be structured as a policy instrument, and how it can adapt over time to remain relevant and effective.

6.1 Formal Adoption and Governance Instruments

To give GGCL official status and accountability:

Federal Policy Directive: The Treasury Board Secretariat (TBS) will likely issue a policy (or directive) binding on federal departments, mandating compliance with GGCL standards

and participation in the federated architecture. This could be under the Policy on Service and Digital or a new dedicated directive. It will instruct departments to integrate GGCL into their service delivery and IT planning, and assign roles (like the requirement to identify an AI business owner for each AI tenant).

Federal-Provincial Agreement: Because provinces are key players, GGCL would be formalised through a Memorandum of Understanding (MoU) or Accord signed by the federal government and each participating province/territory. This intergovernmental agreement would outline each party's commitments: e.g., provinces agree to implement their AI tenants to the shared standard, federal agrees to provide support and maintain the central protocols, all agree to cooperate via the Coordination Committee and Oversight Board, etc. This could be endorsed at a First Ministers' Meeting or through the Council of the Federation to signal high-level political support.

Legislative Alignment: While initially an administrative framework, some aspects might be backed by legislation or regulatory changes. For example, amendments to privacy laws or data-sharing laws might be done to explicitly allow the necessary info flows (with protections). If the AI will be used to assist in decision-making, regulations might be updated to clarify how that fits within existing decision authorities. However, the core GGCL likely doesn't require a new Act – it can be done under existing powers, with agreements and policy.

Integration into Departmental Plans: Each government organization will incorporate GGCL milestones into their official plans and performance reports. For the federal side, Departmental Results Reports and Program service standards will include how GGCL is improving outcomes. For provinces, similarly in their public service strategy documents. This ensures ongoing political and public attention.

6.2 Adaptability and Evolution

GGCL is built to be flexible and future-proof:

Technology Evolution: The framework explicitly acknowledges that tech will change. It might be Large Language Models today, and something more advanced tomorrow. The governance committees (Coordination Committee and Oversight Board) are empowered to update technical standards (APIs, security protocols, even the definition of what an "AI tenant" is) as needed without having to renegotiate the entire framework. For example, if quantum-safe encryption is needed, the Committee can approve that change; if a new AI algorithm offers better accuracy, a guideline can be issued to adopt it, provided it still

meets all principles. The idea is that the core principles (accuracy, transparency, privacy, etc.) remain constant even if the tech toolkit changes. Much like an international agreement (Paris Accord, etc.) sets goals but lets parties adjust methods, GGCL sets immutable goals (like legal compliance, bilingual service) but flexible means.

New Domains and Partners: GGCL could extend to new areas. Suppose in a few years, we want to integrate municipal services or even international info sharing (like cross-border tax info from the IRS for Canadians abroad). The framework is structured to allow inclusion of new partners via the established process (sign onto the MoU, adhere to protocols). Another example, if an Indigenous government or organization wanted to have an AI tenant to help navigate federal programs for Indigenous peoples, GGCL could potentially integrate that in a respectful, co-governed manner. Thus, it's scalable beyond the initial set of participants.

Review and Update Mechanism: The framework might include a clause that it will be formally reviewed after a certain period (say 3 years after full implementation) to assess if it needs major amendment. This could account for on-the-ground lessons or new policy priorities from elected governments. The review would be jointly done by all signatories. If major changes are needed (like adding a new principle or adjusting the governance structure), those would be done through an updated agreement. This built-in review ensures GGCL can course-correct or strengthen itself once it's out of the theoretical stage and into full practice.

Universality of Approach: The structure of GGCL – though tailored to Canada's federal system – could serve as a model or be adapted to other contexts. While this document is Canada-specific, it is structured clearly in sections that make it understandable and potentially exportable. For instance, if another country with regional governments (say Australia or a EU country) wanted to emulate it, they could see how we balanced central standards and local autonomy. Within Canada, if new service areas emerge (imagine some future digital identity wallet or something), GGCL provides a blueprint for how to integrate that with everything else.

6.3 Universality of Service ("No Wrong Door")

(This point ties together the user-centric theme in structure.)

GGCL's implementation will uphold a "no wrong door" policy. This means no matter how someone seeks information or services, they get guided correctly, which is a direct

contrast to the current state where asking the "wrong" office often yields no help. Concretely:

All participating agencies will cross-reference each other. If a citizen mistakenly asks the CRA AI a question about provincial property tax, the CRA AI will not just say "not our jurisdiction" and stop, but rather will either get the info from the correct source or direct the user how to reach the correct resource (ultimately, when fully integrated, it would just fetch the answer from the right AI). The principle is that the system as a whole takes responsibility for guiding the citizen.

The universality extends to ensuring equal service standards across Canada. There should be no pocket where GGCL doesn't reach (as long as the person has some way to contact the government at all, they should benefit). Over time, as all provinces come on board, it becomes a truly nation-wide layer of service.

Finally, by formalizing GGCL through high-level agreements and directives, and building in adaptability, Canada ensures that this initiative is not just a pilot or tech demo but a lasting reform. It will become part of "how government works" – subject to public administration controls and improvement cycles in the same way as any major program. And by articulating it clearly (as done in this document with Purpose, Principles, Architecture, etc.), all stakeholders from Ministers to front-line workers to citizens can understand what GGCL is and what it is supposed to achieve.

Conclusion

The Government Guidance and Governance Control Layer (GGCL) framework represents a bold transformation in how Canadian governments serve their people. By harnessing advanced AI in a carefully governed, federated model, Canada can dramatically reduce errors and waits, delivering service that is timely, reliable, accurate, and inclusive – exactly what Canadians have been told to expect, but too often did not receive32 33.

Under GGCL, a Canadian will be able to ask a question – any question about government services or rules – and get the right answer, fast. If that question touches multiple departments or even different levels of government, they will still get one coherent answer that respects all the rules. No more getting bounced around or given half-answers. For example:

A small business owner could inquire about starting a business and, in one interaction, learn about federal tax registration, provincial permits, and even municipal licensing, with each piece contributed by the respective authority's AI but presented together logically.

A new immigrant could ask about health coverage, income support, and how that affects their taxes, and get a clear combined response drawn from IRCC, Service Canada, and provincial health and social services – instead of having to contact each office separately as before.

A taxpayer confused about a notice could get an explanation that cites both the federal law and the provincial info that might be relevant, leaving no ambiguity about what they need to do.

All of this is achieved without centralising power or data. Canada's federated governance (our division of powers and data custody) remains intact – each jurisdiction's AI is an extension of that jurisdiction. What changes is that through GGCL's "governance layer", those separate parts act in unison when needed. It's like having a team of experts in different fields, but they're in constant communication and coached to work together for the client's benefit.

The framework goes to great lengths to ensure that accuracy, legality, and accountability are never compromised: AIs that always quote the law, logs that anyone can audit, humans overseeing and stepping in when needed. In fact, the service becomes more accountable than ever – there will be a clear record for virtually every piece of advice given, something that was impossible with thousands of phone calls before. Mistakes will stand out and be fixed, not hidden.

For public servants, GGCL is a boon, not a bane. It will handle the repetitive inquiries that wear down staff, freeing them to focus on complex cases and proactive service improvement. It also provides them a reliable reference at their fingertips. The framework ensures employees are supported and trained to collaborate with AI, leading to an empowered workforce equipped with better tools rather than an obsolete one.

For governments as a whole, the results include cost savings (fewer resources wasted on repetitive tasks and correcting errors) and better compliance (when people get the right info easily, they're more likely to follow rules, file forms on time, etc.). It also provides rich data to continuously refine policies and services. For instance, if one region has a spike in questions about a certain benefit, maybe outreach is needed there – now you'd see that in real time.

Adopting GGCL will position Canada as a world leader in ethical, effective use of AI in the public sector. At a time when many governments struggle to implement new technology while upholding trust, this framework shows a path forward: innovate, but do so guided by

strong principles and oversight. Canada's model demonstrates that even in a decentralized country, you can unify service delivery digitally without re-writing the constitution – you just need a smart "governance layer" that links arms across jurisdictions.

In short, GGCL turns the page on outdated service models. It upholds what Auditor General Karen Hogan emphasized: Canadians "deserve timely, reliable, and accurate service", and it provides the means to finally deliver just that34. By implementing this framework, Canada's governments collectively commit to making government information and services truly accessible and consistent for everyone, thereby strengthening public trust and ensuring no citizen is left struggling to navigate government on their own.

The vision is that a few years from now, stories of CRA giving 17% correct answers or hour-long hold times will be history, taught as a case study in why we needed to change. In their place, Canadians will have a virtual assistant they can turn to at any time – one that effectively says, "We've got this – your government knows what you need, and here's the answer." And behind that friendly AI assistant will be all the governments of Canada working together, seamlessly, through the GGCL framework.

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