

## Update

Ministry

Treasury Board and Finance

### Describe: Basic Job Details

#### Position

Position ID

Position Name (200 character maximum)

Business Intelligence &amp; Analytics

Current Class

Manager (Zone 2)

Job Focus

Supervisory Level

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

#### Employee

Employee Name (or Vacant)

#### Organizational Structure

Division, Branch/Unit

 Current organizational chart attached?

Supervisor's Position ID

Supervisor's Position Name (30 characters)

Supervisor's Current Class

### Design: Identify Job Duties and Value

#### Changes Since Last Reviewed

Date yyyy-mm-dd

Responsibilities Added:

Over the past year the Manager, Business Intelligence and Analytics became responsible for working with Technology and Innovation teams to develop and implement the AI and ML infrastructure needed to apply AI/ML technologies and advance the TRA's AI/ML strategy across the division. The Manager plays a lead role in the application of AI in the division, with a focus on guiding processes for the secure, effective and ethical implementation of AI and ML.

Responsibilities Removed:

## Job Purpose and Organizational Context

Why the job exists:

The Manager, Business Intelligence & Analytics (BIA) reports to the Director, Business Integration and Engagement. In collaboration with the Technology and Innovation Ministry, the Manager is responsible for all AI applications, systems software, and hardware implementations including data communications for the division's AI applications. The Manager leads AI/ML and data and reporting strategies and projects for the Tax and Revenue Administration (TRA) division of Treasury Board and Finance (TBF). The manager must strive to ensure the continued operational success of these areas through well-monitored AI environments, applications, and internal databases. This position also develops strategic and tactical plans for reporting and oversees development and maintenance of TRA's SQL database, dashboards, meta data, and data/information systems.

The position directs the work of professional staff to meet the division's strategic direction related to AI/ML, data and reporting requirements. The position provides rigorous, high quality data, research, evaluation and analytics to executive and senior management, program delivery to enable data-driven, evidence-informed strategic decision-making for the purposes of strategic planning, policy development, evaluation, continuous improvement, forecasting, legislated reporting, service design and delivery, as well as financial and human resource allocation.

Through the provision of relevant, high-quality information and analysis, the position impacts the effectiveness of decision-making and overall organizational performance.

## Responsibilities

Job outcomes (4-6 core results), and for each outcome, 4-6 corresponding activities:

1. The Manager provides the strategic direction for the design, development and implementation of an AI environment, agents and applications into operational workflows and integration with TRA's existing systems and databases.

- Collaborate with Technology and Innovation to ensure TRA's AI environment, applications, and software meet GoA policies and industry best standards. For example, ensuring data is stored in Canada at all times.
- Consults with TRA business areas, vendors, and Technology and Innovation to guide the division's best practices, including data quality, good machine learning practices and monitoring the effectiveness of AI models and projects throughout their life cycle.
- Leads a professional team and guides them through project planning, system architecture, risk management, privacy assessments, verification and validation and continued operational success post-implementation.
- Leads communication and change management initiatives to foster the use of AI, ML and business intelligence tools and information products.
- Establishes working relationships with internal and external partners, stakeholders, and government agencies to achieve program or project objectives.

2. Oversees all data and reporting governance and services supporting the design, development and delivery of timely, accurate, comprehensive, and transparent data models and reports that analyze business functions and key operations and provide insights into tax and revenue business performance.

- Develops standards that enable business intelligence analysis and reporting methods to be applied consistently throughout the division; lead discussion on the development of those standards; prepare data models, documentation, analytic reports, presentations and discussion papers related to methodological and analytical standards.

- Acquire, deliver and maintain high quality data with supporting metadata that meets applicable data standards, guidelines and business rules.
- Provides strategic advice and guidance on analytics to senior level leadership in view of achieving organizational priorities.
- Provides leadership using data as a vital business resource by setting priorities for generating insight from data that will inform TRA's programs and policies.
- Directs the development of solutions to provision internal and external data from source systems and develop processes and methods to securely transfer and store the data as per Information Management policies and procedures. The solutions should ensure the proper handling of the data including extraction, transforming and integrating the data into related data models, views or other products.
- Define the data science ethics for TRA and best practices based on standards from across the government, industry and related academia.
- Chair assigned business intelligence governance committees within the division.
- Establish service levels to ensure regular reporting, ongoing evaluation and continuous improvement to meet current and future demand.
- Liaise and coordinate with TBF divisions and Technology and Innovation to ensure a fully integrated approach to business performance and analytics enabling the division and government policy to be more data-centric in their decision-making when related to tax and revenue.

3. Leads the development of automated strategic dashboards leveraging various internal and external data sources and works in consultation with key internal and external stakeholders to enable evidence-based and outcome-focused decisions.

- Ensure highly accurate and reliable statistical data and information related to TRA are maintained and made available to clients and stakeholders, including executive leadership.
- Maintain strict policies and actions regarding statistical methodology, accuracy, confidentiality, documentation and database management, including satisfying the provisions of Protection of Privacy Act (POPA) and the Statistics Act of Canada.
- Provide appropriate data and methodology support to TRA's Strategic Plan in the development of measures and indicators.

4. Oversees daily operations of Business Intelligence and Analytics staff and establishes target criteria for work volume including deliverables and ensures priority targets are met.

- Overall responsibility to set goals for the team that align and contribute to both the branch, division, and department strategic plan.
- Has final responsibility in the unit for allocation of assigned staff to working groups and assignment of responsibilities to staff to ensure goals are achieved.
- Ensures all staff are aware of performance expectations and that appropriate action is taken to address performance issues.
- Develops succession plans and learning and development plans for direct reports and ensures similar plans are developed for staff throughout the group.
- Promotes a healthy corporate culture that aligns with GoA values.

- Responsible for participating in the recruitment process for qualified resources including the preparation of job ads, screening resumes, interviewing candidates, reference checks, and overseeing new employee orientation.

5. Overall responsibility for performance management of all assigned staff within the group.

- Completes performance agreements for direct reports including conducting annual reviews; discussions and approval of annual performance agreement for indirect reports.
- Establishes and actively monitors action plans to address performance issues. Has direct involvement with managing ongoing performance issues.
- Identifies skills and abilities for future operations and develops training plans to ensure staff are ready to meet changing operational requirements.
- Ensures staff participate in developmental and training activities to ensure a high degree of accuracy and quality in work performed that is relevant to their current positions as well as potential or target positions.

6. Planning and cross divisional/ ministry support.

- Assists Director in planning activities and ensure plans are communicated and are transferred into operational work plans that direct the daily activities of staff.
- Provide the Director with regular progress reports on work activities and plan.
- Ensure the appropriate actions are taken to resolve issues which challenge the group's ability to meet established targets and measures.
- Ensures operational issues and the related impacts are communicated to ensure they are considered in the branch business planning process.

### Problem Solving

Typical problems solved:

The Manager has independent management for the day-to-day operational management of the BIA team and has the freedom to act within the bounds of established policy/ procedure and legislation in order for programs to be delivered efficiently and effectively. The position requires an understanding of problem-solving tools and techniques, including risk-based decision making processes, consultation, collaboration and consensus-seeking processes. Solving problems requires a strategic approach and needs to draw on a wide network of contacts and subject matter experts. The position also needs a strong understanding of stakeholder interests as well as the perspective of the ministry.

Challenges of this position include:

- the development of strategies and plans with no standard procedures or guidelines, based on approaches recommended by industry leaders, direction from management, the unique business culture and the current state of resources, skills, technology, infrastructure and processes.
- Solving problems relating to funding, human resources or time constraints in the delivery of analytics or business intelligence solutions.
- Solving problems related to missing, poor or incomplete data, often requiring the use of alternative data source as proxies or the development of models to predict outcomes.
- Identifying the best methodological approach that is relevant accurate and understandable.
- Operating in an environment where short timelines are often imposed by elected government officials to address policy questions or recent trends in caseloads.

Significant interpretive, evaluative and developmental thinking is required, along with the ability to understand complex relationships and facilitate decision-making processes involving stakeholders and senior decision-makers.

Excellent professional judgment is required given the confidential information and complex issues dealt with by the division as well as often conflicting perspectives, requirements, and priorities of the varied partners and stakeholders.

Types of guidance available for problem solving:

The position is expected to solve the majority of day-to-day issues and only require occasional assistance and advice from the Director on unique, and non-recurring issues where there is impact to other areas of TRA business or where there is a clear departure from department policies.

Situations faced are unstructured and approaches to solving problems are not determined. The role is expected to remain focused at the strategic level when leading and/or providing advice on the development and implementation of data/ reporting strategies, initiatives, frameworks and leading practice at business, technical and operational levels.

Direct or indirect impacts of decisions:

The Manager operates within the context of relevant legislation, government objectives, policy and administrative frameworks and brings forward those situations that may indicate a change to an established department or government policy. Client and stakeholders (government and non-government) will be impacted by actions taken.

The position is accountable for the progress toward the provision of information and analysis that are critical for effective decision making, changes to programs or policies, budget allocation and resource allocation. Senior Executive leaders, elected officials, and at times the public, academics and media, will rely on system trends and business insights created under this position's guidance. If not done with an eye to detail and technical precision, the ministry risks using unreliable information, making ill-informed decisions, misrepresenting tax and revenue trends, and impacting financial results for the Ministry in regards to revenues and expenses, cash flow, and reputation to the overall GoA. TRA administers more than \$10 billion in revenue and is responsible supporting one million Alberta customers and stakeholders (e.g., individuals, band member, and corporations) across more than 30 programs for multiple departments in the GoA (e.g., TBF, Health, Justice and Solicitor General, Energy, Advanced Education, Municipal Affairs, Community and Social Services, etc.).

The position ensures all AI/ML and data reporting efforts are undertaken collaboratively, meets business requirements and are effectively disseminated and used for decision-making. The role is also the cross-ministry contact for any GOA data projects, and therefore must provide accurate and timely data to partner ministries, with particular attention to the unique data security, privacy and information sharing rules that pertain to court, corrections, and youth data.

## Key Relationships

Major stakeholders and purpose of interactions:

**Executive Director** - bi-weekly to receive direction on strategies and plans; to provide results of analysis and updates on analytics initiatives; provide consultation, advice and recommendations; respond to concerns and inquiries.

**Director** - daily, to receive direction on strategies and plans; to receive input on performance and advice on human resource issues; to provide advice on analytics solutions, to provide updates on status of projects, risk mitigation or unresolved issues.

**Internal staff** - provides leadership, direction, coaching, mentoring, work assignments, and performance management to assist staff in meeting operational requirements. Enhance understanding of strategic initiatives and business opportunities; support development of skills and capacity; provide oversight of day-to-day activities and issues management.

Program Areas - daily, to exchange information, receive/provide guidance/direction, and collaborate on strategic and tactical solutions; present strategy, explain importance and benefits.

Business System Analyst - jointly define and review business requirements, identify and evaluate solutions to resolve business and application problems.

Colleagues in other government departments and external stakeholders - as needed, to exchange information; to provide/receive direction/guidance; share leading practices, lessons learned, issues and challenges, solutions and related opportunities.

### Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Master's Degree	Other	Other	Other

If other, specify:

Machine Learning, Artificial Intelligence, Computer Science, Data Science

Job-specific experience, technical competencies, certification and/or training:

A graduate degree in the machine learning, artificial intelligence, data science, computer science, or a related field, involving diverse technical experience, including generative AI model development and integration, quantitative research methodologies, and data management.

In addition to formal AI/ML and data science training and experience, six years experience managing and supervising groups of employees in a unionized environment is an asset. Experience utilizing leadership, organization, and planning skills supplemented by experience in client relations is required. Experience in developing employees and retention/ succession planning is requested. Project management training is recommended. Strong performance management skills are essential.

- Expertise in understanding AI/ML models, algorithms, training, deployment and tools.
- Proven delivery of AI/ML products from idea to maintenance, ensuring integration.
- Experience in data strategy including data modeling and data exploration tools, and knowledge of data governance, quality, pipelines, and leveraging data for AI.
- Experience in leading management and professional staff on cross-functional teams to achieve deliverables on department-wide initiatives.
- Experience in leadership role(s) with proven success in managing complex issues, leading staff to achieve results and applying an integrated approach to service delivery.
- Experience presenting strategies and plans, and providing advice, options papers, briefing notes and status reports to Executive Team on department-wide initiatives.
- Demonstrated ability to develop and maintain collaborative working relationships within the organization, across government and with stakeholders, including the ability to balance the needs and interests of these diverse groups and facilitate the delivery of coordinate data analytics and business intelligence.
- Knowledge of the IT sector business practices, including ability to vision, plan and implement efficiently and effectively.
- Ability to analyze, evaluate, identify problem areas and create innovative solutions to address issues identified.
- Excellent project planning and management skills to ensure appropriate governance and reporting mechanisms are in place to plan, coordinate and execute for successful outcomes.
- Knowledge of project management processes, methodologies, principles and techniques.
- Knowledge of the department programs and services to ensure program policy and practice is taken into consideration for reporting.
- Excellent communication skills, both verbal and written, including very good consultation, facilitation and presentation skills.
- Demonstrated ability in leading large and complex initiatives and projects.
- Knowledge of privacy legislation to ensure measures are in place for privacy and security of data for reporting and analytics.
- Knowledge of human resources, financial management and contract policies and practices.

## Behavioral Competencies

Pick 4-5 representative behavioral competencies and their level.

Competency	Level A B C D E	Level Definition	Examples of how this level best represents the job
Systems Thinking	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	<p>Integrates broader context into planning:</p> <ul style="list-style-type: none"> <li>• Plans for how current situation is affected by broader trends</li> <li>• Integrates issues, political environment and risks when considering possible actions</li> <li>• Supports organization vision and goals through strategy</li> <li>• Addresses behaviours that challenge progress</li> </ul>	
Creative Problem Solving	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	<p>Works in open teams to share ideas and process issues:</p> <ul style="list-style-type: none"> <li>• Uses wide range of techniques to break down problems</li> <li>• Allows others to think creatively and voice ideas</li> <li>• Brings the right people together to solve issues</li> <li>• Identifies new solutions for the organization</li> </ul>	
Agility	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	<p>Proactively incorporates change into processes:</p> <ul style="list-style-type: none"> <li>• Creates opportunities for improvement</li> <li>• Is aware of and adapts to changing priorities</li> <li>• Remains objective under pressure and supports others to manage their emotions</li> <li>• Proactively explains impact of change on roles, and integrates change in existing work</li> <li>• Readily adapts plans and practices</li> </ul>	
Drive for Results	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	<p>Works to remove barriers to outcomes, sticking to principles:</p> <ul style="list-style-type: none"> <li>• Forecasts and proactively addresses project challenges</li> <li>• Removes barriers to collaboration and</li> </ul>	

		<p>achievement of outcomes</p> <ul style="list-style-type: none"> <li>• Upholds principles and confronts problems directly</li> <li>• Considers complex factors and aligns solutions with broader organization mission</li> </ul>	
Develop Networks	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	<p>Makes working with a wide range of parties an imperative:</p> <ul style="list-style-type: none"> <li>• Creates impactful relationships with the right people</li> <li>• Ensures needs of varying groups are represented</li> <li>• Goes beyond to meet stakeholder needs</li> <li>• Ensures all needs are heard and understood</li> </ul>	
Build Collaborative Environments	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	<p>Involves a wide group of stakeholders when working on outcomes:</p> <ul style="list-style-type: none"> <li>• Involves stakeholders and shares resources</li> <li>• Positively resolves conflict through coaching and facilitated discussion</li> <li>• Uses enthusiasm to motivate and guide others</li> <li>• Acknowledges and works with diverse perspectives for achieving outcomes</li> </ul>	
Develop Self and Others	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	<p>Encourages development and integration of emerging methods:</p> <ul style="list-style-type: none"> <li>• Shapes group learning for team development</li> <li>• Employs emerging methods towards goals</li> <li>• Creates a shared learning environment</li> <li>• Works with individuals to develop personal development plans</li> </ul>	

## Benchmarks

List 1-2 potential comparable Government of Alberta: [Benchmark](#)

M410-11 - Manager, Technical Services and Application Support

M420-12 - Unit Leader, Statistics and Data Development

M410-02 - Manager, Distributed Computing Services