

New

Ministry

Treasury Board and Finance

Describe: Basic Job Details

Position Name (30 characters)

Methodologist

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Supervisor's Position ID

Supervisor's Position Name (30 characters)

Supervisor's Current Class

Design: Identify Job Duties and Value

Job Purpose and Organizational Context

Why the job exists:

Alberta's Office of Statistics and Information (OSI) functions with a government-wide mandate and is responsible for creating, managing and sharing consistent and reliable information about the economy of Alberta and its people. The OSI works in collaboration with other ministries as the government resource responsible for consolidating official statistics and other key government data to support the efficient and strategic management, dissemination of information for policy and decision-making. In addition, the OSI develops data and research methodologies and models for generating evidence to decision.

Reporting to the Manager, Statistical Services, The position provides expertise, research and analysis for the development, maintenance and evaluation of models and selection of appropriate methodological approaches for large and complex analysis to support decision making, including, forecasting population, economic analysis, and policy formulation and evaluation. The position draws from fundamental understanding of Statistic Canada data and information, as well as theoretical concepts and analytical methods in statistics, mathematics, economics, epidemiology, and data management to support methodological and modeling frameworks for evidence-informed decision making. Basic functions of the position include: assist in understanding and evaluating analytical tools; manage analytical frameworks; conduct financial and business analysis, planning and forecasting; develop and coordinate statistical methodology and processes; survey design and analysis; operational plan support; perform data mining, simulations and modeling; develop indicators and performance targets; support the development of effective business processes to support analytics.

The position supports or leads a variety of concurrent projects, including multi-discipline cross-functional Ministry and

external stakeholders, and provides analysis and/or strategic advice on analytic topics.

The position provides technical advice and support on analysis and information product development projects, methods and measures (e.g., advice on indicator methods for performance management, population, health and program evaluation), and data management processes. This position also has an educational function, in sharing knowledge on analytics, models and methods within OSI, TBF and other stakeholders.

Responsibilities

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

1. Assist in developing and managing analytical methods:

- help develop, maintain and evaluate methods and models, including conceptualization, developing and recommending approaches and proposals;
- support consulting activities for Branch clients on optimum methods, models and processes to meet their analytic needs for data products, reporting and analysis, in support of critical evidence-informed capabilities and the evaluation of policy and operations;
- identify, through consultations and research, the parameters, assumptions, criteria, and technical specifications to meet requirements for ministry decision makers;
- participate in or lead projects for the Branch, or those comprised of multidiscipline cross-functional Ministry and external stakeholders and provide strategic advice and information on model development and support;
- assess current methods, models and processes, advise on best practices, standard methods, indicators, analytic procedures, processes and policies to ensure consistent application of the most appropriate methods and models for internal and external clients;
- provide project management or business analysis services to projects/initiatives in which the Branch participates, as required; and
- support the development of appropriate data structures and data management processes to support analytic solutions.

2. Support the continuous improvement of analytic capabilities to support stakeholder information needs:

- identify gaps in client information products, available data, as well as reporting and analysis capabilities and assist in provisioning appropriate methods, models, and processes;
- remain current (through environmental scans, research, etc.) on trends and issues in population dynamics, clinical practices, health system design, health care policies, and stakeholder and facility related issues impacting on Ministry strategies and directions for delivering health care services; support the development of options and/or recommendations to address them.

3. Support departmental strategic directions and policy initiatives through effective methods and models:

- Participate on or lead projects, or conduct analysis to identify, define, compare and implement methodological approaches and/or models to assist the implementation/improvement of specific policy initiatives
- support development of Branch operational plans, risk management strategies, and financial reporting;
- support Branch involvement in data/information quality initiatives.

4. Support clients and other stakeholder partnerships:

- carry out and provide advice in developing methods and modeling policies and processes;

- collaborate in providing data and analytical assistance to Ministry initiatives and issues;
- develop/collaborate on production of reports, communication materials, seminars/workshops, conferences, or dissemination sessions, training; and
- respond to assigned Action Requests and information requests from stakeholders.

Problem Solving

Typical problems solved:

- Creating innovative solutions to address data gaps and information requests from stakeholders across the GoA to foster information driven decision making.
- Developing and applying creative methodology for data development and modeling to analyze complex policy and program issues; and provide methodological and analytical advice to internal or external clients.
- Providing official sources for statistics; and identifying data gaps and opportunities to generate data and information to fill data and analytical gaps, as policy priorities evolve.

Types of guidance available for problem solving:

Overall, effective problem solving as a methodologist requires a combination of methodological, technical, statistical, economic specific field, interdisciplinary, and professional guidance and skills, depending on the specific challenges and problems encountered in the work.

- Methodological guidance involves adopting survey, research, and analytical methods to develop surveys, research projects, analyze data, and build models serving the client needs.
- Statistical guidance involves using statistical methods and techniques to analyze data; and identify patterns, trends, relationships, and develop models to uncover relevant insights and provide a better understanding of the issues at hand. To this end, various statistical software and programming languages can be used to carry out exploratory data analysis, hypothesis testing, regression analysis, and modeling exercises.
- Technical guidance involves using technical tools and resources, such as data visualization tools, data management software, etc., as well as guidance from technical experts, such as data scientists or IT professionals.
- Interdisciplinary guidance involves collaborating with other subject matter experts from fields, such as energy, social sciences, engineering, or natural sciences, to integrate insights and knowledge from a variety of fields into the problem-solving approach. For example, the methodologist needs to work with subject area specialists to design appropriate methodologies for designing survey, linking data, and analysis.
- Professional guidance involves seeking advice and guidance from professional organizations and networks to access to resources, training, and networking opportunities that can help with staying up-to-date with the latest developments in the related fields and connect with other professionals who share your interests and challenges.

Direct or indirect impacts of decisions:

Direct impacts of decisions can have a significant effect on the quality and reliability of data and analysis that inform decisions and policies within the GoA. Examples of direct impacts of decisions include:

- Developing methodologies and models for assessing the potential impacts of different policy options or scenarios, and to guide the decision-making processes accordingly.
- Ensuring that data is developed, analyzed, and reported in a timely and consistent manner, to enable policymakers and other stakeholders to make informed decisions based on up-to-date information that is

grounded on sound methodology and high quality data.

Indirectly, decisions this position makes can have indirect impacts on various stakeholders, beyond the immediate context of methodology development, including contribution to the well-being and prosperity of individuals, businesses, and society as a whole through the development of a more informed decision-making.

Key Relationships

Major stakeholders and purpose of interactions:

INTERNAL STAKEHOLDERS

Executive Team & Director:

Frequency: Regularly

- Provide updates on project and stakeholder engagements; and prepare analytical brief and response to action requests as needed.

Supervisor:

Frequency: Daily

- Consult and obtain direction on project priorities and initiatives as well as inform on emerging issues that may hinder the progress and/or success of any ongoing projects.

Team:

Frequency: Daily

- Collaborate on the management and progress of ongoing team initiatives as needed.

INTERNAL STAKEHOLDERS

Frequency: Regularly

GoA Policy and Program Units:

- Participate in project developments and working groups supporting cross-ministry initiatives; provide regular updates on ongoing collaborative initiatives; and inform on methodology and modeling technique advancements as appropriate.

EXTERNAL STAKEHOLDERS

Frequency for all as required

Cross-Government (all levels):

- Participate in projects and teams.

Statistics Canada:

- Participate in methodology and data development meetings or discussions hosted by Statistics Canada; if deemed appropriate, inform on the province's new or upcoming methodology and data development projects; and when possible, participate in Statistics Canada's methodology and data development initiative(s).

Statistical Agencies in other Jurisdictions:

- Participate in methodology and data development discussions, and as appropriate, inform on the province's new or upcoming methodology and data development projects.

Required Education, Experience and Technical Competencies

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

If other, specify:

Statistics, Mathematics, Epidemiologist, Data Science, Econometrics, or closely related field

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

- At least, three years of professional experience in methodology and model development; and some formal coursework in survey or research or analytical methodology and model building.
- In-depth knowledge in designing, planning and executing a variety of multi-stakeholder collaborative projects such as data development and management; survey, research, and analytical methodology; and modeling.
- Effectively advise clients on the design and methodology related to their projects or initiatives; foster collaborative relationship; and manage stakeholder expectations.
- Expert knowledge of techniques and software for theoretical and applied econometric/statistical models.
- Strong data management and analytical skills using advanced programming software such as SAS, R, Python, and STATA.
- Strong organizational and project management skills to optimize resources and effectively manage time
- Excellent written and oral communication skills, as well as strong analytical and quantitative skills. The incumbent must be able to communicate highly technical issues in simple, straightforward language.

Behavioral Competencies

Pick 4-5 representative behavioral competencies and their level.

Competency	Level					Level Definition	Examples of how this level best represents the job
	A	B	C	D	E		
Build Collaborative Environments	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Collaborates across functional areas and proactively addresses conflict: <ul style="list-style-type: none"> • Encourages broad thinking on projects, and works to eliminate barriers to progress • Facilitates communication and collaboration • Anticipates and reduces conflict at the outset • Credits others and gets talent recognized • Promotes collaboration and commitment 	A methodologists who is skilled in building collaborative environments, encourages open communication, fosters teamwork, builds relationships with stakeholders and manages conflict, is able to create a shared vision for a project that inspires team members to work towards a common goal.
Creative Problem Solving	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Engages the community and resources at hand to address issues: <ul style="list-style-type: none"> • Engages perspective to seek root causes 	In leading methodology and modeling initiatives, drives engaging perspective from the clients to ensure the that

- Finds ways to improve complex systems
- Employs resources from other areas to solve problems
- Engages others and encourages debate and idea generation to solve problems while addressing risks

the developed methodology is appropriate and the project outcomes can confidently drive policy decisions.

Drive for Results



Takes and delegates responsibility for outcomes:

- Uses variety of resources to monitor own performance standards
- Acknowledges even indirect responsibility
- Commits to what is good for Albertans even if not immediately accepted
- Reaches goals consistent with APS direction

Striving for reliability, accuracy and quality, developing methodology and model, analyzing data efficiently, focusing on key priorities, collaborating effectively, finding solutions and meeting deadlines are different examples of how this skill/level is essential for the position.

Agility



Proactively incorporates change into processes:

- Creates opportunities for improvement
- Is aware of and adapts to changing priorities
- Remains objective under pressure and supports others to manage their emotions
- Proactively explains impact of change on roles, and integrates change in existing work
- Readily adapts plans and practices

Adopting to innovative methodologies, new technologies, applications and softwares, responding to changing business needs, handling ambiguity, when there is incomplete data or information, and learning quickly are some examples showing how this skill/level helps the methodologist to continuously improve the quality of work.