Update

Ministry

Treasury Board and Finance

Describe: Basic Job Details

Position

Position ID

Position Name (30 characters)

Statistical Analyst

Current Class

Program Services 3

Job Focus

Operations/Program

Supervisory Level

00 - No Supervision

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or Vacant)

Vacant

Organizational Structure

Division, Branch/Unit

Economics and Fiscal Policy Division, OSI

[✓] 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:

N/A

Responsibilities Removed:

N/A

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, this position involves providing analytical support to the operations of the OSI, with a focus on statistical analysis of . Working closely under the guidance of the manager, the Statistical Analyst leverages their specialized expertise to offer crucial assistance for various facets of economic statistics, survey programs, economic modeling, and related endeavors, all of which are aligned with the Ministry Business plan. This position demonstrates skills in data collection, data manipulation, data linking, database creation and management, and quality assurance processes using various software and programming languages such as SAS, R, STATA, and Python. This role is key to developing accurate and reliable statistical data and analysis to support policy analysis, planning, and decision-making for the division, the government, and the public.

Responsibilities

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

Provide comprehensive research and statistical analysis to support Ministry staff in evidence-informed decision-making related to program planning, policies and processes :
 -Research and analyze data pertaining to social issues obtained from multiple sources, including national statistical databases, legislation, journals and administrative sources.;
 -Work in partnership with department colleagues to ensure analysis captures knowledge of the program and business processes.
- Analyze, compare and synthesize data drawn from multiple sources including Statistic Canada and socio-economic data.
- Analyzes and identifies potential policy implication of any statistics analysis and present recommendations to Ministry executives for considerations.
- Develop models used for caseload forecasting and program policy design, including models used to measure impact of program changes on client benefits.
- Support the use of data required for analysis from the data warehouse by gaining an understanding of the data structures and tools to extract the data.
- Research and review existing literature on advanced statistical methods
- Work with Business Analyst to review data structures, data limitations, meta data and data usage considerations.

Prepare statistical reports and presentations to provide management and staff with information on trends and demographic characteristics of program caseloads to support policies and program development
- Prepare monthly and quarterly reports on Statistic Canada trends and demographic characteristics.
- Prepare and deliver statistical presentations for executive, management and other stakeholders.
- Collaborate within the branch and with program areas to develop mutually agreed upon data quality and reporting standards.
- Lead or contribute to the development of research reports and other types of reports on social issues, policies and programs.
- Consult with stakeholders to identify information gaps, areas of duplication and opportunities for efficiencies.
- Review branch reports and technical documentation to ensure accuracy and quality standards are met.

Consult with stakeholders to clarify research objectives and provide advice on appropriate statistical methods
- Facilitate meetings with stakeholders to ensure the research questions are well-defined.
- Collaborate with other branches, divisions, ministries and governments in conducting statistical analysis to ensure consistency in the development or refinement of social programs and policies.
- Provide advice to various business areas on the appropriate statistical or research methodologies (e.g. survey methodology and questionnaire design) to ensure thorough analysis of issues.
- Research availability of appropriate data sources (both internal and external) and provide recommendations.
- Support the development of performance indicators for use in various accountability frameworks
- Participate on teams and/or Ministry committees that promote collaboration and exchange of expertise to ensure consistency in policy and program development.

Prepare briefing notes and other documents to advise government and senior leadership
- Provide information and analysis for briefing notes or other documents related to analysis of Statistics data or socio-economic data.
- Remains current and informed on Ministry's issues by providing inputs and recommendations relating to issues
- Coordinate and respond to external and internal information requests related to data and analysis.
- Disseminate analytical information to departmental staff to support informed planning and decision making.
- Prepare briefings notes on topics related to results of analysis and/or statistical methodology.

This position is providing assistance to different stakeholders on realizing the value of socio-economic statistics and other key information to ensure the government and clients are maximizing available supports by:

- Advising on the use of Statistics Canada or other source data with regard to development of derivative datasets and analysis;
- Evaluating methodologies and data quality from proposed and completed projects from other areas;
- Assisting in the preparation of regular publications, data visualizations, and analysis;
- Developing resources and guides to support understanding of published datasets and collections;
- Responding to data and information requests from clients;
- Engaging panels and working groups with both internal and external stakeholders to provide insight on economic analysis, modeling techniques and data requirements in Alberta; and
- Supporting micro-data requests and access to OSI's data lab.

Problem Solving

Typical problems solved:

- Contributes to statistical analysis and modeling expertise on diverse statistical modeling and statistical product development initiatives across the government.
- Works with sensitive and personally identifiable datasets while maintaining data security and aligning with applicable legislation and data sharing agreements.
- Develops novel processes from automating complex models and analysis at the provincial and sub-provincial level.
- Validates datasets and methodologies to ensure analysis leverages statistically sound processes and meets quality assurance requirements.
- Works independently to meet project milestones using appropriate project management tools and processes.
- Asks questions to get a deeper understanding of issues and tasks.
- Documents processes and creates useful supports to enhance overarching data lifecycle.

Types of guidance available for problem solving:

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

1. Statistical guidance involves using statistical methods and techniques to analyze data and identify patterns, trends, and relationships. You can use statistical software and programming languages to carry out exploratory data analysis, hypothesis testing, regression analysis, and other types of statistical analysis.

2. 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.

4. Interdisciplinary guidance involves collaborating with experts from other disciplines, such as energy, social sciences, engineering, or natural sciences, to integrate insights and knowledge from different fields into the problem-solving approach. For example, the statistical analyst needs to work with energy specialists to design appropriate framework for the statistical analysis serving their needs.

5. 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 economic data and analysis, as well as on the decisions and policies that based on this information. Some examples of direct impacts of decisions could include:

- Developing economic models and simulations to predict the potential impacts of different policy options or economic scenarios, and to inform decision-making processes accordingly.

- Ensuring that economic data is collected, processed, and reported in a timely and consistent manner, to enable policymakers and other stakeholders to make informed decisions based on up-to-date

information.

Indirectly, decisions this position makes can have indirect impacts on various stakeholders and aspects of the economy, beyond the immediate context of data collection and analysis, 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 statistical data and information, analytical brief and response to action requests as needed

Supervisor:
Frequency: Daily
- Consult and obtain direction on project priorities and initiatives

Team:
Frequency: Daily
- Collaborate on statistical product/data development and analysis within the team

EXTERNAL STAKEHOLDERS
Frequency for all as required
Cross-Government (all levels):
- Participate on projects and teams

Contractors/Businesses:
- Provide data and information, advice and consult on projects

Public:
- Provide data and information, insight, and advice

Required Education, Experience and Technical Competencies

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

If other, specify:

Econometrics, Statistics, Mathematics, or closely related field

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

Technical Competencies
- A degree in a relevant discipline (e.g., economics, statistics, or a similar field of study) with experience and proficiency in using and developing statistical models and creating statistical, financial and economic related analysis.
- Demonstrate working comprehension of data analytics, including ability to assess existing data sources.
- Scripting and programming capabilities especially in R and SAS to facilitate statistical analysis and process automation, when possible.
- Experience with Statistics Canada datasets regularly used by analysts withing GoA.
- Knowledge of the Alberta economy, industries, and the needs Alberta businesses.
- Experience with data collection, data manipulation, summarizing data and preparing reports with quantitative information using Microsoft Excel and or visualization tools (e.g. Power BI, SAS Visual Analytics, etc.)

Skills and Abilities
- Strong oral and written communication skills to communicate effectively with stakeholders.
- Strong ability to work independently and as a member of a team.
- Excellent interpersonal skills to interact professionally with external stakeholders and staff.
- Strong ability to prioritize and handle tight deadlines.
- Strong organizational and project management skills to optimize resources and effectively manage time.
- Innovative and self-motivated, and capable of handling a wide range of project responsibilities.

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
Creative Problem Solving	○ ◉ ○ ○ ○	Focuses on continuous improvement and increasing breadth of insight: • Asks questions to understand a problem • Looks for new ways to improve results and activities • Explores different work methods and what made projects successful; shares learning • Collects breadth of data and perspectives to make choices	Conducting statistical analysis drives engaging perspective from the clients to ensure the accuracy of the data and the relevance of statistical technique used and as a result credibility of statistics analysis and data products. Generating statistics products (through modeling or survey programs) drives engaging with the team for the best results.
Drive for Results	○ ◉ ○ ○ ○	Works to exceed goals and partner with others to achieve objectives: • Plans based on past experience • Holds self and others responsible for results • Partners with groups to achieve outcomes • Aims to exceed expectations	Pursuing accuracy and quality, 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	○ ○ ◉ ○ ○	Identifies and manages required change and the associated risks: • Identifies alternative approaches and supports others to do the same • Proactively explains impact of changes • Anticipates and mitigates emotions of others • Anticipates obstacles and stays focused on goals • Makes decisions and takes action in uncertain situations and creates a backup plan	Adopting to 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 economic analyst to continuously improve the quality of work.
Develop Self and Others	○ ◉ ○ ○ ○	Seeks out learning and knowledge-sharing opportunities: •Reflects on performance	Sharing knowledge and expertise within team , while staying updated with the latest economic

		and identifies development opportunities • Takes initiative to stay current • Shares with the team even when not asked • Actively coaches and mentors direct reports	trends, theories, and data sources. Dedicating time to continuous learning, attending workshops, and staying current with industry publications.

Benchmarks

List 1-2 potential comparable Government of Alberta: Benchmark

023PS73
023PS75

Assign

The signatures below indicate that all parties have read and agree that the job description accurately reflects the work assigned and required in the organization.

_____   _____   _____
Employee Name   Date yyyy-mm-dd   Employee Signa

_____   _____   _____
Supervisor / Manager Name   Date yyyy-mm-dd   Supervisor / Manager Signature

_____   _____   _____
Director / Executive Director Name   Date yyyy-mm-dd   Director / Executive Director Signature

_____   _____   _____
ADM Name   Date yyyy-mm-dd   ADM Signature

_____   _____   _____
DM Name   Date yyyy-mm-dd   DM Signature