**Capstone Project: Optimal Emergency Health Services Base Locations in Nova Scotia**

Project Title: Identifying Ideal Base Locations for Emergency Health Services in Nova Scotia

Audience: Executive leadership of Emergency Health Services, Nova Scotia Department of Health and Wellness

Submitter: [Student Name], Candidate for Master of Business Analytics

Overview: Students will develop a capstone project using publicly available data to recommend optimal locations for emergency health services (EHS) base locations across Nova Scotia. The project includes two deliverables:

* Briefing Note (1,500–2,000 words) — formatted for health system decision-makers.
* PowerPoint Presentation — summarizing key findings for an oral policy briefing.

**Briefing Note Structure**

1. Introduction: Clearly define the purpose: to determine optimal locations for EHS bases to improve access and equity.

* Explain why this analysis is timely and policy-relevant.

2. Background: Describe current EHS infrastructure and known issues (e.g., rural response times, regional disparities).

* Mention related metrics: population density, historical call volumes, transport times, underserved areas.

Cite publicly available datasets from Open Data NS or StatsCan.

3. Methods: Detail the data sources used (e.g., EMS call locations, population demographics, road network data).

* Describe analysis tools: mapping software, regression models, clustering (e.g., k-means), service area buffers.
* Note assumptions or exclusions (e.g., limited rural road data).

4. Options Analysis: Present 2–3 location optimization scenarios (e.g., maximize coverage, minimize response time, hybrid approach).

* Include visuals: maps, tables, or dashboard screenshots.
* Compare pros and cons of each scenario: efficiency, equity, feasibility.

5. Recommendation: Make a clear, evidence-based recommendation.

* Justify with both analytical insight and practical considerations (e.g., road access, co-location with hospitals).
* Suggest next steps: stakeholder engagement, pilot site assessment, or further analysis.

**PowerPoint Presentation Structure (8–10 slides)**

* Title Slide — Project title, student name, date
* Purpose — Short summary of objective
* Background — Key facts about current EHS deployment
* Data & Methods — Overview of datasets and tools used
* Scenario 1 — Visual/map with summary
* Scenario 2 — Visual/map with summary
* Recommendation — Clear policy recommendation + rationale
* Next Steps — Implementation suggestions or areas for refinement
* Q&A — Optional placeholder

Evaluation Criteria

* Data acquisition & use (20%)
* Analytical methodology (25%)
* Clarity of recommendation (15%)
* Policy relevance (15%)
* Quality of visuals/maps (15%)
* Communication & format (10%)

Suggested Data Sources:

* Nova Scotia Open Data Portal (EHS call volume, road networks, health zone boundaries)
* Statistics Canada (Census population, household income)
* Natural Resources Canada (topography, rural/urban land use)

This project challenges you to integrate technical, geographic, and policy dimensions of health analytics in service of a real-world decision. It is designed to demonstrate mastery in data storytelling, spatial analysis, and evidence-based policy design.