TOPIC 07 - Request for Proposal (RFP)

Project Title: Launching a Data Analytics Consultancy Service
Client Organization: ITL Corporation (ITL Corp)
Project Type: Group Project Assignment – DevOps & Deployment Focus
Target Audience: Computer Science Students (Group Work, Semester Project)

1. Introduction

ITL Corp is one of the leading logistics and transportation enterprises in Southeast Asia, with decades of operational experience and extensive client networks across Vietnam and the region. As the logistics industry generates massive amounts of operational data every day, ITL Corp sees an opportunity to diversify into **data analytics consultancy services**.
Through this project, student teams will act as consultants tasked with preparing a **comprehensive solution proposal** for the establishment of this new consultancy service. The project combines **technical deployment, DevOps practices, and business strategy**, requiring student groups to design an architecture, prototype, and implementation plan that can help ITL Corp launch and scale its consultancy operations.
This RFP invites proposals that blend **technical feasibility** and **business viability**, simulating a **real-world industry consultancy project**.

2. Business Case

Current Industry Context

- Logistics and transportation firms deal with **dynamic operations** such as fleet management, route optimization, warehouse handling, and last-mile delivery.
- Despite the abundance of data, many enterprises **lack in-house data expertise** to analyze, visualize, and make decisions effectively.
- Competitors in the region (e.g., DHL, DB Schenker, FedEx) already invest heavily in data-driven operations, putting ITL Corp under pressure to innovate.

Business Opportunity

- By leveraging its **logistics domain expertise** and integrating **advanced data analytics**, ITL Corp can position itself as a **trusted consultancy partner**.
- Services can be offered to SMEs, manufacturers, distributors, and e-commerce companies who seek **better decision-making tools** but lack internal capabilities.

Expected Outcomes

1. Establish a **Data Analytics Consultancy Division** inside ITL Corp.
2. Build a **service portfolio** including:
    - ✓ Predictive maintenance for fleets
    - ✓ Route and network optimization

- ✓ Inventory forecasting and warehouse analytics
- ✓ Customer demand forecasting

3. Develop a **scalable deployment model** powered by DevOps pipelines to reduce time-to-market and ensure reliability.
4. Provide ITL Corp with a **competitive edge**, new revenue stream, and long-term market differentiation.

3. Project Objectives

The student group must deliver a project proposal and prototype that achieve the following objectives:

1. **Design a scalable system architecture** that supports data collection, cleaning, analytics, and visualization.
2. **Implement DevOps practices** (CI/CD, automated testing, monitoring) to ensure fast and reliable deployment.
3. **Create a working prototype** that demonstrates analytics in a logistics scenario (e.g., predictive fleet maintenance, warehouse efficiency dashboard).
4. **Propose a consultancy business model** that defines service tiers (basic reporting, advanced predictive analytics, full optimization), pricing strategies, and client engagement process.
5. **Evaluate maintainability and evolution strategies**, ensuring that the system can be updated with new analytics models and technologies.

4. Scope of Work

4.1 Technical Deliverables

- **Data Pipeline Design**: End-to-end flow including ingestion (IoT sensors, ERP, WMS data), storage (SQL/NoSQL, cloud data lake), processing (Spark, Python, R), and visualization (Power BI, Tableau, Grafana).
- **DevOps Framework**:
  - ✓ CI/CD pipeline (GitHub Actions, Jenkins, GitLab CI)
  - ✓ Containerization & orchestration (Docker, Kubernetes)
  - ✓ Infrastructure as Code (Terraform, Ansible)
  - ✓ Automated testing (unit, integration, regression)
- **Cloud Deployment**: Multi-tier deployment on AWS, Azure, or GCP with scalability and fault tolerance.

- **Security & Compliance**: Data encryption, GDPR compliance, role-based access.
- **Monitoring & Logging**: Implement Prometheus, ELK stack, or similar for performance monitoring and system health.

4.2 Business Deliverables

- **Market Analysis**: Identify logistics companies, SMEs, and retail/e-commerce businesses as potential clients. Conduct competitor benchmarking.
- **Service Design**: Define consultancy packages (e.g., Bronze: dashboards; Silver: predictive modeling; Gold: full process optimization).
- **Revenue Model**: Combination of subscription-based services, project-based consultancy, and long-term retainer contracts.
- **Operational Workflow**: Engagement lifecycle – proposal → data assessment → analytics delivery → training & support.
- **Value Proposition**: Demonstrate efficiency gains (e.g., reduced delivery times, cost savings, optimized resource allocation).

5. Project Methodology

The project must follow an **Agile methodology** with **DevOps integration**, structured as follows:

1. **Sprint 0 (Planning):** Requirement gathering, team role allocation, backlog creation.
2. **Sprint 1–2:** System architecture design, business model framework.
3. **Sprint 3–4:** Prototype data pipeline, initial analytics models.
4. **Sprint 5–6:** DevOps CI/CD setup and deployment of analytics modules.
5. **Sprint 7–8:** Business consultancy service package development.
6. **Sprint 9–10:** Security, monitoring, and scalability evaluation.
7. **Sprint 11–12:** Final integration, testing, report, and presentation delivery.

Regular check-ins, sprint reviews, and retrospectives will ensure continuous improvement.

6. Evaluation Criteria

Proposals will be following rubric