Project Charter: **NexaFlow - Agile DataOps Platform**

**NexaFlow***Orchestrate. Iterate. Deliver.*

NexaFlow is a Tool-as-a-Service (TaaS) platform that empowers data teams to design, run, and iterate large-scale data pipelines using SCRUM/Agile best practices—bringing collaboration, visibility, and automation to the heart of modern DataOps.

**1. Project Scope Abstract**

Transform MSD Alliance into a data-driven organization by uniting fragmented data, optimizing operations, and ensuring full PDPA compliance. Deliverables include:

* Secure & automated ingestion pipelines
* Robust data cleaning frameworks
* Unified dashboard for stakeholders’ leadership
* Focus on automation, scalable cloud architecture, and regulatory readiness to create long-term competitive advantage.

**2. Product Description / Deliverables**

1. **Unified Data Platform**
   * Cloud-native single source of truth
   * Integrates DUSP, MCMC, and tech partner FTP systems
   * Scalable and secure
2. **Data Ingestion Pipeline**
   * Secure, automated ingestion (file uploads + APIs)
   * PII encryption and internal ID mapping
3. **Data Cleaning & Standardization**
   * Automated frameworks to ensure accuracy and consistency
4. **Secure Data Architecture**
   * AES‑256 encryption
   * Built for resilience, accessibility, and data integrity
5. **Advanced Analytics Engine**
   * AI/ML‑powered predictive insights and recommendations
6. **Executive Dashboard (Management)**
   * Real-time KPIs
   * Geospatial analytics (heatmaps, clustering)
   * Clean naming conventions and unified views
7. **Automated Reports**
   * Scheduled PDFs/images with KPIs and system health alerts
8. **Compliance Framework**
   * Privacy‑by‑design PDPA compliance
   * Automated audit trails and cybersecurity protocols
9. **24/7 Monitoring & Support**
   * 99.9% uptime SLA
   * Disaster recovery and ongoing technical support

**3. Project Objectives**

* **Data Consolidation & Accessibility**  
  Create a real-time, reliable single source of truth with built-in data quality assurance.
* **Compliance & Risk Management**  
  Full PDPA compliance, robust cybersecurity posture, and ongoing audit capabilities.
* **Operational Excellence**  
  Automate insights to improve efficiency and data-driven decision-making.
* **Competitive Advantage**  
  Leverage AI/ML to gain market responsiveness and strategic foresight.
* **Scalability**  
  Modular, cloud-ready architecture designed for future integrations   
  (e.g., KE - PADU, DOSM, JDN, JPN, MCMC).

**4. Business Case**

**Challenges:**

* Data silos and fragmentation → 30–40% productivity loss
* Compliance risk → potential fines of RM100k–RM500k

**Opportunity:**

* Malaysian digital economy projected at RM371B by 2025
* Data-savvy organizations see:
  + 23% more profitability
  + 60% cost reduction
  + 50% faster decisions

**Investment Overview:**

* Total investment: RM227,815
* Expected ROI: 203% by end of Year 1
* Payback period: ~4.8 months

**5. Pre-assigned Resources**

* **Freelance Data Scientist/Consultant** – Project execution lead
* **Cloud Infrastructure** – AWS/Azure compute, storage, analytics
* **Open-Source & SaaS Tools** – For ETL, BI, & reporting

**6. Stakeholders**

| **Name** | **Title** | **Role/Responsibility** |
| --- | --- | --- |
| MCMC | Government Agency | Data provider & dashboard end-user |
| NADI (Smart Services) | Tech Partner | Technical integration collaboration |
| Board of Directors & Executives | Project Sponsors | Budget approval & alignment |
| Freelance Data Scientist | Project Lead / Executor | End-to-end implementation & recommendations |

**7. Summary Milestone Schedule**

| **Description** | **Due Date** |
| --- | --- |
| **Project Preparation** | |
| • Review & finalize scope | Weeks 1–2 |
| • Executive engagement & sign-off | Weeks 2–3 |
| • Infrastructure provisioning | Week 4 |
| **Phase 1 – Foundation (Months 1–3)** | |
| • Deploy core infrastructure | Week 4 |
| • Consolidate 70% of critical datasets | Week 8 |
| • Basic compliance framework in place | Month 2 |
| • Launch Executive Dashboard MVP | Week 12 |
| **Phase 2 – Enhancement (Months 4–8)** | |
| • Operationalize advanced analytics | Month 5 |
| • Achieve full PDPA compliance certification | Month 6 |
| • Launch automated reporting system | Month 8 |
| **Phase 3 – Optimization (Months 9–12)** | |
| • Deploy AI/ML predictive models | Month 10 |
| • Complete system optimization | Month 12 |