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

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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

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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

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