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11TH APPeN CONFERENCE | Thimphu, Bhutan

Towards AI-Powered e-GP: Planning for Intelligence & Sustainable Procurement

Modernized Philippine Government Electronic Procurement System (mPhilGEPS Phase 2)

Presented by
Procurement Service-Department of Budget and Management (PS-DBM) Republic of the Philippines

PHILIPPINES E -GP MODERNIZATION

Session 2 | Towards AI-Powered e-GP: Planning for Intelligence & Sustainable Procurement

ADB CONFERENCE THEME

Digitalization to Intelligence

PLANNING AND SAFEGUARDS

AI Capabilities Across the Procurement Lifecycle

STRATEGIC ROADMAP

mPhilGEPS Phase 2 Evolution

PHILIPPINES E -GP MODERNIZATION

RA No. 12009 Mandates Emerging Tech, Data Analytics & Sustainability



SECTION 20

Central Portal



SECTION 24

Data Analytics



SECTION 23

Interconnectivity



RULE XXIII

Sustainability

PHILIPPINES E -GP MODERNIZATION

mPhilGEPS Phase 2: Core Operational AI Modules (1 to 4)

1 **Intelligent Planning**
Function: **Demand Forecasting**

2 **Price & Market Analytics**
Function: **Cost Benchmark**

3 **Compliance Pre-Checking**
Function: **Eligibility Screen**

4 **Document Processing**
Function: **AI Data Extraction**

Integrity, Risk Intelligence & Oversight Dashboards (Modules 5 to 9)

5 **Collusion Detection:** Scans for bid-rigging patterns, interlocking directors, and suspicious bid withdrawals.

6 **Supplier Risk Scoring:** Consolidates performance ratings, delivery histories, and eligibility compliance into risk ratings.

7 **Virtual Assistant:** Provides natural-language guidance for merchants and agencies on procurement rules.

8 **Executive Dashboards:** Delivers real-time analytics for oversight bodies (COA, GPPB) to identify market bottlenecks.

9 **Open Data Analytics:** Publishes OCDS-compliant machine-readable data for civil society & public monitoring.

Essential Prerequisites: Data Foundations & Cross-Agency Interconnectivity

OPEN CONTRACTING DATA STANDARD (OCDS)

PHILIPPINE AGENCY / PARTNER	INTEGRATED DATABASE / SYSTEM	AUTOMATED VALIDATION PURPOSE
Securities and Exchange Commission (SEC)	Corporate Registry & Beneficial Ownership	Validates corporate legal status, active registration, and beneficial ownership disclosures.
Department of Trade and Industry (DTI)	Business Name & Green Directory	Verifies sole proprietorships, active project lists, domestic preference, and certified green products.
Bureau of Internal Revenue (BIR)	eTax Clearance & eAFS Portal	Provides real-time validation of approved Tax Clearances and Audited Financial Statements.
Philippine Contractors Accreditation Board (PCAB) / Construction Industry Authority of the Philippines (CIAP)	Contractors Licensing & CPES	Validates contractor license classification, special JV validity, and CPES performance ratings.
Cooperative Development Authority (CDA) / Local Government Units (LGUs)	Cooperative Registry & Mayor's Permits	Automates registration verification for cooperatives and valid business permits from local LGUs.

Governance Safeguards: AI as Decision-Support, Not Decision-Maker

PILLAR 1

Non-Delegable Human Authority

PILLAR 2

Explainability & Traceability

PILLAR 3

Data Privacy & Security Controls

Implementation Phasing & Architectural Deployment Options

3-YEAR IMPLEMENTATION PHASING

- **Priority 1 Feature (Months 1–12)**
  Core e-Bidding, Merchant Registry & e Marketplace stabilization.
- **Priority 2 Feature (Months 13–24)**
  OCDS dataset integration & CrossAgency API pipelines (SEC, BIR, DTI).
- **Priority 3 Feature (Months 25–36)**
  AI Modules deployment (Planning, Collusion Analytics, Price Benchmarking).

ARCHITECTURAL TRADEOFF ANALYSIS

- **Commercial SaaS / API Integration**
  Fast feature deployment, lower initial setup, but incurs recurring API subscription and usage-based licensing fees.
- **In-House Government Infrastructure**
  Total data sovereignty and custom model control, but requires high capital outlay for cloud hardware & dedicated ML engineering teams.

The Governing Principle: Human Accountability

AI should:

- Assist procurement officials
- Analyze information and patterns
- Flag and prioritize potential issues
- Explain and recommend possible actions

AI should not:

- Make legally consequential procurement decisions
- Independently determine compliance
- Replace authorized procurement officials
- Assume accountability for government decisions

PHILIPPINES E -GP MODERNIZATION

Governance & Human-in-the-Loop



Decision Support, Not Autonomy

- Advisory Role
- Human Authority
- Public Accountability



Core System Safeguards

- Model Governance
- Data & Bias Management
- Audit Ready

PHILIPPINES E -GP MODERNIZATION

Summary & Implementation Vision



Modernized Procurement



Uncompromised Integrity



Strategic Roadmap