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ADB

High Level Technology in ADB Procurement Operations

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Overview

ADB's HLT Multi Donor Trust Fund prioritizes HLT in four sectors:

- Energy
- Transport
- Urban development
- Water

HLT can be incorporated into ADB procurement operations into several ways:

- the acquisition of equipment and goods that employ HLT that is new globally, in ADB operations, or to an ADB DMC (developing member country);
- construction or civil works based on specifications that require contractors to meet enhanced performance standards and/or employ HLT in the construction process, materials, and other inputs; and

HLT can be incorporated into ADB procurement operations into several ways:

- consulting services that require specific knowledge and expertise in the use of HLT in different phases of the innovation cycle, as well as different sectors and applications.

Procurement Strategies for High-Level Technology

- **ADB's procurement principles and processes apply to HLT with emphasis on value for money (VFM)**
- **The appropriate strategy to procure HLT and innovative solutions depends on:**

(i) the project's goals;

(ii) the stage of the innovation cycle;

(iii) the extent to which there is more than one feasible HLT or innovative solution;

Procurement Strategies for High-Level Technology

(i) whether or not that solution is protected by intellectual property rights;

(ii) the availability of reliable information;

(iii) risk; and

(iv) market sounding and intelligence.

Table 2: Procurement Strategies and Methods for High-Level Technology by Innovation Stage

Pre-Commercialization	Introduction	Adoption	Adaptation
• VFM analysis • Performance or block grants • Consulting services, based on quality • Requisition of key components from limited suppliers • Prequalification • Design and build of pilots • Minor civil works and standard equipment on open competitive basis	• VFM analysis • Performance or block grants • Consulting services, both quality and cost, depending on scope or nature of assignment • Prequalification • Design and build of demonstration projects • Procurement of components from limited suppliers • Civil works largely on a competitive basis, some specialized facilities may have limited potential bidders	• VFM analysis • TCO analysis with mix of qualitative and quantitative criteria • Interactive outreach, market sounding • Prequalification • Design and build • Progressive design and build • Performance incentives • Two-stage bidding • Direct contracting, with negotiations • Consulting services, primarily based on quality	• VFM analysis • TCO analysis with mix of quantitative and qualitative criteria • Interactive outreach, market sounding • Prequalification • Design and build • Progressive design and build • Performance incentives • Two-stage bidding • Direct contracting, with negotiations • Consulting services, primarily based on quality

TCO = total cost of ownership, VFM = value for money.

Value for Money Analysis

VFM analysis at this stage provides a high-level at the investment, including:

- screening of potential technology;
- design choices;
- identify the inherent risks and opportunities; and
- specific market situation

Contracting Consulting Services

- **Identifying the Need for High-Level Technology Consultants:**

(i) data analysis, database optimization, and modeling;

(ii) risk analysis;

(iii) systems architecture (real time, critical systems, automation, instrumentation, testing);

(iv) automation (controls, electrical engineering, monitoring systems, regulation and control, validation);

(v) migration strategies from one technology to another, integration with legacy systems;

In Construction Contracts

(i) performance and process engineering;

(ii) measurement and performance criteria;

(iii) life cycle costs

(iv) mechanical engineering (design of components, parts, subsystems);

(v) simulations;

(vi) validation processes (tests, quantification, integration);

(vii) safety analysis;

(viii) material strength, tolerance, and resistance; and

(ix) dependability and reliability

“Thank you!”

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