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UPGRADING AND COMPUTERIZING THE MANAGEMENT INFORMATION SYSTEM AT
BAPPENAS' BUREAU OF FOREIGN ECONOMIC COOPERATION:
FEASIBILITY STUDY

prepared for:

The Development Studies Project

The United States Agency for International Development, Jakarta

by:

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EXECUTIVE SUMMARY

Background and Problem Definition

The Bureau of Foreign Economic Cooperation at BAPPENAS is responsible for coordinating and monitoring the implementation of foreign development assistance, and integrating foreign assistance into the national development planning process. Despite this rather sweeping mandate, the Bureau is currently severely constrained both by its small size, and its entirely manual mode of operation. Consequently, the Bureau's foreign assistance management responsibilities have now outstripped its management capacity, as the volume and complexity of information passing through the Bureau's offices is more than its 12-person staff can handle using traditional data management systems.

Needs Assessment

Consequently, the Bureau has decided that it needs a management information system which is:

- o segmented into three major components, corresponding both to the three major types of external development assistance, and the Bureau's internal structure to track these types of assistance, namely multilateral/bilateral project assistance, export credit facilities, and technical assistance;
- o tracked from the time donors make general pledges or commitments until the final disbursement of project loan or grant agreements;
- o stored, processed, and retrieved by project site, sector, executing agency, donor, fiscal year, and/or total value; and
- o based primarily on data already available in its own files, supplemented when necessary by data already (or soon to be) available in regular reports of Bank Indonesia, the Ministry of Finance, and the Cabinet Secretariat.

The expected primary output of an upgraded information system is a project status summary, which can then be sorted a variety of ways to provide several special listings and reports, or secondary outputs. The primary inputs necessary to derive the above-described outputs rely quite heavily on the contract as the unit of analysis for multilateral/bilateral projects and for export credit projects, and on the project component (expert services, fellowships, and equipment) for technical assistance projects. The main source of data for these input forms comes from the Bureau's own files, especially project agreement and contract approval forms. These documents are supplemented by Bank Indonesia and Ministry of Finance data regarding contract disbursements, and by the Cabinet Secretariat for more detailed

information on grant-funded technical assistance.

Although there are already a great many computers either being procured or now in operation both within and outside of BAPPENAS, none of these systems are both appropriate and available for automating the Bureau's upgraded management information system. Nonetheless, the Bureau would like to maximize the compatibility of its system with those already being used elsewhere, to facilitate interoffice communication and data exchange.

Technical Options for Designing and Computerizing the Required Management Information System

There are five principal options for designing and computerizing the required management information system, which can be classified as follows:

SINGLE USER SYSTEMS

- o Option I: Self Sufficient Subsystems
- o Option II: Standalone Subsystems With Pooled Peripherals

MULTIUSER SYSTEMS

- o Option III: Local Area Network
- o Option IV: Distributed Processing
- o Option V: Time Sharing

Option I, Self Sufficient Subsystems, is simply the replication of one configuration five times. Consequently, although it involves minimal technical and organizational risk, it is the fourth most expensive option because it is a highly redundant system in terms of duplicated hardware.

Option II, Standalone Subsystems With Pooled Peripherals, uses a configuration similar to Option I, but shares some relatively expensive hardware (hard disks, printers, and power supply units). Thus, Option II not only combines the relatively low risk of Option I with the cost savings of pooled hardware, but also enables a bit more hardware depth by introducing a daisy wheel printer for letter-quality report production.

Although both Option I and Option II are single user systems rather than linked or integrated multiuser systems, they both can later be upgraded with relative ease to Option III, Local Area Network. The primary advantage to a local area network is that, for a moderate additional cost, a segmented or modular computer configuration can be converted into a system that allows interterminal communication and data exchange. However, within the next year or two, local area networks are extremely high risk.

endeavors in Indonesia. Not only is the technology still being developed and tested both within and outside of the country, but if a local area network were to be implemented, it would also require significant organizational changes at the Bureau.

Option IV, Distributed Processing, is similar conceptually to a local area network, but is usually more efficient technically and more economical financially. The major difference between a distributed processing system and a local area network system is that the former usually creates a single integrated system by employing one central service processor and hard disk storage area, while the latter basically links together relatively independent computers. Consequently, distributed processing tends to be less expensive than local area networks. However, distributed processing operating systems tend to be quite complex, and thus require the constant support of a commodity in short supply in Indonesia: high-level computer software experts.

Option V, Time Sharing, is similar to distributed processing, except that rather than dividing data processing functions among intelligent workstations, it centralizes these activities in one unit and employs dumb terminals. This is even less expensive than distributed processing, but the risks are similar, and the quality of the system decreases considerably in a multiuser environment.

Recommended Option

Given the nature of the Bureau's management information needs, and balancing technical quality and expandability with institutional compatibility and implementation cost, time, and risk, Option II is the most appropriate design and computerization alternative.

Although all options presented will produce the Bureau's required outputs from its anticipated inputs relying primarily on a standard integrated software package such as Symphony or Framework, Options I, III, IV, and V all have critical drawbacks.

Option II, however, entails minimal risk, is compatible with the Bureau's current organizational structure and operating procedures but is expandable or upgradable if necessary, is moderately priced (\$60,000 to \$80,000 for hardware, software, and peripherals, and an additional \$60,000 to \$80,000 for technical assistance), and would take about three months to install and prepare for operations, once procured.

CHAPTER ONE: BACKGROUND AND PROBLEM DEFINITION

Introduction

The following feasibility study has been conducted by Development Alternatives, Inc. (DAI) under the auspices of the Development Studies Project (DSP) of the United States Agency for International Development's Indonesia mission (USAID/Jakarta). It has been undertaken in response to a request by the Bureau of Foreign Economic Cooperation (Biro Kerjasama Ekonomi Luar Negeri, KELN) at the National Development Planning Agency (Badan Perencanaan Pembangunan Nasional, BAPPENAS) to redesign and computerize its current management information system.

The purpose of this study is to:

- o define the Bureau's present management information system;
- o identify the shortcomings of this system in meeting current and anticipated information needs; and
- o present a set of options, along with their implications in terms of the time, cost, and technical and organizational parameters of implementation, for upgrading and computerizing the Bureau's information system to redress current information deficiencies.

Upon approval by USAID and the Bureau of Foreign Economic Cooperation of the preferred means of proceeding from among the various options presented, the consultant will then develop a formal proposal for the Development Studies Project.

The Role and Function of the Bureau of Foreign Economic Cooperation

The Bureau of Foreign Economic Cooperation is responsible for:

- o coordinating and monitoring the implementation of foreign development assistance; and
- o integrating foreign assistance into the national development planning process.

That is, the Bureau is responsible neither for the technical implementation of development activities, traditionally handled by Government of Indonesia (GOI) executing (line) agencies, nor for the detailed tracking of pecuniary flows in and out of Indonesia, usually the domain of Bank Indonesia (BI) and the Ministry of Finance (MOF). Instead, the Bureau has been given the mandate to coordinate, track, and assess foreign development assistance, from a national development planning and management perspective.

Difficulties in Meeting the Bureau's Mandate

Despite this rather sweeping mandate, the Bureau is currently severely constrained by both its very small-scale and quite traditional mode of operations. Consequently, the Bureau's foreign assistance management responsibilities have now outstripped its management capacity, as the volume and complexity of information passing through the Bureau's offices is more than its 12-person staff can handle using traditional data management systems.

Specifically, the Bureau's staff must now coordinate, monitor, and assess foreign development assistance that,

annually:

- o comes from approximately 20 different sources in as many different currencies;
- o goes to over 50 different parts of the GDI; and
- o is comprised of roughly 500 separate loan and grant agreements, and 4,000 to 5,000 individual contracts.

The Bureau must keep track of this foreign assistance from the time project proposals are first assembled for consideration by the Intergovernmental Group for Indonesia (IGGI), through the final disbursement of project loan or grant agreements.

However, at present, the Bureau feels that it lacks the capacity to store, process, or retrieve this information in an efficient and effective manner, and has thus asked USAID to assist the Bureau in redesigning and automating its current management information system.

The remaining text, an examination of the feasibility of alternative options for addressing current information shortcomings, is the first step in the upgrading process. It will then be followed by the detailed design, and subsequent implementation of the approach that best meets the Bureau's technical and organizational needs, while at the same time accommodates both internal and external time and budgetary constraints.

CHAPTER TWO: NEEDS ASSESSMENT

Required Information System to Address Current and Anticipated Management Needs

SYSTEM PARAMETERS

Although the Bureau of Foreign Economic Cooperation is charged with the formidable task of coordinating and monitoring the implementation of all foreign development assistance, and integrating these external resources into the national development planning process, the Bureau seeks a revised management information system that allows the Bureau to fulfill this mandate without inundating it with a plethora of minutia.

That is, although the upgraded management information system must not exclude information critical to the Bureau's performance of its designated responsibilities, the system must be highly selective in terms of the nature and volume of data it incorporates to ensure its utility in providing timely and appropriate information. Moreover, the system must be structured in such a way that its execution operationally is compatible with the Bureau's structure organizationally.

Consequently, the Bureau has decided that the system is most appropriately segmented into three major components, corresponding both to the three major types of external development assistance, and the Bureau's internal structure to track these types of assistance. These three components are:

- o multilateral/bilateral project assistance;
- o export credit facilities; and
- o technical assistance.

Moreover, the Bureau has identified several key decision points during the planning and implementation of all three types of foreign development assistance listed above. These decision points provide the basic temporal structure for an upgraded information system. They consist of:

- o comparing signed project loan and grant agreements with donor commitments and general pledges;
- o assessing the status of these signed agreements in terms of contract approvals and actual disbursements; and
- o identifying and ameliorating significant obstacles to the smooth and successful implementation of development assistance project agreements.

Moreover, the Bureau has identified critical non-temporal dimensions with which to define the storing, processing, and retrieval of data, such as project:

- o site;
- o sector;
- o executing agency;
- o donor;
- o fiscal year; and/or
- o total value.

Finally, the Bureau will rely primarily on data already available in its own files, supplemented when necessary by data already (or soon to be) available in regular reports of Bank Indonesia, the Ministry of Finance, and the Cabinet Secretariat.

SYSTEM OUTPUTS, INPUTS, AND DATA SOURCES

The management information system required by the Bureau can best be disaggregated technically into:

- o primary and secondary outputs;
- o primary inputs; and
- o data sources for primary inputs.

The expected primary output of an upgraded information system is a project status summary, which can then be sorted a variety of ways to provide several special listings and reports, or secondary outputs.

The project status summary provides a snapshot profile of project progress through a given reporting period. This summary uses a mixture of quantitative and qualitative data, so that the Bureau has both critical indicators of progress, as well as an interpretation of these numbers accompanied by pending issues requiring follow-up activities. The Bureau can then generate recapitulations of this project status summary in a number of different ways without additional data entry. Preliminary designs of these anticipated outputs are presented in Annex II.

The primary inputs necessary to derive the above-described outputs rely quite heavily on the contract as the unit of analysis for multilateral/bilateral projects and for export credit projects, and on the project component (expert services, fellowships, and equipment) for technical assistance projects. These input forms exploit the data processing capacity of computers by utilizing automatic conversions and calculations whenever possible, and by minimizing duplicate data entry. They also allow for qualitative assessments of project progress,

as well as references to background or supporting documentation. Sample input forms are presented in Annex III.

The main source of data for these input forms comes from the Bureau's own files, especially project agreement and contract approval forms. These documents are supplemented by Bank Indonesia and Ministry of Finance data regarding contract disbursements, and by the Cabinet Secretariat for more detailed information on grant-funded technical assistance.

That is, the Bureau's proposed information system is comprised entirely of existing data bases. The new system's preliminary design is conceived on the premise that not only is a rich data base currently available, but also that efforts to request fresh data from the multitude of donors and GOI agencies involved with foreign assistance will most likely yield little additional useful information.

In sum, data are plentiful. Rather, these data are simply unmanageable the way they are now organized, processed, stored, and retrieved. Consequently, most of the Bureau's time is spent responding to crises as they arise, rather than anticipating and resolving problems before they develop into crises.

An inventory of principal data sources for the above-described input forms is presented in Annex IV.

SYSTEM COMPUTER FACILITIES

Although there are already a great many computers either being procured or now in operation both within and outside of BAPPENAS, none of these systems are both appropriate and available for automating the Bureau's upgraded management

information system.

Within BAPPENAS, there are two computer systems now in operation, with a third one recently tendered. The existing systems are:

- o 12 Wang dedicated word processors used by the BAPPENAS Secretariat for report production, and incapable of handling data base management tasks; and
- o 1 NEAC and 4 NEC personal computers used by the Japanese-assisted BAPPENAS Quantitative Studies Project, and unavailable for other users.

Moreover, BAPPENAS is now planning to buy a large central computer, most likely either a NEC or NCR. This computer is designated for large data processing functions, while the Bureau is presently seeking a much more modest system to assist the Bureau in its daily management tasks. The Bureau would certainly like its system to be compatible with the BAPPENAS-wide system to facilitate data exchange, but the issues of Bureau access and control over its data base warrants a small computer configuration as a tool for managing the Bureau's information system on a regular, interactive basis.

Regarding computer facilities outside of BAPPENAS, the most critical concern is trying to ensure system compatibility to allow the automated exchange of information with BAPPENAS. Thus, in procuring new computers, BAPPENAS should note the following outside computer facilities:

- o Bank Indonesia's IBM-4341 and Wang VS-80;
- o Ministry of Finance's IBM-4331, IBM-4341, IBM-System 36, IBM Personal Computers, and Sperry Univac-1106; and

- o Cabinet Secretariat's Wang VS-2200 and Soerry Univac-S80.

In addition, Bank Indonesia and/or the Ministry of Finance is considering the purchase of a DEC Vax minicomputer to run the Debt Analysis and Management System, while the Cabinet Secretariat is currently procuring 4 NEC S100 microcomputers to help monitor the progress of foreign technical assistance.

A Comparison of the Bureau's Present and Required Management Information Systems

The Bureau for Foreign Economic Cooperation's present management information system contains most of the raw data necessary to implement the above-described future information system. The primary difference between these two information systems is that the current system is fragmented and entirely manual, while the anticipated system would be rationalized and partially computerized.

By first reorganizing, and subsequently automating the most critical components of the current information system, the Bureau would then be able not only to use its current data base much more efficiently and effectively than at present, but would also be able to complement this data base with summary data from Bank Indonesia and the Ministry of Finance regarding monetary flows after contracts have been signed and approved, and from the Cabinet Secretariat regarding the status of technical assistance projects and programs.

That is, the Bureau would be able to capitalize on its rich but currently overwhelming data base derived from its role as a key focal point for the flow of external development resources to

Indonesia. Moreover, the Bureau would be able to extend the utility of this data base by linking it to equally extensive but substantively different data bases regularly published by other GOI institutions. Consequently, the Bureau would strengthen its development assistance coordinating function, without either demanding new data from GOI executing agencies, or impinging on the legally mandated functions of other central GOI institutions.

CHAPTER III:
TECHNICAL OPTIONS FOR DESIGNING AND COMPUTERIZING
THE REQUIRED MANAGEMENT INFORMATION SYSTEM

Principal Options

There are five principal options for designing and computerizing the management information system proposed in Chapter II, which can be classified as follows:

SINGLE USER SYSTEMS

- o Option I: Self Sufficient Subsystems
- o Option II: Standalone Subsystems With Pooled Peripherals

MULTIUSER SYSTEMS

- o Option III: Local Area Network
- o Option IV: Distributed Processing
- o Option V: Time Sharing

These options are illustrated in Figure I, while their technical specifications and operational implications are described in Figure II.

Option I, Self Sufficient Subsystems, is simply the replication of one configuration five times. Consequently, although it involves minimal technical and organizational risk, it is the fourth most expensive option because it is a highly redundant system in terms of duplicated hardware.

Option II, Standalone Subsystems With Pooled Peripherals, uses a configuration similar to Option I, but shares some relatively expensive hardware (hard disks, printers, and power supply units). Thus, Option II not only combines the relatively low risk of Option I with the cost savings of pooled hardware, but also enables a bit more hardware death by introducing a daisy

FIGURE I:
OPTIONS TREE

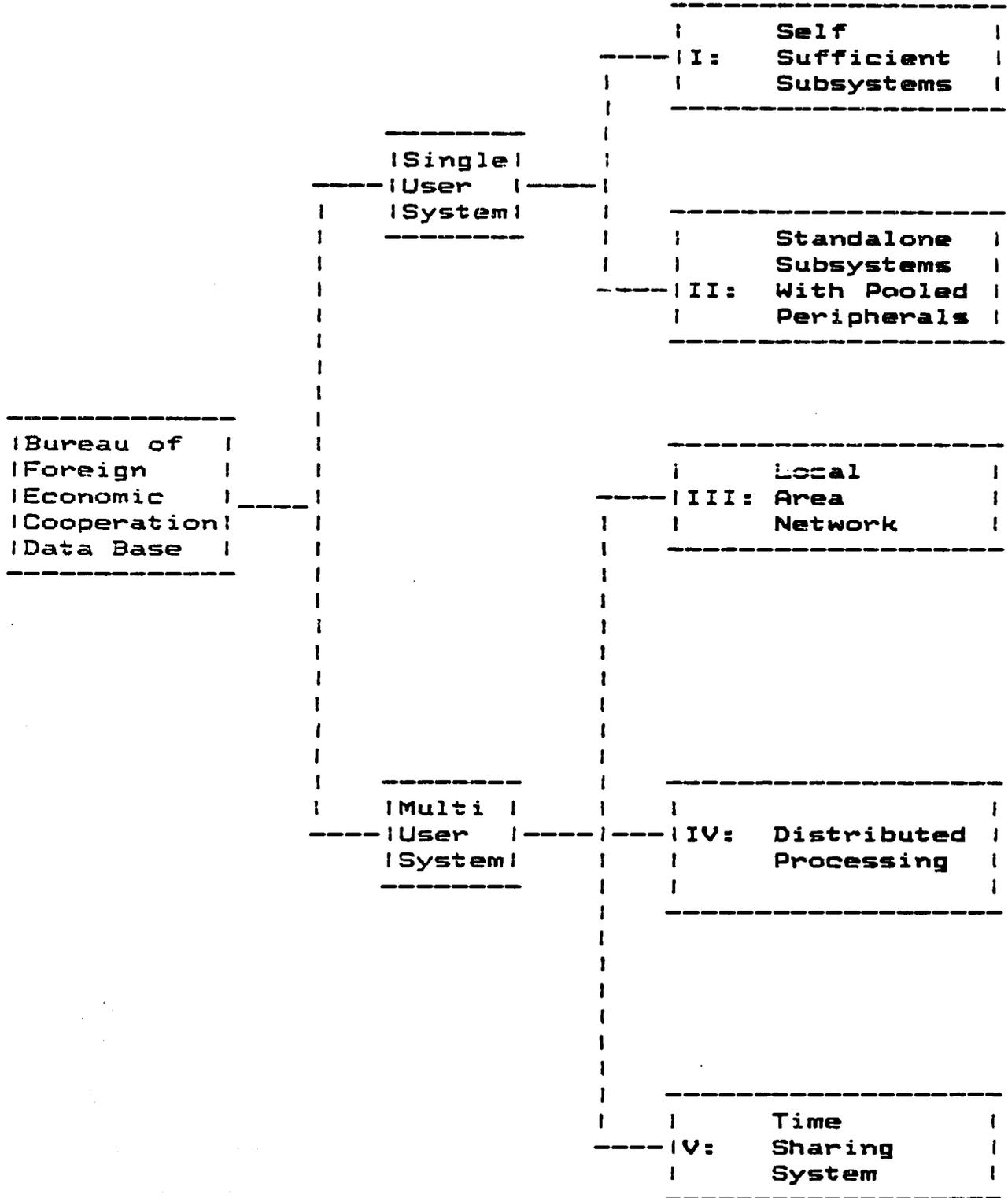


FIGURE II:
TECHNICAL SPECIFICATIONS AND THEIR IMPLICATIONS FOR IDENTIFIED DATA BASE MANAGEMENT OPTIONS

OPTION	TECHNICAL SPECIFICATIONS		IMPLICATIONS				
	Hardware	Software	Cost	Time	Institutional	Expandability	Risk
I: Self Sufficient Subsystems	<u>5 Units:</u> - 16-bit processor - 512 Kb RAM - 360 Kb floppy - 10 Mb hard disk - RS-232C port - Parallel port - 12-inch screen - 24 x 80 display - Detached keyboard - 136-column cmo - UPS	<u>5 Packets:</u> - MS-DOS compatible operating system - Standard languages and applications - Integrated w/spreadsheet/data base program	\$ 75,000 to \$105,000 (hardware, software, & peripherals) \$ 60,000 to \$ 80,000 (technical assistance)	About 3 months (incl. install., training, and start-up; excl. procurement)	Quite compatible with current organization, procedures, and staff capacity	Limited, except to link via local area network	Minimal (already avail., tested, and maintn. in Indo.)
I: Standalone Subsystems II: With Pooled Peripherals	- 3 units Option I computer - 2 units Option I computer w/o hard disk (2 floppies) - 1 unit Option I dot matrix printer - 1 unit daisy wheel printer - 3 units UPS	Same as Option I Network Packet (i.e., config., comm., etc.)	\$ 60,000 to \$ 80,000 (hardware, software, & peripherals) \$ 60,000 to \$ 80,000 (t.a.)	Same as Option I	Same as Option I	Same as Option I	Same as Option I
I: Local III: Area Network	Same as Option I or Option II Network Package (i.e., trans. unit, adapters, etc.)	Same as Option I Network Packet (i.e., config., comm., etc.)	Option I: \$ 85,000 to \$120,000 Option II: \$ 70,000 to \$ 95,000 T.A.: \$ 60,000 to \$120,000	3 to 6 months (incl. all but procurement)	Requires tighter coordination and internal control than currently practiced	Can include dozens of computers, within limited geographic area	Extremely high risk (not yet fully tested or maintn. in Indo.)
I: IV: Distributed Processing	- 16-bit, 512 Kb, 3-port service proc. - 40 Mb hard disk - 14.5 Mb tape cart. - 1 unit Option I computer w/o hard disk (2 floppies) - 4 units Option I computer w/o disks - Option II printers - 1 unit UPS	Same as Option I Multiuser, multitasking operating system	\$ 50,000 to \$ 70,000 (hardware, software, & peripherals) \$ 60,000 to \$120,000 (t.a.)	Same as Option III	Same as Option III	Can support up to 8, and be expanded to 16 computers, within limited geographic area	Moderate to high risk (avail. in Indo., but very difficult to install and maintain)
I: IV: Time Sharing System	- 16-bit, 512 Kb, 3-port service proc. - 40 Mb hard disk - 14.5 Mb tape cart. - 5 units cump terms - Option II printers - 1 unit UPS	Same as Option IV	\$ 45,000 to \$ 75,000 (hw, sw, & perions.) \$ 60,000 to \$120,000 (t.a.)	Same as Option III	Same as Option III	Same as Option IV	Same as Option IV

wheel printer for letter-quality report production.

Although both Option I and Option II are single user systems rather than linked or integrated multiuser systems, they both can later be upgraded with relative ease to Option III, Local Area Network. The primary advantage to a local area network is that, for a moderate additional cost, a segmented or modular computer configuration can be converted into a system that allows interterminal communication and data exchange. However, within the next year or two, local area networks are extremely high risk endeavors in Indonesia. Not only is the technology still being developed and tested both within and outside of the country, but if a local area network were to be implemented, it would also require significant organizational changes at the Bureau.

Option IV, Distributed Processing, is similar conceptually to a local area network, but is usually more efficient technically and more economical financially. The major difference between a distributed processing system and a local area network system is that the former usually creates a single integrated system by employing one central service processor and hard disk storage area, while the latter basically links together relatively independent computers. Consequently, distributed processing tends to be less expensive than local area networks. However, distributed processing operating systems tend to be quite complex, and thus require the constant support of a commodity in short supply in Indonesia: high-level computer software experts.

Option V, Time Sharing, is similar to distributed

processing, except that rather than dividing data processing functions among intelligent workstations, it centralizes these activities in one unit and employs dumb terminals. This is even less expensive than distributed processing, but the risks are similar, and the quality of the system decreases considerably in a multiuser environment.

Recommended Option

Given the nature of the Bureau's management information needs, and balancing technical quality and expandability with institutional compatibility and implementation cost, time, and risk, Option II is the most appropriate design and computerization alternative.

Although all options presented will produce the Bureau's required outputs from its anticipated inputs relying primarily on a standard integrated software package such as Symphony or Framework, Options I, III, IV, and V have the following critical drawbacks:

- o Option I is overly redundant and thus too expensive;
- o Option III is neither fully tested nor readily available in Indonesia, although is a future alternative if the system needs to be upgraded;
- o Option IV, although currently available in Indonesia, is quite difficult to install and maintain, making it hard to justify the risk entailed when there is no need for one integrated data base for the application in question; and
- o Option V, in addition to having the same shortcomings as Option IV, degrades considerably when employed by

many users at the same time.

Option II, however, entails minimal risk, is compatible with the Bureau's current organizational structure and operating procedures, is expandible or upgradable if necessary, is moderately priced, and would take about three months to install and prepare for operations, once procured.

ANNEX I:
ORGANIZATIONAL PLACEMENT AND STRUCTURE OF
THE BUREAU OF FOREIGN ECONOMIC COOPERATION

PLACEMENT OF THE BUREAU OF FOREIGN ECONOMIC COOPERATION
WITHIN BAPPENAS

1. DEPUTY DEPARTMENT OF ECONOMIC AFFAIRS

Agriculture and Irrigation Bureau
Industry, Mining, and Electricity Bureau
Communication and Tourism Bureau
Trade Bureau
Foreign Economic Cooperation Bureau

2. DEPUTY DEPARTMENT OF SOCIAL AND CULTURAL AFFAIRS

Education and Culture Bureau
Social Communication and Science Bureau
Social Welfare and Public Housing Bureau
Health and Nutrition Bureau
Religion and Law Bureau

3. DEPUTY DEPARTMENT OF FISCAL AND MONETARY AFFAIRS

National Monetary and Finance Bureau
Balance of Payments and Multilateral/Regional Economic
Relations Bureau
Economic and Statistical Analysis Bureau
Macro Planning and Quantitative Studies Bureau

4. DEPUTY DEPARTMENT OF IMPLEMENTATION SUPERVISION

Development Projects Expenditures Bureau
Monitoring of Development Projects Implementation Bureau
Business and Cooperatives Development Bureau
Management of Natural Resources and the Environment Bureau

5. DEPUTY DEPARTMENT OF REGIONAL AND LOCAL AFFAIRS

Regional I Bureau
Regional II Bureau
Local Economic and Social Affairs Bureau
Spatial Planning and Land Use Bureau
Local Development Assistance Bureau

6. DEPUTY DEPARTMENT OF MANPOWER AND POPULATION AFFAIRS

Manpower Bureau
Transmigration Bureau
Family Planning and Population Bureau

7. DEPUTY DEPARTMENT OF ADMINISTRATIVE AFFAIRS

Development Administration Bureau
Data and Information Management Bureau
General Administration Bureau

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ANNEX II:
PRIMARY AND SECONDARY OUTPUTS OF THE
PROPOSED MANAGEMENT INFORMATION SYSTEM

Primary Output
(Recapitulation, Using
Project As Unit Of
Analysis, In \$ U.S. Only)

MULTILATERAL/BILATERAL PROJECT SUMMARY

Date of Report: _____

- A. TITLE: _____
- B. SITE: _____
- C. SECTOR: _____
- D. EXECUTING AGENCY: _____
- E. DONOR: _____
- F. CODE: _____
- G. DATE: _____
- H. TOTAL VALUE (\$ U.S.): _____
- I. CONTRACTS SIGNED AND APPROVED THROUGH THIS REPORTING PERIOD:
 - 1) CUMULATIVE VALUE (\$ U.S.): _____
 - 2) RATIO OF SIGNED AND APPROVED CONTRACTS TO TOTAL PROJECT VALUE (%): (Automatic)
- J. LETTERS OF CREDIT OPENED THROUGH THIS REPORTING PERIOD:
 - 1) CUMULATIVE VALUE (\$ U.S.): _____
 - 2) RATIO OF OPENED LETTERS OF CREDIT TO SIGNED AND APPROVED CONTRACTS (%): (Automatic)
 - 3) RATIO OF OPENED LETTERS OF CREDIT TO TOTAL PROJECT VALUE (%): (Automatic)
- K. DISBURSEMENTS THROUGH THIS REPORTING PERIOD:
 - 1) CUMULATIVE VALUE (\$ U.S.): _____
 - 2) RATIO OF TOTAL DISBURSEMENTS TO OPENED LETTERS OF CREDIT (%): (Automatic)
 - 3) RATIO OF TOTAL DISBURSEMENTS TO CONTRACTS SIGNED AND APPROVED (%): (Automatic)
 - 4) RATIO OF TOTAL DISBURSEMENTS TO TOTAL PROJECT VALUE (%): (Automatic)

L. PENDING ISSUES/FOLLOW-UP REQUIRED:

M. REFERENCE DOCUMENTS:

- 1) -----
- 2) -----
- 3) -----
- 4) -----
- 5) -----

Secondary Outputs
(Selected Recapitulations
Based on Primary Input)

MISCELLANEOUS SUMMARIES OF
THE STATUS OF MULTILATERAL/BILATERAL PROJECT ASSISTANCE

- I. Recapitulation of the Primary Output (Multilateral/Bilateral Project Summary) by one or more of the following categories:
 - o site;
 - o sector;
 - o executing agency;
 - o donor;
 - o time period;
 - o total value; and
 - o contract status (contracts signed and approved/letters of credit opened/disbursements).

- II. Comparison of the total amount pledged with the total value of all project agreements, by:
 - o donor;
 - o fiscal year.

Primary Output
(Recapitulation, Using
Project As Unit Of
Analysis, In \$ U.S. Only)

EXPORT CREDIT PROJECT SUMMARY

Date of Report: _____

- A. TITLE: _____
- B. SITE: _____
- C. SECTOR: _____
- D. EXECUTING AGENCY: _____
- E. ALLOCATION:
 - 1) FISCAL YEAR OF INITIAL ALLOCATION: _____
 - 2) INITIAL VALUE OF ALLOCATION (\$ U.S.): _____
 - 3) FISCAL YEAR OF REVISION: _____
 - 4) NEW VALUE OF ALLOCATION (\$ U.S.): _____
- F. SOURCE OF FINANCING: _____
- G. CONTRACTS SIGNED AND APPROVED THROUGH THIS REPORTING PERIOD:
 - 1) CUMULATIVE VALUE (\$ U.S.): _____
 - 2) RATIO OF SIGNED AND APPROVED CONTRACTS TO TOTAL PROJECT VALUE (%): (Automatic)
- H. DISBURSEMENTS THROUGH THIS REPORTING PERIOD:
 - 1) CUMULATIVE VALUE (\$ U.S.): _____
 - 2) RATIO OF TOTAL DISBURSEMENTS TO CONTRACTS SIGNED AND APPROVED(%): (Automatic)
 - 3) RATIO OF TOTAL DISBURSEMENTS TO TOTAL PROJECT VALUE (%): (Automatic)
- I. PENDING ISSUES/FOLLOW-UP REQUIRED:

U

J. REFERENCE DOCUMENTS:

- 1) -----
- 2) -----
- 3) -----
- 4) -----
- 5) -----

Secondary Outputs
(Selected Recapitulations
Based on Primary Input)

MISCELLANEOUS SUMMARIES OF
THE STATUS OF EXPORT CREDIT PROJECT ASSISTANCE

- I. Recapitulation of the Primary Output (Export Credit Project Summary) by one or more of the following categories:
 - o site;
 - o sector;
 - o executing agency;
 - o total allocation;
 - o time period;
 - o source of financing;
 - o recipient company; and
 - o contract status (contracts signed and approved/
disbursements).

- II. Comparison of the total amount allocated with the total value of all project agreements, by:
 - o sector; and
 - o fiscal year.

Primary Output
(Recapitulation, Using
Project As Unit Of
Analysis, In \$ U.S. Only)

TECHNICAL ASSISTANCE PROJECT SUMMARY

Date of Report: _____

- A. TITLE: _____
- B. SITE: _____
- C. SECTOR: _____
- D. EXECUTING AGENCY: _____
- E. DONOR: _____
- F. CODE: _____
- G. DATE: _____
- H. TOTAL VALUE (\$ U.S.): _____
- I. CONTRACTS SIGNED THROUGH THIS REPORTING PERIOD:
 - 1) CUMULATIVE VALUE (\$ U.S.): _____
 - 2) RATIO OF SIGNED CONTRACTS TO TOTAL PROJECT VALUE (%):
(Automatic)
- J. DISBURSEMENTS THROUGH THIS REPORTING PERIOD:
 - 1) CUMULATIVE VALUE (\$ U.S.): _____
 - 2) RATIO OF TOTAL DISBURSEMENTS TO CONTRACTS SIGNED (%):
(Automatic)
 - 3) RATIO OF TOTAL DISBURSEMENTS TO TOTAL PROJECT VALUE (%):
(Automatic)
- K. PENDING ISSUES/FOLLOW-UP REQUIRED:

L. REFERENCE DOCUMENTS:

- 1) -----
- 2) -----
- 3) -----
- 4) -----
- 5) -----

Secondary Outputs
(Selected Recapitulations
Based on Primary Input)

MISCELLANEOUS SUMMARIES OF
THE STATUS OF TECHNICAL ASSISTANCE PROJECTS

- I. Recapitulation of the Primary Output (Technical Assistance Project Summary) by one or more of the following categories:
- o site;
 - o sector;
 - o executing agency;
 - o donor;
 - o time period;
 - o total value;
 - o contract status (contracts signed/disbursements); and
 - o project component (expert services/fellowships/equipment).
- II. Comparison of the total amount pledged with the total value of all project agreements, by:
- o donor; and
 - o fiscal year.

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ANNEX III:

PRIMARY INPUTS OF THE PROPOSED MANAGEMENT INFORMATION SYSTEM

J. CRITICAL RATIOS THROUGH THIS REPORTING PERIOD (all automatic, and in percentages):

- 1) RATIO OF OPENED LETTERS OF CREDIT TO SIGNED AND APPROVED CONTRACTS:
- 2) RATIO OF OPENED LETTERS OF CREDIT TO TOTAL PROJECT VALUE:
- 3) RATIO OF SIGNED AND APPROVED CONTRACTS TO TOTAL PROJECT VALUE:

K. DISBURSEMENTS THROUGH THIS REPORTING PERIOD:

- 1) CUMULATIVE VALUE (\$ U.S.): _____
- 2) RATIO OF TOTAL DISBURSEMENTS TO OPENED LETTERS OF CREDIT (%): Automatic
- 3) RATIO OF TOTAL DISBURSEMENTS TO SIGNED AND APPROVED CONTRACTS (%): Automatic
- 4) RATIO OF TOTAL DISBURSEMENTS TO TOTAL PROJECT VALUE (%): Automatic

L. PENDING ISSUES/FOLLOW-UP REQUIRED:

M. REFERENCE DOCUMENTS:

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

H. CRITICAL TOTALS AND RATIOS THROUGH THIS REPORTING PERIOD (all automatic, and all in \$ U.S. and percentages):

- 1) CUMULATIVE VALUE OF SIGNED AND APPROVED CONTRACTS:
- 2) RATIO OF SIGNED AND APPROVED CONTRACTS TO TOTAL PROJECT ALLOCATION:

I. DISBURSEMENTS THROUGH THIS REPORTING PERIOD:

- 1) CUMULATIVE VALUE (\$ U.S.): _____
- 2) RATIO OF TOTAL DISBURSEMENTS TO SIGNED AND APPROVED CONTRACTS (%): Automatic
- 3) RATIO OF TOTAL DISBURSEMENTS TO TOTAL PROJECT ALLOCATION (%): Automatic

J. PENDING ISSUES/FOLLOW-UP REQUIRED:

K. REFERENCE DOCUMENTS:

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

Primary Input
 (Project Component As Unit
 Of Analysis; \$ U.S. Only;
 Sekkab Main Source)

TECHNICAL ASSISTANCE PROJECT SUMMARY

Date of Report: _____

- A. TITLE: _____
- B. SITE: _____
- C. SECTOR: _____
- D. EXECUTING AGENCY: _____
- E. DONOR: _____
- F. CODE: _____
- G. DATE: _____
- H. TOTAL VALUE (\$ U.S.):
 - 1) EXPERT SERVICES: _____
 - 2) FELLOWSHIPS: _____
 - 3) EQUIPMENT: _____
 - 4) TOTAL: (Automatic)
- I. CONTRACTS SIGNED THROUGH THIS REPORTING PERIOD:

Project Component:	Cumulative Value (\$ U.S.)	Contracts Signed:
(1)	(2)	Project Value (%)
(3)		
Expert Services		
Fellowships		
Equipment		
Total		

J. DISBURSEMENTS THROUGH THIS REPORTING PERIOD:

- 1) CUMULATIVE VALUE (\$ U.S.): _____
- 2) RATIO OF TOTAL DISBURSEMENTS TO CONTRACTS SIGNED (%):
(Automatic)
- 3) RATIO OF TOTAL DISBURSEMENTS TO TOTAL PROJECT VALUE (%):
(Automatic)

K. PENDING ISSUES/FOLLOW-UP REQUIRED:

L. REFERENCE DOCUMENTS:

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

ANNEX IV:
PRINCIPAL DATA SOURCES FOR
THE PROPOSED MANAGEMENT INFORMATION SYSTEM

Data Sources for
Primary Inout

MULTILATERAL/BILATERAL PROJECTS

TIMING, FLOW, AND NATURE OF INFORMATION	FREQUENCY	FROM	TO	MONETARY UNIT	CLASSIFIERS
STAGE OF PROJECT CYCLE					
1) Projects Proposed to the IGGI					
a) List of Project Proposals: Summary	Annual	IGOI (BAPPENAS)	IGGI	Thousands of \$ U.S.	Code; Title; Status; Cost; Sector
b) List of Project Proposals: Description	Annual	IGOI (BAPPENAS)	IGGI	\$ U.S.	Code; Title; Status; Cost; Sector; Location; Executing Agency; Objectives; Description; Implementation Time; Proposed Commitment; Relation To Technical Assistance
12) IGGI Pledges	Annual	IGOI (BAPPENAS)	IGOI (General)	Original Currency; \$ U.S. Equivalent	Country/Institution; Fiscal Year; % Change From Previous Year; Exchange Rate
13) General Agreements	Annual	Donor	IGOI	Original Currency; \$ U.S. Equivalent	Varies By Donor (Belgium, Denmark, France, Japan, Netherlands, United Kingdom)
14) Project Loan/Grant Agreements	Annual/Periodic	Donor	IGOI	Original Currency; \$ U.S. Equivalent	Varies By Donor (Australia, Austria, Canada, Germany, Italy, Japan, New Zealand, Spain, USA, Switzerland, IBRD, ADB, UNDP, EEC, UNICEF, IFAD, Abu Dhabi Dev. Fund, Islamic Dev. Bank, Kuwait Dev. Fund, Saudi Dev. Bank)
(continued)					

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TIMING, FLOW, AND NATURE OF INFORMATION	FREQUENCY	FROM	TO	MONETARY UNIT	CLASSIFIERS
STAGE OF PROJECT CYCLE					
(continued)					
5) Contract Approval	Periodic	BAPPENAS	Executing Agency; Ministry of Finance; Bank Indonesia; Supervisory Board	Original Currency or \$ U.S. or Rupan	Contract Number; Contract Date; Executing Agency; Supplier; Project Name; Contract Amount; Loan Agreement; Country/Donor; Remarks
6) Loan Drawdowns					
a) Disbursements	Periodic	Bank Indonesia	Bank Indonesia	Original Currency; \$ U.S. Equivalent	Bank Indonesia Files
b) Withdrawals	(Planned)	Ministry of Finance	Ministry of Finance	\$ U.S.	Loan Number; Loan Date; Project; Executing Agency; Value; Withdrawal Before/During/Close Of Reporting Period; Balance
7) Foreign Assistance Recapitulations					
a) List of Foreign Assistance Projects	Periodic	BAPPENAS	BAPPENAS	Original Currency	Code; Fiscal Year; Project Title; Allocation; Remarks
b) Foreign Assistance	Quarterly	Bank Indonesia	GOI (Limited Distr.)	Thousands of \$ U.S.	Country/Donor; Project; Loan Agreement Date; Loan Agreement Total; Contract Date; Contract Total; L/C Date; L/C Total

EXPORT CREDIT PROJECTS

TIMING, FLOW, AND NATURE OF INFORMATION	FREQUENCY	FROM	TO	MONETARY UNIT	CLASSIFIERS
STAGE OF PROJECT CYCLE					
1) Projects Proposed to the IGGI					
a) List of Project Proposals: Summary	Annual	IGOI (BAPPENAS)	IGGI	Thousands of \$ U.S.	Code; Title; Status; Cost; Sector
b) List of Project Proposals: Description	Annual	IGOI (BAPPENAS)	IGGI	\$ U.S.	Code; Title; Status; Cost; Sector; Location; Executing Agency; Objectives; Description; Implementation Time; Proposed Commitment; Relation To Technical Assistance
12) Export Credit Facilities Proposed By Government Agencies (Compiled From #1 Above)	Annual	IGOI (Executing Agencies)	BAPPENAS	\$ U.S.	Sector; Project; Amount; Application
13) Allocations Recommended by BAPPENAS (From #2 Above)	Annual	BAPPENAS	Menko Ekuin	\$ U.S.	Sector; Project; Amount Application
14) Actual Allocations (From #3 Above)	Annual	Menko Ekuin/ BAPPENAS	IGOI (Executing Agencies)	\$ U.S.	Sector; Project; Amount; Application
(continued)					

TIMING, FLOW, AND NATURE OF INFORMATION	FREQUENCY	FROM	TO	MONETARY UNIT	CLASSIFIERS
(continued)					
15) International Tendering/ Contracting	Periodic	GOI (Executing Agencies)	Int'l. Bidders	Original Currencies	Varies By Executing Agency/ Source of Financing
16) Export Credit Recapitulations					
a) Report on Export Credit Implementation	Periodic	BAPPENAS	GOI (Executing Agencies)	Original Currencies and \$ U.S. Equiv.	Executing Agency; Project; Allocation; Company; Contract Number; Contract Date; Contract Value; Approval Date; Approval Value; Financing Source; Financing Value; Payment Value; Follow-Up
b) Export Credit Facilities	Semiannual	Bank Indonesia	GOI (Extremely Limited Distr.)	\$ U.S.	Country; Financing Source; Project; Estimated Project Foreign Exchange Costs (Eximbank, Export Credits, GOI Budget); Loan Agreements; Signed Contracts; L/C-TT; Withdrawals

TECHNICAL ASSISTANCE PROJECTS

TIMING, FLOW, AND NATURE OF INFORMATION	FREQUENCY	FROM	TO	MONETARY UNIT	CLASSIFIERS
STAGE OF PROJECT CYCLE					
1) Projects Proposed to the IGGI					
a) List of Technical Assistance Proposals: Summary	Annual	IGOI (BAPPENAS)	IGGI	\$ U.S.	Code; Title; Cost; Location; Related Assistance; Sector
b) List of Technical Assistance Proposals: Description	Annual	IGOI (BAPPENAS)	IGGI	\$ U.S.	Code; Title; Cost; Location; Related Assistance; Sector; Executing Agency; Objectives; Description; Scope of Assistance; Required (Expert Services, Fellowships, Equipment)
2) IGGI Pledges	Annual	IGOI (BAPPENAS)	IGGI (General)	Original Currency; \$ U.S. Equivalent	Country/Institution; Fiscal Year; % Change From Previous Year; Exchange Rate
3) General Agreements	Annual	Donor	IGOI	Original Currency; \$ U.S. Equivalent	Varies By Donor (Belgium, Denmark, France, Japan, Netherlands, United Kingdom)
4) Project Grant Agreements	Annual/Periodic	Donor	IGOI	Original Currency; \$ U.S. Equivalent	Varies By Donor (Approximately 20 Different Organizations)
(continued)					

PLACEMENT OF THE BUREAU OF FOREIGN ECONOMIC COOPERATION
WITHIN BAPPENAS

1. DEPUTY DEPARTMENT OF ECONOMIC AFFAIRS

Agriculture and Irrigation Bureau
Industry, Mining, and Electricity Bureau
Communication and Tourism Bureau
Trade Bureau
Foreign Economic Cooperation Bureau

2. DEPUTY DEPARTMENT OF SOCIAL AND CULTURAL AFFAIRS

Education and Culture Bureau
Social Communication and Science Bureau
Social Welfare and Public Housing Bureau
Health and Nutrition Bureau
Religion and Law Bureau

3. DEPUTY DEPARTMENT OF FISCAL AND MONETARY AFFAIRS

National Monetary and Finance Bureau
Balance of Payments and Multilateral/Regional Economic
Relations Bureau
Economic and Statistical Analysis Bureau
Macro Planning and Quantitative Studies Bureau

4. DEPUTY DEPARTMENT OF IMPLEMENTATION SUPERVISION

Development Projects Expenditures Bureau
Monitoring of Development Projects Implementation Bureau
Business and Cooperatives Development Bureau
Management of Natural Resources and the Environment Bureau

5. DEPUTY DEPARTMENT OF REGIONAL AND LOCAL AFFAIRS

Regional I Bureau
Regional II Bureau
Local Economic and Social Affairs Bureau
Spatial Planning and Land Use Bureau
Local Development Assistance Bureau

6. DEPUTY DEPARTMENT OF MANPOWER AND POPULATION AFFAIRS

Manpower Bureau
Transmigration Bureau
Family Planning and Population Bureau

7. DEPUTY DEPARTMENT OF ADMINISTRATIVE AFFAIRS

Development Administration Bureau
Data and Information Management Bureau
General Administration Bureau

STRUCTURE OF THE BUREAU OF FOREIGN ECONOMIC COOPERATION

Bureau of
Foreign Economic Cooperation

