UNIDO METHODOLOGY FOR THE IDENTIFICATION, PREPARATION AND EVALUATION OF INVESTMENT PROJECTS

CONTENTS:

• OVERVIEW: INVESTMENT PROJECT CYCLE
• IDENTIFYING INVESTMENT PROJECTS
• PRE-INVESTMENT STUDIES
• PROJECT APPRAISAL
INVESTMENT PROJECT CYCLE

PHASES OF THE PROJECT CYCLE

START WITH PROJECT IDEAS

I CONCEPTION (IDENTIFICATION)

II FORMULATION (PREPARATION)

III ANALYSIS (APPRAISAL)

IV IMPLEMENTATION (SUPERVISION)

OPERATION

EXPANSION / MODERNIZATION
IDENTIFYING INVESTMENT PROJECTS
IDENTIFYING INVESTMENT PROJECTS

• OBJECTIVES
  – FIND PROMISING BUSINESS AREAS
  – SCREEN ACCORDING TO CRITERIA
  – CLASSIFY FOR FURTHER STUDY OR LATER CONSIDERATION

• CHARACTERISTICS
  – PRELIMINARY INFORMATION FROM KNOWLEDGEABLE INDIVIDUALS AND PROMOTION AGENCIES

PROJECT IDENTIFICATION PROCESS

- SCAN SOURCES OF IDEAS AND LISTS
- DEVELOP SELECTION CRITERIA
- PROFILE - READILY AVAILABLE DATA
- SCREEN IDEAS vs. CRITERIA
- ACCEPTABLE?
  - NO
    - REJECT
    - REWORK
    - LATER
    - RECONSIDER
  - YES
    - FURTHER STUDY
SOURCES OF PROJECT IDEAS

Project ideas.... Where to find???

INVESTMENT OPPORTUNITIES

• DEMAND
• LINKAGES
• PROBLEMS
• RESOURCES
• DEVELOPMENT
• TRADE
• TECHNOLOGY
• GOVERNMENT POLICY
• EXTERNAL CONSTRAINTS
SOURCES OF IDEAS

- NATIONAL, REGIONAL DEVELOPMENT PLANS
- SECTOR STUDIES
- LOCAL RESOURCE STUDIES
- OTHER COUNTRIES' EXPERIENCE
- PRODUCT CLASSIFICATION LISTS

STUDY TOPICS

TERMS OF REFERENCE

- Natural resources endowment
- Availability and cost of production factors
- Existing agricultural pattern (for agro-based industries)
- Future demand for consumer goods based on projected population trends, purchasing power, consumption patterns
- Imports, to identify areas for import substitution
- Backward and forward linkages
- Export possibilities
- The general investment climate
SCREENING PROJECTS

- SIZE and GROWTH OF MARKET
- LOCAL RESOURCES
- PLANT SIZE
- APPROPRIATE TECHNOLOGY
- SIZE OF INVESTMENT
- ESTIMATED FINANCIAL INDICATORS
- REQUIREMENTS and CONSTRAINTS

SCREENING CRITERIA

- VARY ACCORDING TO INVESTIGATOR
  - INVESTMENT PROMOTION AGENCY
  - INVESTOR
  - LENDER
- RISK OF CONCERN TO ALL
WHAT CONSTITUTES A BUSINESS OPPORTUNITY??

<table>
<thead>
<tr>
<th>MICRO</th>
<th>MACRO</th>
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<tbody>
<tr>
<td>Business concept</td>
<td>Business climate</td>
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<tr>
<td>Investors</td>
<td>Business cycle</td>
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<td>Market</td>
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<td>RISK !</td>
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<td>Criteria satisfaction</td>
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KEY ASPECTS of IDENTIFICATION

• SET UP SCREENING SYSTEM TO MEASURE LONG-TERM POTENTIAL
• CONCENTRATE ON BEST PROSPECTS
• QUICK NEGATIVE DECISION BETTER THAN DELAY
• ASSURE COMMITMENT OF POTENTIAL SPONSOR TO IMPLEMENTATION
PRE-INVESTMENT STUDIES

ALLOCATION OF INVESTMENT RESOURCES

PROGRESSIVE DEVELOPMENT

IDENTICAL SCOPE AT ALL LEVELS, INCREASING ACCURACY AND PRECISION
CONTENT OF PRE-INVESTMENT STUDY

• Executive Summary
• Project Background and Basic Idea
• Market Analysis and Marketing Concept
• Raw Materials and Supplies
• Location, Site and Environment
• Engineering and Technology
• Organization and Overhead Costs
• Human Resources
• Implementation Planning and Budgeting
• Financial Analysis and Investment Appraisal

INFORMATION FLOW DIAGRAMS
related to preparation of investment studies

• COLLECTING
• ORGANIZING
• PROCESSING
• ANALYZING
OPPORTUNITY STUDY

Objectives:

• REFINEMENT OF BUSINESS IDEA
• PRELIMINARY EVALUATION OF ALTERNATIVE APPROACHES
• PRELIMINARY ASSESSMENT OF STRENGTHS AND WEAKNESSES OF CONCEPT

Characteristics:

SKETCHY, BASED MORE ON ROUGH AGGREGATE ESTIMATES THAN ON DETAILED ANALYSIS

PRE-FEASIBILITY STUDY

Objectives:

• PRELIMINARY PROJECT ASSESSMENT
• IDENTIFY PROJECT ALTERNATIVES
• IDENTIFY CRITICAL ASPECTS THAT REQUIRE SPECIAL SUPPORT STUDIES

Characteristics:

INTERMEDIATE LEVEL OF DETAIL BASED PRIMARILY ON SECONDARY DATA
FEASIBILITY STUDY

Objective:

PROVIDE COMMERCIAL, TECHNICAL, FINANCIAL AND ECONOMIC INFORMATION NEEDED FOR INVESTMENT DECISION-MAKING

Characteristics:

• CLEAR PROJECT CONCEPTS AND CRITERIA
• COMPREHENSIVE PROJECT DESIGN
• RELIABLE INFORMATION, OFTEN PRIMARY DATA
• QUANTIFIED PREDICTION OF PERFORMANCE
• DETAILED ANALYSIS WITH HIGH CONFIDENCE LEVEL
• CONSISTENT AND DEFENSIBLE CONCLUSIONS

SUPPORT STUDIES

Objective:

PROVIDE DETAILED TECHNICAL ANALYSIS OF CRITICAL DESIGN FEATURES

Characteristics:

• LIMITED SCOPE
• PERFORMED BY TECHNICAL EXPERTS
• ANSWERS KEY QUESTIONS
• DEGREE OF RIGOR COMMENSURATE WITH STAGE OF PROJECT DEVELOPMENT?
TYPES OF SUPPORT STUDIES

- MARKETS
- INPUTS
- LOCATION
- TECHNOLOGY
- EQUIPMENT

TARGET PRECISION IN PRE-INVESTMENT STUDIES
IN PERCENTAGE OF TOTAL INVESTMENT AND PRODUCTION COSTS

- ± 30% of investment & production costs
- ± 20%
- ± 10% feasibility studies
- pre-feasibility studies
- opportunity studies
COST RANGE OF PRE-INVESTMENT STUDIES
APPROXIMATION IN PERCENTAGE OF TOTAL INVESTMENT COSTS

PROJECT APPRAISAL
COMPARING PROJECT CHARACTERISTICS WITH CRITERIA
APPRAISAL NEEDED?

- ALL SECTORS OF ECONOMY
- REVENUE AND NON-REVENUE PROJECTS
- ALL TYPES OF PROJECTS
  - NEW INVESTMENT
  - MODERNIZATION
  - EXPANSION
  - PRIVATIZATION
  - TECHNOLOGY ACQUISITION
  - EQUIPMENT REPLACEMENT ……
- PUBLIC AND PRIVATE INVESTMENT

WHY APPRAISAL?

- COMMITMENT OF SCARCE RESOURCES
- EXPECTATION OF FUTURE BENEFITS
- INHERENT UNCERTAINTIES
PERSPECTIVES OF PARTICIPANTS

- INVESTORS
- FINANCIERS
- REGULATORS
- GUARANTORS
- SUPPLIERS

PARTICIPANTS’ CONCERNS

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<tr>
<th>PARTICIPANT</th>
<th>Investor</th>
<th>Financier</th>
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1 VERY IMPORTANT
2 SOMEWHAT IMPORTANT
3 NOT SO IMPORTANT
SPONSOR’S PERSPECTIVE

IS THIS GOOD PROJECT FOR THE SPONSOR?

- IS IT COMPATIBLE WITH OTHER INVESTMENT ACTIVITIES?
- IS THE PROJECT POTENTIALITY BANKABLE?
- DOES THE PROJECT MAKE THE BEST USE OF THE SPONSOR’S RESOURCES?
- DOES SPONSOR HAVE THE CAPACITY TO ENERGIZE THE PROJECT AND TO RETAIN ITS MOMENTUM IN THE FACE OF OBSTACLES TO GROWTH?

FOREIGN AND LOCAL PARTNERS

LOCAL PARTNER
(ON THE ABILITY OF FOREIGN PARTNER TO CONTRIBUTE MORE EQUITY)
- “HE CAN AFFORD IT”
- “THE EXCHANGE RATE IS WRONG”
- “HE WANTS OUR MARKET”

FOREIGN PARTNER
(ON THE REASONS TO OFFER LOWER PRICE FOR PARTICIPATION)
- “POLITICAL AND ECONOMIC RISK”
- “LOW PURCHASING POWER IN THE MARKET PLACE”
- “UNCERTAIN FUTURE EARNINGS”
- “WORKERS’ DEMANDS”
- “BOOK VALUE IS IRRELEVANT”
FOREIGN INVESTORS’ CONCERNS

- POLITICAL SITUATION
- ECONOMIC TRENDS
- MONETARY AND FISCAL POLICY
- SOCIAL LEGISLATION AND EVOLUTION
- LABOR CLIMATE AND AVAILABILITY
- DEMOGRAPHICS
- FINANCIAL SYSTEM
- ATTITUDE TOWARD FOREIGN DIRECT INVESTMENT (FDI)
- INFRASTRUCTURE (communications, transportation, energy)
- LIVING CONDITIONS
- INTERNATIONAL PROFILE

MACRO-MICRO APPRAISAL

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<td>PROJECT LEVEL</td>
<td>NATIONAL LEVEL</td>
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COMMERCIAL PROFITABILITY
NATIONAL PROFITABILITY
NATIONAL PERSPECTIVE

• DOES THE PROJECT MAKE SENSE FOR THE COUNTRY?
  – CONSISTENT WITH DEVELOPMENT GOALS
  – POSITIVE IMPACT ON MACRO-ECONOMIC INDICATORS?
  – SATISFY ECONOMIC RATE OF RETURN CRITERION?

APPRAISAL REPORT

• PURPOSE
• PROJECT BACKGROUND
• ANALYSIS OF
  – COMMERCIAL / MARKET
  – TECHNOLOGY
  – ENVIRONMENTAL IMPACTS
  – INSTITUTIONAL / MANAGERIAL
  – FINANCIAL
  – ECONOMIC AND SOCIAL
• CONCLUSION
COMMERCIAL / MARKET

- SOUND BUSINESS CONCEPT?
- MARKET FOR PRODUCT / SERVICE?
- MARKETING STRATEGY VIABLE?
- SALES PROJECTIONS REALISTIC?
- VIABLE DISTRIBUTION PLAN?

TECHNOLOGY

- PRODUCTION AT COMPETITIVE PRICES?
- PROCESS TECHNOLOGY ACCESSIBLE?
- SUSTAINABLE UNDER OPERATING CONDITIONS?
- QUALITY DEMANDED BY MARKET?
- RELIABLE INPUTS TO PLANNING HORIZON?
- ADEQUATE TECHNICAL PERSONNEL?
ENVIRONMENT

- Do process emissions and effluents exceed regulated standards?
- Are products environmentally acceptable?
- Do impacts indicate future regulatory actions?

INSTITUTIONAL / MANAGERIAL

- Competent
  - Entrepreneur
  - Implementation Management
  - Operations Management?
- Organization capable of executing necessary functions?
FINANCIAL

- ADEQUATE FINANCIAL RESOURCES TO PLANNING HORIZON?
- ADEQUATE RETURNS TO THE INVESTOR
- FINANCIAL CRITERIA OF OTHER PARTICIPANTS SATISFIED?
- FINANCIAL RISKS AND RISK SHARING ACCEPTABLE?
- FINANCIAL STRUCTURE ACCEPTABLE?

CAVEATS FOR THE APPRAISER

- WRONG TIMING
- NON-OPTIMAL FINANCING
  - INSUFFICIENT WORKING CAPITAL
  - HIGH LEVERAGE
- OVER-ESTIMATED MARKET POTENTIAL
- UNDER-ESTIMATED CAPITAL COST
- UNDER-ESTIMATED COMPETITION
- PLANNED CAPACITY INCONSISTENT WITH MARKET
- UNIDENTIFIED SOURCES OF SKILLED PERSONNEL
- INADEQUATE INFRASTRUCTURE
- PROJECT DESIGN ALTERNATIVES
- INEFFECTIVE PLANNING