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## **APPENDIX**



**QUESTIONNAIRE**

**IDENTIFYING THE MAIN FACTORS AND EFFECTS OF DELAYS IN  
INTERNATIONAL FUNDING PROJECTS IN YOGYAKARTA TO RESULT IN  
BETTER ELABORATION OF PLANNING SEQUENCES**

This questionnaire consists of 5 sections:

**SECTION A:** Respondent Background

**SECTION B:** Factors that Contributing to Causes of Construction Delays

**SECTION C:** Effects of Construction Delays

**SECTION D:** Methods of time-risk management and their effectiveness

**SECTION D:** The Master Schedules

Purpose of the study is to:

- a. Identify the main causes of delays in construction industry in Indonesia and test the importance as well in small and large projects.
- b. Find out the effects of delays to all the participants of the projects so that suggestions could be given about time control issues.
- c. Determine the use of available technology in time management methods
- d. Planning the established sequence of works

STUDENT NAME : Armella Miariambinina Rabearitsoa

SUPERVISOR : Ir. A. Koesmargono, M. Const. Mgt., PhD

**NOTE:**

Your answer will be treated confidentially. The findings of the study will be used for academic purposes. Your name is optional in this questionnaire.

Thank you for your corporation

## SECTION A

### Respondent Background

Organization/ Company name: \_\_\_\_\_

1. State respondent organization/company type.  
☐ Client ☐ Contractor  
☐ Consultant ☐ Others: \_\_\_\_\_
2. State respondent position in the organization/company.  
☐ Director ☐ Engineer/ Designer  
☐ Site Manager ☐ Project Manager
3. State the number of year respondent has experienced in construction industry.  
☐ < 5 years ☐ 11-15 years  
☐ 5-10 years ☐ >15 years
4. State the number of construction project that involved by respondent.  
☐ 1-3 projects ☐ 4-6 projects  
☐ 7-9 projects ☐ >9 projects
5. State the number of project delays which is faced by respondent.  
☐ 1 - 3 projects ☐ 4 - 6 projects  
☐ 7 - 9 projects ☐ > 9 projects

## SECTION B

### Factors that Contributing to Causes of Construction Delays

\* Please tick and fill in the blanks if you select others.

- Each scale represents the frequency of occurrence :  
(4) Always (3) Often  
(2) Sometimes (1) Rarely
- Each scale represents the degree of severity:  
(4) Extreme (3) Great  
(2) Moderate (1) Little

### Question:

Which of the following related factors stated below that contribute to causes of delays of construction project in Yogyakarta?



CATEGORIES			Frequency				Severity			
			1	2	3	4	1	2	3	4
Project	1	Original contract duration is too short								
	2	Legal disputes b/w various parts								
	3	Inadequate definition of substantial completion								
	4	Ineffective delay penalties								
	5	Type of construction contract								
	6	Type of project bidding and award (negotiation, lowest bidder.)								
Owner	1	Delay in progress payments by owner								
	2	Delay to furnish and deliver the site to the contractor by the owner								
	3	Change orders by owner during construction								
	4	Late in revising and approving design documents by owner								
	5	Delay in approving shop drawings and sample materials								
	6	Poor communication and coordination by owner and other parties								
	7	Slowness in decision making process by owner								
	8	Conflicts between joint-ownership of the project								
	9	Unavailability of incentives for contractor for finishing ahead of schedule								
	10	Suspension of work by owner								
Contractor	1	Difficulties in financing project by contractor								
	2	Conflicts in sub-contractors schedule in execution of project								
	3	Rework due to errors during construction								
	4	Conflicts b/w contractor and other parties (consultant and owner)								
	5	Poor site management and supervision by contractor								
	6	Poor communication and coordination by contractor with other parties								
	7	Ineffective planning and scheduling of project by contractor								
	8	Improper construction methods implemented by contractor								
	9	Delays in sub-contractors work								
	10	Inadequate contractor's work								
	11	Frequent change of sub-contractors because of their inefficient work								
	12	Poor qualification of the contractor's technical staff								
	13	Delay in site mobilization								
Consultant	14	Delay in performing inspection and testing by consultant								
	15	Delay in approving major changes in the scope of work by consultant								
	16	Inflexibility (rigidity) of consultant								
	17	Poor communication/coordination between consultant and other parties								
	18	Late in reviewing and approving design documents by consultant								
	19	Conflicts between consultant and design engineer								
	20	Inadequate experience of consultant								
Design	1	Mistakes and discrepancies in design documents								
	2	Delays in producing design documents								
	3	Unclear and inadequate details in drawings								
	4	Complexity of project design								
	5	Insufficient data collection and survey before design								
	6	Misunderstanding of owners requirements by design engineer								
	7	Inadequate design-team experience								
	8	Un-use of advanced engineering design software								

CATEGORIES		CAUSES OF DELAY	Frequency				Severity			
			1	2	3	4	1	2	3	4
Materials	1	Shortage of construction materials in market								
	2	Changes in material types and specifications during construction								
	3	Delay in material delivery								
	4	Damage of sorted material while they are needed urgently								
	5	Delay in manufacturing special building materials								
	6	Late procurement of materials								
	7	Late in selection of finishing materials due to availability of many types in market								
Equipment	1	Equipment breakdowns								
	2	Shortage of equipment								
	3	Low level of equipment-operators skill								
	4	Low productivity and efficiency of equipment								
	5	Lack of high-technology mechanical equipment								
Labors	1	Shortage of labors								
	2	Unqualified workforce								
	3	Nationality of labors								
	4	Low productivity level of labors								
	5	Personal conflicts among labors								
External	1	Effects of subsurface conditions (e.g., soil, high water table, etc.)								
	2	Delay in obtaining permits from municipality								
	3	Hot weather Effects on construction activities								
	4	Rain effects on construction activities								
	5	Unavailability of utilities in site (such as, water, electricity, telephone, etc.)								
	6	effect of social and cultural factors								
	7	Traffic control and restriction at job site								
	8	Accident during construction								
	9	Differing site (ground) conditions								
	10	Changes in government regulations and laws								
	11	Delay in providing services from utilities (such as water, electricity)								
	12	Delay in performing final inspection and certification by a third party								

## SECTION C: EFFECTS OF CONSTRUCTION DELAYS

**Question: What is the effect of construction delays?**

(5) Always

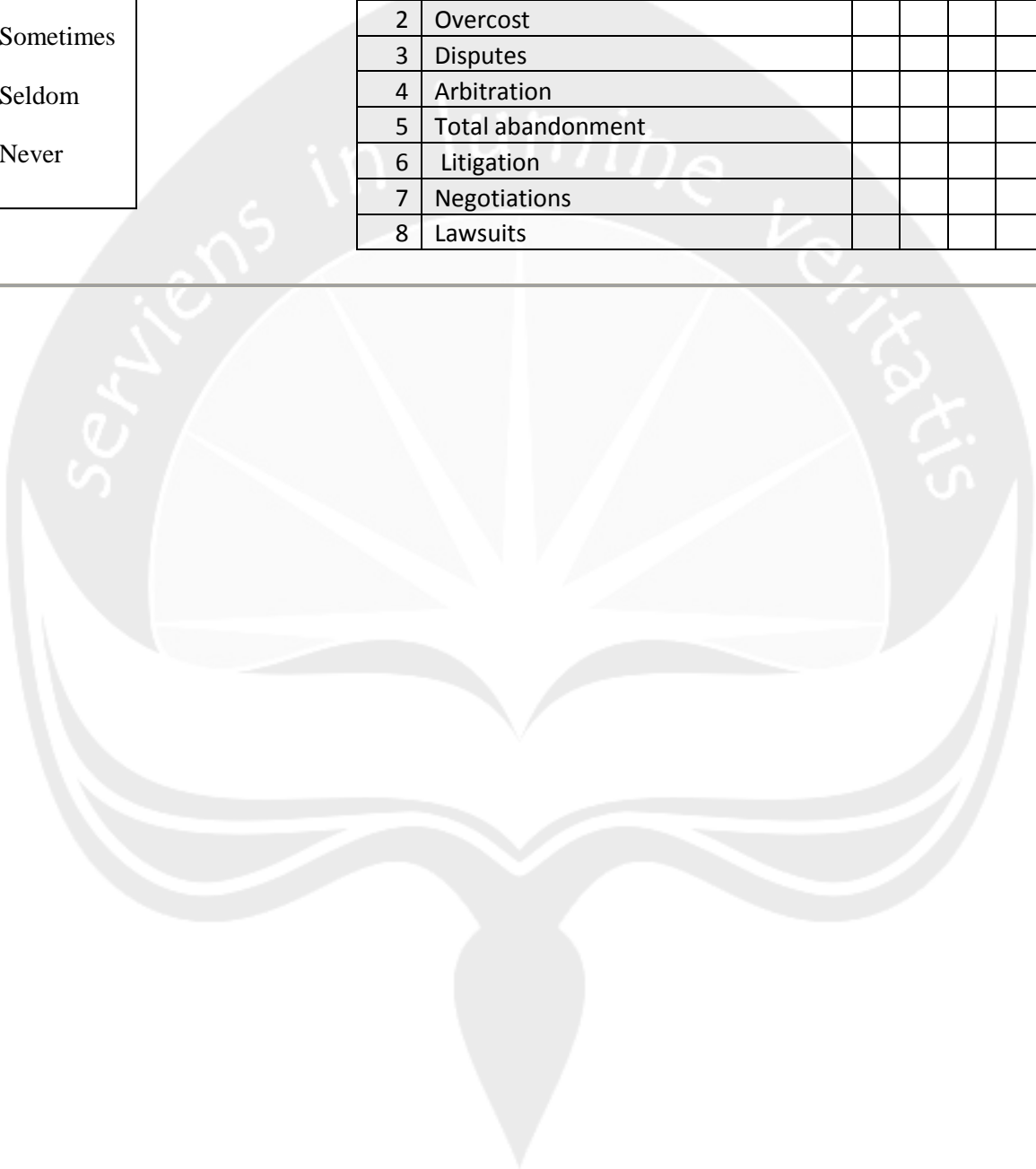
(4) Mostly

(3) Sometimes

(2) Seldom

(1) Never

	Effects of delays	1	2	3	4	5
1	Overtime					
2	Overcost					
3	Disputes					
4	Arbitration					
5	Total abandonment					
6	Litigation					
7	Negotiations					
8	Lawsuits					



## SECTION D

### Methods of time-risk management and their effectiveness

\* Tick the boxes and select few from below

**Purpose:** Determine the use of available technology in time management methods

**Question:** How respondents are managing a current project?

1. Procurement Methods used:
    - ☐ Bespoke contract
    - ☐ Partnering
    - ☐ Lump sum
    - ☐ Design and build
    - ☐ Target cost
    - ☐ Re-measure
    - ☐ Construction management
  2. Time management methods used:
    - ☐ Professional services
    - ☐ Project management
    - ☐ General contracting
    - ☐ Specialist trade contractor
    - ☐ Other
  3. Type of tool used for time management
    - ☐ A bar-chart
    - ☐ Partially linked network
    - ☐ Fully linked network
    - ☐ Time chainage diagram
    - ☐ Line of balance diagram
    - ☐ Flow chart
    - ☐ Minutes of meetings
    - ☐ Correspondence
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## SECTION E

### The Master Schedule

\* Tick the boxes and select few from below

**Purpose:** Planning the established sequence of works

1. When delay to progress is notified?
  - ☐ The client complains
  - ☐ The contract administrator complains
  - ☐ Liquidated damages are deducted
  - ☐ Sub contractors complain
  - ☐ The schedule is updated and reissued
2. How the planed sequence of work is established?
  - ☐ By writing out a method statement only
  - ☐ By discussion in meetings only
  - ☐ By a discussion and written statement, with the programmer
  - ☐ By a discussion and written method statement
  - ☐ By a discussion with the programmer
  - ☐ By the programmer by reference to other jobs coupled with a method statement
  - ☐ By the programmer alone
  - ☐ By the programmer with reference to other jobs
  - ☐ By reference to other jobs only
3. Parties usually involved in drafting method statements to arrive at planned sequence
  - ☐ Contract manager
  - ☐ Site manager
  - ☐ Foreman
  - ☐ Tradesman
  - ☐ Sub-contractors
  - ☐ Quantity surveyor
  - ☐ Programmer
  - ☐ Project manager
  - ☐ Architect
  - ☐ Structural engineer
  - ☐ Mechanical engineer
  - ☐ Client Relevant specialist/subcontractor/supplier

☐ Electrical engineer

4. The application of logic to the planned activities

- ☐ By meetings with the construction manager and other interested parties
- ☐ By reference to previous projects of a similar type
- ☐ By the planning engineer or project scheduler writing the programme
- ☐ Logic is not indicated on the schedule

5. The use of date constraints

- ☐ By reference to the contract documents
- ☐ Where the logic cannot be determined
- ☐ To control critically
- ☐ As the project scheduler writing the schedule chooses

\*Please state out your comment for any recommendations (OPTIONAL)

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