## PROJECT RISK MANAGEMENT IN YOGYAKARTA

Final Project Report as a requirement to obtain Bachelor degree from Universitas Atma Jaya Yogyakarta

by:

MONIKA BRENNA HERNINDIA RATRI Student ID Number: 13 13 14752



INTERNATIONAL CIVIL ENGINEERING PROGRAM
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING
UNIVERSITAS ATMA JAYA YOGYAKARTA
YOGYAKARTA
2017

## APPROVAL

Final Project Report

## PROJECT RISK MANAGEMENT IN YOGYAKARTA

by:

MONIKA BRENNA HERNINDIA RATRI Student ID Number: 13 13 14752

has been approved by Supervisor

Yogyakarta, 13/2/17

Supervisor,

Ir. A. Koesmargono, MCM., Ph.D

Department of Civil Engineering
Head of Civil Engineering Department,

J. Januar Sudjati, S.T., M.T.

#### STATEMENT

I signed below stating that the final project with the title:

## "PROJECT RISK MANAGEMENT IN YOGYAKARTA"

It is the result of my own work and not a result of plagiarism of other people's work. Ideas, research data, and quotes directly or directly derived from the writings or ideas of others expressly provided in this Final Project. If it is proven later that this Final Project is the result of plagiarism, the graduation certificate that I received will be canceled and returned to Universitas Atma Jaya Yogyakarta.

Yogyakarta, February 7th 2017

Who made the remarks,

Monika Brenna Hernindia Ratri

## APPROVAL

Final Project Report

## PROJECT RISK MANAGEMENT IN YOGYAKARTA



by:

MONIKA BRENNA HERNINDIA RATRI Student ID Number: 13 13 14752

Has been examined and approved by the examination committee

Name Signature Date

Chairman : Ir. A. Koesmargono, MCM., Ph.D

Secretary : Ir. Harijanto Setiawan, M.Eng., Ph.D

Member : Ir. Peter F. Kaming, M.Eng., Ph.D

#### ACKNOWLEDGEMENT

First and foremost, I would like to thank to Jesus Christ for his blessing, therefore I can prepare and finish this final project. For the completion of this final project, I would like to express my gratitude towards:

- 1. Ir. A. Koesmargono, MCM., Ph.D as my advisor for his advice and counseling.
- 2. Prof. Ir. Yoyong Arfiadi, M.Eng., Ph.D as the Dean of Engineering Department.
- 3. Dr. Eng. Luky Handoko, S.T., M.Eng. as the Coordinator of International Civil Engineering Program.
- 4. J. Januar Sudjati, ST., MT. as the head of Civil Engineering Department of Universitas Atma Jaya Yogyakarta.
- 5. Ir. Harijanto Setiawan, M.Eng., Ph.D and Ir. Peter F. Kaming, M.Eng., Ph.D as the examiners.
- 6. All the lecturers in the civil engineering program, especially in the International Civil Engineering Program.
- My beloved parents and my brother Ambrosius Brian Rahardian Parahita for their love, motivation and support.
- 8. My boyfriend Peter Adi Prasetya Gunawan for his love and support.
- All my friends in ICEP 2013 especially Crezensia Alfiora Dea, Christien Pratiwi Palayukan, Digna Diva Koa, Alpin Roy Batubara, and Hary Pesta Gultom for their love, help, and support.
- 10. My seniors and juniors in the International Civil Engineering Program for their help and support during my study period.

11. All parties that cannot be mentioned one by one, thank you for your support and help.

I realize, this report may be flawed. Therefore, I accept any form of suggestion iens in lumina for further improvement. Thank you.

Yogyakarta, 27 January 2017

The Author

Monika Brenna Hernindia Ratri

# TABLE OF CONTENT

COVE	ER PAGE	1
	EMENT	
APPR	OVAL	iii
ACKN	NOWLEDGEMENT	v
	E OF CONTENT	
LIST	OF TABLE	X
LIST	OF FIGURES	хi
ABST	RACT	кii
I. INT	RODUCTION	
1.1	Background	1
1.2	Problem Statement	2
1.3	Research Aims	
1.4	Originality	3
II. LIT	TERATURE REVIEW	
2.1	Construction Industry	4
2.2	Risk Definition	5
2.3	Risk Management Definition	6
2.4	Concepts of Risk Identification and Risk Analysis	8
2.5	Factors that Affecting Risk in Construction Project	10

2.6	Risk Re	esponse	.12
III. RI	ESEARC	H METHODOLOGY	
3.1	Data Co	ollection	.16
3.2	Respon	dents	.17
3.3	Questio	onnaire Composition	.17
3.4		ollection and Analysis	
	3.4.1	Data Collection	.18
3	3.4.2	Data Analysis	.18
U	3.4.2.1	Percentage	.19
∽)	3.4.2.2	Mean	.19
	3.4.2.3	Standard Deviation	.20
IV. RI	ESULT A	AND ANALYSIS	
4.1	General	Information	.21
4.2	Respon	dents' Information	.22
	4.2.1	Respondents' Type	.22
	4.2.2	Respondents' Position in the Company	.23
	4.2.3	Respondents' Latest Education Status	.24
	4.2.4	Age of the Company	.24
4.3	Analysi	is Data	.25
	4.3.1	Factors Influencing Risks in the Construction Project Based on	
		the Types of Risks	.25

	4.3.1.1	Technical Risks	26
	4.3.1.2	Logistical Risks	27
	4.3.1.3	Management Related Risks	28
	4.3.1.4	Environmental Risks	29
	4.3.1.5	Financial Risks	30
		Socio-political Risks	
4.3.2	Commo	on Sources of Risks in Construction Project	32
4.3.3	Respons	se to Risks	33
1		S.	
V. CC	)NCLUS	ION AND RECOMMENDATION	
5.1	Conclus	sion	35
5.2	Recomn	mendations	36
REFF	ERENCE	ES	38
APPE	NDICES	S	41

# LIST OF TABLE

Table 4.1	2	22
Table 4.2	2	23
Table 4.3	2	!4
Table 4.4.	100 2	25
Table 4.5	2	26
Table 4.6	2	!7
Table 4.7	2	18
Table 4.8		29
Table 4.9	3	60
Table 4.10		31
Table 4.11	3	32
Table 4.12	3	34

# LIST OF FIGURE

Figure 2.1	 	7
Figure 2.2	 	9
Figure 2.3	 	12
Tigure 2.3		Stratis

#### **ABSTRACT**

**RISK MANAGEMENT IN YOGYAKARTA,** Monika Brenna Hernindia Ratri, 131314752, year 2017, Department of Civil Engineering, Faculty of Engineering, Universitas Atma Jaya Yogyakarta.

The construction industry is highly potential for the risk of failure. The probability of risk in the construction industry is high because of the process from the designing, investment, bidding, until the construction project done is very complex. Risk is unpredictable events that will affect the profitability of project investment. It is a common thing that the failures result in project delay, cost overruns, and the change scope of work. Risk management can reduce or even avoid the damages that resulting failures in many projects. The aim of this research is to identify existing factors that influence risks in the construction project in Yogyakarta. It is essential for the contractors and consultant companies to understand deeply about the risk management so that both of the contractors and consultants can get more potential benefits to minimize and avoid the risks in construction project activities.

**Keywords:** risk identification, risk management, project management, risk analysis, construction