Project Risk Management Processes

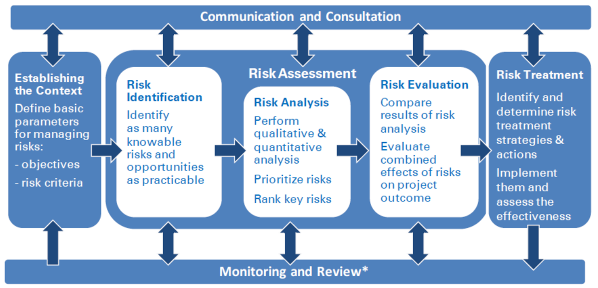
INTRODUCTION

- ✓ In managing big projects it is **inevitable that something will go wrong**. The difference in **efficient project management** is addressing properly the risks and after, taking **successfully** the **risk response actions**.
- ✓ By **risk identification**, **evaluation** and **control**, the differences between initial **cost**, **time** and **quality** estimations and the real ones can be prevented or **diminished**.
- ✓ Increase the **project success** probability by applying the **risk minimization** and **opportunities development** techniques
- ✓ For a complex project risk evaluation should be mandatory. These risks can be **attributed** and **measured** as **probability of apparition**, **impact** and **consequences**.

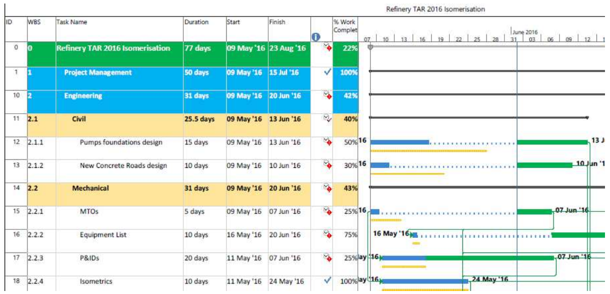
OBJECTIVES

1. **Risk Management Plan**
2. Analyzing the project schedule
3. Critical Path Analysis
4. Risk **Identification** Workshop (negatives and opportunities)
5. Developing the Risk Register Model
6. **Analyzing** risks by qualitative measures
7. **Evaluating** priority risks
8. Defining **Risk Reponses Strategies**
9. **Quantifying** Project Risk Impacts Effects
10. **Implementing** risk management **measures** (Defining reserves)

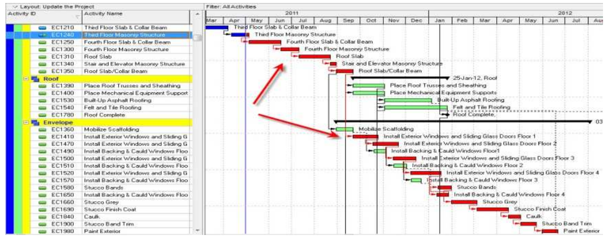
1. PROJECT RISK MANAGEMENT PLAN



2. ANALYZING THE PROJECT SCHEDULE



3. CRITICAL PATH ANALYSIS



4. RISK IDENTIFICATION WORKSHOP

TECHNICAL	ECONOMICAL	COMMERCIAL	ORGANISATION	socio-political
• Underground, static, dynamic • Surface • Infrastructure • Technologies • Maintenance • Availability • Sustainability • Logistic • HSSE	• Costs • Fazes • Evaluation methods • Model economic KPIs (NPV, IRR, EVA) • Legal costs	• Licenses • Contracting & purchases • Financing • Insurance • Control • Legal • Claims & payments	• Government • Management Structure • Resources • Competences • Procedures, standards, manuals • Project Control • Systems, IT • Interfaces • Partners • Local Rules	• Authorities • Govern • Parties involved • Employees • Local legislation • Community

5. DEVELOPING THE RISK REGISTER MODEL

ID	Nume	Descrierea Riscului (incluzand cauza si efectul)	Nivel inainte de actiuni	Stretegie de raspuns	Data Verificare	Status
1	Utilitati si devierea traficului	Asigurarea utilitatilor poate fi dificila, este posibila necesara devierea/oprirea traficului in zona de lucru	-		5-Apr-17	Propus
2	Studii de teren	Datorita vechimii studiilor de teren existente, este posibil sa apara diferente in compozitia solului, ducand la schimbari de proiectare	-		5-Apr-17	Propus
3	Lucrari de excavare	Este posibila prezenta altor retele subterane de cabluri, conducte care pot duce la accidente si intarzieri	-			
7	Lipsa fondurilor	Lipsa finantarii la timp poate duce la blocaje de lucru	-			
9	Conditii geografice-meteorologice	In perioada estimata a lucrarii sunt posibile ninsori ce vor ingreuna activitatile	-			
4	Construirea tunelului si a pasajelor de trecere		-			

6. ANALYSING RISKS THROUGH QUALITATIVE MEASURES

ANALIZA CALITATIVĂ				
Probabilitate	**Durată**	**Cost**	**Scor**	**Răspuns**
VH	H	M	20	
H	H	L	12	
H	M	VL	6	
M	M	VL	6	
VL	VH	VH	5	

Probabilitate \ Impact	VL	L	M	H	VH
VH	5	10	15	20	25
H	4	8	12	16	20
M	3	6	9	12	15
L	2	4	6	8	10
VL	1	2	3	4	5

IMPACT			
Durată		Cost	
H	4	M	3

7. EVALUATING PRIORITY RISKS

ID	Nume	Descrierea Riscului (incluzand cauza si efectul)	Nivel inainte de actiuni	Stretegie de raspuns	Data Verificare	Status	Actiuni de prevenire/rezolvare	Data impusa actiune	Responsabil actiune	Nivel dupa actiuni	Data estimata de start
3	Lucrari de excavare	Este posibila prezenta altor retele subterane de cabluri, conducte care pot duce la accidente si intarzieri	55	Reducere	5-Apr-17	Propus	Efectuiarea de detectari inainte de excavare, sapaturi manuale	05-Jul-17	Marcel Vasile	30	05-Aug-17
2	Studii de teren	Datorita vechimii studiilor de teren existente, este posibil sa apara diferente in compozitia solului, ducand la schimbari de proiectare	40	Reducere	5-Apr-17	Propus	Reluarea studiilor de teren, vizita la locul de amplasament	05-May-17	Mihai Pop	22	5-Jun-17
9	Conditii geografice-meteorologice	In perioada estimata a lucrarii sunt posibile ninsori ce vor ingreuna activitatile	30	Evitare	5-Apr-17	Propus	Luarea masurilor de protectie, corturi pentru sudura, compozitii de material, replanificare	25-Apr-17	Popescu Ion	22	05-May-17
1	Utilitati si devierea traficului	Asigurarea utilitatilor poate fi dificila, este posibila necesara devierea/oprirea traficului in zona de lucru	25	Reducere	5-Apr-17	Propus	Stabilirea unei intalniri cu Autoritatile pentru analiza variantelor de lucru si luarea masurilor	05-Jun-17	Popescu Ion	15	5-Sep-17
7	Lipsa fondurilor	Lipsa finantarii la timp poate duce la blocaje de lucru	20	Acceptare	5-Apr-17	Propus	Verificarea surselor de finantare	25-Apr-17	Popescu Ion	20	05-May-17

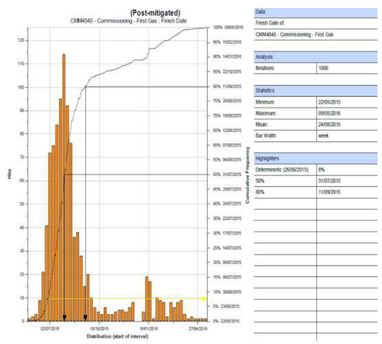
8. DEFINING RISK REPONSES STRATEGIES

RISC

Negative
- Avoid
- Reduce
- Transfer
- Accept

Opportunity
- Accept
- Exploit
- Develop
- Transfer

9. QUANTIFYING PROJECT RISK IMPACTS EFFECTS



10. IMPLEMENTING RISK MANAGEMENT MEASURES

- **Defining time and cost reserves;**
- **Updating the project execution schedule for preventing negative risks and quantifying opportunities**
- **Applying risk prevention measures on site**
- **Applying redesign measures for risk elements**
- **Performing Field Studies**
- **Employing specialized personnel**

BENEFITS

- **Anticipating/ avoiding problems**
- **Preventing surprises**
- **Improving negotiation abilities**
- **Fulfilling contractual obligations**
- **Reducing project delays**
- **Reducing over budget costs**

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