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THE REGIONAL DEPARTMENT

OF DEFENSE RESOURCES MANAGEMENT STUDIES



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CONTEMPORARY CHALLENGES IN PROJECT AND

PROGRAM MANAGEMENT

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CONTEMPORARY CHALLENGES IN PROJECT AND PROGRAM MANAGEMENT



Proceedings of the workshop unfolded during the
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BRAȘOV

ROMANIA

CONTEMPORARY CHALLENGES IN PROJECT AND PROGRAM MANAGEMENT

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Mohammad JANADIEH

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Ilie TIȚA

FORMATION OF A MILITARY FREIGHT COMPANY

Colonel Salah ALMAJALI

I. BUSINESS CASE

I.1. Executive Summary

Because of its unique location, Jordan is used by many countries as a convenient distribution centre for Arabian hinterland locations. Thus, to the east and south there are two of the world's largest oil producers, Iraq and Saudi Arabia, while to the north Syria connect Jordan with Turkey and Europe. The transport sector enjoyed a banner year in 1994, with a growth rate of 6.8%. This improvement continued and the sector contributed a 15.7% share to GDP at constant factor cost. In 1997 it carried 1.3 million tons of goods and almost 70,000 passengers and made more than 13,000 trips between Aqabah and Iraq only. Now this sector had a fleet of about 11000 trucks, 40000 employees and about 250,000 vehicles were registered in Jordan, an increase from 60,000 vehicles ten years previously. This figure included about 131,000 passenger cars, 13,000 taxis, 4,000 buses, and 8,500 heavy trucks of various types.

I.2. Goals

Formation of the military Freight Company with the following objectives: to serve the public and private sectors; to meet the requirements of increasing freight in the region; to increase benefits from local transportation system; to reduce costs and to provide a business value to creative professional's financial benefits.

Business Opportunity

The Company has opportunities for successful investment in the internal area and with neighbouring countries. Moreover, it will support the State's treasury with direct profits as it will provide more than 500 jobs and contribute to the organization of the transportation sector.

I.3. Benefits

The project will help the country to achieve financial benefits, speed and flexibility, better security and protection, ongoing work in all circumstances, better coverage of all areas in the country, better control of the local transportation means, improved quality and efficiency of transport with neighbouring countries.

I.4.Costs & Financial Analysis

Budget estimates:

TYPE	ESTIMATED COST	TOTAL
Personnel	0	
Marketing	75.000\$	
Legal	50.000\$	
Employees	250.000\$	
Skilled trainers	20.000\$	395,000 \$
Advertising	50.000\$	
<i>Equipment</i> <i>Large freight</i> <i>vehicles</i>	10.000000\$	
Cranes	200.000\$	
Forklifts	150.000\$	
Spare parts	1.000000\$	11350,000 \$
Materials		50,000 \$
Stationeries	50.000\$	
estimated total		11845.000 \$
Falling in the range of -10% to +25% of the actual cost of the project.		

I.5. Assumptions

There is a marked increase in the demand for cargo services in the region, and it's expected to increase during the next three years to accommodate more investment in this area. That will support the company's work, especially if the project is started and finished as early as possible.

By running a sensitivity analysis focused on the positive aspects of the project the following conclusions can be drawn. First, leaving the transport sector as its current non-integrated and organized under unified control and supervision does not serve the aspirations of the developed countries in the use of their resources and capabilities. Thus, the state would lose a major source of income and significant increase opportunities for development and increase the national income. Second, the transport system in Jordan earns and achieves less than what could be obtained compared to the expected benefit in the development and organization of this sector in more effective manner than the current approach.

I. 6. Stakeholders support

Consistent with studies and statistics focused on trends in shipping services, the conclusions are that there is an increase in demand for this kind of services. Moreover, demand in the field is expected to increase during the next three years to accommodate more investment in this area, which will support the business, services, especially if started early. In conclusion, the conviction and support of stakeholders in such a project of significance is more than necessary.

II. PROJECT SCOPE MANAGEMENT

II.1. Goal

Formation of military Freight Company, to achieve the following: to serve the public and private sectors, to meet the requirements of increasing freight in the region.

II.2. Objectives

- O. 1.** Before the end of the first half of this year, conducting a complete study about the freight market in the region, and areas where investment is possible by a specialized company in this field under the supervision of Director of Strategic Studies.
- O. 2.** Development of military freight vehicles to increase efficiency and speed of Freight services before the end of this year.
- O. 3.** Rehabilitation and advanced training for military freight vehicles drivers, in the Army training centers accredited in line with new developments .
- O. 4.** By the second quarter of this year consolidation and development of military transport law to allow the new company to start working in the public and private sectors as the first phase.
- O. 5.** By the first quarter in 2011 signing of a memorandum with the public and private sectors in coordination with Directorate of Defense Resource and Investment Management to present offers to provide heavy transport services.

II.3. List of activities (WBS)

O. 1. Before the end of the first half of this year, conducting a complete study about the freight market in the region, and areas where investment is possible by a specialized company in this field under the supervision of Director of Strategic Studies.

A.1.1 Reviewing of local and regional previously accredited studies about freight Transportation under the supervision of the director of the investment in the Directorate research office to know the best investment opportunities before modifying the military transport law.

A. 1.2. Issuing a guide about the feasibility of investment in the freight sector by the director of the investment and resources in coordination with the Finance Department of the Army to distribute to all members concerned.

A. 1.3. Obtaining initial approval from the General Command - Chairman of Planning and Organization Commission to invest in this area from the Chairman of the Resources and Investment

O. 2. Development of military freight vehicles to increase efficiency and speed of freight services before the end of 2010.

A.2.1 Comprehensive studies of the military freight vehicles available at the moment and the methods to develop them by reviewing the experiences of developed countries in this sector under the supervision of the Director of Military Transport in the General Command.

A. 2.2. Bids according to the law from local and international companies to purchase new freight vehicles under the supervision of the Director of Procurement in the General Command.

A. 2.3. Formation of committees to purchase the required freight vehicles from the best offers presented depending on the previous study. This falls under the responsibility of the Directorate of Procurement under the chairmanship of the Director of Investment.

O. 3. Rehabilitation and advanced training for military freight vehicles drivers, in the Army training centers accredited in line with new developments before the end of this year.

A. 3.1 Holding intensive courses for military heavy freight drivers in training centre under Coordination with private companies to rehabilitation them in two stages under the supervision of the Directorate of Military Training in the General Command.

A. 3.2 Recruiting qualified heavy freight drivers, to cover the needs of the company, by the Directorate of Affairs of individuals, under the direct Supervision of the Chief of resources and investment.

O. 4. By the second quarter of this year developing and issuing military transport law to allow the new company to start working in the public and private sectors as the first phase.

A. 4.1 Review of the military transportation law, to develop it to serve investment and Provide services to non-military sectors, headed by the Director of Military Justice in the General Command.

A. 4.2 Obtain government approval to amend the Military Transportation law by the Ministry of Defense and direct follow-up by the Director of Military Justice.

O. 5. By the first quarter in 2011 signing off a memorandum with the public and private sectors in coordination with Directorate of Defense Resource and Investment Management to present offers to provide heavy transport services.

A. 5.1 Holding full meetings with representatives of the private and public sectors in the Directorate of Investment and Resources, to offer the new services of the company to start cooperation with them and obtain agreement to terms and conditions of cooperation. The activities will be chaired by the President of the Resources and Investment.

A. 5.2 Arranging workshop for advertising in all media the new company services, under the supervision of the Directorate of Moral Guidance and follow- up by the head of the Public Relations.

A. 5.3. Issuing a directory of the company's services, prices and terms of new services under the supervision of the Directorate of Moral Guidance and follow-up of the head of public relations.

II.4. Activities description

O. 1. Before the end of the first half of this year, conducting a complete study about the freight market in the region, and areas where investment is possible by a specialized company in this field under the supervision of Director of Strategic Studies.

A.1.2. Reviewing local and regional previously accredited studies about freight transportation under the supervision of the director of the investment in the Directorate research office to know the best investment opportunities before modifying the military transport law

- Head of research at the military planning Commission in charge of the follow-up work of the private company charged with this. It needs 1 month from 1-30May 2010

A. 1.2 Issuing a guide about the possibility of investment in the freight sector by the director of the investment and resources in coordination with the Finance Department of the Army to distribute to all members concerned

- The Head of research department at the military planning Commission in charge of the follow-up work of the private company charged with this. It needs 2 weeks from 1-14 June 2010

A.1.3. Obtaining initial approval from the General Command - Chairman of Planning and Organization Commission to invest in this area by the Chairman of the resources and investment

- Since this is a major task, the Chairman of resources and investment Commission is in charge of it. It need 8 weeks from 15-29 June 2010.

O. 2. Development of military freight vehicles to increase efficiency and speed of freight services before the end of 2010.

A. 2.1 Comprehensive studies of the military freight vehicles which are available now and the methods to develop them by reviewing the experiences of developed countries in this sector under the supervision of the Director of Military Transport in the General Command.

- The Head of research department at the military planning Commission in charge of this task. To achieve the results (i.e. how & what we need) it will take 2 months from 1 july-1 November 2010

A. 2.3 Formation of committees to purchase the required freight vehicles from the best offers presented depending on the previous study, by the Directorate of Procurement under the chairmanship of the Director of Investment.

- Formation of a committee headed by the Chief of tenders in the Directorate of Procurement and the membership of representatives of authorities concerned. It will be started immediately after obtaining best offers. It takes about 3 months from 29 june-30 august 2010

O. 3. Rehabilitation and advanced training for military freight vehicles drivers, in the Army training centers accredited in line with new developments before the end of this year.

A. 3.1 Holding intensive courses for military heavy freight drivers in training centre under Coordination with private companies to rehabilitation them in two stages under the supervision of the Directorate of Military Training in the General Command.

- Head of human resources in the Directorate of Military Training is in charge of this task to achieve the goal to rehabilitation them in two stages. The activity starts immediately after obtaining initial approval from the General Command. It takes about 6 weeks from 29 June -8 July 2010

A. 3.2 Recruiting qualified heavy freight drivers, to cover the needs of the company, by the Directorate of Affairs of individuals, under the direct Supervision of the Chief of resources and investment.

- Head of human resources in the Directorate of Military Training is in charge of this task. It starts immediately after obtaining initial approval from the General Command. It takes about 4 weeks from 29 June-29 July 2010

O. 4. By the second quarter of this year developing and issuing military transport law to allow the new company to start working in the public and private sectors as the first phase.

A. 4.1 Review of the military transportation law, to develop it to serve investment and Provide services to non-military sectors, headed by the Director of Military Justice in the General Command.

- The Director of Military Justice in the General Command is in charge of this task. It start immediately after obtaining initial approval from the General Command. It takes about 4 weeks from 29 may-29 June 2010

A. 4.2 Obtain government approval to amend the Military Transportation law by the Ministry of Defense and direct follow-up by the Director of Military Justice.

- The Director of Military Justice in the General Command is in charge of this task which starts directly after developing the military transportation law. It takes about 2 months from 25 May - 25 July 2010

O. 5. By the first quarter in 2011 signing off a memorandum with the public and private sectors in coordination with Directorate of Defense Resource and Investment Management to present offers to provide heavy transport services.

A. 5.1 Holding full meetings with representatives of the private and public sectors in the Directorate of Investment and Resources, to offer the new services of the company to start cooperation with them and obtain agreement to terms and conditions of cooperation. The activities will be chaired by the President of the Resources and Investment.

- Establish meeting chaired by the chief of the resources and investments, to discuss these events, it will be start directly after obtain the initial approval from the General Command it will take 3 days from 29 May-3 June 2010).

A. 5.2 Arranging workshop for advertising in all media the new company services, under the supervision of the Directorate of Moral Guidance and follow- up by the head of the Public Relations.

- The head of the public relations in the head quarter is in charge of this task. It will start immediately after obtaining the initial approval from the General Command. It will take 3 days from 11- 14 May 2010 and should be continued until the end

A. 5.3. Issuing a directory of the company's services, prices and terms of new services under the supervision of the Directorate of Moral Guidance and follow-up of the head of public relations.

- The head of the public relations in the head quarter in charge of this task, it will start directly after obtaining government approval to amend the Military Transportation law. It will take 1 week from 9 – 16 June 2010

III. PROJECT TIME MANAGEMENT

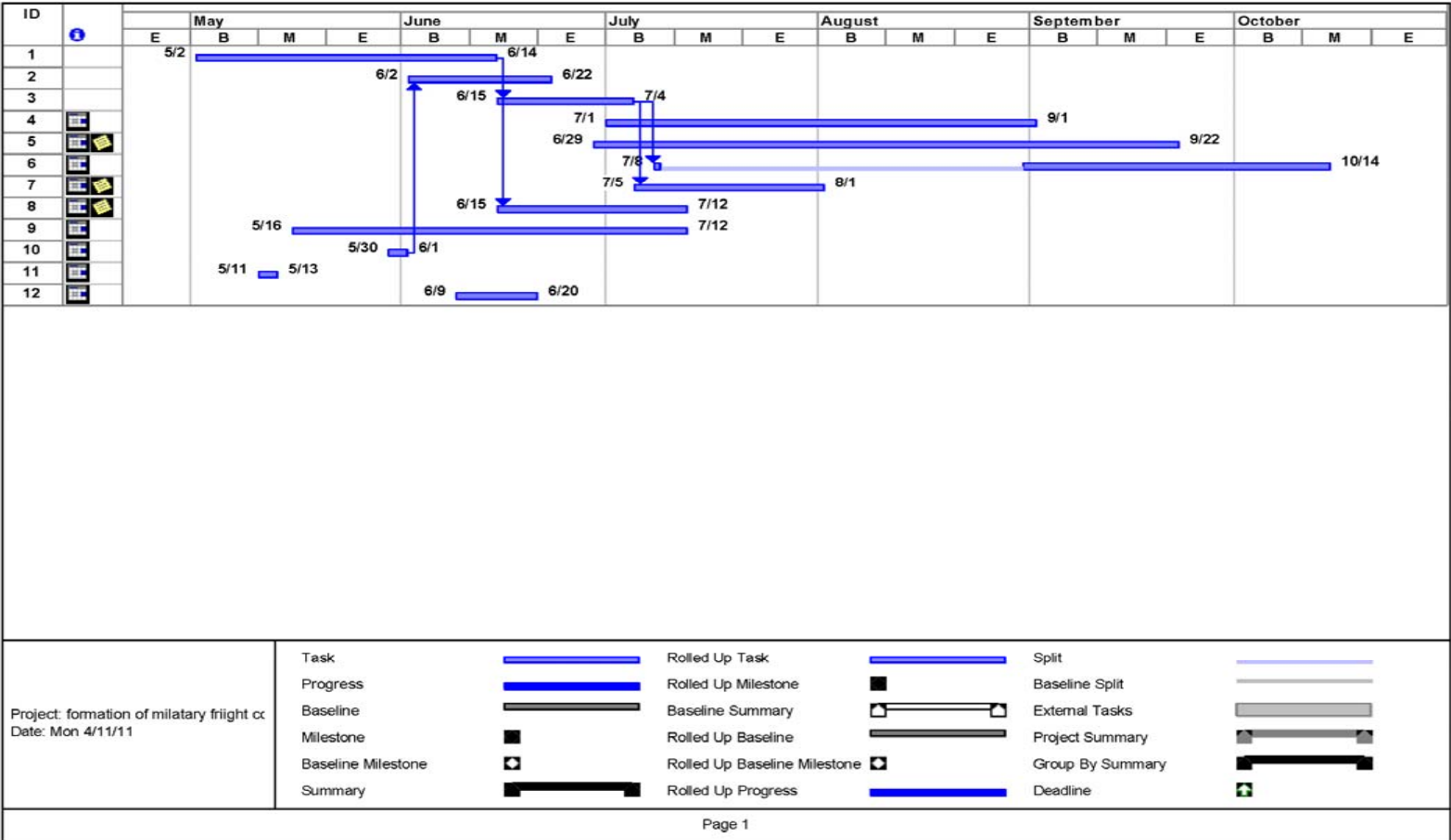
Effective time management is crucial to accomplishing organization tasks as well as to avoiding wasting valuable organizational assets., for that I organize my project time to give enough time for each task within the time limit imposed on the project to begin work. Consequently, the time schedule as shown in the table:

III. 1. WBS WITH DURATION ESTIMATES:

Project name: Formation of military Freight Company		
Summary/ Activity 1.0. (Research)	Task 1.1. (Market survey & research)	SD1-May 2010 ED30 May 2010 Duration= 30 days Duration=30 days
Summary/ Activity 2.0. (possibility of investment)	Task 2.1. (Issues a guide about the possibility of investment in the freight sector)	SD I June 2010 ED 14 June 2010 Duration=14 days
Summary/ Activity 3.0. (Obtain approval)	Task 3.1 (approval from the General Command - Chairman of Planning and organization Commission)	SD15- June 2010 ED29 June 2010 Duration=14 days
Summary/ Activity 4.0 (research & develop)	Task 4.1. (develop of military freight vehicles)	SD1 July-2010 ED1 November 2010 Duration= 60 days
	Task 4.2 (maintenance & repair)	SD29 June-2010 ED30 august 2010 Duration= 90 days

Project name: Formation of military Freight Company		
Summary/ Activity 5.0 (purchase the required freight vehicles)	Task 5.1. (Formation committee) Task 5.2. (Buy new freight vehicles)	SD1 july-2010 ED30 august 2010 Duration=60 days
Summary/ Activity 6.0 (training)	Task 6.1(rehabilitation of military drivers)	SD29 June –2010 ED 8 July 2010 Duration = 6 weeks Duration=6 weeks
Summary/ Activity 7.0 (Recruitment)	Task7.1(Recruitment of qualified heavy freight drivers)	SD29 june-2010 ED29 July 2010 Duration=4 weeks
Summary/ Activity 8.0 (develop military law)	Task8.1(amend the Military Transportation law)	SD29 may-2010 ED 29June 2010 Duration=4 weeks
Summary/ Activity 9.0 (government approval)	Task 9.1 (obtain government approval)	SD25 may -2010 ED25 July 2010 Duration=2 months
Summary/ Activity 10.0 (meeting)	Task 10.1(Meeting with private & public sectors)	SD29 may-2010 ED3 June 2010 Duration=3 days
	Task10.2(cooperation with private companies)	SD11- may-2010 ED14 may 2010 Duration=4 weeks
Summary/ Activity 11.0(workshop for advertising) marketing strategy	Task 11.1. (Ad campaign) Task 11.2. (Marketing plan)	SD 9 – June 2010 ED16 June 2010 Duration=7 days

III. 2. Gantt Chart



IV. PROJECT COST MANAGEMENT

The preparation of the construction cost plan based on the project within the Department of the Investment Enterprise contract signed. Implementation of this project related to economic indicators. The project manager, the technical staff in the organization try reasonable and feasible ways to develop specific measures to reduce the project cost, and predicted that these measures were obtained after economic effects in order to develop cost-reduction goals, and constantly adjust the calculation to compile the project cost plan.

Authority interests In the specific construction implementation process, and continue to the actual costs and project costs compared to assess the implementation of the project cost plan and the completion target of whether there are deviations in time adjust or amend cost index. In this project the Department of the Investment and resources plan the cost to be as shown:

IV.1 Activities estimate coast

<u>Activities</u>	<u>Cost estimate</u>	<u>Total</u>	<u>Notes</u>
Market survey & research	75.000 \$	75.000\$	Contract with a specialized office
Issues a guide	Research, Printing, Stationeries, Personals	0	Printing presses in the Military
Develop of military freight vehicles	Repair & maintenance 0 Spare Parts 200.000		Done by Maintenance Corps
Purchase the required freight vehicles	Equipment Large freight vehicles Cranes Forklifts Spare parts	10,000000\$ 200,000\$ 150,000\$ 1,000000\$	
Rehabilitation of military drivers	Training, Feeding, housing, salaries, coaches	0 0 0	Done in army training centres
Recruitment of qualified heavy freight drivers	Feeding, housing, salaries, coaches	0 0	Done in army training centres

<u>Activities</u>	<u>Cost estimate</u>	<u>Total</u>	<u>Notes</u>
Meeting with private & public sectors	Place, preparations, coordination, publications	0	Done by army head quarters
Ad campaign	50.000\$	50,000\$	
Marketing plan	75.000\$	75,000\$	
marketing strategy	75.000\$	75,000\$	
Issued a directory of the company's services	Research 0 Printing 0 Stationeries 0 Personals 0		Printing presses in the Military

IV.2 Budget estimates.

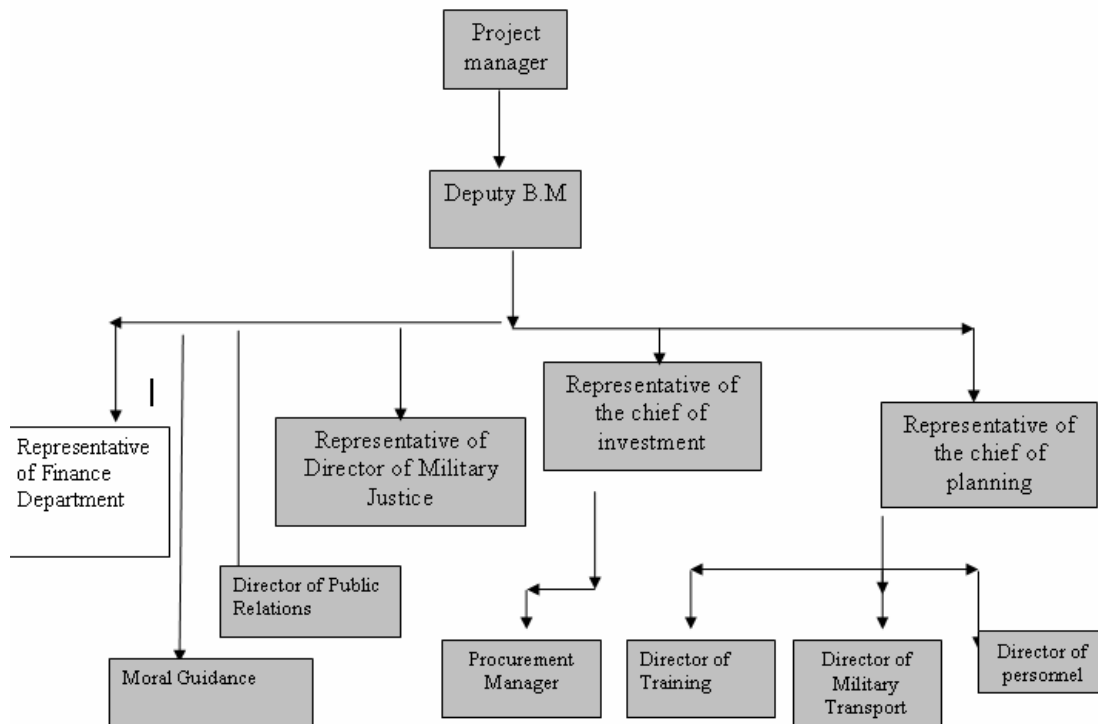
Type	Estimated cost	Total
Personnel	0	
Marketing	75,000\$	
Legal	50,000\$	
Employees	250,000\$	
Skilled trainers	20,000\$	395,000 \$
Advertising	50,000\$	
Equipment		
Large freight sophisticate vehicles	10,000000\$	11350.000 \$
Cranes	200,000\$	
Forklifts	150,000\$	
Spare parts	1,000000\$	
Materials		50,000
Stationeries	50,000\$	\$
Estimated total	11845.000 \$	
Falling in the range of -10% to +25% of the actual cost of the project.		

V. PROJECT HUMAN RESOURCE MANAGEMENT


V.1. Resource pool description

Task	Resource	Number of resources
Market survey	Marketing	2
Legal Adviser	Legal	2
Investment research	Marketing	3
Studies of freight vehicles	Marketing	2
Bids& tenders	Employees	10
Trainers	Training	50
Marketing plan	Marketing	3
Ad campaign	Advertising	4

V.2. Organizational Chart for the Project



V.3. Responsibility Assignment Matrix (RAM)



 WBS activities

<i>Activity code</i>	<i>1.1</i>	<i>1.2</i>	<i>1.3</i>	<i>2.1</i>	<i>2.2</i>	<i>2.3</i>	<i>3.1</i>	<i>3.2</i>	<i>4.1</i>	<i>4.2</i>	<i>5.1</i>	<i>5.2</i>	<i>5.3</i>
<i>Position</i>													
Project manager	A	A	A	A	A	A	A	A	A	A	A	A	A
Chairman of Planning	I	I	I	S	I	I	I	I	I	I	I	I	I
Director of Military Justice	I	I	I	I	A	A	I	I	A	A	I	I	I
Director of the Department of Finance	I	I	I	A	I	I	A	P	P	P	I	I	I
Director of personnel Affairs	I	I	I	P	P	A	A	P	I	I	I	I	I
Director of Military Transport	P	P	P	P	A	I	A	P	P	P	I	I	I
Director of Training	I	I	P	P	A	A	P	P	P	P	P	I	I
Procurement Manager	P	P	P	A	A	P	P	P	P	P	I	I	i

VI. PROJECT COMMUNICATION MANAGEMENT

To ensure the success of my project much information, including expectations, resources, status reports, budgets and purchase requests, needs to be communicated on a regular basis to all the major stakeholders. The concept of my Project Communications Table is simple and it is fairly easy to construct, as it shown in the table:

4.1. Communication matrix

Target audience	Person(s) to convey the message	Message frequency	Format of a message	Message content
Everyone involved in the project	Director of Public Relations - Moral Guidance for the army	weekly	A brief presentation	Project introduction project members Current status Project phases and deliverables
Company management	Project manager	According to the timing of the project - before the start of any stage	an official meeting	Project overview Stage overview High level operational implications
Customers	Director of Public Relations - Moral Guidance for the army	monthly	Detailed presentation	Project shape Current status Impact on customer

VII. PROJECT RISK MANAGEMENT

There are always risks associated with any project. The purpose of risk management is to ensure levels of risk and properly managed so that the project is successfully completed.

A recommended best practice is that all projects should institute some level of risk management. In my project I develop a separate risk management plan. This plan generated and implemented very early during project initiation and maintained throughout the project life cycle - "as it's shown in the table.

Level of risk management

Seq.	Risk factor	Rating	Description	Risk mitigation strategy	Remarks
1.	Project Fit to Provider Organization	High Risk Cues	Goals does not support or relate to Provider Requirements	Signing an official document to define the project goal during the planning phase by Project Sponsor	can be controlled with careful analysis, planning and communication.
2.	Customer Perception	Medium Risk Cues	organization is working on project in area not expected by customer	The preparation of a prior study on consumers and their Perception of this project	we can manage this risk by looking at the past
3.	Use of Attractive Technology	Medium Risk Cues	project is being done in a sub-optimal way, to leverage the	Signing a binding contract in advance to introduce the latest	most technology projects deserve some degree of risk management.

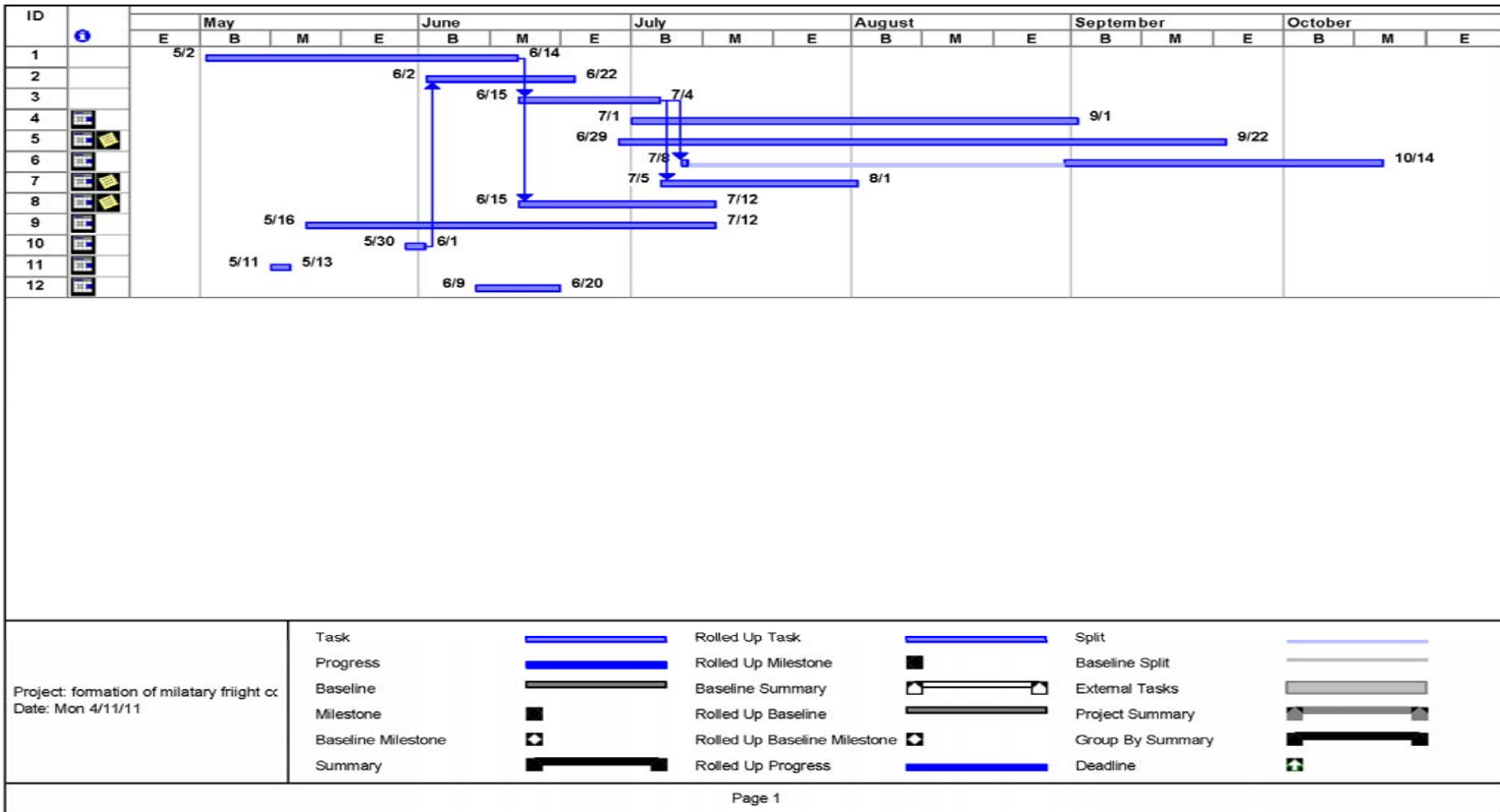
Seq.	Risk factor	Rating	Description	Risk mitigation strategy	Remarks
			development of new technology	vehicles for the project	
4.	Organization Roles and Responsibilities	High Risk Cues	many in the organization are unsure of who is responsible for many of the activities of the organization	Determine the organization and clearly shows the limits of responsibilities of the team and endorsement from the highest leaders	The loss of key staff to competitors or vendors will not occur in this case
5.	Policies and Standards	Medium Risk Cues	development policies and standards are in place, but are weak or not carefully followed	Binding regime to account for any breach of the policies and specifications already controlled directly from the project manager	we can manage this risk by controlling the outcome
6.	Project Objectives	Medium Risk Cues	some project objectives, measures may be questionable	Precise and clear definition of the project objectives to serve the goal	risk includes both threats to the project's objectives and opportunities to improve on those objectives
7.	User Involvement	High Risk Cues	minimal or no user involvement; little user input	Signing of a memorandum of understanding with the users admitted to involvement during the phases of constructing the project	

Seq.	Risk factor	Rating	Description	Risk mitigation strategy	Remarks
8.	User Acceptance	High Risk Cues	users do not accept any concepts or design details of system	implementation of a thorough study of user requirements take into account their desires and achieve the regulation	poor communication techniques and inability to gain User Acceptance.
9.	Project Size	Medium Risk Cues	Moderate complexity, decomposable	Determine the size of the project according to market needs with the flexibility to introduce changes when necessary	
10.	Budget Constraints	Medium Risk Cues	some questions about availability of funds	Advance and accurate budget monitoring according to the requirements of the project	to consider the nature and complexity of the project at hand.
11.	Requirements Stability	Low Risk Cues	little or no change expected to approved	As it is in baseline	Non political issues that could negatively impact resource availability and cooperation
12.	Testability	Medium Risk Cues	parts of services hard to test, or minimal planning being done	Draw a time-plan to examine the project inputs gradually	
13.	Implementation Difficulty	Low Risk Cues	content is reasonable for this team to implement	As it is in baseline	The uncertainty of a risk often depends on the project's progress through its life cycle

Seq.	Risk factor	Rating	Description	Risk mitigation strategy	Remarks
14.	Customer Service Impact	High Risk Cues	requires major changes to customer service approach or offerings	The preparation of a prior study on consumers impacts of this project	
15.	Quality Assurance Approach	Medium Risk Cues	Procedures established, but not well followed or effective	Adherence to international specifications for the quality of project services	early adoption of new technology will limit the ability to benefit from the experiences of others
16.	Early Identification of Defects	Medium Risk Cues	reviews are used sporadically but not affect as requested	Designing a monitoring system for periodic review for each activity to implement within the sequence	If any Risks discovered during the risk identification process are evaluated along with their potential
17.	Vendor Support	High Risk Cues	little or no support, high cost, and/or poor response time	Sign contracts with More than a seller to ensure the operation of the project on time	risks can include product delivery delays, or missed deadlines along the critical path.
18.	PM Authority	High Risk Cues	has little authority from location in the organization structure and little	Binding document showing the powers of the project manager and does not tolerate interference in his	Not supposed to be the subject of controversy
19.	Team Spirit and Attitude	Low Risk Cues	strongly committed to success of project; cooperative		Risks that do not occur should be documented and closed in the risk response plan.

Seq.	Risk factor	Rating	Description	Risk mitigation strategy	Remarks
20.	Technology Match to Project	Low Risk Cues	technology planned for project is good match to customers and problem		Not supposed to be the subject of controversy
21.	Change in laws	Low Risk Cues			Non political issues could negatively impact resource

Appendix 1: Gantt chart



Appendix 2: WBS

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1	Reviewing of local and regional previous	30 days	Sun 5/2/10	Mon 6/14/10		
2	issues a guide about the possibility of investment	14 days	Wed 6/2/10	Tue 6/22/10	10	
3	obtain initial approval	14 days	Tue 6/15/10	Sun 7/4/10	1	
4	studies of the military freight vehicles	9 wks	Thu 7/1/10	Wed 9/1/10		
5	committees to purchase	12 wks	Tue 6/29/10	Wed 9/22/10		
6	intensive courses for military	6.2 wks	Thu 7/8/10	Thu 10/14/10	3FS+3 days	
7	Recruitment of qualified heavy freight driver	4 wks	Mon 7/5/10	Sun 8/1/10	3	
8	Review of the military transportation law	4 wks	Tue 6/15/10	Mon 7/12/10	1	
9	2 Obtain government approval to amend	8 wks	Sun 5/16/10	Mon 7/12/10		
10	meeting with representatives	3 days	Sun 5/30/10	Tue 6/1/10		
11	workshop for advertising	3 days	Tue 5/11/10	Thu 5/13/10		
12	Issued a directory of the company's services,	7 days	Wed 6/9/10	Sun 6/20/10		

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*** - The Project Management Body of Knowledge

*** - <http://sepo.spawar.navy.mil/PMP>

TRANSFORMING THE SECRET SERVICE INTO AN INTELLIGENCE SERVICE

Lt. Ciubeica Anca

INTRODUCTION

I have considered this project because of the importance given lately to corporate image by all the Western public institutions and of the way they understand to bring their activities, successful or not, on the public agenda.

In terms of intelligence services, the subject has always been sensitive and only few of these organizations dared to reveal details of their activity. This has turned the intelligence officers' job into a myth, through film productions, or following some intriguing revelations, their activity has been perceived all wrong.

The reaction of these institutions has been very shy at the beginning, but they soon realized the importance and implications of communication, and so they started to react. The Eastern European Intelligence Services are still trapped in a defensive and timid position, reacting poorly or, most of the times, not reacting at all.

The first initiatives of the intelligence organizations were based on adapting the public relations programs of the commercial institutions to their goals, and gradually they realized that an open relation with the media in respect to security matters is beneficial, improving the relations they had with other public institutions, and the general public. Their mission became understood, recognized, accepted and appreciated by public opinion, these aspects increasing their powers and authority.

As a natural result, the intelligence services should start to interact with the civil society, appropriating some of their objectives and setting similar goals. This in order to broaden the horizons of the intelligence activity and to score big points on the public agenda because of the concern the services had in the society's problems.

The process signifies the transformation of the secret services in intelligence services, not by revealing the tools of the trade, but by adopting a correct and open dialogue with the public.

This may prove to be extremely beneficial to the Eastern European Intelligence Services in fighting the ghosts of the past.

PROJECT SPONSOR

The sponsor for my project is the director of the intelligence organization.

I. A BUSINESS CASE

The needs of the intelligence service in terms of the image within civil society are:

- *changing the misperception (dated back to the communist period) of intelligence services role in society* - that is activities are against the population and for the control of the people;
- *gaining the support of the civilians and assuring their understanding and approval* for the mission of the organization – to deliver a secure environment for the citizens with all its implications;
- *improving the relationships* of the intelligence organization *with the other state institutions*;
- *addressing lack of transparency both to the internal and external stakeholders concerning the institutional transformation process* which the organization is undergoing;
- *improving the specific basic activities* (gathering information) so that the actions of the organization to be a real success;
- *obtaining the necessary funds from the government* based on the approval of the civil society;
- *consolidating the organizational culture* among the employees of the intelligence service;
- *consolidate the security culture* among the population;
- *increasing the intrinsic motivation for intelligence services employees* by creating a powerful institutional image outside the organization;
- *attracting real professionals* inside the intelligence structures;
- *ensuring a successful collaboration with the academic society*;
- *establishing contacts with the representatives of the civil society*;
- *strengthening the relations with the former employees* of the organization.

II. PROJECT SCOPE MANAGEMENT

II.1. Goals, objectives, activities

1. Internal goal (addressing the *intelligence services employees*)

Increase the intrinsic motivation *for intelligence services employees* by creating a powerful institutional image outside the organization.

O1.1. provide the support/acceptance of the intelligence organization employees concerning the transformation or modernization process, developed by the institution;

List of Activities

activities description

1.1.1. write certain articles about the transformation/modernization process;

the articles about the transformation/modernization process will present the context which generate the process and the objectives needed to be achieved in order to follow the strategic institutional documents;

1.1.2. get the approvals from the special department of the organization in order to address to the general public some subjects;

all information regarding the organization's activities addressed to the external public/civil society must get the approval from the special department of the organization;

1.1.3. publish in the internal brochures, as main articles, topics about the transformation/modernization process (the context which generated it and the objectives needed to be achieved in order to follow the strategic documents);

in order to inform the internal stakeholders about the reasons and the goals of the processes which they deal with, some articles will be published in the internal brochures;

1.1.4. publish articles in mass media about the reform process of the intelligence organization. the press department will select and provide some articles to the main newspapers;

O1.2. by the end of each phase of the transformation process (which are stated in the document “Strategic Vision Plan” as the reorganization phase and the implementation of a new planning system phase) the employee will get well informed about the new aspects operated/delivered and what has caused them;

List of Activities

activities description

1.2.1. provide institutional analyses by the institutional analysis department regarding the development of the transformation process;

the institutional analysis will be made by the Institutional Analysis Department in collaboration with the other main operative departments of the organization ;

1.2.2. get the approval from the director of the intelligence organization for the information which will become visible;

the director is the one who represents the image of the organization and you must get his approval for the information which will become visible;

1.2.3. communicate to the general public and to the organization’s employee the main conclusions regarding the development of the modernization process and the effects implied by it, based on institutional analyses.

delivering the written articles to the general public and to the organization’s employee by TV apparitions of the main personalities of the intelligence organization and by publishing interviews in certain papers;

O1.3. by the end of the 5 years transformation planned process, the organizational actors will submit the need of the modernization phases;

List of Activities**activities description**

1.3.1. perform a pertinent research about the similar partner organizations which are developing or have developed a reform process;

the External Relationships Department will provide, mainly from the information they have, a research about the similar partner organizations which are developing or have developed a reform process;

1.3.2. obtain some informal materials from the partners about their experiences on this matter;

based on existing information, the External Relationships Department will try to obtain some additional informal materials from the external partners by addressing them some official addresses;

1.3.3. organize public debates about similar partner intelligence organizations undergoing this kind of process - including the participation of partner institutions officers.

involves support from the partners (mutual exchanges, speeches) and promoting the image of the intelligence organization as an important international partner which is a part of the external bodies based on intelligence sharing; some information will be delivered about the actions taken under these partnerships forms and the results obtained will be delivered.

O1.4. provide a professional internal communication process all along the project.

List of Activities**activities description**

1.4.1. hire a team from a poll/opinion institution in order to evaluate, the effects of the PR activities developed (upon the internal / external public).

some research will be provided in order to choose the proper poll institution; the team will provide the design of the poll, the appliance and the interpretation of the results;

1.4.2. distribute materials to the employees regarding the results of the polls applied in order to evaluate the effects of the public campaign;

every semester the materials regarding the results of the polls will be distributed to the internal stakeholders;

2. External goal (addressed to the *civil society*)

Improve the relationships of the intelligence organization with the other state institutions (mainly with collaborative institutions included in the National Security System – *Ministry of Defense, Internal Affairs Ministry, External Intelligence Service, Guard and Protection Service, Secret Transmission Service*).

O2.1. provide transparency for the public opinion regarding the specific missions of the organization;

List of Activities

activities description

- | | |
|---|--|
| 2.1.1. prepare the public campaign “Get secure, get intelligence!”; | 2.1.1. the public campaign will focus on delivering some information about one of the most important organization’s activity (e.g. counterterrorism); |
| 2.1.2. get the approval from the intelligence organization director to initiate the campaign; | 2.1.2. the director will be informed about the strategy of the campaign and what it involves in terms of actions; |
| 2.1.3. print informal materials/brochures about the development of the public campaign; | 2.1.3. the events/public activities of the campaign must involve spreading out informal materials/brochures regarding the development of the public campaign; |
| 2.1.4. initiate the public campaign “Get secure, get intelligence!”; | 2.1.4. the initiation of the public campaign will be marked by a planed public event which includes the participation of the mass media; |
| 2.1.5. publish related campaign articles in mass media; | 2.1.5. information about all the public events of the campaign will be delivered to mass media; you must assure the visibility of the events for the results to be well promoted by the media; |
| 2.1.6. address a communicate to the mass media by the organization’s spokesman; | 2.1.6. the public campaign will become more visible by addressing several communiqés connected also with the events; |

<p>2.1.7. publish dedicated brochures and promoting materials during the development of the campaign – every three months;</p>	<p>2.1.7. every three months, during the development of the campaign, some public brochures will be made; it will include information about the campaign, the events, the representative’s speeches, the participation, the conclusions, etc;</p>
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O2.2. by the end of the public campaign the organization will be identified as one of the main institution responsible for a secure environment;

List of Activities

activities description

<p>2.2.1. design the contest of the campaign;</p>	<p>2.2.1. the PR department will design the contest of the campaign in order to promote the best reasons to support your national intelligence service and in accordance with the main project’s objectives;</p>
<p>2.2.2. initiate the contest of the campaign "Why intelligence?" in order to promote the best reasons to support the national intelligence service;</p>	<p>2.2.2. during an event of the campaign, the contest of the campaign "Why intelligence?" will be initiated;</p>

O2.3. obtain acceptance from the public by creating harmonious boundaries with the civil society;

List of Activities

activities description

<p>2.3.1. assign a team for designing the brochure “<i>Democracy and intelligence</i>” addressed to the general public;</p>	<p>2.3.1. to coordinate and design the brochure “<i>Democracy and intelligence</i>” a team must be assigned, mainly from the academic structures;</p>
<p>2.3.2. generate the editorial team and the topics for the first issue;</p>	<p>2.3.2. the list of the editorial team and the topics for the first issue. The latter which will be</p>

provided by the internal stakeholders, by the valuable retired officers and by some public representatives;

- 2.3.3. publish the brochure “*Democracy and intelligence*” dedicated to the public opinion which will debate different subjects related to the specific activities of the organization and about its values; 2.3.3. the organization’s publishing house will publish the first issue of the brochure;
- 2.3.4. develop the “open gates day” for the wide population; 2.3.4 includes visits to one of the organization’s base/department;

O2.4. perform a correct and open dialogue with the public.

List of Activities

activities description

- 2.4.1. improve the informal web site of the organization by providing a forum for debates on certain topics; 2.4.1. includes technical matters and a list of topics in order to provide a forum for debates;
- 2.4.2. prepare a session of communications for the academic environment about related intelligence subjects; 2.4.2. prepare a session of communications for the academic environment about related intelligence subjects;
- 2.4.3. perform the session of communications in one of the organization’s academic location 2.4.3. includes the participation of the general public;
- 2.4.4. prepare a round table on specific matters concerning the present social issues with the representatives of the civil society; 2.4.4. includes: list of participation, the general title, the main topics, the speeches of the main organization’s representatives, a press communiqués from the spokesman;
- 2.4.5. perform/conduct the round table. 2.4.5. the round table will be held inside of the main organization’s building and includes the participation of the media.

III. PROJECT TIME MANAGEMENT

The *Gantt Chart* which reflects the project time management is presented in Appendix no. 1.

The project's duration is about 393 days long.

It begins at 29.03.2010 and will be finished at 28.09.2011.

IV. PROJECT HUMAN RESOURCE MANAGEMENT

The organizational chart reflects the hierarchy within the organization and also the connections between the project's team members.

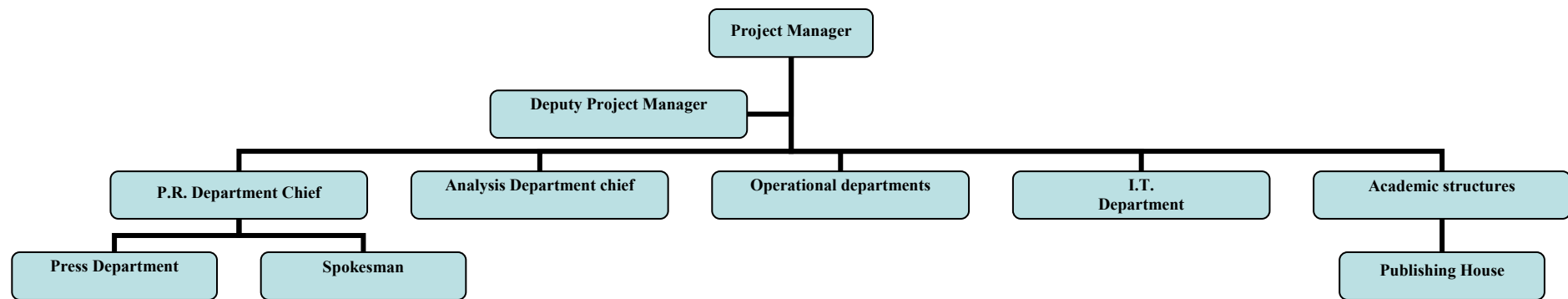
Because of the complexity of the project, will be needed also a deputy project manager.

The project manager may be the director councilor in matter of communication and the deputy project manager may be the chief of Communication Department.

The *responsibility matrix* details the tasks in terms of: R – Responsibility; A – Accountability; C – Consultation; I – Informed.

Each department/structure involved in the project is assigned/delegated with some issues which are recommended to be established from the beginning of the project.

IV.1. Organizational chart



IV.2. Responsibility matrix

Activities	Di	An. Dpt.	Int. Sec. Dpt.	Ph	press dpt.	Inst. an. Dpt.	Op. Dprts.	P.r. dpt	Ex rel. dpt	Poll inst.	Spk.	Com. Dpt.	Acad	IT dpt
Internal goal														
1.1.1.	I	A				R	C							
1.1.2.		I	R			A								
1.1.3.			I	R		A	C							
1.1.4.					R			I			C	A		
1.2.1.	I	A				R	C							
1.2.2.	R					A		I						
1.2.3.	I				A			R			C			
1.3.1.						R	I		C			A		
1.3.2.						C	I		R					
1.3.3.	I							C	R			A		
1.4.1.	I							C		R		A		
1.4.2.							I	R		A		C		
External goal														
1.1.1.	I				A			R				C		
1.1.2.	R		C		I						A			
1.1.3.					I			R			A	C		
1.1.4.					I			R			C	A		
1.1.5.					I			R			C	A		
1.1.6.					C			I			R	A		
1.1.7.					C			R			I	A		
1.2.1.					A			R			I	C		
1.2.2.					A			R			C	I		
1.3.1.					A			I				R	C	
1.3.2.							I	A				R	C	
1.3.3.	I			R				A				C		
1.3.4.					I		C	R				A		

Activities	Di	An. Dpt.	Int. Sec. Dpt.	Ph	press dpt.	Inst. an. Dpt.	Op. Dprts.	P.r. dpt	Ex rel. dpt	Poll inst.	Spk.	Com. Dpt.	Acad	IT dpt
1.4.1.								C			I	A		R
1.4.2.					I			A				C	R	
1.4.3.					A			C				I	R	
1.4.4.					I			A				C	R	
1.4.5.					I			A				C	R	

Legend: R – Responsibility; A – Accountability; C – Consultation; I – Informed;

Di - the director of the intelligence organization

An. Dpt –The analysis department

Int. Sec. Dpt – internal security specialized department

Ph - organizational publishing house

Press dpt - press department

Inst. an. Dpt – institutional analyze department

Op dprts – main institutional operative departments

P.r. dpt – pr department

Ex rel. Dpt – department of external relationships

Poll inst – poll institution

Spk. - the spokesman of the organization,

Com dpt – the communication department

Acad – academic organization’s structures

IT dpt – the IT department

V. PROJECT COMMUNICATIONS MANAGEMENT

The success of the project depends highly of the way the team understands and practices communications tools and channels in order to ensure a good development and appliance of the selected tasks.

V. 1. TARGET AUDIENCE

V.1.1. Project stakeholders

The project's stakeholders are the general public (P, I, D) and employee of the intelligence organization (P, I, D, E), where: the performer is (**P**), influencer (**I**), decision maker (**D**) and technical or subject matter expert (**E**).

The main idea of the project is about creating a new, powerful and better image (internal and external) of the organization in order to develop performant activities. **The general public** is the one who should be influenced by the project and also the one who influences the project's activities by the way people will react to the messages addressed to them. They could have a negative reaction and reject the idea of a new organizational image; a neutral conduct and may not be interested in the topics; or a positive reaction and support the ideas and be interested in the information delivered.

Some representatives from the general public will become project's performers by participating to the public debates, publishing some articles on different topics in the public brochure or becoming a participant to the performed contest.

Because the general public includes the employee from important institutions and within/inside these institutions are adopted some decisions which influence the activities of the intelligence organization, the public opinion becomes a decision maker factor.

In my opinion, **the intelligence organization's employees** are the most important stakeholders because they are the ones who, together with their families, act as representatives of the organization. If you have many employees dissatisfied, the external image will be hard to get. That is why the project will develop (in parallel to the external and internal public) some professional communication tools.

One of the project's objectives states that the organizational actors will submit the need of the modernization process, so these communication tools are very important for

achieving the related specific tasks. The specialized literature shows that when people deal with a change process, some problems appear, so that an important aspect for managing the situation is to adopt and develop good communication with your employee. Only by providing them the information they need you will manage the situation, by including their participation and support to the new processes.

Because the director of any organization (and mostly of the intelligence organizations) is the one who represents the image outside the organization, he becomes the most important stakeholder of the project because his professional image will be associated with the promoted image of the organization.

The internal stakeholders/employees must be involved in the project all the way - from the beginning till the end. They should be informed about the actions developed by the project team and about the results they get. Also they should be implied in some activities such as:

- writing some articles for the internal and the public brochures,
- participation to the session of communications;
- participation to some activities related to the public campaign.

Important for gaining the support of the internal employees is to consult them/the organization's actors regarding the development of the project – they could get some ideas by presenting some perceptions/problems that they have noted about the public opinion. So, they are included in the planning and in the execution phases.

The external stakeholders will also be included in the execution phase by participation to activities such as:

- the contest of the public campaign ““Why intelligence?””;
- participation to the “open gates” day;
- publishing articles in the public brochure “*Democracy and intelligence*”;
- participation to the public debates, round tables and session of communications.

The major issues or risks of the project for the internal stakeholders include:

- not being informed about the project so they will get a bad opinion about the project from the start and they turn into a weak part of the project;

- not being included in any phases of the project so that the image of the organization will fail to be promoted as a realistic and powerful one.

The major issues or risks of the project for the external stakeholders include:

- not evaluating the effects of the campaign towards the general public so there is no knowledge as to what went bad and what went well and what is to be done later;

- not giving the opportunity to dialogue with the general public.

Stakeholders need information about the development of the project during its entire period.

V.2. Communication channels:

The project team will use mostly the internal network and cell phones.

Types of communication: periodical meetings for discussing issues informally and informal documents as weekly reports.

1.3. Message format: written status report, email, fax, letter, formal/informal presentations, feedback form (format of the polls)

1.4. Timing and frequency of messages will be in accordance with each and every task developed.

1.5. Ways that information can be distributed: Internet, round tables, public debates, meetings, newsletters, special events, posters, bulletin boards, video conferences, intranet, Web pages.

Most message deliveries to the external and the internal public, concerning information about the organization, will be first approved by the director of the organization.

VI. PROJECT COST MANAGEMENT

In order to establish/predict the cost of the project, you must know/keep in mind all kind of resources that it will be used during operationalize of the planed activities and also their costs.

VI.1. List of resources

Resource type	Name	Number
Human resources	Analysis Department specialists	3
	the head manager of the Internal Security Specialized Department	1
	employee from the Organizational Publishing House	3
	employee from the Press Department	3
	employee from the Institutional Analysis Department	7
	employee from the other main institutional operational departments	8
	the director of the intelligence organization	1
	employees from the PR department	10
	director councilors	2
	main personalities of the organization (director, deputy director, spokesman)	3
	employee from the main Department Of External Relationships	5
	employee from a poll institution	11
	employee from the PR department	10
	the spokesman of the organization,	1
	officers from the antitero unit	5
	people from the Communication Department	6
	employees from the academic organization's structures	9
employees from the visited department	3	
people from the It Department	6	
Equipment	PCs	90
	electronic mail	-
	international secure network	-
	cars	6
Materials	paper	236 reams
	ink	170 color cartridges
	performer printer	22
	hotel rooms	4
	conference hall	4
	protocol materials - food, drinks	

VII. PROJECT QUALITY MANAGEMENT

The concept of “quality” for the project reflects the products/deliverables/outcomes of the project. Very important for the project are the tools identified to be used in order to measure the deliverables in accordance with the performed activities.

The measurement quality tools of the project are the polls performed by the experts. The results of the polls will be used for reflecting the real achievements of the project in connection with the established goals and related objectives.

VII.1. Deliverables and quality criteria

Output/deliverable name	Deliverable description						Date of assessment/review
	Deliverable description						
	Activity codes:	purpose of the deliverable:	what is composed of:	where information about it is obtained from:	the required appearance:	the level of quality required	
<i>Main topics of the public debates</i>	1.1.2.; 1.1.4.; 1.2.2.; 1.2.3.; 1.3.1.; 1.3.2.; 1.3.3.	provide transparency of the organizational reform process;	a list of important topics, some possible templates, list of main mass media which will be chosen to transmit/send	requires inputs from similar partner organizations and from the institutional analysis department;	must get the approvals from the director of the intelligence organization;	quality criteria will be measured by the level of trust for the organization in comparison with some other state institutions – get by the results of the	after every 3 public debates the poll institution will deliver the results/evaluations (every semester)

Output/deliverable name	Deliverable description						Date of assessment/review
	Deliverable description						
	Activity codes:	purpose of the deliverable:	what is composed of:	where information about it is obtained from:	the required appearance:	the level of quality required	
			the messages;			poll which reflect the public opinion	
<i>The strategy of the public campaign "Get secure, get intelligence!"</i>	2.1.1.; 2.1.2.; 2.1.3.; 2.1.4.; 2.1.5.; 2.1.6.; 2.1.7.; 2.2.1.; 2.2.2..	promote the main missions of the organization;	implies a list of P.R. activities developed on certain periods of time;	requires inputs from the institutional P.R. department;	must get the approvals from the director of the intelligence organization;	quality criteria will be measured by how many people know about the public campaign as it is reflected by results of the poll.	every semester of the public campaign the poll institution will deliver the results
<i>The public brochure "Democracy and intelligence"</i>	2.3.1.; 2.3.2.; 2.3.3.	ensure better relationships with the other state institutions (mainly with collaborative institutions included in the National Security System) by promoting national security culture - specific values and	implies an editorial team, list of expected sections, topics and some possible templates;	requires inputs from academic structures, from main operative departments and also from the public opinion (public representatives will be invited to publish some articles on certain topics);	must get the approvals from the Internal Security Specialized Department so that the information of the officers shouldn't be classified;	quality criteria will be measured by concordance between reality and the public opinion regarding the present missions of the organization and the missions it should develop - as it is reflected	every semester of the public campaign the poll institution will deliver the results

Output/deliverable name	Deliverable description						Date of assessment/review
		Deliverable description					
	Activity codes:	purpose of the deliverable:	what is composed of:	where information about it is obtained from:	the required appearance:	the level of quality required	
		activities of the organization;				by results of the poll.	

VIII. PROJECT RISK MANAGEMENT

VII.1. Risk type, conditions, description, strategy

Knowledge Area	Risk Conditions	Rating /Level of risk		
		<i>Low</i>	<i>Medium</i>	<i>High</i>
Integration	lack of evaluation about the effects of the public campaign;	x		
	poor resource allocation;		x	
	poor integration management;		x	
Time	delays in achieving tasks because of many approvals and informal materials you must hand out;	x		
	errors in estimating time or resource availability;		x	
	poor allocation and management of float		x	
Quality	not taking into account the effects /results of the project;	x		
	underestimate the evaluations by not taking adequate decisions to improve/plan further actions according to the goal you want to achieve;		x	
	inadequate poll format;	x		
Human Resources	poor project organization and definition of responsibilities;		x	
	lack of experience from the project's team in dealing with the new P.R. situations;			x
Communications	not giving the opportunity for a real dialogue with the general public;			x
	lack of consultation with internal key stakeholders (employees of intelligence organization);			x
	lack of delivering information to the internal stakeholders about the development of the project;		x	
	lack of valuable feedback from the other main managers of the organization's structures;			x
	restrains/limits in communication process especially outside the institution because of the organizational specific activities;			x
Risk	ignoring risk;		x	
	unclear assignment of risk;		x	
	poor insurance management.		x	

Some risks may occur in accordance with the main identified scope and this will generate mitigation activities which you can plan from the beginning. Moreover, during the development and implementation of the tasks other mitigation activities can be provided in order to follow the plan or to ensure the success of the project.

Main/major tasks	Scope	Possible risks	Mitigation activities
Develop the public campaign <i>“Get secure, get intelligence!”</i>	provide transparency for the public opinion regarding the specific missions of the organization;	because of the lack of human resource’s experience, the P.R. activities will disregard some important steps (errors in planning) and fail accomplish their objectives;	consultative/collaborative activities with experts from a professional P.R. institution;
Perform the contest of the campaign <i>“Why intelligence?”</i>	identify the organization as one of the main institution responsible for a secure environment;	lack of strategy in promoting the contest which in the end will turn it into a no valuable tool of the campaign	the strategy of the contest will be delivered from the beginning of the public campaign and it should be in concordance with each step made by the campaign;
Apparition of the public brochure <i>“Democracy and intelligence”</i>	obtain acceptance from the public by creating harmonic boundaries with the civil society;	lack of cooperation with internal stakeholders will provide a distorted and incomplete image of the organization;	provide periodical information to the internal stakeholders about the project’s activities and ask for their support in order to promote a valuable public brochure;
Perform session of communications for the academic environment	develop relationships with the academic environment;	errors regarding the preparation of the session because of the time factor and lack of human resources – will give a bad image of the organization and the session will be identify not as a valuable one but as a low level/common one;	start to organize the session long enough before the date planed for its performance, ensure that the quantitative and qualitative aspects of the human resources involved in this task are assured;
Organize round tables on specific matters	perform a correct and open dialogue with the public;	turn the situation against the organization’s image by giving the	select very careful the persons who will participate to the debates and the topics; prepare

Main/major tasks	Scope	Possible risks	Mitigation activities
		opportunity to some representatives of the civil society to express their opinions and perceptions about your organization (on the historic ground);	and adopt a code of manner;
Providing a forum for debates on certain topics	ensure the feedback from the civil society;	the discussions will underline some negative aspects regarding the perception over organization's activities;	the forum will be provided for a limited period of time and several employee will take part/participate to the discussions in order to equilibrate the balance when is needed.

Identifying the project's possible risks is a very important step and also a challenging one because that means to see very clear from the beginning the weak parts of your project. Most of the times you get to know them long after the project begin, while the tasks are developing.

Even if it is a difficult job to do, identifying the risks and focusing on mitigation activities will help create a better strategy of the project and also ensure against failure.

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JORDAN ARMED FORCES CRYOGENIC LIQUID OXYGEN-NITROGEN PLANT

LTC Mohammad Janadieh

**PROJECT SPONSOR: Defense Resources & Investment Management
Commission (DRIMC)**

BUSINESS CASE

Executive Summary

The Jordanian Armed Forces used to purchase the oxygen and nitrogen by buying it from local companies through tenders in the newspapers, and the assignment was based on the prices provided by these companies.

Because the corporate interest is only a matter of material gain and of achieving the greatest possible amount of profits, possible agreements between private companies to raise prices and force the armed forces to purchase these products at the highest prices could be a high risk for the armed forces.

Hence, there is a major and serious question that needs to be addressed:

What would happen to the strategic infrastructure if companies failed to supply the armed forces with these strategic products? (Do we allow for the military aircraft to stop flying? Do we let the military hospitals stop from running?)

Everyone knows that oxygen and nitrogen are strategic materials of any army in the world because they are essential items for the Air Force and the field of operations and medical services.

Therefore, it becomes necessary to consider the set up of an armed forces oxygen & nitrogen **PLANT** that will provide the various armed forces units (including military hospitals) with oxygen and nitrogen. Maybe later on the Jordan armed forces will convert this unit to a company which complies with the laws of the Ministry of Industry and Trade looking forward to investing in this field and trying to market the surplus of production to other government institutions such as hospitals and universities. Moreover, once set up this company will try to promote and market the rest of its product to the domestic market at lower prices than other companies.

The cost of construction with this plant depends on two factors:

- 1 - Daily production capacity of this company.
- 2 - The origin of machines and equipment.

Business Opportunity

The establishment of this plant provides a lot of money to the armed forces and ends its dependence on others to provide these strategic materials.

Benefits

The establishment of this plant will provide about (1.2) million dollars annually. Besides that, it is estimated that in case of converting it to accompany, an annual profit from sales to other governmental institutions and local market sales will be made.

Costs

At a thorough analysis the costs broken down below are to be covered in the next four years, as shown in the feasibility study. There is more than one option to estimate the cost of construction, if we consider that the daily production capacity is 15 tons / day and the cost of infrastructure is U.S. \$ 300000. Thus, the estimated total costs for this plant are as follows:

- Buy machines and plant equipment from the United States to become the total cost of the project about 3.500000\$
- Buy machines and plant equipment from the China to become the total cost of the project about 2,500,000 \$
- Buy machines and plant equipment from the India to become the total cost of the project about 1,600,000 \$.

After research and consultation, the decision was to purchase machines and equipment of Chinese-origin in order to ensure good quality and low prices, compared to U.S. machines and equipment.

In **conclusion**, considering the high prices paid at the moment for the quantity of oxygen and nitrogen necessary for the Jordanian armed forces it is more than worth undertaking this project.

Chapter 1

PROJECT SCOPE MANAGEMENT

1.1. Goal:

To set up an oxygen & nitrogen plant to provide the various armed forces units, including military hospitals with oxygen and nitrogen and to achieve the adoption of the armed forces itself in the provision of these strategic products and ends its reliance on others.

1.2. Objectives

2.1. To contract a company to carry out a feasibility study by the second quarter of 2010.

2.2 Receipt of the feasibility study from the company concerned and present it to the concerned high level Committee to take the approval to begin implementation of the project by the second quarter of 2010.

2.3 To hire a company to: build 2 hangars (area of each is 250m²) one to accommodate the plant equipments, the second for the purposes of storage cylinders of oxygen, nitrogen, and spare parts for the plant by the fourth quarter of 2010, build an administrative building for staff and various departments in the company (Production Division, Accounting Department, Personnel Section ... etc) by the first quarter of 2011.

2.4 To buy the necessary equipments by tenders from abroad by the second quarter of 2011.

2.5 To commit human resources from within the military to start work in the plant by second quarter of 2011.

1.3. List of activities (WBS)

Based on the objectives above the following list of activities was established.

3.1. To contract a company to carry out a feasibility study by the second quarter of 2010.

3.1.1. To publish an Advertisement in daily newspapers on a tender for the Work of the Feasibility study of creating a plant for the production of liquid gas (oxygen-nitrogen).

Responsible authority: Defense Procurement Directorate.

Start date: 4/4/2010

End date: 8/4/2010

Predecessor activity: none

Resources:

Hr: 1 (Chief of the Division of tenders, Secretary,)

Equipment: 1(PCs, Copying Machine, Fax)

Costs: None

Deliverables: Advertisement

3.1.2. Formation of a committee to study the bids submitted by companies and to refer the bid to the appropriate company.

Responsible authority: Defense Procurement Directorate.

Start date: 11/4/2010

End date: 22/4/2010

Predecessor activity: none

Resources:

Hr: 1(Director of defense procurement Directorate; secretary)

Equipment: 1 (PCs, Copying machine, Fax)

Costs: None

Deliverables: approval document of committee formation

3.1.3. Considering proposals from various companies by the committee of local tenders and refer the bid to the appropriate company.

Responsible authority: Defense Procurement Directorate.

Start date: 25/4/2010

End date: 26/4/2010

Predecessor activity: activity 3.1.2

Resources:

Hr: 1 committee made up of 4 specialists; 1 secretary

Equipment: 1(PCs, Copying machine, Fax)

Costs: None

Deliverables: Feasibility study

3.2. Receipt of the feasibility study from the company concerned and present it to the concerned high level Committee to take the approval to begin implementation of the project by the second quarter of 2010.

3.2.1 Presentation of the feasibility study by Director of Military Production Directorate to the high level committee.

Responsible authority: Military Production Directorate.

Start date: 27/4/2010

End date: 29/4/2010

Predecessor activity: Activity 3.1.3

Resources:

Hr: 1(Director of military production Directorate,

High level committee made up of 14 high ranks officers, secretary)

Equipment: 1(PCs, Copying machine, Fax)

Costs: None.

Deliverables: Signature and approval document.

3.2.2. Choose a piece of land from the property of the armed forces with an area of not less than 5000 m² so as to be suitable for the establishment of this plant.

Responsible authority: Military Production Directorate, Military Housing Directorate.

Start date: 2/5/2010

End date: 6/5/2010

Predecessor activity: Activity 3.2.1

Resources:

Hr: 1(Director of Military Housing Directorate, Chief of the buildings division, Chief of the technical division, secretary)

Equipment: 1(PCs, Copying machine, Fax)

Costs: None

Deliverables: Own a piece of land in the appropriate site

3.3 To hire a company to: build 2 hangars (area of each is 250m²) one to accommodate the plant equipments, the second to the purposes of storage cylinders of oxygen, nitrogen, and spare parts for the plant, build an administrative building for staff and various departments in the plant (Production Division, Accounting Department, Personnel Section ... etc) by the first quarter of 2011.

3.3.1. Tender in the newspapers to hire a company to build 2 hangars and 1 administrative building.

Responsible authority: Military Production Directorate, Military Housing Directorate.

Start date: 9/5/2010

End date: 13/5/2010

Predecessor activity: Activity 3.2.4.

Resources:

Hr: 1(Chief of the Buildings Division, Chief of the Technical Division, secretary)

Equipment: 1(PCs, Copying machine, Fax)

Costs: None.

Deliverables: Advertisement

3.3.2 Assignment of a tender to build the required hangars, administrative building and start construction phase.

Responsible authority: military housing Directorate.

Start date: 27/5/2010

End date: 3/6/2010

Predecessor activity: Activity 3.1.4.

Resources:

Hr: 1(Director of Military Housing Directorate, committee made up of 4 specialists, secretary)

Equipment: 1(PCs, Copying machine, Fax)

Costs: None.

Deliverables: Sign off the Referral.

3.3.3 Receive required hangars and administrative building by a specialized committee in this field.

Responsible authority: Military Housing Directorate, Military Production Directorate.

Start date: 6/6/2010

End date: 30/12/2010

Predecessor activity: Activity 3.2.2

Resources:

Hr: 1(committee made up of 4 specialists, Chief of the Buildings Division, Chief of the technical division, secretary)

Equipment: 1(PCs, Copying machine, Fax)

Costs: None.

Deliverables: Report of the receipt of the 3 buildings.

3.4. To buy the necessary equipments by tenders from abroad by the second quarter of 2011.

3.4.1 The formation of an ad hoc committee to develop technical specifications for oxygen and nitrogen plant

Responsible authority: Military Production Directorate.

Start date: 2/5/2010

End date: 16/5/2010

Predecessor activity: Activity 3.2.1

Resources:

Hr: 1(Director of Military Production Directorate, chief of the Technical Division, 1 secretary)

Equipment: 1(PCs, Copying machine, Fax).

Costs: None.

Deliverables: Document of the committee formation, report of the technical specifications of the required plant.

1.-1.

2.-1. 3.4.2 A tender to buy the plant equipments & machines from manufacturers abroad.

Responsible authority: Defense Procurement Directorate.

Start date: 5/5/2010

End date: 18/5/2010

Predecessor activity: Activity 3.3.1

Resources:

Hr: 1(Director of Defense Procurement Directorate, ad hoc committee of 4 specialists, chief of the division of tenders, secretary).

Equipment: 1(PCs, Copying machine, Fax)

Costs: None.

Deliverables: Advertisement of tender.

1.-1. 3.4.3 Assignment of a tender to buy the required equipments & machines of the plant by an ad hoc committee.

Responsible authority: defense procurement Directorate.

Start date: 19/5/2010

End date: 24/5/2010

Predecessor activity: Activity 3.3.1

Resources:

Hr: 1 ad hoc committee of 4 specialists, 1 secretary

Equipment: 1(pcs, Copying machine, Fax)

Costs: None.

Deliverables: Sign off the Referral.

2.-1.

3.-1. 3.4.4 Receive required equipments& machines by an ad hoc committee and installation them by Manufacturer Company.

Responsible authority: Director of military production, Directorate of defense procurement.

Start date: 26/5/2010

End date: 25/5/2011

Predecessor activity: Activity 3.3.3

Resources:

Hr: 1 ad hoc committee of 4 specialists, 1 secretary

Equipment: 1(pcs, Copying machine, Fax)

Costs: None.

Deliverables: required equipments& machines.

3.5 To commit human resources from within the military to start work in the plant by second quarter of 2011.

3.5.1 Formation of a specialized committee to select:

- General Manager of this plant.
- Other human resources (engineers, specialists in liquid gas field...etc).
- Staff of the Department of Accounting, Department of Supply, Procurement Section, Department of Quality Control, etc...

Responsible authority: Military Personnel Directorate, Military Production Directorate.

Start date: 19/5/2010
End date: 7/6/2010
Predecessor activity: Activity 3.2.1
Resources:
Hr: 1(Director of Military Production Directorate, Director of Military Personnel Directorate, secretary)
Equipment: 1(PCs, copying machine, fax)
Costs: None.
Deliverables: Document of the committee formation,

3.5.2. Undertake selection process.

Responsible authority: Military Personnel Directorate, Military Production Directorate.

Start date: 20/6/2010

End date: 18/7/2010

Predecessor activity: Activity 3.5.1

Resources:

Hr: 1 ad hoc committee of 4 specialists, 1 secretary

Equipment: 1(PCs, copying machine, fax)

Costs: None.

Deliverables: The report of the names proposed to fill the positions previously mentioned

3.5.3 Undertake recruitment process.

Responsible authority: Military Personnel Directorate.

Start date: 19/7/2010

End date: 19/8/2010

Predecessor activity: Activity 3.5.2

Resources:

Hr: 1 (Director of Military Personnel Directorate, ad hoc committee of 4 specialists, secretary)

Equipment: 1(PCs, copying machine, fax)

Costs: None.

Deliverables: Qualified, skilled manpower specialized in the field of liquid gas

3.5.4 Carry out training courses for the newly hired employees

Responsible authority: Military Production Directorate, Supplier Company).

Start date: 2/5/2010

End date: 30/5/2010

Predecessor activity: Activity 3.4.4

Resources:

Hr: Supplier Company, Chief of the Technical Division

Equipment: 1(the plant, data show device, pc)

Costs: None.

Deliverables: Report at the end of the training course for trainees.

Chapter 2

PROJECT TIME MANAGEMENT

* The project duration is 14 months, with a start date on 4/4/2010 and the end date on 29/5/2011.

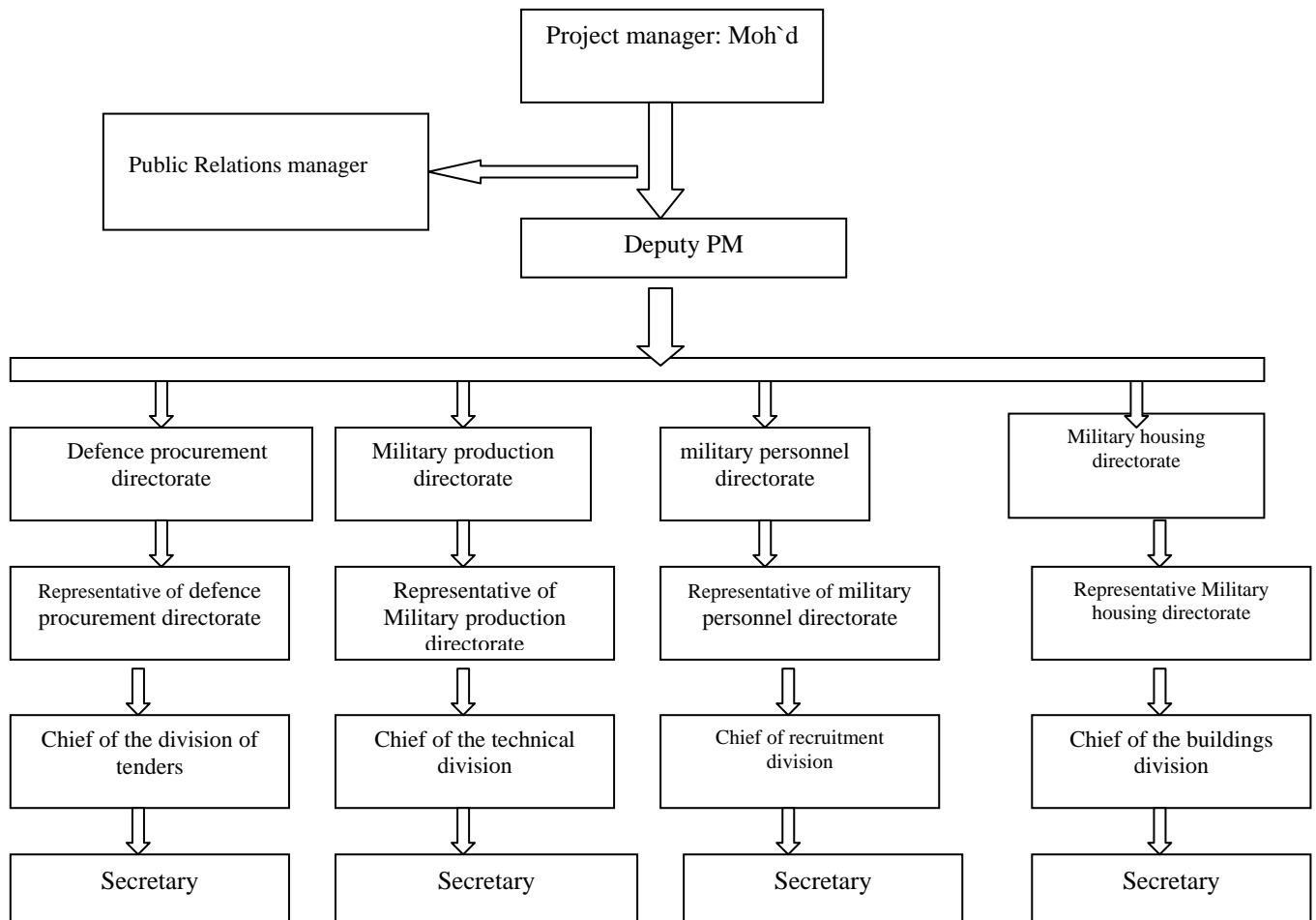
Activity code	Description	Duration	
		Month	Day
3.1.1	To publish an Advertisement in daily newspapers on a tender for the Work of the Feasibility study of creating a plant for the production of liquid gas (oxygen-nitrogen).	-	4
3.1.2	Formation of a committee to study the bids submitted by companies and to refer the bid to the appropriate company.	-	14
3.1.3	Considering proposals from various companies by the committee of local tenders and referred the bid to the appropriate company.	-	2
3.2.1	Presentation of the feasibility study by the Director of Military Production Directorate to the high level committee.	-	2
3.2.2	Choose a piece of land from the property of the armed forces with an area of not less than 5000 m2 so as to be suitable for the establishment of this plant.	-	4
3.3.1	Tender in the newspapers to hire a company to build 2 hangars and 1 administrative building.	-	4
3.3.2	Assignment of a tender to build the required hangars, administrative building and start constructive phase.	-	7
3.3.3	Receive required hangars and administrative building by a specialized committee in this field.	6	28
3.4.1	The formation of an ad hoc committee to develop technical specifications for oxygen and nitrogen plant	-	14
3.4.2	A tender to buy the plant equipments & machines from manufacturers abroad.	-	14
3.4.3	Assignment of a tender to buy the required equipments & machines of the plant by an ad hoc committee.	-	7
3.4.4	Receive required equipments & machines by an ad hoc committee and installation them by Manufacturer Company.	12	-

Activity code	Description	Duration	
		Month	Day
3.5.1	Formation of a specialized committee to select: <ul style="list-style-type: none"> ○ General Manager of this company. ○ Other human resources (engineers, specialists in liquid gas field...etc). 	1	-
3.5.2	Undertake selection process.	1	-
3.5.3	Undertake recruitment process.	1	-
3.5.4	Carry out training courses for the newly hired employees	-	28

Chapter 3

PROJECT HUMAN RESOURCE MANAGEMENT

3.1. Organizational chart



3.2. Responsibility matrix

Activity code position	3.1.1	3.1.2	3.1.3	3.2.1	3.2.2	3.3.1	3.3.2	3.3.3	3.4.1	3.4.2	3.4.3	3.4.4	3.5.1	3.5.2	3.5.3	3.5.4
Director of Directorate of defense procurement	S	S	R	---	---	---	---	---	R	S	S	R	---	---	---	---
Director of military production	R	P	R	A	R	P	R	P	S	P	P	R	R	A	R	S
Directorate of military housing	---	---	---	---	S	S	S	S	---	---	---	---	---	---	---	---
Directorate of military personnel	---	---	---	---	---	---	---	---	---	---	---	---	S	S	S	---
Chief of the division of tenders	A	P	A	---	---	---	---	---	R	A	A	P	---	---	---	---
Chief of the buildings division	---	---	---	---	A	A	A	A	---	---	---	---	---	---	---	---
Chief of the technical division	A	A	P	---	A	A	P	A	A	P	P	A	A	A	---	A
Public relations manager	A	P	P	A,P	R	A	A	P	A	A	P	P	A	A	R	A
Secretary	A,I	A,I	P	A,I	A,I	A,I	A,I	A,I	A,I	A,I	A,I	A,I	A,I	A,I	A,I	A,I
High level committee made up of 14 high ranks officers	---	---	---	S	---	---	---	---	---	---	---	---	---	---	---	---

A = Accountable, P = Participant, R = Review Required, I = Input Required, S = Sign-off required.

3.3. Resource Pool Description

Type of Resource	Name	Number	Cost	Notes
HR	High level committee made up of 14 high ranks officers	14	0	Activity 1.2.1
HR	Defence procurement Director	1	0	----- --
HR	Military production Director	1	0	----- -
HR	Military housing Director	1	0	----- ---
HR	Military personnel Director	1	0	----- ---
HR	Chief of the Division of tenders	1		
HR	Chief of the technical division	1		

Type of Resource	Name	Number	Cost	Notes
HR	Chief of the buildings division	1		
HR	Public Relations manager			All
HR	Deputy project manager	1	0	All
HR	Secretary	4	0	All
HR	1 committee made up of 4 specialists	4	0	Activity 1.1.3
HR	Committee made up of 4 specialists	4	0	Activity 1.3.3
HR	ad hoc committee of 4 specialists	4	0	Activity 1.4.2
HR	ad hoc committee of 4 specialists	4	0	Activity 1.5.2
HR	ad hoc committee of 4 specialists	4	0	Activity 1.5.3
HR	Supplier Company	-----	0	Activity 1.5.4
Equipment	PCs	4	0	All
Equipment	Fax	4	0	All
Equipment	Copier machine	4	0	All
Equipment	Data Show Device	1	0	Activity 1.2.1
Equipment	Oxygen-Nitrogen Plant (Origin of equipment and machines is China)	1	2.200000 \$	Activity 1.5.4

Chapter 4

PROJECT QUALITY MANAGEMENT

QUALITY MANAGEMENT FOR PROJECT ACTIVITY RESULTS/DELIVERABLES

Deliverable Name	Deliverable description	Date Of Review
	1. Planned actions to produce the activity output: 3.1.3 2. Deliverable description 2.1. Purpose of the deliverable: to present it to HLC (high level committee) to be approved. 2.2. What is composed of: payback	Second quarter

Deliverable Name	Deliverable description	Date Of Review
Feasibility study	<p>period, Return On Invested Capital (ROIC).</p> <p>2.3. Where information about it is obtained from: Study the rates of oxygen & nitrogen consumption in the army and prices in the local market.</p> <p>2.4. The required appearance: As it is recognized universally.</p> <p>2.5. the level of quality required 2.5.1. Quality criteria: It leads to approval document signed off by HLC.</p> <p>2.6. Company carrying out the study.</p>	of 2010.
Own a piece of land in the appropriate site	<p>1.Planned actions to produce the activity output: 3.2.2</p> <p>2. Deliverable description</p> <p>2.1. Purpose of the deliverable: to establish the concerned plant (producing liquid oxygen & nitrogen).</p> <p>2.2. What is composed of: Equipped with the infrastructure required for the concerned plant.</p> <p>2.3. Where information about it is obtained from: Military Housing Directorate.</p> <p>2.4. The required appearance: According to manufacturer's standards of the plant.</p> <p>2.5. The level of quality required 3.5.1. Quality criteria: * With less pollution. * Appropriate middle site.</p> <p>2.6. Military production Directorate, Military housing Directorate.</p>	Second quarter of 2010.
Required equipments & machines.	<p>1. Planned actions to produce the activity output: 3.4.4</p> <p>2. Deliverable description</p> <p>2.1. Purpose of the deliverable: to start work on the plant.</p> <p>2.2. What is composed of: Required equipments and machines.</p> <p>2.3. Where information about it is obtained from: Manufacturer</p> <p>2.4. The required appearance: As mentioned in the agreement with the manufacturer.</p>	Second quarter of 2011.

Deliverable Name	Deliverable description	Date Of Review
	<p>2.5. the level of quality required: 3.5.1. Quality criteria: * To Be in conformity with the required specifications in terms of production capacity and purity of the final product.</p> <p>2.6. Manufacturer</p>	
Specialized manpower	<p>1.Planned actions to produce the activity output: 3.5.3 2. Deliverable description</p> <p>2.1. Purpose of the deliverable: To be used in the operation of liquid gas plant</p> <p>2.2. What is composed of :Specialized employees</p> <p>2.3. Where information about it is obtained from: Military personnel Directorate.</p> <p>2.4. The required appearance: in accordance with their curricula vitae and personal interview.</p> <p>2.5. the level of quality required 2.5.1. Quality criteria : * To be certified in the field of liquid gas. * Years of experience not less than 5 years. * Passing the training course successfully.</p> <p>2.6. Military production Directorate, Military Personnel Directorate.</p>	Second quarter of 2011.

Chapter 5

PROJECT COMMUNICATIONS MANAGEMENT

What is communication: communication is the transmission of information to the recipient in order to understand what it means to the sender

The communications media have several forms: verbal, written, woven, digital, decree, body language, paper, electronic, etc.

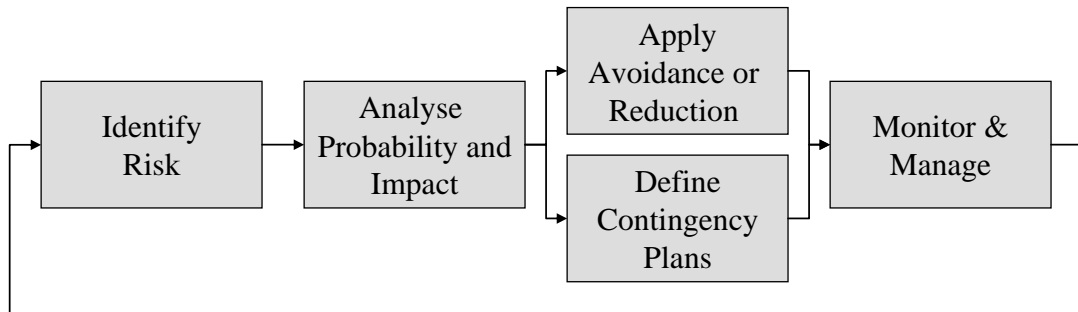
The following table shows the management actions to promote this human activity that is so vital to project success.

Communication matrix

Target audience	Person(s) to convey the message	When the message is conveyed	Format of a message	Message content
All project members	Director of Public Relations	Monthly	Report	* Stages of progress * Remarks on the performance of team work.
Director of military production Directorate	Project manager	Quarterly	Presentation	* Project phases and deliverables. * Current status.

Chapter 6

PROJECT RISK MANAGEMENT



There are different types of risk management and the characteristics and procedures of each type of risk management are different one from another. In this project we first identify the most **effect** risks, then we analyse the probability & impact to assess the importance of the identified risks. Then, we decide if the risk can be avoided or its effect reduced. If not, we accept it and try to make contingency plan. Finally, we start implementation and execution.

Risk Factor	Rating	Risk Description	Risk mitigation strategy
Change of Chairman of the Joint Chiefs of Staff. Change of Chief of DRIMC	High	Delay the project	Risk Acceptance
DRIMC budget decrease/cuts	Medium	Project budget decrease/cuts	Reduce plant production capacity
Increased pollution level at the project site	Medium	Increased Run Cost	Site selection carefully
Climate Change	Medium	Delay of pay- back period	Risk Acceptance
Increased Electricity Cost	Medium	Increased Run Cost	power saving system

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Miner
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2010 *Project and Program Management Postgraduate Course Material*

MILITARY EXERCISE RESOURCE MANAGEMENT FRAMEWORK DOCUMENT

LTC Robert KORDIK

Abstract

The project and program approach represents an innovation in the Serbian Armed Forces (SAF). Even if the project and program approach has often been applied in its history of the armed forces in Serbia, it was mostly particular and without “the full picture” of all necessary resources and costs. Military exercises can be viewed from different angles in terms of planning and executing. In terms of resource management, military exercises, at the national or multinational level, request very complex and detailed preparation. Moreover, introducing and implementing the PPBES in the Serbian Ministry of Defense (MoD) and Serbian Armed Forces, requires in fact, just that. Therefore, the aim of the Graduation Paper is to try to address some key questions about the project and program approach in preparing and executing military exercises, especially in a field of multiyear planning and programming through the PPBES. The ambition of this document is to create a basis for further analysis and defining all basic procedural steps and accompanying documentation which are necessary for effective and efficient military exercises resource management.

I. A BUSINESS CASE

I.1. Conditions

I.1.1. Problem

Every armed force in the world, annually, organizes one or more military exercises, whether at the national or multinational level. According to the previous experience, it is not fully clear known how much military exercises really cost in total and what is the pool of other resources which is needed. Usually, the resources and costs are divided to many different military units which are involved in a military exercise, but it is still not possible to provide full information and review of total resources and costs for military exercise and even for each military unit in particular. In this respect, it is not possible to appropriately analyze an impact of resources and costs on military exercise success and, indirectly, on military capabilities in general, which should be done in a close future.

I.1.2. Needs

Military exercises are one of the most important activities which organized in armed forces. Military exercises show the level of military capabilities of one or more military units. Military exercises cost some amount of money and request engagement of some resources. In order to have all necessary information about the multiyear planning, programming and budgeting military units through the PPBES, involved in the military exercises in forthcoming fiscal years, there is also a necessity to know what part of the military resources and budget is needed for that purpose.

With regards to that, the needs are prioritized as follows:

- 1 Improving the quality of resource and budget management, throughout time rate, materials, human resources and budget savings
- 2 New approach in planning documents and activities
- 3 Developing more efficient military exercises planning procedures
- 4 Creating project management documentation for military exercises
- 5 Civilian oversight and democratic control of spending the military budget (transparency)

I.1.3. Proposal

The strategy for solving this problem through the project will be:

- 1 Ensuring a consensus of all decision makers at the MoD and the SAF General Staff (SAF GS) about the need for a change in this domain through representing benefits of the expected outcomes of the project
- 2 Organizing a set of presentations at the brigade/wing and battalion/squadron level
- 3 Data acquisition using general enquiry, questionnaires and other scientific methods at all levels of command
- 4 Data analysis, delivering the results, and proposing a framework model for determining the resources and cost prices to the decision makers for testing
- 5 Testing the model
- 6 Approving the model
- 7 Introducing it to operative use

I.1.4. Organization

In order to create resource management framework procedures for military exercises, a project team, consisting of all necessary specialists in different fields, will be formed. The project team will be directly subordinated to Deputy Chief of SAF GS who will be the sponsor of the project. The Project Manager will report to the Project Sponsor monthly and at the end of each phase of the project. All activities for the organization of the project will be supported by an order, signed by the Minister of the Defense. This organization of the project should be the most suitable, observing the military structure, organization and current procedures.

I.2. Gap

The gaps between existing procedures in order to prepare and execute military exercises are:

Current status	Expected status of implemented results of the project
Partly developed procedures in a field of resource management for military exercises	Fully developed procedures in the field of resource planning for military exercises
Lack of unified (joint) procedures for military exercises preparation and execution	Defined and adopted unified procedures for military exercises preparation and execution

Current status	Expected status of implemented results of the project
Budgeting military exercises is not in accordance with the budget cash flow during the fiscal year, and it has a negative impact on other military activities	Budget for military exercises will be uniformly allocated which will positively affect other military activities during the fiscal year

1. Each military exercise has foregoing problem, and it affects very negatively efficiency of preparation and execution of the exercises.
2. If nothing is done about this problem, time, material, human resources and budget expenditures will continue to increase every year.
3. Need for establishing clear and unified (joint) procedures is requested of commanders and staff officers.
4. Pertinent literature:
 - A Guide to Project Management Body of Knowledge (PMBOK®), Project Management Institute, Inc, Third Edition, 2004.
 - US Department of Defense Extension to PMBOK®
 - Military Training Guidebook
 - Instruction for Military Training
 - The PPBES Rule Book of the MoD and the SAF GS,
 - Other regulations, rules, etc.
5. The focus of the project is on developing procedures for estimating and managing planned resources and costs for military exercises.
6. Solving the problem will directly affect improving all current regulations and directives in a field of military training and provide resources and budget savings.
7. The project is directly related to all problems of implementing the system and process of planning, programming, budgeting and execution (including evaluation) at the MoD and the SAF.
8. Gathered outputs and outcomes of the project should give adequate inputs for future exercise outcomes. It should be a new and improved approach for all phases of preparation and executing of the exercises. Moreover, the results (outcomes) of the project should provide measurable indicators of real success of the exercise which is necessary for the evaluation afterwards, especially in terms of cost – effectiveness analysis and military capabilities generally.

II. PROJECT SCOPE MANAGEMENT

II.1. Goal

“Develop a uniform framework document for military exercise resource management, based on multiyear planning”

II.2. Objectives

1. By the end of January of FY1, the Project Team will be established.
2. By the end of 1Qtr of FY1, all integrated activities for preparing and executing military exercises will be defined and hierarchically structured.
3. By the end of the midpoint of FY1, the model of framework procedures, followed by templates (documentation) will be introduced to the Program Manager for testing approval.
4. By the end of FY1, the Model of Military Exercise RMFD will be tested in the 1st Land Forces Brigade.
5. By the end of 1Qtr of FY2, the model of framework procedures will be tested in the 25th Air Forces Wing.
6. By the end of 3Qtr of FY2, an expert debate will be organized.
7. By the end of midpoint of FY2, the RMFD Draft will be updated and distributed to all organizational units of the SAF GS, SAF branch commands and units, and to all organizational units of the Ministry of Defense for confirmation.
8. By the end of November of FY2, the RMFD Draft will be finally updated and submitted to the Program Manager for approval and also submitted to the Defense Planning Council for final adoption.
9. By the end of FY2, the RMFD will be delivered to the Minister of Defense for authorization.
10. By the end of January of FY3, the Project will be closed.

II.3. List of activities (WBS Duration Estimates)

Activity Nr.	Activity Name	Duration (days)
1.1	Writing and distributing the order of Minister of Defense for establishing the Project Team	15
1.2	Constituent meeting of the Project Team	1
2.1	Defining procedural activities – steps	15
2.2	Structuring procedural activities - steps	20
3.1	Developing Military Exercise Charter	15
3.2	Developing Military Exercise Scope Statement Template	5
3.3	Developing Military Exercise Plan	25
3.4	Developing Military Exercise Communications Plan	15
4.1	Training of commanders and staff officers of the 1 st Land Forces Brigade Headquarters in implementing the Model of Military Exercise RMFD	20
4.2	Monitoring all phases of preparation and execution military exercise in using the model of framework procedures and undertaking corrective measures	3
4.3	Conducting analysis, evaluation and writing a report	10
4.4	Updating the Model of Military Exercise RMFD	35
5.1	Training of commanders and staff officers at the 25 th Air Forces Wing Headquarters in implementing the Model of Military Exercise RMFD	20
5.2	Monitoring all phases of preparation and execution military exercise in using the updated Model of Military Exercise RMFD and undertaking corrective measures	3
5.3	Conducting analysis, evaluation and writing a report	10
5.4	Updating of the Model of Military Exercise RMFD	10
6.1	Preparing and distribution invitation letters, program and other of working materials to all participants	20
6.2	Preparing facilities, technical equipment, catering and administrative materials	20
6.3	Realization of the expert debate	2
6.4	Debate conclusions analysis	2
7.1	Distribution of the RMFD to all organizational units of the SAF GS, SAF branch commands and units, and to all organizational units of the Ministry of Defense	5
7.2	Obtaining feedback	10
7.3	Conducting analysis and delivering a report to the Program Manager	5

8.1	Smart paging the RMFD	45
8.2	Submitting the RMFD Final Draft to the Program Manager for approval	20
8.3	Preparing and submitting the RMFD Final Draft and other accompanying documents to the Strategic Planning Department of the Ministry of Defense as a coordinator of all major programs at the Ministry of Defense	15
8.4	Eventually, smart paging the RMFD	20
9.1	Preparing and sending the RMFD and other accompanying documents to the Ministry of Defense Secretariat for the Minister of Defense signing	15
9.2	Distribution signed the RMFD by the Minister of Defense to all organizational units of the Ministry of Defense and SAF for further use	15
10.1	Final analysis of the Project and writing the final report	14
TOTAL TIME:		430

II.4. Activities description

Objective 1: By the end of January of FY1, the Project Team will be established

A. 1.1 Writing and distributing the order of Minister of Defense for establishing the Project Team

In order to establish the Project Team, the order of the Minister of Defense has to be written and signed.

Writing, signing and distribution of the Minister's order will be performed by the officer who is proposed to be the Project Manager. The activity will be performed using commonly acknowledged correspondence procedures at the Ministry of Defense and the SAF.

The proposed Project Manager is responsible for this activity.

The activity will be conducted at the office of the SAF GS.

A.1.2 Constituent meeting of the Project Team

- **Preparing the meeting**
- **Forming the Project Team,**
- Defining roles and responsibilities of the Project Team members
- Defining the Project Team forthcoming activities

in order to form the Project Team, define the roles, responsibilities and future activities, and organize relations between the Project Team members, a constituent meeting has to be performed.

This activity will be done through organizing a meeting.

The Project Manager will be responsible for this activity.

The activity will be conducted in a conference room of the SAF GS.

Objective 2: By the end of 1Qtr of FY1, all integrated activities for preparing and executing military exercises will be defined and hierarchically structured

2.1 Defining procedural activities – steps

In order to develop complete procedures for the military exercise resources management framework document (RMFD), all necessary activities or steps have to be defined first.

Procedural steps will be done through conducting analysis using previous results of military exercises and gathering necessary information by questionnaires, interviews, discussions, etc.

A Project Team member from the Training and Doctrine Department (J-7) is responsible for this activity.

The activity will be conducted at offices and a conference room of the Serbian Armed Forces General Staff (SAF GS).

2.2 Structuring procedural activities - steps

- Defining hierarchy and,
- Defining time-frame of procedural activities - steps

In order to structure activities, all previously defined activities have to be hierarchically sorted and aligned.

This activity will be done through discussions and creating the hierarchy of identified activities.

A Project Team member from the J-7 will be responsible for this activity.

The activity will be conducted at the offices and in the conference room of the SAF GS.

Objective 3: By the end of the midpoint of FY1, the model of framework procedures, followed by templates (documentation) will be introduced to the Program Manager for testing approval

3.1 Developing Military Exercise Charter

- Military Exercise (Business) Case Template
- Military Exercise Goal and Objectives Template
- Military Exercise Statement of Work (SOW) Template

In order to have an appropriate documentation which will follow military exercise RMFD, it is necessary to develop first all templates in fields of Business Case, goal and objectives, as well as in a field of Statement of Work.

This activity will be done through discussions and creating official forms which are needed to be filled out during a preparation of the military exercise.

A Project Team Member from Joint Operational Command of the SAF GS will be responsible for this activity.

The activity will be conducted at the offices and in the conference room of the SAF GS.

3.2 Developing Military Exercise Scope Statement Template

In order to have an appropriate documentation which will follow the military exercise RMFD, it is necessary to develop a template which will be based on the Military Exercise Scope Statement Template.

This activity will be done through discussions and creating official form which needs to be filled out during a preparation of the military exercise.

A Project Team member from the Joint Operational Command of the SAF GS will be responsible for this activity, too.

The activity will be conducted at the offices and in the conference room of the SAF GS.

3.3 Developing Military Exercise Plan

3.3.1 Scope Plan

3.3.2 Schedule Plan

3.3.3 Cost Plan

3.3.4 Staffing Plan

In order to have an appropriate documentation which will follow the military exercise RMFD, it is necessary to develop templates of the plans which will include scope, schedule, staffing and costs.

This activity will be done through discussions and creating official forms which need to be filled out during a preparation of the military exercise.

A Project Team member from the Joint Operational Command of the SAF GS will be responsible for this activity. A Project Team member from the Finance Division (J-8) will be responsible for the sub activity which refers to developing the Cost Plan.

The activity will be conducted at offices and in the conference room of the SAF GS.

3.4 Developing Military Exercise Communications Plan

In order to have an appropriate documentation which will follow the military exercise RMFD, it is necessary to develop a template of the plan which will include communication during the preparation and execution of the military exercise.

This activity will be done by discussing and creating official forms which need to be filled out.

A Project Team member from the IT Department (J-6) will be responsible for this activity.

The activity will be conducted at offices and in the conference room of the SAF GS.

Objective 4: By the end of FY1, the Model of Military Exercise RMFD will be tested at the 1st Land Forces Brigade

4.1 Training of commanders and staff officers at the 1st Land Forces Brigade Headquarters in implementing the Model of Military Exercise RMFD

In order to have well trained officers for the military exercise RMFD, there is a need to organize training for the 1st Land Forces Brigade commanders and staff officers.

This activity will be done through courses and workshops.

The Project Team member from J-7 will be responsible for this activity.

The activity will be conducted in classrooms of the 1st Land Forces Brigade.

4.2 Monitoring all phases of preparation and execution military exercise in using the model of framework procedures and undertaking corrective measures

In order to get a feedback on the preparation and execution of the military exercise using the Model of Military Exercise RMFD, monitoring must be applied through all phases of the military exercise.

This activity will be done through directly monitoring of each group which is responsible for the military exercise resource planning and executing.

The Project Team member from J-7 will be responsible for this activity.

The activity will be conducted in classrooms of the 1st Land Forces Brigade and at military training area.

4.3 Conducting analysis, evaluation and writing a report

In order to get results, evaluate them and write a report of preparation and execution of the military exercise using the Model of Military Exercise RMFD. For that, deep analysis must be performed.

This activity will be carried out through measured indicators of the military exercise success analysis and evaluation, and writing a report.

A Project Team member from the Planning and Development Department (J-5) will be responsible for this activity.

The activity will be conducted at military training area and in the classrooms of the 1st Land Forces Brigade.

4.4 Updating the Model of Military Exercise RMFD

In order to get appropriate framework procedures, further development and updating must be made in the Model of Military Exercise RMFD.

This activity will be done by discussing and creating updated procedures.

The Project Team member form J-5 will be responsible for this activity.

The activity will be conducted at the offices and in the conference room of the SAF GS.

Objective 5: By the end of 1Qtr of FY2, the model of framework procedures will be tested at the 25th Air Forces Wing

5.1 Training of commanders and staff officers at the 25th Air Forces Wing Headquarters in implementing the Model of Military Exercise RMFD

In order to have well trained officers for implementing the Model of Military Exercise RMFD, there is a need for organizing training for the 25th Air Forces Wing commanders and staff officers.

This activity will be done through courses and workshops.

The Deputy Project Team Manager will be responsible for this activity.

The activity will be conducted in the classrooms of the 25th Air Forces Wing.

5.2 Monitoring all phases of preparation and execution of the military exercise in using the updated Model of Military Exercise RMFD and undertaking corrective measures

In order to get a feedback on the preparation and execution of the military exercise using the updated Model of Military Exercise RMFD, monitoring must be applied trough all phases of the military exercise.

This activity will be done through direct monitoring of each group which is responsible for military exercise resource planning and executing.

The Deputy Project Manager will be responsible for this activity.

The activity will be conducted in the classrooms of the 25th Air Forces Wing.

5.3 Conducting analysis, evaluation and writing a report

In order to get results, evaluate them and write a report on the preparation and execution of the military exercise using the Model of Military Exercise RMFD, deep analysis must be performed.

This activity will be carried out through measured indicators of the military exercise success analysis and evaluation, and writing a report.

The Project Team member from the J-5 will be responsible for this activity.

The activity will be conducted at military training area and in the classrooms of the 25th Air Forces Wing.

5.4 Updating of the Model of Military Exercise RMFD

In order to get appropriate framework procedures, further development and updates must be made in the military exercise resource management and executing procedures.

This activity will be done by discussing and creating updated procedures.

The Project Team member from the J-5 will be responsible for this activity.

The activity will be conducted at the offices and in the conference room of the SAF GS.

Objective 6: By the end of 3Qtr of FY2, an expert debate will be organized

6.1 Preparing and distribution of invitation letters, program and other working materials to all participants

In order to get expertise from representatives who are coming from various organizational units at the Ministry of Defense and SAF, an expert debate needs to be organized after the testing performed at the 1st Land Forces Brigade and the 25th Air Forces Wing.

This activity will be organized in two working days through plenary and working group sessions.

The Project Team member from J-6 will be responsible for this activity.

The activity will be conducted at the conference rooms of the Military Club.

6.2 Preparing facilities, technical equipment, catering and administrative materials

In order to provide successful organization of the debate, all facilities, technical equipment, catering and administrative materials have to be prepared days before the debate.

This activity will be carried out through written requests, viewing rooms, checking equipment and contracting catering services.

The Project Team member from J-6 will be responsible for this activity.

The activity will be conducted in the conference rooms and restaurant of the Military Club.

6.3 Realization of the expert debate

In order to provide effectiveness of the debate, all discussions will be led by a moderator delegated from the Project Team.

This activity will be carried out through plenary and working group sessions, in accordance with the defined program.

The Project Team member from J-6 will be responsible for this activity.

The activity will be conducted in the conference rooms and restaurant of the Military Club.

6.4 Debate conclusions analysis

After the debate, in order to update the RMFD, a deep analysis must be performed.

This activity will be carried out through brainstorming sessions of the Project Team and writing a report.

The Deputy Project Manager will be responsible for organizing brainstorming sessions, and the Project Team member from the Joint Operational Command will be responsible for writing a report.

The activity will be conducted in the conference room and offices of the SAF GS.

Objective 7: By the end of midpoint of FY2, the RMFD Draft will be updated and distributed to all organizational units of the SAF GS, SAF branch commands and units, and to all organizational units of the Ministry of Defense for confirmation

7.1 Distribution of the RMFD to all organizational units of the SAF GS, SAF branch commands and units, and to all organizational units of the MoD

In order to get a feedback from organizational units at the SAF GS, branch SAF commands and units, and from all organizational units of the MoD, the RMFD must be prepared and distributed to all of them.

This activity will be done by using channels of official post office.

The Project Team member from the Operations Department (J-3) will be responsible for this activity.

The activity will be conducted at the offices and in the conference room of the SAF GS.

7.2 Obtaining feedback

Gathering all feedback from organizational units of the GS, branch commands and units, and from the Budget and Finance Department at the MoD is necessary for further analysis and final finishing of the RMFD Draft.

This activity will be done by using channels of official post office.

The Project Team member from the J-3 will be responsible for this activity.

The activity will be conducted at the offices and in the conference room of the SAF GS.

7.3 Conducting analysis and delivering a report to the Program Manager

In order to finalize the RMFD Draft, all received feedback and confirmations from organizational units of the SAF GS, SAF branch commands and units, and from the Budget

organizational units of the Ministry of Defense must be validated and thoroughly analyzed. Upon finishing the analysis, a report will be delivered to the Program Manager.

This activity will be carried out through brainstorming sessions and writing a report.

The Project Team Manager will be responsible for brainstorming sessions, and the Project Team member from the Joint Operational Command will be responsible for writing the report.

The activity will be conducted at the offices and in the conference room of the SAF GS.

Objective 8: By the end of November of FY2, the RMFD Draft will be finally updated and submitted to the Program Manager for approval and also submitted to the Defense Planning Council for final adoption

8.1 Smart paging the RMFD

In order to finalize the RMFD Draft, analyzing and including the Program Manager comments must be done.

This activity will be done through smart paging of the text.

The Deputy Project Manager will be responsible for this activity.

The activity will be conducted at the office of the Deputy Project Manager of the SAF GS.

8.2 Submitting the RMFD Final Draft to the Program Manager for approval

In order to submit the RMFD Final Draft to the Program Manager for approval, all necessary accompanying documents and annexes must be prepared.

This activity will be carried out through final corrections of the RMFD Draft and writing the necessary accompanying documents.

The Deputy Project Manager will be responsible for this activity.

The activity will be conducted at the office of the Deputy Project Manager of the SAF GS.

8.3 Preparing and submitting the RMFD Final Draft and other accompanying documents to the Strategic Planning Department of the MoD as a coordinator of all major programs within the MoD

In order to submit the RMFD Final Draft to the Defense Planning Council for final adoption, all other necessary accompanying documents have to be prepared. This activity will be carried out through writing necessary accompanying documents. The Project Team member from J-7 will be responsible for this activity. The activity will be conducted at the office of the Deputy Project Manager of the SAF GS.

8.4 Eventually, smart paging the RMFD

After the Defense Planning Council session, if it is necessary, the RMFD will be smart paged.

The Project Team member from J-7 will be responsible for this activity. The activity will be conducted at the office of the Deputy Project Manager of the SAF GS.

Objective 9: By the end of FY2, the RMFD will be delivered to the Minister of Defense for authorization

9.1 Preparing and sending the RMFD and other accompanying documents to the MoD Secretariat for the Minister of Defense signing

In order to submit the RMFD Final Draft to the MoD Secretariat for authorization, all other necessary accompanying documents have to be prepared and submitted.

This activity will be carried out through writing necessary accompanying documents.

The Project Team member from J-3 will be responsible for this activity.

The activity will be conducted at the office of the Deputy Project Manager of the SAF GS.

9.2 Distribution signed the RMFD by the Minister of Defense to all organizational units of the MoD and SAF for further use

When the Project Team got the signed RMFD, and in order to distribute signed the RMFD to all organizational units of the MoD and the SAF, written request has to be sent to the Military Printing Office for printing and further distribution of the RMFD in written and electronic form.

This activity will be carried out through writing a request and other necessary accompanying documents and materials.

The Deputy Project Manager will be responsible for this activity.

The activity will be conducted at the office of the Deputy Project Manager of the SAF GS.

Objective 10: By the end of January of FY3, the Project will be closed

10.1 Final analysis of the Project and writing the final report

In order to close the Project, the final analysis has to be done, and the final report has to be written.

This activity will be carried out through organizing the final meeting of the Project Team and writing the final report.

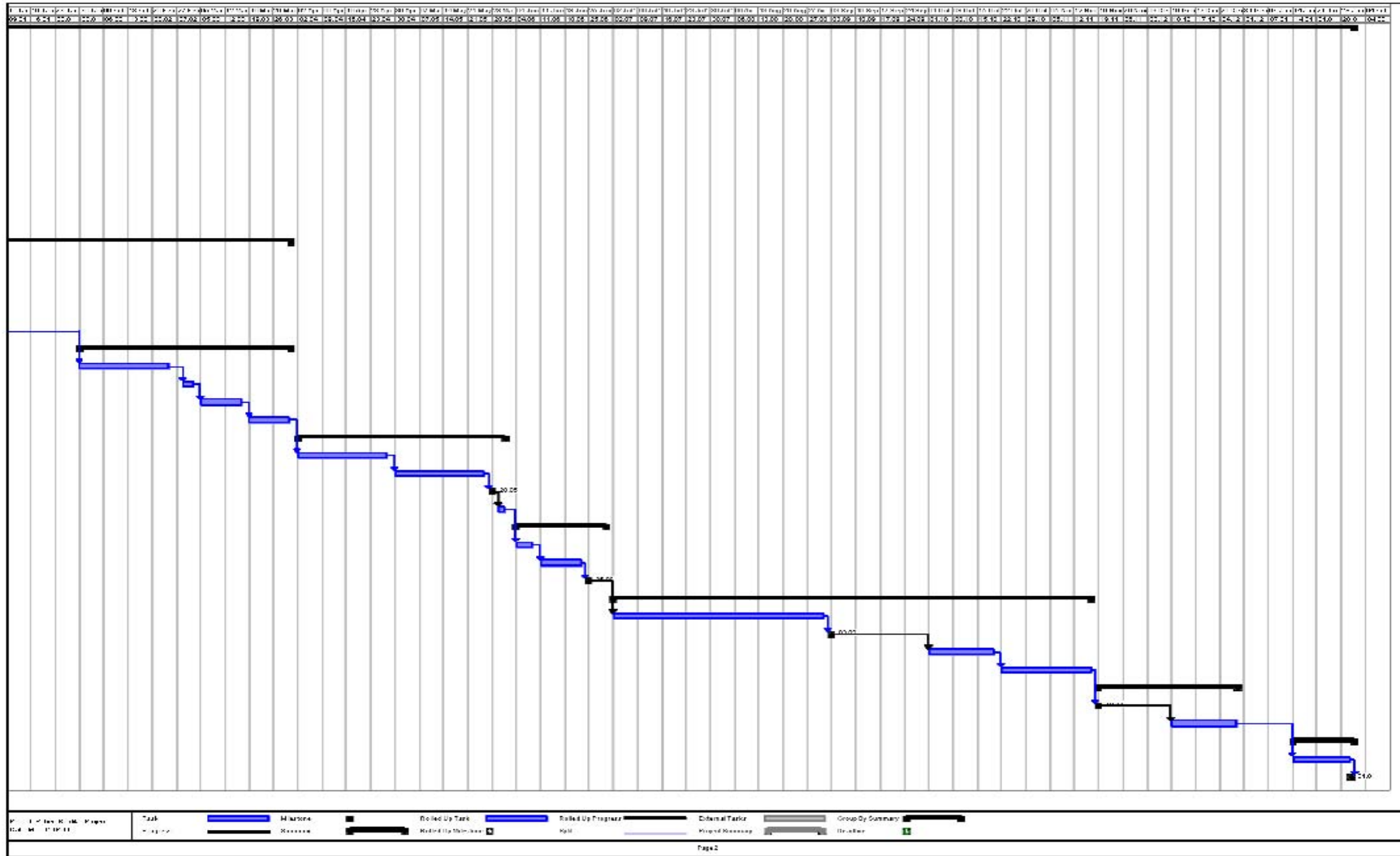
The Project Manager will be responsible for this activity.

The activity will be conducted at the office of the Project Manager of the SAF GS.

III. PROJECT TIME MANAGEMENT

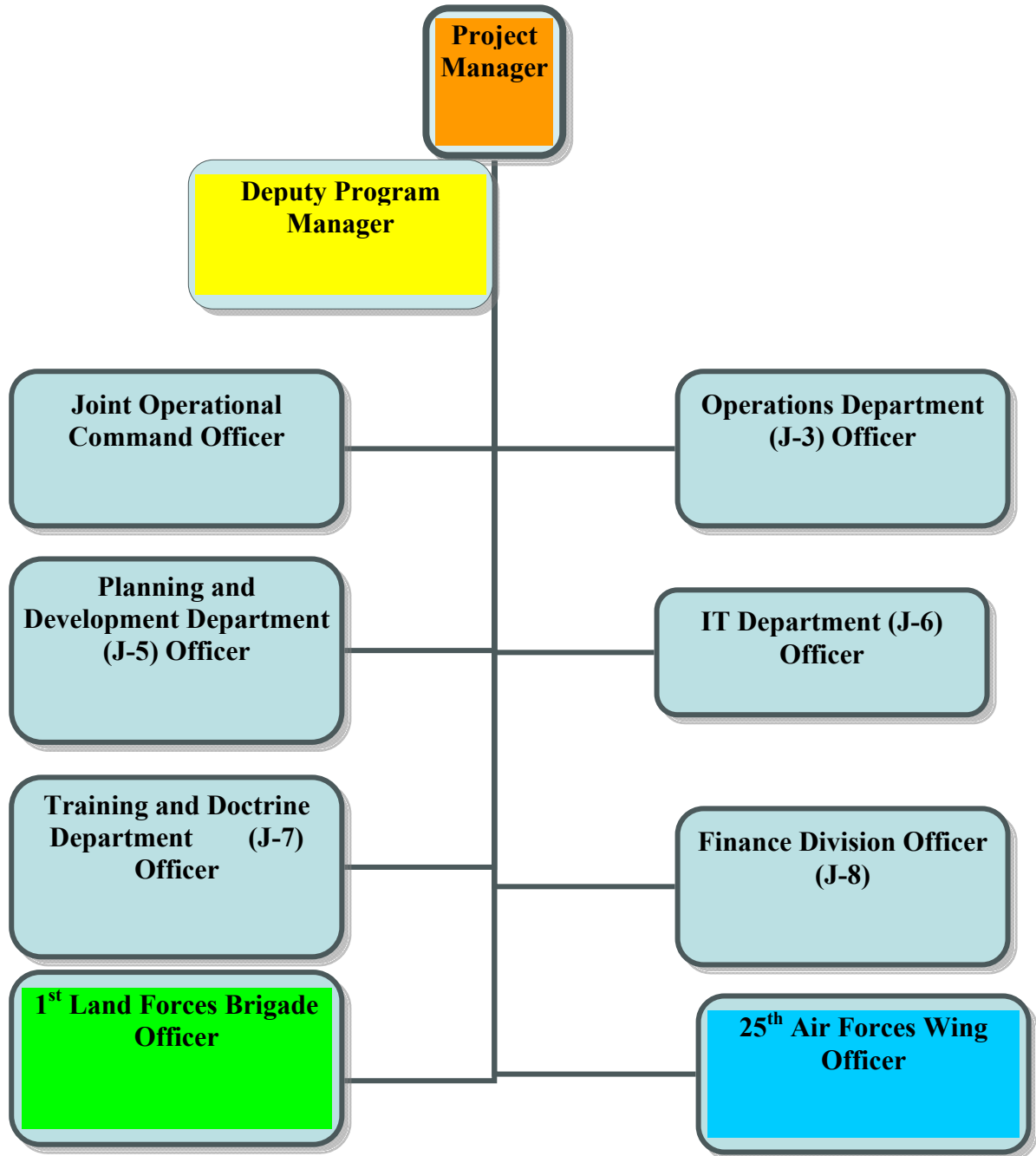
Project time management is to be carried out in accordance with the Gantt Chart displayed below.





IV. PROJECT HUMAN RESOURCE MANAGEMENT

IV.1. Project team organizational chart



IV.2. Responsibility Assignment Matrix (RAM) Using a RACI Format

Position \ Activity	Project Manager	Deputy Project Manager	Joint Operational Command Officer	Operations Department (J-3) Officer	Planning and Development Department (J-5) Officer	IT Department (J-6) Officer	Training and Doctrine Department (J-7) Officer	Finance Division (J-8) Officer	1 st Land Forces Brigade Officer	25 th Air Forces Wing Officer
1.1	R	A	I	I	I	I	I	I	I	I
1.2	R	A	I	I	I	I	I	I	I	I
2.1	C	C	A	A	I	I	R	I	I	I
2.2	C	C	A	A	I	I	R	I	I	I
3.1	C	C	R	A	A	A	A	A	I	I
3.2	C	C	R	A	A	A	A	A	I	I
3.3	C	C	R	A	A	A	A	A	I	I
3.4	C	C	C	A	A	R	A	A	I	I
4.1	C	C	C	I	A	I	R	A	A	I
4.2	C	C	C	I	A	I	R	I	A	I
4.3	C	C	C	I	R	I	A	I	A	I
4.4	C	C	C	I	R	I	A	A	A	I
5.1	C	R	I	I	A	I	A	I	I	A
5.2	C	R	I	I	A	I	A	I	I	A
5.3	C	C	I	I	R	I	A	A	I	A
5.4	C	C	C	I	R	I	A	I	I	A
6.1	C	C	I	A	I	R	I	I	I	I
6.2	C	C	I	A	I	R	I	A	I	I
6.3	C	C	I	A	I	R	I	I	I	I
6.4	C	R	I	I	A	A	I	I	I	I
7.1	C	C	I	R	I	A	I	I	I	I
7.2	C	C	I	R	I	A	A	I	I	I
7.3	R	A	A	A	I	A	A	I	I	I
8.1	C	R	A	I	I	I	A	A	I	I
8.2	C	R	A	I	I	I	A	I	I	I
8.3	C	C	A	I	I	I	R	I	I	I
8.4	C	C	A	I	I	I	R	I	I	I
9.1	C	C	I	R	I	I	A	I	I	I
9.2	C	R	I	A	I	I	A	I	I	I
10.1	R	A	A	I	A	I	A	I	I	I

IV.3. Work breakdown structure

ID	Task Name	Duration	Start	Finish	Predecessors
1	Resource Management Framework Document	544 days?	Tue 04.01.11	Fri 01.02.13	
2	Establishing the Project Team	25 days?	Tue 04.01.11	Mon 07.02.11	
3	Writing and distributing the order of Minister of Defense for establishing the Project Team	14,88 days?	Tue 04.01.11	Mon 24.01.11	
4	Constituent meeting of the Project Team	1 day	Mon 07.02.11	Mon 07.02.11	3
5	Defining and hierarchically structuring all unified activities for preparing and executing military exercises	49 days	Tue 08.02.11	Fri 15.04.11	
6	Defining procedural steps - activities	15 days	Tue 08.02.11	Mon 28.02.11	4
7	Structuring procedural steps - activities	20 days	Mon 21.03.11	Fri 15.04.11	6
8	Introducing a model of framework procedures, followed by templates	45 days	Mon 18.04.11	Fri 17.08.11	
9	Developing Military Exercise Charter	15 days	Mon 18.04.11	Fri 06.05.11	7
10	Developing Military Exercise Scope Statement Template	5 days	Mon 30.05.11	Fri 03.06.11	9
11	Developing Military Exercise Plan	25 days	Mon 16.05.11	Fri 17.06.11	9
12	Developing Military Exercise Communications Plan	15 days	Mon 30.05.11	Fri 17.06.11	9
13	Testing the Model of Framework Procedures	150 days	Fri 02.09.11	Fri 30.03.12	
14	Testing the Model of Framework Procedures in the 1st Land Forces Brigade	70 days	Fri 02.09.11	Fri 09.12.11	
15	Training of commanders and staff officers in the 1st Land Forces Brigade Headquarters' in implementing the Model of	20 days	Fri 02.09.11	Fri 30.09.11	10;11;12
16	Monitoring of all phases of preparation and execution military exercise in using the Model of Framework Procedures at	3 days	Fri 30.09.11	Wed 05.10.11	15
17	Conducting analysis, evaluation and writing a report	10 days	Wed 05.10.11	Wed 19.10.11	16
18	Updating of the Model of Framework Procedures	35 days	Fri 21.10.11	Fri 09.12.11	17
19	Testing the Model of Framework Procedures in the 25th Air Forces Wing	45 days	Fri 27.01.12	Fri 30.03.12	
20	Training of commanders and staff officers in the 25th Air Forces Wing Headquarters' in implementing the Model of Fra	20 days	Fri 27.01.12	Fri 24.02.12	18
21	Monitoring of all phases of preparation and execution military exercise in using the Model of Framework Procedures at	3 days	Tue 28.02.12	Fri 02.03.12	20
22	Conducting analysis, evaluation and writing a report	10 days	Fri 02.03.12	Fri 16.03.12	21
23	Updating of the Model of Framework Procedures	10 days	Fri 16.03.12	Fri 30.03.12	22
24	Organiz an expert debate	44 days	Fri 30.03.12	Thu 31.05.12	
25	Preparing and sending invitation letters, program and distribution other of working materials to all participants	20 days	Fri 30.03.12	Fri 27.04.12	23
26	Preparing facilities, technical equipment and catering	20 days	Fri 27.04.12	Fri 25.05.12	25
27	Realization of the event	2 days	Fri 25.05.12	Tue 29.05.12	26
28	Debate conclusions analysis	2 days	Tue 29.05.12	Thu 31.05.12	27
29	Gathering feedback from organizational units of the MoD and the SAF GS	20,13 days	Fri 01.06.12	Fri 29.08.12	
30	Distribution of the RMFD to all organizational units of the SAF GS, SAF branch commands and units, and to all organizati	5 days	Fri 01.06.12	Fri 08.06.12	28
31	Obtaining feedback	10 days	Fri 08.06.12	Fri 22.06.12	30
32	Conducting analysis and delivering a report to the Program Manager	5 days	Mon 25.06.12	Fri 29.06.12	31
33	Submitting to the Defense Planning Council for final approval	100 days	Mon 02.07.12	Fri 16.11.12	
34	Smart paging the RMFD	45 days	Mon 02.07.12	Fri 31.08.12	32
35	Submitting the RMFD Final Draft to the Program Manager for approval	20 days	Mon 03.09.12	Fri 28.09.12	34
36	Preparing and submitting the RMFD Final Draft and other accompanying documents to the Strategic Planning Department	15 days	Mon 01.10.12	Fri 19.10.12	35
37	Eventually, smart paging the RMFD	20 days	Mon 22.10.12	Fri 16.11.12	36
38	Authorization of the Framework Procedures Document by the Minister of Defense	30 days	Mon 19.11.12	Fri 28.12.12	
39	Preparing and sending the Framework Procedures Document and other supporting documents to the Ministry of Defense S	15 days	Mon 19.11.12	Fri 07.12.12	37
40	Printing and distribution of signed document by the Minister of Defense to all organizational units in the Ministry of Defens	15 days	Mon 10.12.12	Fri 28.12.12	39
41	Closing the Project	15,13 days	Fri 11.01.13	Fri 01.02.13	
42	Final analysis of the Project and writing the final report	13 days	Fri 11.01.13	Wed 30.01.13	40
43	End of the project	2 days	Thu 31.01.13	Fri 01.02.13	42

V. PROJECT COMMUNICATIONS MANAGEMENT PLAN

The Project Communications Management Plan is necessary in order to provide the most appropriate way of mutual understanding the steps which are needed to be done in developing the RMFD. The Plan also defines communications relations between the key players in the project.

Target audience	Person(s) to convey the message	When the message is conveyed	Format of a message	Message content
All Project Team members	Project Manager	Fortnightly	News letter	<ul style="list-style-type: none"> •1 Project introduction •2 Program Manager and organizational units of MoD and SAF •3 Project Team and members •4 Project phases and deliverables
Program Manager and organizational units of MoD and SAF	Project Team member from IT Department (J-6)	Quarterly	Report	<ul style="list-style-type: none"> •1 Project overview •2 Stage overview •3 Implications
Program Manager	Project Team member from the Planning and Development Department (J-5)	After military exercises	Report	<ol style="list-style-type: none"> 1. Analysis 2. Project status 3. Impact on military units
Experts from MoD and SAF	Project Team member from IT Department (J-6)	30 days before the expert debate	Invitation letter	<ol style="list-style-type: none"> 4. Model of RMFD 5. Analysis of military exercises 6. Event Program
Organizational units of MoD and SAF	Project Team member from the Operations Department (J-3)	End of midpoint of FY2	News letter	<ol style="list-style-type: none"> 7. RMFD Draft

Target audience	Person(s) to convey the message	When the message is conveyed	Format of a message	Message content
Program Manager	Project Team member from the Joint Operational Command	End of midpoint of FY2	Report	8 Feedback analysis
Program Manager	Deputy Program Manager	End of FY2	News letter	9 RMFD Final Draft
Strategic Planning Department	Project Team member from the Training and Doctrine Department (J-7)	End of FY2	News letter	10 Approved RMFD Final Draft by Program Manager
MoD Secretariat	Project Team member from the Operations Department (J-3)	End of 1 Qtr of FY3	News letter	11 RMFD
Organizational units of MoD and SAF	Deputy Project Manager	End of 1 Qtr of FY3	News letter	12 Signed RMFD
Program Manager and organizational units of MoD and SAF	Project Manager	First half of April of FY3	News letter	13 Report and analysis

VI. PROJECT COST MANAGEMENT (RESOURCE POOL DESCRIPTION)

The Cost Management Plan (the Resource Pool Description) is necessary in order to provide full information about the needed resources and budget for the project. This is very important because the resources and the budget are usually limited at the MoD and the SAF level, and they should be allocated timely.

RESOURCE TYPE	NAME	NUMBER	SUM COSTS (€)
Personnel	Project Manager	1	60.00
	Deputy Project Manager	1	60.00
	Joint Operational Command Officer	1	60.00
	Operations Department (J-3) Officer	1	60.00
	Planning and Development Department (J-5) Officer	1	60.00
	IT Department (J-6) Officer	1	60.00
	Training and Doctrine Department (J-7) Officer	1	60.00
	Finance Division Officer (J-8)	1	60.00
	1 st Land Forces Brigade Officer	1	15.00
	25 th Air Forces Wing Officer	1	15.00
	Driver	1	60.00
Equipment	Personal computers	20	0.00
	Lap-tops	2	0.00
	Printers	5	0.00
	Plotter A1	1	0.00
	LCD Projectors	3	0.00
	Mini van	1	0.00
Materials	Sheets of paper	20	100.00
	Scrolls of paper A1	1	10.00
	Toner cartridge	6	120.00
	Fuel/diesel	100 litres	100.00
	Catering for expert debate (per person)	30	400.00
Venues	Offices	10	0.00
	Conference rooms	3	0.00
Total costs:			1300.00

VII. PROJECT QUALITY MANAGEMENT

VII.1. Activities Deliverables

Objective 1: By the end of January of FY1, the Project Team will be established

1.1 Writing and distributing the order of the Minister of Defense for establishing the Project Team

Deliverables: Prepared and sent the signed order of the Minister of Defense to all units

1.2 Constituent meeting of the Project Team

- Preparing the meeting
- Forming of the Project Team,
 - Defining roles and responsibilities of the Project Team members
 - Defining forthcoming activities of the Project Team

Deliverables:

- Defined the aim and purpose of the Project
- Structured project team and defined and listed roles and responsibilities of the Project Team members
- Described methodology to manage the Project
- Defined and listed forthcoming activities of the Project Team

Objective 2: By the end of 1Qtr of FY1, all integrated activities for preparing and executing military exercises will be defined and hierarchically structured

2.1 Defining procedural activities – steps

Deliverables: The list of procedural steps - activities

2.2 Structuring procedural activities - steps

- Defining hierarchy and,
- Defining time-frame of procedural activities - steps

Deliverables: Defined structure of procedural steps – activities, including the time – frame of each activity

Objective 3: By the end of the midpoint of FY1, the model of framework procedures, followed by templates (documentation) will be introduced to the Program Manager for testing approval

3.1 Developing Military Exercise Charter

- Military Exercise (Business) Case Template
- Military Exercise Goal and Objectives Template
- Military Exercise Statement of Work (SOW) Template

Deliverables: Created templates for Business Case, Goal and Objectives and SOW

3.2 Developing Military Exercise Scope Statement Template

Deliverables: Created Military Exercise Scope Statement Template

3.3 Developing Military Exercise Plan

3.3.1 Scope Plan

3.3.2 Schedule Plan

3.3.3 Cost Plan

3.3.4 Staffing Plan

Deliverables: Created Scope, Schedule, Cost and Staffing plans

3.4 Developing Military Exercise Communications Plan

Deliverables: Created Military Exercise Communications Plan

Objective 4: By the end of FY1, the Model of Military Exercise RMFD will be tested at the 1st Land Forces Brigade

4.1 Training of commanders and staff officers of the 1st Land Forces Brigade Headquarters in implementing the Model of Military Exercise RMFD

Deliverables:

- Created Training Program for commanders and staff officers of the 1st Land Forces Brigade
- The number of trained officers

4.2 Monitoring all phases of preparation and execution of the military exercise using the model of framework procedures and undertaking corrective measures

Deliverables: The list of results gathered from monitoring and undertaking corrective measures

4.3 Conducting analysis, evaluation and writing a report

Deliverables: Written analysis, evaluated results and report

4.4 Updating the Model of Military Exercise RMFD

Deliverables:

- Updated Training Program
- Updated Model of Military Exercise RMFD

Objective 5: By the end of 1Qtr of FY2, the model of framework procedures will be tested at the 25th Air Forces Wing

5.1 Training of commanders and staff officers of the 25th Air Forces Wing Headquarters in implementing the Model of Military Exercise RMFD

Deliverables:

- Tailored Training Program for commanders and staff officers of the 25th Air Forces Wing Headquarters
- The number of trained officers

5.2 Monitoring all phases of preparation and execution of the military exercise using the updated Model of Military Exercise RMFD and undertaking corrective measures

Deliverables: The list of results gathered from monitoring and undertaking corrective measures

5.3 Conducting analysis, evaluation and writing a report

Deliverables: Written analysis, evaluated results and report

5.4 Updating of the Model of Military Exercise RMFD

Deliverables: Updated Training Program and Model of Military Exercise RMFD

Objective 6: By the end of May of FY2, an expert debate will be organized

6.1 Preparing and distribution invitation letters, program and other of working materials to all participants

Deliverables: Invitation letters attached to the Expert Debate Program and other working materials

6.2 Preparing facilities, technical equipment, catering and administrative materials

Deliverables: Report of provided facilities, technical equipment and administrative materials and catering contract

6.3 Realization of the event

Deliverables: Reports of the working groups

6.4 Debate conclusions analysis

Deliverables: Written analysis and report on expert debate conclusions

Objective 7: By the end of midpoint of FY2, the RMFD Draft will be updated and distributed to all organizational units of the SAF GS, SAF branch commands and units, and to all organizational units of the MoD for confirmation

7.1 Distribution of the RMFD to all organizational units of the SAF GS, SAF branch commands and units, and to all organizational units of the MoD

Deliverables: Updated Draft of the RMFD

7.2 Obtaining feedback and conducting analysis

Deliverables: Written analysis of feedback from the organizational units of the Ministry of Defense and the SAF GS

7.3 Preparing and delivering a report to the Program Manager

Deliverables: Written report to the Program Manager

Objective 8: By the end of November FY2, the RMFD Draft will be finally updated and submitted to the Program Manager for approval and also submitted to the Defense Planning Council for final adoption

8.1 Smart paging the RMFD

Deliverables: Smart paged RMFD

8.2 Submitting the RMFD Final Draft to the Program Manager for approval

Deliverables: The RMFD Final Draft

8.3 Preparing and submitting the RMFD Final Draft and other accompanying documents to the Strategic Planning Department of the MoD as a coordinator of all major programs within the MoD

Deliverables: The RMFD Final Draft approved by the Program manager

8.4 Eventually, smart paging the RMFD

Deliverables: Smart paged the RMFD Final Draft

Objective 9: By the end of FY2, the RMFD will be delivered to the Minister of Defense for authorization

9.1 Preparing and sending the RMFD and other accompanying documents to the MoD Secretariat for the Minister of Defense signing

Deliverables: The RMFD with accompanied documents

9.2 Distribution signed the RMFD by the Minister of Defense to all organizational units of the MoD and the SAF for further use

Deliverables: Signed the RMFD with accompanying documents

Objective 10: By the end of January of FY3, the Project will be closed

10.1 Final analysis of the Project and writing the final report

Deliverables: Written final analysis and report

VII.2. Deliverables Description

Output/Deliverable Name

1.1.1. Prepared and sent the signed order of the Minister of Defense to all units

Deliverable Description

1. Writing an order draft.

2. Deliverable description:

2.1. The purpose is to prepare and distribute to all units the order of the Minister of Defense which will cover all necessary organizational aspects of managing the project.

The order is a basis for organizing all further activities of the Project Team and gives to

the Project and Program Manager a written authorization for taking all needed steps in managing the project.

2.2. The order is a written document which defines:

- 1 Project Team with all its elements
- 2 Roles and responsibilities of the Program Manager, Project Manager and all MoD and SAF GS departments involved in the project
- 3 Deadline for closing the project
- 4 Deadlines for delivering reports.

2.3. The order is prepared by the Logistics Department (J-4) of the SAF GS in order to provide an authorization from the Minister of Defense for establishing the Project Team and improving existing planning documents in the field of resource management.

2.4. The order must be written in accordance with the SAF Rule Book of Office Operations.

2.5. The level of quality required:

2.5.1. Quality will be measured through comprehensiveness of the document.

2.5.2. Verification will be made by benchmarking with other reference documents.

2.6. Desk officers of the Operations Section of the J-4 should be experienced in writing the orders.

Date of Assessment/Review: 24 January of FY1

Output/Deliverable Name

1.2.1. Defined the aim and purpose of the Project

Deliverable Description

1. Writing an aim and purpose for the proposal.
2. Deliverable description:
 - 2.1. The purpose is to harmonize views of the Project Team members.
 - 2.2. Deliverable is composed on an aim and purpose in written form and defines what and why the project should achieve.
 - 2.3. The aim and purpose is proposed by the J-4 in order to focus efforts of the Project Team on gaining the final results of the project.
 - 2.4. The defined aim and purpose of the project must be in accordance with the objectives of the project.
- 2.5. The level of quality required:
 - 2.5.1. Quality will be measured by the level of compliance with objectives of the project.

2.5.2. Verification will be made by benchmarking with the objectives of the project.

2.6. All Project Team Members should be involved in defining the aim and purpose of the project.

Date of Assessment/Review: 7 February of FY1

Output/Deliverable Name

1.2.2. Structured Project Team and defined and listed roles and responsibilities

Deliverable Description

1. Introducing the Project Team members and defining their roles and responsibilities.
2. Deliverable description:
 - 2.1. The purpose is clearly defined and the structure of the Project Team with all roles and responsibilities of each Project Team member established.
 - 2.2. Deliverable is the table of structure, roles and responsibilities.
 - 2.3. The information about the Project Team members is obtained from organizational units which delegated the Project Team members.
 - 2.4. The Project Team structure is based on previous experience.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured through the level of understanding roles and responsibilities of the Project team members.
 - 2.5.2. Verification will be made through the time needed for establishing the Project Team, according with the meeting program.
 - 2.6. All Project Team Members have to be present at the meeting and should participate in establishing the Project Team.

Date of Assessment/Review: 7 February of FY1

Output/Deliverable Name

1.2.3. Described methodology to manage the project

Deliverable Description

1. Introducing and describing the methodology for managing the project.
2. Deliverable description:
 - 2.1. The purpose is a clearly defined methodology of the project describing all necessary forthcoming steps.
 - 2.2. Deliverable is the written description of the methodology which will be used.

2.3. The information about the methodology is obtained from adequate literature related to the project management.

2.4. The methodology is based on existing templates prescribed in appropriate military rule books and handbooks.

2.5. The level of quality required:

2.5.1. Quality will be measured by using ISO standards related to project management.

2.5.2. Verification will be made through the level of understanding of proposed methods.

2.6. The level of understanding methodology will be tested through dialogue with each of the Project Team members.

Date of Assessment/Review: 7 February of FY1

Output/Deliverable Name

1.2.4. Defined and listed forthcoming activities of the Project Team

Deliverable Description

1. Introducing and describing a proposal of forthcoming activities of the Project Team.

2. Deliverable description:

2.1. The purpose is clarifying and reaching consensus about the forthcoming activities within the Project Team.

2.2. Deliverable is the list of forthcoming activities.

2.3. The information about the forthcoming activities is obtained from requirements of the J-4.

2.4. Proposed forthcoming activities are based on existing procedures and templates prescribed in appropriate military rule books and handbooks.

2.5. The level of quality required:

2.5.1. Quality will be measured using the list.

2.5.2. Verification will be made through the level of understanding of proposed activities.

2.6. The level of understanding proposed activities will be tested through dialogue with each of the Project Team members.

Date of Assessment/Review: 7 February of FY1

Output/Deliverable Name

2.1.1. The list of procedural steps – activities

Deliverable Description

1. Introducing and describing a proposal of procedural steps in preparing and executing military exercises.
2. Deliverable description:
 - 2.1. The purpose is consensus about the procedural steps within the Project Team.
 - 2.2. Deliverable is the list of procedural steps.
 - 2.3. The information about the procedural steps is obtained from requirements of the J-4.
 - 2.4. Proposed procedural steps are based on existing procedures and templates prescribed in appropriate military rule books and handbooks.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using the list.
 - 2.5.2. Verification will be made through the level of understanding of proposed procedural steps.
 - 2.6. The level of understanding proposed activities will be tested through dialogue with each of the Project Team members.

Date of Assessment/Review: 28 February of FY1

Output/Deliverable Name

2.2.1. Defined structure of procedural steps – activities, including the time – frame of each activity

Deliverable Description

1. Introducing, describing and accepting structure of procedural steps in preparing and executing military exercises.
2. Deliverable description:
 - 2.1. The purpose is consensus about the procedural steps structure and time – frame within the Project Team.
 - 2.2. Deliverable is the table of structured and time – framed procedural steps.
 - 2.3. The information about the procedural steps is obtained from requirements of the J-4.
 - 2.4. Proposed procedural steps are based on existing procedures and templates prescribed in appropriate military rule books and handbooks.
 - 2.5. The level of quality required:

2.5.1. Quality will be measured using the table.

2.5.2. Verification will be made through the level of understanding structured and time - framed procedural steps.

2.6. The level of understanding proposed activities will be tested through dialogue with each of the Project Team members.

Date of Assessment/Review: 15 April of FY1

Output/Deliverable Name

3.1.1. Created templates for Business Case, Goal and Objectives and SOW

Deliverable Description

1. Proposing and accepting the templates.

2. Deliverable description:

2.1. The purpose is consensus about the proposed templates within the Project Team.

2.2. Deliverable is the set of required templates.

2.3. The information about the templates is obtained from requirements of the J-4.

2.4. Templates are based on existing procedures and templates prescribed in appropriate military rule books and handbooks.

2.5. The level of quality required:

2.5.1. Quality will be measured using the templates.

2.5.2. Verification will be made through the level of understanding the templates.

2.6. The level of understanding the templates will be tested by gathering feedback from the organizational units of the MoD and the SAF.

Date of Assessment/Review: 6 May of FY1

Output/Deliverable Name

3.2.1. Military Exercise Scope Statement Template

Deliverable Description

1. Proposing and accepting the template.

2. Deliverable description:

2.1. The purpose is consensus about the proposed template within the Project Team.

2.2. Deliverable is the required template.

2.3. The information about the template is obtained from requirements of the J-4.

2.4. Template is based on existing procedures and templates prescribed in appropriate military rule books and handbooks.

2.5. The level of quality required:

2.5.1. Quality will be measured using the template.

2.5.2. Verification will be made through the level of understanding the template.

2.6. The level of understanding the template will be tested by gathering feedback from the organizational units of the MoD and the SAF.

Date of Assessment/Review: 3 June of FY1

Output/Deliverable Name

3.3.1. Created Scope, Schedule, Cost and Staffing plans

Deliverable Description

1. Proposing and accepting the plans.
2. Deliverable description:
 - 2.1. The purpose is consensus about the proposed plans within the Project Team.
 - 2.2. Deliverable is the set of required plans.
 - 2.3. The information about the plans is obtained from requirements of the J-4.
 - 2.4. The plans are based on existing procedures and templates prescribed in appropriate military rule books and handbooks.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using the plan.
 - 2.5.2. Verification will be made through the level of understanding the plan.
 - 2.6. The level of understanding the plans will be tested by gathering feedback from the organizational units of the MoD and the SAF.

Date of Assessment/Review: 17 June of FY1

Output/Deliverable Name

3.4.1. Created Military Exercise Communication Plan

Deliverable Description

1. Proposing and accepting the plan.
2. Deliverable description:
 - 2.1. The purpose is consensus about the proposed plan within the Project Team.
 - 2.2. Deliverable is the required plan.

- 2.3. The information about the plan is obtained from requirements of the J-4.
- 2.4. The plan is based on existing procedures and templates prescribed in appropriate military rule books and handbooks.
- 2.5. The level of quality required:
- 2.5.1. Quality will be measured using the plan.
 - 2.5.2. Verification will be made through the level of understanding of the plan.
- 2.6. The level of understanding the plan will be tested by gathering feedback from the organizational units of the MoD and the SAF.

Date of Assessment/Review: 17 June of FY1

Output/Deliverable Name

4.1.1. Created Training Program for commanders and staff officers of the 1st Land Forces Brigade

Deliverable Description

1. Proposing and accepting the Training Program.
2. Deliverable description:
 - 2.1. The purpose is creating an appropriate training program which will provide high level of accepting the proposed model of the RMFD.
 - 2.2. Deliverable is the Training Program.
 - 2.3. The information about the Training Program is obtained from requirements of the J-4 and J-7.
 - 2.4. The program is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using the Training Program.
 - 2.5.2. Verification will be made through the estimation of the Training Program.
 - 2.6. The estimation of the Training program will be carried out through discussions between the Project Team members.

Date of Assessment/Review: End of September of FY1

Output/Deliverable Name

4.1.2. The number of trained officers

Deliverable Description

1. Creating a list of participants and filling out questionnaires forms.

2. Deliverable description:

2.1. The purpose is to provide feedback about the number of participants, their ranks, positions, etc. and the level of acceptance of proposed model of the RMFD.

2.2. The deliverable is the list of participants with their assessments.

2.3. The information about the trained officers is obtained from requirements of the J-7.

2.4. The information about the trained officers is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.

2.5. The level of quality required:

2.5.1. Quality will be measured using the trained officers level of acceptance for the Training Program.

2.5.2. Verification will be made through the gap assessment between the expected and derived data.

2.6. The assessment of the trained officers will be carried out through analysis at the 1st Land Forces Brigade.

Date of Assessment/Review: End of October of FY1

Output/Deliverable Name

4.2.1. The list of results from monitoring and undertaking corrective measures

Deliverable Description

1. Creating a list of results from monitoring and undertaking corrective measures.

2. Deliverable description:

2.1. The purpose is to provide feedback about the level of acceptance proposed model of the RMFD after the military exercise.

2.2. Deliverable is the list of results and undertaken measures.

2.3. The list of the results and undertaken measures is obtained from requirements of the J-4 and J-7.

2.4. The list of the results and undertaken measures is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.

2.5. The level of quality required:

2.5.1. Quality will be measured using the standards in a field of military training.

2.5.2. Verification will be made through the gap assessment between the expected and derived data.

2.6. The assessment will be carried out through an analysis of the Project Team.

Date of Assessment/Review: 5 October of FY1

Output/Deliverable Name:

4.3.1. Written analysis, evaluated results and report

Deliverable Description

1. Creating a report based on an analysis and evaluation of results.
2. Deliverable description:
 - 2.1. The purpose is to provide feedback about the level of feasibility and acceptance for proposed model of the RMFD after the military exercise.
 - 2.2. The deliverable is the written report, supported by analysis.
 - 2.3. The written report is obtained from requirements of the J-4 and J-7.
 - 2.4. The written report is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using the standards in the field of military training.
 - 2.5.2. Verification will be made through the gap assessment between the expected and derived data.
 - 2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 19 October of FY1

Output/Deliverable Name

4.4.1. Updated Training Program and Model of Military Exercise RMFD

Deliverable Description

1. Updating the Training Program and the Model of Military Exercise RMFD.
2. Deliverable description:
 - 2.1. The purpose is to provide an improved training program and the Military Exercise RMFD.
 - 2.2. The deliverable is the updated training program and model as documents.
 - 2.3. The updated training program and model are obtained from requirements of the J-4 and J-7.

2.4. The updated training program and model are based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.

2.5. The level of quality required:

2.5.1. Quality will be measured using the standards in the field of military training.

2.5.2. Verification will be made through the gap assessment between the expected and derived data.

2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 9 December of FY1

Output/Deliverable Name

5.1.1. Tailored Training Program for commanders and staff officers of the 25th Air Forces Wing Headquarters

Deliverable Description

1. Proposing and accepting the tailored Training Program for commanders and staff officers of the 25th Air Forces Wing Headquarters.
2. Deliverable description:
 - 2.1. The purpose is tailoring an appropriate training program which will provide acceptance of the proposed model of the RMFD for the Air Forces units.
 - 2.2. The deliverable is the tailored Training Program.
 - 2.3. The information about the Training Program is obtained from requirements of the J-4 and J-7.
 - 2.4. The tailored program is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using the tailored Training Program.
 - 2.5.2. Verification will be made through the estimation of the tailored Training Program.
 - 2.6. The estimation of the tailored Training program will be carried out through discussions between the Project Team members.

Date of Assessment/Review: 24 February of FY2

Output/Deliverable Name

5.1.2. The number of trained officers

Deliverable Description

1. Creating a list of participants and filling out questionnaires forms.
2. Deliverable description:
 - 2.1. The purpose is to provide feedback about the number of participants, their ranks, positions, etc. and the acceptance of the proposed model of the RMFD.
 - 2.2. The deliverable is the list of participants with their assessments.
 - 2.3. The information about the trained officers is obtained from requirements of the J-7.
 - 2.4. The information about the trained officers is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using the trained officers' acceptance of the tailored Training Program.
 - 2.5.2. Verification will be made through the gap assessment between the expected and derived data.
 - 2.6. The assessment of the trained officers will be carried out through analysis at the 25th Air Forces Wing.

Date of Assessment/Review: 2 March of FY2

Output/Deliverable Name

5.2.1. The list of results from monitoring and undertaking corrective measures

Deliverable Description

1. Creating a list of results from monitoring and undertaking corrective measures.
2. Deliverable description:
 - 2.1. The purpose is to provide feedback about the acceptance of the proposed model of the RMFD after the military exercise.
 - 2.2. Deliverable is the list of results and undertaken measures.
 - 2.3. The list about the results and undertaken measures is obtained from requirements of the J-4 and J-7.

2.4. The list about the results and undertaken measures is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.

2.5. The level of quality required:

2.5.1. Quality will be measured using the standards in the field of military training.

2.5.2. Verification will be made through the gap assessment between the expected and derived data.

2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 16 March of FY2

Output/Deliverable Name

5.3.1. Written analysis, evaluated results and report

Deliverable Description

1. Creating a report based on an analysis and evaluation of the results.

2. Deliverable description:

2.1. The purpose is to provide feedback about the level of feasibility and acceptance for the proposed model of the RMFD after the military exercise.

2.2. The deliverable is the written report, supported by analysis.

2.3. The written report is obtained from requirements of the J-4 and J-7.

2.4. The written report is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.

2.5. The level of quality required:

2.5.1. Quality will be measured using the standards in the field of military training.

2.5.2. Verification will be made through the gap assessment between the expected and derived data.

2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 16 March of FY2

Output/Deliverable Name

5.4.1. Updated Training Program for the Model of Military Exercise RMFD

Deliverable Description

1. Updating the Training Program and the Model of Military Exercise RMFD.

2. Deliverable description:

2.1. The purpose is to provide an improved training program and the Military Exercise RMFD.

2.2. The deliverable is the updated training program and model as documents.

2.3. The updated training program and model are obtained from requirements of the J-4 and J-7.

2.4. The updated training program and model are based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.

2.5. The level of quality required:

2.5.1. Quality will be measured using the standards in the field of military training.

2.5.2. Verification will be made through the gap assessment between the expected and derived data.

2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 30 March of FY2

Output/Deliverable Name

6.1.1. Invitation letters attached to the Expert Debate Program and other working materials

Deliverable Description

1. Writing the invitation letters attached to the Expert Debate Program and other working materials.
2. Deliverable description:
 - 2.1. The purpose is to invite and inform all organizational units of the MoD and the SAF about the forthcoming event.
 - 2.2. The deliverables are the documents necessary for organizing the expert debate.
 - 2.3. The invitation letters and accompanying documents are obtained from requirements for organizing such kind of event.
 - 2.4. The invitation documents are based on settled procedures and templates for organizing events.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using the invitation documents.
 - 2.5.2. Verification will be made through the level of understanding the documents.

2.6. The invitation documents will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 27 April of FY2

Output/Deliverable Name

6.2.1. Report of provided facilities, technical equipment and administrative materials and catering contract

Deliverable Description

1. Writing the reports and signing the catering contract.
2. Deliverable description:
 - 2.1. The purpose is to provide a report about providing all necessary facilities, technical equipment and other administrative materials, including catering.
 - 2.2. The deliverables are the documents necessary for organizing the expert debate.
 - 2.3. The documents are obtained from requirements for organizing such kind of event.
 - 2.4. The documents are based on settled procedures and templates for organizing events.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using the level of comprehensiveness established for the documents.
 - 2.5.2. Verification will be made through the level of understanding the documents.
- 2.6. The documents will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 25 May of FY2

Output/Deliverable Name

6.3.1. Reports of the working groups

Deliverable Description

1. Writing the reports of the working groups.
2. Deliverable description:
 - 2.1. The purpose is to provide the report which will give expert feedback in order to improve proposed Model of RMFD.
 - 2.2. The deliverables are the documents necessary for further analysis of the results of the expert debate.
 - 2.3. The documents are obtained from requirements for organizing such kind of event.

2.4. The documents are based on settled procedures and templates for organizing events.

2.5. The level of quality required:

2.5.1. Quality will be measured using the level of comprehensiveness established for the documents.

2.5.2. Verification will be made through the level of understanding the documents.

2.6. The documents will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 29 May of FY2

Output/Deliverable Name

6.4.1. Written analysis and report of the expert debate

Deliverable Description

1. Creating a report based on an expert debate results analysis.

2. Deliverable description:

2.1. The purpose is to provide feedback about the level of feasibility and acceptance of the proposed model of the RMFD after the expert debate.

2.2. The deliverable is the written report, supported by analysis.

2.3. The written report is obtained from requirements of the J-4 and J-7.

2.4. The written report is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.

2.5. The level of quality required:

2.5.1. Quality will be measured using the standards in the field of military training and resource planning.

2.5.2. Verification will be made through the gap assessment between the expected and derived data.

2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 31 May of FY2

Output/Deliverable Name

7.1.1. Updated Draft of the RMFD

Deliverable Description

1. Updating the Model of Military Exercise RMFD.

2. Deliverable description:

2.1. The purpose is to provide an improved the Military Exercise RMFD.

- 2.2. The deliverable is the updated model as a procedural document.
- 2.3. The updated document is obtained from requirements of the J-4 and J-7.
- 2.4. The updated document is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.
- 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using the standards in the field of military training and resource planning.
 - 2.5.2. Verification will be made through the gap assessment between the expected and derived data.
- 2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 8 June of FY2

Output/Deliverable Name

7.2.1. Written analysis of feedback from the organizational units of the Ministry of Defense and the SAF GS

Deliverable Description

1. Creating an analysis based on feedback from the organizational units of the Ministry of Defense and the SAF GS.
2. Deliverable description:
 - 2.1. The purpose is to provide feedback about the level of feasibility and acceptance of proposed RMFD.
 - 2.2. The deliverable is the written analysis.
 - 2.3. The written analysis is obtained from requirements of the J-4 and J-7.
 - 2.4. The written analysis is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using the standards in the field of military training and resource planning.
 - 2.5.2. Verification will be made through the gap assessment between the expected and derived data.
 - 2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 22 June of FY2

Output/Deliverable Name

7.3.1. Written report to the Program Manager

Deliverable Description

1. Creating a report based on analysis of feedback from the organizational units of the Ministry of Defense and the SAF GS.
2. Deliverable description:
 - 2.1. The purpose is to inform the Project Manager about the level of feasibility and acceptance of proposed RMFD.
 - 2.2. The deliverable is the written analysis.
 - 2.3. The written analysis is obtained from requirements of the J-4 and J-7.
 - 2.4. The written analysis is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using the standards in the field of military training and resource planning.
 - 2.5.2. Verification will be made through the gap assessment between the expected and derived data.
 - 2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 29 June of FY2

Output/Deliverable Name

8.1.1. Smart paged RMFD

Deliverable Description

1. Smart paging the Military Exercise RMFD.
2. Deliverable description:
 - 2.1. The purpose is to provide an improved Military Exercise RMFD.
 - 2.2. The deliverable is the updated model as a procedural document.
 - 2.3. The updated document is obtained from requirements of the J-4 and J-7.
 - 2.4. The updated document is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.
 - 2.5. The level of quality required:

2.5.1. Quality will be measured using the standards in the field of military training and resource planning.

2.5.2. Verification will be made through the gap assessment between the proposed and derived corrections from the Program Manager.

2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: End of August of FY2

Output/Deliverable Name

8.2.1. The RMFD Final Draft

Deliverable Description

1. Submitting the RMFD Final Draft to the Program Manager for approval.

2. Deliverable description:

2.1. The purpose is to provide the Final Draft of the Military Exercise RMFD.

2.2. The deliverable is the RMFD document.

2.3. The document is obtained from requirements of the organizational units of the MoD and the SAF.

2.4. The document is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.

2.5. The level of quality required:

2.5.1. Quality will be measured using the standards in the field of military training and resource planning.

2.5.2. Verification will be made through the gap assessment between the proposed and derived corrections from the Program Manager.

2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: End of September of FY2

Output/Deliverable Name

8.3.1. The RMFD Final Draft approved by the Program manager

Deliverable Description

1. Approving the RMFD Final Draft by the Program Manager.

2. Deliverable description:

2.1. The purpose is to provide the approved Final Draft of the Military Exercise RMFD.

2.2. The deliverable is the approved RMFD document.

2.3. The document is obtained from requirements of the Program Manager.

2.4. The document is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.

2.5. The level of quality required:

2.5.1. Quality will be measured using the standards in the field of military training and resource planning.

2.5.2. Verification will be made through the gap assessment between the proposed and final draft.

2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 19 October of FY2

Output/Deliverable Name

8.4.1. Smart paged the RMFD Final Draft

Deliverable Description

1. Eventually, smart paging the Military Exercise RMFD.

2. Deliverable description:

2.1. The purpose is to provide an improved the Military Exercise RMFD.

2.2. The deliverable is the updated model as a procedural document.

2.3. The updated document is obtained from requirements of the Defense Planning Council.

2.4. The updated document is based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to training and resource planning.

2.5. The level of quality required:

2.5.1. Quality will be measured using the standards in the field of military training and resource planning.

2.5.2. Verification will be made through the gap assessment between the proposed and derived corrections from the Defense Planning Council.

2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: 16 November of FY2

Output/Deliverable Name

9.1.1. The RMFD with accompanying documents

Deliverable Description

1. Preparing and sending the RMFD and other accompanying documents to the Ministry of Defense Secretariat for the Minister of Defense signing.
2. Deliverable description:
 - 2.1. The purpose is to prepare and send the RMFD with accompanying documents to the Secretariat in order to provide a signature of the Minister of Defense
 - 2.2. The deliverable is a written document.
 - 2.3. The order is prepared by the Project Team and based on the last improvement after requirements of the Defense Planning Council.
 - 2.4. The updated document is based on existing procedures and templates prescribed in the SAF Rule Book of Office Operations.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured through comprehensiveness level established for the document.
 - 2.5.2. Verification will be made by benchmarking with other reference documents.
 - 2.6. Document drafting and sending will be carried out by the Project Team.

Date of Assessment/Review: 7 December of FY2

Output/Deliverable Name

9.2.1. Signed the RMFD with accompanying documents

Deliverable Description

1. Distribution signed the RMFD by the Minister of Defense to all organizational units of the Ministry of Defense and SAF for further use.
2. Deliverable description:
 - 2.1. The purpose is to distribute the signed document.
 - 2.2. The deliverable is the distributed document.
 - 2.3. The document is obtained after all requirements of the organizational units of the MoD and the SAF.
 - 2.4. The updated document is based on existing procedures and templates prescribed in the SAF Rule Book of Office Operations.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using comprehensiveness level established for the document.

2.5.2. Verification will be made by benchmarking with other reference documents.

2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: End of FY2

Output/Deliverable Name

10.1.1. Written final analysis and report

Deliverable Description

1. Creating a report based on analysis of the project.
2. Deliverable description:
 - 2.1. The purpose is to inform the Project Manager and other stakeholders about the final results of the project.
 - 2.2. The deliverable is the written report, supported by analysis.
 - 2.3. The written analysis is obtained from requirements of the project.
 - 2.4. The written report and analysis are based on existing procedures and templates prescribed in appropriate military rule books and handbooks related to project management.
 - 2.5. The level of quality required:
 - 2.5.1. Quality will be measured using the standards in the field of project management.
 - 2.5.2. Verification will be made through the assessment between the expected and derived results.
 - 2.6. The assessment will be carried out through an analysis by the Project Team.

Date of Assessment/Review: End of January of FY3

VIII. PROJECT RISK MANAGEMENT

VIII.1. Project Risk management Plan

Type of Risk	Risk Conditions	Risk Description		Impact	Probability	Importance (Sum of Impact X Probability)/ Average		Risk Mitigation Strategy
Political	Insufficient support to change	Integration	Poor integration management	4	2	8	8	Preparing and organizing several presentations and meetings with the Program Manager in order to convince decision makers about the importance of the project
		Scope	Inadequate scope control	3	1	3		
		Time	Postponing of the project start	3	3	9		Updating the Time Management Plan
		Cost	Difficulty financing	5	1	5		Trying to convince decision makers about the importance of the project and reducing some of activities
		Quality	Quality reduction	3	1	3		Revision of quality requirements
		HR	Inadequate support for providing the best experts	5	3	15		Sending another request for appropriate experts
		Communications	Lack of consultation with key stakeholders	5	3	15		Preparing and organizing several presentations and meetings in order to convince key stakeholders about the importance of the project

Type of Risk	Risk Conditions	Risk Description		Impact	Probability	Importance (Sum of Impact X Probability)/ Average		Risk Mitigation Strategy
	Lack of consensus on priorities	Integration	Poor integration management	5	2	10	10	Redefining priorities
		Scope	Inadequate scope control	3	2	6		Updating the Time Management Plan
		Time	Postponing of the project start	3	4	12		Redefining costs in accordance with priorities
		Cost	Lack of defining costs	5	2	10		Proposing updated quality requirements
		Quality	Lack of consensus on quality	4	2	8		Defining the lowest level of necessary experts Project Team members and sending a request for their obtaining
		HR	Inadequate support for obtaining the best experts	5	3	15		Convincing key stakeholders about the importance of the project
		Communications	Lack of consultation with key stakeholders	5	2	10		
Organizational	Change of organizational structure of the SAF	Integration	Poor resource allocation	3	1	3	7	Revision of the Resource Management Plan
		Scope	Changing the scope of the project and inadequate scope control	4	1	4		Revision of the Scope
		Time	Postponing of some activities	4	2	8		Updating the Time Management Plan
		Cost	Increasing costs costs	5	1	5		Reducing the number of activities
		Quality	Quality reduction	3	1	3		Revision of quality requirements
		HR	Changing of the Project Team members	5	3	15		Updating the Minister's order

Type of Risk	Risk Conditions	Risk Description		Impact	Probability	Importance (Sum of Impact X Probability)/ Average		Risk Mitigation Strategy	
Organizational		Communications	More complex communication	4	2	8	6	Revision of the Communications Plan	
	Misunderstanding and resistance	Integration	Poor integration management	5	2	10		6	Preparing and organizing several presentations and meetings with the Program Manager in order to convince decision makers about the importance of the project
		Scope	Incomplete definition of quality requirements	4	1	4			
		Time	Poor estimation for overall project - time increasing	3	1	3			Updating the Time Management Plan
		Cost	Increasing costs	3	1	3			Redefining costs in the Cost Management Plan
		Quality	Inadequate quality assurance program	4	2	8			Updating quality requirements
		HR	Inappropriate project management staff	5	2	10			Sending a request for providing appropriate experts
		Communications	Lack of consultation with key stakeholders	5	1	5			Preparing and organizing several presentations and meetings in order to convince key stakeholders about the importance of the project
	Increasing number of unplanned tasks	Integration	Inadequate planning	5	3	15	11	Redefining the Integration Management documents	
		Scope	Poor definition of scope or work packages	5	2	10		Redefining the Project Scope Statement	
		Time	Difficulties in estimating time availability	4	2	8		Reducing the number of activities	

Type of Risk	Risk Conditions	Risk Description		Impact	Probability	Importance (Sum of Impact X Probability)/ Average	Risk Mitigation Strategy	
Organizational		Cost	Difficulties in costs estimating	5		15		Cancellation of the expert debate
		Quality	Quality reduction	4		4		Revision of quality requirements
		HR	Unavailability of all necessary Project Team members	5		20		Rescheduling the Time Management Plan
		Communications	Inadequate quality assurance program	3		6		Proposing updated quality requirements
Legal/ Contracting	Conflict of subsidiary regulations	Integration	Poor integration management	5		15	9	Redefining of the Integration Management documents
		Scope	Incomplete definition of quality requirements	2		4		Redefining the Project Scope Statement
		Time	Long procedures in contracting	5		25		Redefining the Time Management Plan
		Cost	Difficulties in costs estimating	3		3		Recalculating costs
		Quality	Inadequate quality assurance program	3		6		Redefining quality requirements
		HR	Insufficient quality	2		2		Changing the person responsible for contracting

of staff for

Type of Risk	Risk Conditions	Risk Description		Impact	Probability	Importance (Sum of Impact X Probability)/ Average		Risk Mitigation Strategy
			contracting					
		Communications	Lack of consultation with contracting staff	4		8		Organizing coordinative meetings
Type of Risk	Risk Conditions	Risk Description		Impact	Probability	Importance (Sum of Impact X Probability) / Average		Risk Mitigation Strategy
Technological	Complexity of proposed system databases	Integration	Poor integration management	4		8	10	Redefining the Integration Management documents
		Scope	Incomplete definition of quality requirements	4		1 2		Redefining quality requirements
		Time	Difficulties in estimating time availability	5		1 5		Updating the Time Management Plan

Type of Risk	Risk Conditions	Risk Description		Impact	Probability	Importance (Sum of Impact X Probability)/ Average		Risk Mitigation Strategy
		Cost	Difficulties in costs estimating	2		4	11	Updating activities and costs
		Quality	Quality reduction	3		6		Defining the lowest level of quality
		HR	Inexperienced Project Team members	5		1 5		Training the Project Team members
		Communications	Carelessness in communicating	3		9		Organizing coordinative meetings
	Number of stored procedures	Integration	Inadequate planning	3		6		Redefining of the Integration Management documents
		Scope	Poor definition of scope	4		4		Redefining the Project Scope Statement
		Time	Difficulties in estimating time availability	5		1 5		Updating the Time Management Plan
		Cost	Difficulties in costs	3		6		Recalculating costs

costs

Type of Risk	Risk Conditions	Risk Description		Impact	Probability	Importance (Sum of Impact X Probability)/ Average	Risk Mitigation Strategy
			estimating				
		Quality	Inadequate quality assurance program	4		12	Revision of quality requirements
		HR	Inexperienced Project Team members	5		20	Training the Project Team members
		Communications	More complex communication	4		16	Revision and updating the Communications Plan

Legend:

Low Risk 0-8
Medium Risk 9-12
High Risk 13-25



CONCLUSIONS

Preparing and executing military exercises is a very complex process. Resource management in this field requests a lot of knowledge, experience through practice, different skills, and developed procedures. Defining settled procedures is a very complicated and long process which requests a lot of coordination, and harmonization of views and other procedures, rule books, guidebooks, handbooks, etc. Through this Graduation Paper, I have tried to show one possible approach to reaching the goal and objectives of the defense system or, in other words, to demonstrate the applicability of the project approach to developing procedures for further official use.

As a final thought, using the project approach in developing procedural documents should definitely be considered as the most appropriate method. In this respect, full integration of projects through a common view within the PPBES plays a major role.

REFERENCES

- *** (2004) A Guide to Project Management Body of Knowledge (PMBOK[®]), Project Management Institute, Inc, Third Edition.
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- *** (2009) Military Training Guidebook, Serbian Armored Forces General Staff, First Edition
- *** (2009) Instruction for Military Training, Serbian Armored Forces General Staff
- *** (2009) The PPBES Rule Book of the Ministry of Defense and the Serbian Armored Forces General Staff, Serbian Ministry of Defense, First Edition, August.

TESTING LABORATORY FOR NBC PROTECTION EQUIPMENT

Maj. eng. Claudiu LĂZĂROAIE

Project sponsors: National Authority for Science.

I. Business case

Battlefield equipment of modern armed forces includes more and more efficient personal protection elements. Fast modernization supported by Romanian Army and the need to be compliant with NATO standards has an important component also in NBC protection of the military.

The research, design, production and endowment only with efficient and state of art NBC equipments demand a more fitted system for testing and evaluation of these equipments. The increased number of personal protection equipment producers on the market has led to the set up of certain economical and performance criteria, including comparative testing carried out by specialized laboratories, needed to be fulfilled in case of acquisition procedures. With respect for quality standards in equipment producing, the results of the tests made for proving the accordance between declared performance parameters and the real ones is a must.

The project **TESTING LABORATORY FOR NBC PROTECTION EQUIPMENT (TLNBCPE)** wants to answer these requirements by completing the existent technical base with testing equipments to vapors of chemical agents/simulators and also equipment for testing the mechanical properties of protection materials.

The project's purpose is to build up an accredited laboratory, able to perform all the tests necessary to fully characterize the NBC protection equipment and materials, in order to support Romania's engagement in the defense against terrorism and to provide the interoperability and the level of integration equivalent to NATO's armies.

This goal will be achieved by integrating the existing personnel, the existing equipments and the equipment that will be purchase in a laboratory with testing procedures fully compatible with quality standard SR EN ISO/CEI 17025:2005.

The only laboratory in Romania that can approach the problem of testing NBC individual protection equipments is the laboratory of SC ROMCARBON SA Buzau, but unfortunately it is limited to the testing of gas masks and gas mask cartridges. This laboratory has 30 years old instrumentation and after the implementation in our country of the Convention of Prohibition of Chemical Weapons, the testing using real chemical agents it is allowed only in our institution. The requirements prior to Romania as a NATO member implied only the testing of the protection equipments to drops of toxic agents, but the appearance of new NBC protection equipments has led to the necessity of testing these equipments also to chemical agents/simulators vapors and aerosols.

The compliance with European testing regulations for NBC individual protection equipment (such as EN 143) is another reason for which it is necessary to test these equipments to vapors and aerosols.

All the procedures and testing equipment that will be used in this laboratory, will meet the requirements of NATO AEP-38 ("Operational requirements, technical specification and evaluation criteria for NBC protective clothing"), document that state the technical requirements and the testing procedures for skin protection equipment against NBC threats.

II. PROJECT SCOPE MANAGEMENT

II.1. Goals, objectives, activities

1. The project goal is to set up a laboratory for testing nuclear, biological and chemical (NBC) protection equipments and materials.

O1.1. By the end of November 2010, a feasibility study will be elaborated.

List of Activities	activities description
<i>1.1.1. Technical requirements of the testing equipments will be established.</i>	<ul style="list-style-type: none">• Under the supervision of the project manager, the technical manager and his team will identify the suitable equipment on the market, according with project's scope.• Technical manager will deliver a report with all the materials and reagents requested by the selected equipments, in order to be fully operable for one year.• Project manager will identify the costs of the project in terms of equipment and materials.
<i>1.1.2. Based on the equipments that will be bought, the necessary construction work will be evaluated.</i>	<ul style="list-style-type: none">• Using the technical data and special requirements of the equipment identified in para 1.1.1, the construction plan will be elaborated by the project manager.• Project manager will identify the costs of the project in terms of construction work.
<i>1.1.3. The feasibility study, based on activities 1.1 and 1.2, will be prepared and delivered by the project manager.</i>	

O1.2. By the middle of December 2011, 10 newly bought equipment will be installed on position.

List of Activities	activities description
<p>1.2.1. By the end of September 2011, construction work will be finished.</p>	<ul style="list-style-type: none"> • The construction plan will be passed to acquisition manager, in order to initiate the acquisition procedures. • The project manager and the technical manager will supervise the work performed by the contractor and will provide him all the details about the special requirements.
<p>1.2.2. By the middle of December 2011, equipments will be installed on their positions and people will be trained by the supplier.</p>	<ul style="list-style-type: none"> • The technical requirements of the equipment will be passed to acquisition manager, in order to initiate the acquisition procedures. • In the acquisition contracts will be introduced clauses for service activities and training courses for the personnel that will operate the equipments. The deadline for acquisition procedures is 5th of December, 2011. • The project manager will assign the new equipment to the personnel of the laboratory, in order to be acquainted with and to prepare the training and the testing of the equipment. • Acquisition manager will prepare a training plan, based on the agreements with the suppliers, focused on delivering to personnel the proper training with new equipments.

O1.3. By the middle of August 2012, laboratory's documentation, compliant with SR EN ISO/CEI 17025:2005, will be sent for accreditation to Romanian Accreditation Network (RENAR).

List of Activities	activities description
<p>1.3.1. By the begin of March 2012, all the equipment of the laboratory will be tested, in order to prepare the specific procedures.</p>	<ul style="list-style-type: none"> • Technical manager will deliver a testing plan, based on the equipments documentation and the standards to be applied in the laboratory. • Every person that is responsible for specific equipment will deliver a testing report to the project manager.
<p>1.3.2. Specific procedures will be written down 50 days after the testing phase is completed.</p>	<ul style="list-style-type: none"> • Based on the requirements of SR EN ISO/CEI 17025:2005, the specific procedures of the laboratory will be written. • The specific procedures will be verified by the technical manager and will be approved by the Project manager.
<p>1.3.3. By the middle of August 2012, the specific procedures will be integrated in the Master Quality System and the Quality Manual of the laboratory will be finished.</p>	<ul style="list-style-type: none"> • Project manager will make an analysis on the work done in integration of the specific procedures within the Master Quality System, based on SR EN ISO 9001:2008. • Technical manager will complete the Quality Manual of the laboratory with all the statements necessary for accreditation.
<p>1.3.4. The project team will make an assessment of the conformity of the Quality manual with the requirements of RENAR.</p>	<ul style="list-style-type: none"> • If the Quality manual is fully compliant with RENAR requirements, it will be approved by the chief of the centre and will be sent to RENAR, in order to start the accreditation procedures.

O1.4. During the project, the results of the project will be disseminated.

List of Activities	activities description
1.4.1. When starting the project, a website will be created and updated continuously, in order to present the project progress.	<ul style="list-style-type: none">• The project manager will deliver a plan of a website to IT department of the center.• The project manager will update the information about the data to be published on the website on weekly bases.
1.4.2. When the project is finished, a presentation of the laboratory's capabilities will be delivered to funding agency.	<ul style="list-style-type: none">• The project manager will prepare a presentation that will be delivered to funding agency.

O1.5. Before the last payment from the funding agency, a technical and financial audit will occur.

List of Activities	activities description
1.5.1. All the financial documents (bills and contracts), as well as technical documentation of newly bought equipment will be presented to audit commission.	<ul style="list-style-type: none">• The technical team will gather all the financial documents of the project, as well as the technical documentation of the acquired equipment and will present them to the audit team. Based on the audit report, the last payment of the project will be done.

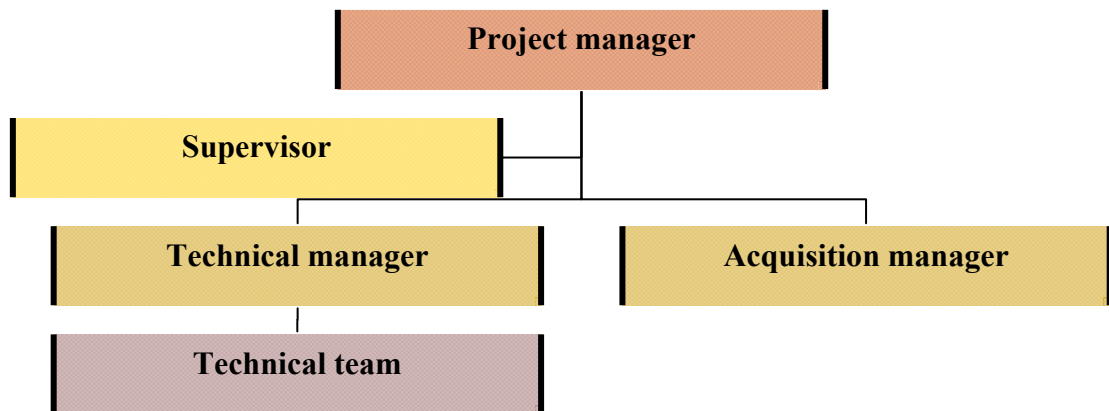
The work breakdown structure is presented in Appendix 1.

III. PROJECT TIME MANAGEMENT

The Gantt chart of the project is presented in Appendix 2.

IV. PROJECT HUMAN RESOURCE MANAGEMENT

IV.1. Organizational chart



IV.2. Responsibility matrix

The necessary skills and the assignment of human resources during the project are presented in **Table 1**.

Table 1. HR assignment

Position	Necessary skills	Assignment
Project manager	<ul style="list-style-type: none">- high education in technical field (chemistry or material physics)- experience in project management- team working abilities- very good communication skills, both in writing and verbal	Claudiu
Supervisor	<ul style="list-style-type: none">- high education in technical field- experience in infrastructure project management	Vasile
Technical manager	<ul style="list-style-type: none">- high education in technical field (chemistry or material physics)	Cip

Position	Necessary skills	Assignment
	<ul style="list-style-type: none"> - good knowledge in quality assurance requirements (ISO 17025) - experience in designing and testing NBC protection equipment - team working abilities - good communication skills, both in writing and verbal 	
Acquisition manager	<ul style="list-style-type: none"> - high education - very good knowledge and experience in acquisition laws and acquisition procedures - team working abilities - good communication skills 	Adi
Technical team member	<ul style="list-style-type: none"> -high education in technical field - good knowledge in quality assurance requirements (ISO 17025) - experience in designing and testing NBC protection equipment - team working abilities 	Simona
	<ul style="list-style-type: none"> -high education in technical field - experience in designing and testing NBC protection equipment - team working abilities 	Crina

The RACI chart of the project is presented in **Table 2**

Table 2. RACI Chart

Activity	Position	Project manager	Tech manager	Acq manager	Tech team	Supervisor
LEPNBC		R				
1. Feasability study		R	C	A	A	I
1.1 Tehnical requirements		C	R	C	A	I
1.2 Construction needs		R	C	A	A	I
Feasability analysis		R	C	I	I	C
2. Laboratory set up		R				
2.1 Equipment acquisition		C	C	R	A	
2.2 Construction work		C	C	R	A	
3. Quality system implementation		C	R	A	A	
3.1 Equipment testing		C	R	A	A	
3.2 Specific procedures		C	R	A	A	
3.3 Integration with MQS		C	R	A	A	
3.4 Quality manual		C	R	A	A	
Project analysis		R	C	I	I	C
3.5 Accreditation		R	C			
4. Results dissemination		R	A			

4.1 Web site publishing	R	A			
4.2 Presentation	R	A			
5. Audit	I	I		R	
5.1 Technical and financial audit	I	I		R	
Project closure	R				

R = responsibility; A = accountability; C = consultation; I = informed

V. PROJECT COMMUNICATIONS MANAGEMENT

Communication during the project will be done using the communication facilities provided by CCSANBCE (regular mail, e-mail, phone).

After a stakeholder survey stakeholders and their information needs were identified. Based on the information, project communications management plan was established (**Table 3**).

Table 3. Communications plan

Stakeholder	Information needs	Methods of communication	Responsible for delivery	When	Template requirement
NAS (funding agency)	Project progress	Written reports	Project manager	15.11.10 05.12.11 13.08.12	Yes, provided by NAS
CCSANBCE (end user) Director and Scientific Council	Technical issues Project progress	Written reports Presentations (formal and informal) Email Phone	Project manager	Before signing the project During project, when requested	N/A
Team members	Project progress Difficulties Task assignment Technical issues	Work meetings Orally Presentations (formal and informal) Email Phone	Project manager	On weekly bases During project, when necessary	N/A

VI. PROJECT COST MANAGEMENT

VI.1. List of resources

The necessary resources to be employed during project are presented in table 4.

Table 4. Resource pool

Resource type	Name	Number	Value
Human resource	Project manager	1	
	Tech manager	1	
	Tech team	2	
	Acq manager	1	
	Supervisor	1	
Equipment	computer		8,000 lei
	equipment		1,100.000 lei
	furniture		30,000 lei
	construction		250,000 lei
Materials	materials for FS		2,000 lei
	materials for LSU		175,000 lei
	materials for QSI		20,000 lei

VI.2. Costs/resources

When estimating the cost of the project I used the “Definitive estimates” method, combined with “Budget estimates” method. The team involved in the project already managed at least one technical project. The list of the equipment to be bought during project was previously approved by the funding agency. Before signing the contract, the project manager had to present to funding agency at list one written offer from a supplier for every equipment he intend to buy.

When estimating the cost of human resources and materials, the “Budget estimates” method was use.

Total costs and the allocation of resources are presented in **Appendix 3** and **Appendix 4.1** and **4.2**.

VII. PROJECT QUALITY MANAGEMENT

Within the project, the quality responsibilities are distributed as presented in **Table 5**.

Table 5. Quality responsibilities

Name	Role	Quality Responsibility
Claudiu	Project Manager	Quality mentoring & coaching
Ciprian	Tech manager	Quality audits
Simona	Tech team	Quality audits
Adrian	Acq manager	Project reviews
Crina	Tech team	Project reviews
Vasile	Supervisor	Project reviews

The quality management plan is based on regular quarterly internal audit, performed by Ciprian and Simona (who are trained as internal auditors both on ISO 9001 and ISO 17025 standards).

The project manager is responsible for issuing the Audit plan.

The results of the audits will be recorded in Audit reports, and the identified nonconformities will be mentioned and distributed to be solved.

Besides the internal audit of the project, the team identified some deliverable related quality criteria that will be considered, during activities (**Table 6**)

Table 6. Quality criteria

Deliverable	Planned activity to produce the activity output	Quality criteria
Feasibility study	1.1 Technical requirements, 1.2 Construction needs	The feasibility study checks against project scope constraints (time, resources)
		The feasibility study respects the standardized format
Training certificates	2.1 Equipment acquisition	Each equipment should have at least two trained operators
		The certificates must address the

Deliverable	Planned activity to produce the activity output	Quality criteria
		following issues: - name of the trainee - equipment - period and duration of training - who deliver the training every operator will perform a test with the equipment they are responsible for
Testing report	3.1 Equipment testing	The standardized methods are performed The results are repeatable
Accreditation documentation	3.1 Equipment testing, 3.2 Specific procedures, 3.3 Integration with MQS, 3.4 Quality manual, 3.5 Accreditation	All the RENAR requirements on ISO 17025 are documented

These criteria will be evaluated and reviewed in project team meetings, after completion of the activity(ies) that issued the deliverable.

At the end of the project, an external audit will occur. This audit will be related to all aspects of the project, technical and financial, and it will be planned by the funding agency.

VIII. PROJECT RISK MANAGEMENT

The risks management plan related to this project is presented in **Table 7**.

Table 7. Risks management plan

Risk category	Associated risk	Impact	Probability	Importance (impact X probability)	Risk mitigation strategy
Integration	Funding agency could decrease the funds allocated for the project, due to budget decrease at the end of the project	5	1	5	Request the necessary funds (especially for equipment acquisition) as soon as possible, in the first 15 months

Risk category	Associated risk	Impact	Probability	Importance (impact X probability)	Risk mitigation strategy
Time	Project may not be finished within the time constraints, established by funding authority	3	4	12	Overlapping not related activities, in order to finish the project on time
Cost	Insufficient funding for equipment acquisition, due to Euro/RON exchange rate	2	4	8	Prepare two sets of acquisition papers, one with the optimum parameters and the second one with the minimum parameters that fulfill the project scope
Quality	Not enough measurable quality criteria could be addressed	3	3	9	Quality management plan will be issued before the project start. Quality criteria and topics for internal audits will be tailored on each particular activity. For quality assurance purposes, team members trained to deal quality issues will play a key role, as internal auditors
Human Resources	Project team is less experienced in infrastructure projects	3	1	3	Project team will be supervised by a person more experienced in this kind of projects. Information package provided by funding agency will be thoroughly studied and acknowledged.
Procurement	Romanian law of acquisition is ambiguous enough, not precise duration for acquisition phase could be establish	3	4	12	Depending on the procedure to be used in acquisition processes, legal duration of the acquisition is multiplied by 3, in order to have enough time to repeat an acquisition procedures at least twice. Due to the value and the complexity of equipment to be bought, the acquisition manager will deal only with three acquisition procedures in the same time.

IX. References

1. AEP-38 – “Operational requirements, technical specification and evaluation criteria for NBC protective clothing”, 1st edition;
2. SR EN ISO/CEI 17025:2005 – “General requirements for the competence of testing and calibration laboratories”;
3. SR EN ISO 9001:2008 – “Quality management systems – Requirements”;
4. RENAR RE-00 – “Accreditation regulations”;
5. RENAR CR-00 – “General criteria for accreditation”.

Appendix 1: Work breakdown structure

WORK BREAKDOWN STRUCTURE

LEPNBC

1. Feasibility study
 - 1.1 Technical requirements
 - 1.2 Construction needsFeasibility analysis
 2. Laboratory set up
 - 2.1 Equipment acquisition
 - 2.2 Construction work
 3. Quality system implementation
 - 3.1 Equipment testing
 - 3.2 Specific procedures
 - 3.3 Integration with MQS
 - 3.4 Quality manualProject analysis
 - 3.5 Accreditation
 4. Results dissemination
 - 4.1 Web site publishing
 - 4.2 Presentation
 5. Audit
 - 5.1 Technical and financial audit
- Project closure

Appendix 2: Gantt chart



Appendix 3: Total costs

Budget Report as of Wed 15.06.11
LTEPNBC

ID	Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost	Baseline	Variance	Actual	Remaining
7	2.1 Equipment acquisition	0,00 lei	Prorated	1.284.858,00 lei	0,00 lei	1.284.858,00 lei	0,00 lei	1.284.858,00 lei
8	2.2 Construction work	0,00 lei	Prorated	284.032,00 lei	0,00 lei	284.032,00 lei	0,00 lei	284.032,00 lei
10	3.1 Equipment testing	0,00 lei	Prorated	19.012,00 lei	0,00 lei	19.012,00 lei	0,00 lei	19.012,00 lei
11	3.2 Specific procedures	0,00 lei	Prorated	2.536,80 lei	0,00 lei	2.536,80 lei	0,00 lei	2.536,80 lei
13	3.4 Quality manual	0,00 lei	Prorated	2.163,20 lei	0,00 lei	2.163,20 lei	0,00 lei	2.163,20 lei
17	4.1 Web site publishing	0,00 lei	Prorated	1.509,00 lei	0,00 lei	1.509,00 lei	0,00 lei	1.509,00 lei
12	3.3 Integration with MQ S	0,00 lei	Prorated	1.090,00 lei	0,00 lei	1.090,00 lei	0,00 lei	1.090,00 lei
18	4.2 Presentation	0,00 lei	Prorated	131,50 lei	0,00 lei	131,50 lei	0,00 lei	131,50 lei
15	3.5 Accreditation	0,00 lei	Prorated	24,00 lei	0,00 lei	24,00 lei	0,00 lei	24,00 lei
20	5.1 Technical and financial audit	0,00 lei	Prorated	3,00 lei	0,00 lei	3,00 lei	0,00 lei	3,00 lei
5	Feasibility analysis	0,00 lei	Prorated	0,00 lei	0,00 lei	0,00 lei	0,00 lei	0,00 lei
21	Project closure	0,00 lei	Prorated	0,00 lei	0,00 lei	0,00 lei	0,00 lei	0,00 lei
		0,00 lei		1.595.359,50 lei	0,00 lei	1.595.359,50 lei	0,00 lei	1.595.359,50 lei

Appendix 4.1: Allocation of Resources

ID	Resource Name	Work																																																																												
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Appendix 4.2: Budget report

ID	Resource Name	Type	Material Label	Cost	Work	Max. Units	Std. Rate
1	Claudiu	Work		10.801,50 lei	2.160,3 hrs	100%	5,00 lei/hr
2	Cip	Work		3.452,40 lei	1.150,8 hrs	100%	3,00 lei/hr
3	Simona	Work		3.795,30 lei	1.265,1 hrs	100%	3,00 lei/hr
4	Adi	Work		3.514,80 lei	1.757,4 hrs	100%	2,00 lei/hr
5	Crina	Work		1.149,00 lei	574,5 hrs	100%	2,00 lei/hr
6	Vasile	Work		193,20 lei	27,6 hrs	100%	7,00 lei/hr
7	computer	Material	unit	8.000,00 lei	1 unit		8.000,00 lei
8	equipment	Material	kit	1.100.000,00 lei	1 kit		1.100.000,00 lei
9	materials for FS	Material	kit	2.000,00 lei	2 kit		1.000,00 lei
10	construction	Material	kit	250.000,00 lei	1 kit		250.000,00 lei
11	furniture	Material	kit	30.000,00 lei	1 kit		30.000,00 lei
12	materials for LSU	Material	kit	175.000,00 lei	175 kit		1.000,00 lei
13	materials for QSI	Material	kit	20.000,00 lei	20 kit		1.000,00 lei

THE IMPLEMENTATION OF BIOMETRIC SYSTEMS IN ROMANIA

2nd LT Argentina- Roxana POPESCU

Abstract

In a world where security is a constant concern, being able to easily and accurately ascertain the identity of individuals is of increasing importance.

“Government and industry have a common challenge in today’s global society to provide more robust identity management tools and identify governance principles on how to deploy these tools intelligently to meet national and international standards.”

Source: National Science and Technology Council Subcommittee
on Biometrics and Identity Management, 2006

I. INTRODUCTION

BIOMETRIC recognition refers to the use of distinctive physiological (e.g., fingerprints, face, retina, voice) and behavioral (e.g., gait, signature) characteristics, called biometric identifiers (or simply biometrics) for automatically recognizing individuals. All biometric identifiers are a combination of physiological and behavioral characteristics. The objectives of biometric recognition are user convenience (e.g., money withdrawal without ATM card or PIN), better security (e.g., difficult to forge access), and higher efficiency (e.g., lower overhead for computer password maintenance).

A biometric system is essentially a pattern recognition system that recognizes a person by determining the authenticity of a specific feature of that person. A biometric system may be called either a verification system or an identification system:

a) a verification system authenticates a person's identity by comparing the captured biometric characteristic with her own biometric template(s) pre-stored in the system. Such a system either rejects or accepts the submitted claim of identity (Am I whom I claim I am?);

b) an identification system recognizes an individual by searching the entire template database for a match. It conducts one-to-many comparisons to establish the identity of the individual, without the subject having to claim an identity (Who am I?). The term authentication is also used in the biometric field, sometimes as a synonym for verification. Depending on the application, the template may be stored in the central database of the biometric system or be recorded on a magnetic card or smartcard issued to the individual. The verification task is responsible for verifying individuals at the point of access. The representation of biometric characteristic is fed to the feature matcher, which compares it against the template of a single user (retrieved from the system DB based on the user's PIN). In the identification task, no PIN is provided and the system compares the representation of the input biometric against the templates of all the users in the system database. Each biometric has its strengths and weaknesses and the choice typically depends on the application. No single biometric is expected to effectively meet the requirements of all the applications. Thus, a combination of different biometrics is necessary to develop a reliable system for person identification.

Three different biometrics for person verification and identification have been studied, improved and implemented so far, namely face, fingerprints and voice.

I. FACE RECOGNITION

Most of the approaches of face identification may be classified into two categories:

a) template-based techniques, usually performing a projection of the original (high-dimensional) images onto lower dimensional subspaces spanned by specific basis vectors. Examples include Principal Components Analysis (PCA), Linear Discriminant Analysis (LDA), and their kernel based variants. Eigenfaces represent a de facto standard for this approach and still defines a performance reference against which any new method is compared;

b) geometric feature-based techniques, relying on the identification of generic components of a face such as eyes, nose, mouth, and distances among them, followed by computation of specific local features. Elastic Graph Matching, active shape models, and Local Feature Analysis (LFA) belong to this category of tools. From another taxonomic perspective, we may identify holistic and parts-based approaches, which extract specific face "signatures" by processing the entire face image or localized portions of it.

In principle, parts-based representation offer advantages in terms of stability to local deformations, lighting variations, and partial occlusion.

II. DIGITAL FINGERPRINT IDENTIFICATION.

Automated fingerprint identification is the process of automatically matching one or many unknown fingerprints against a database of known and unknown prints. Automated fingerprint identification systems are primarily used by law enforcement agencies for criminal identification initiatives, the most important of which include identifying a person suspected of committing a crime or linking a suspect to other unsolved crimes.

Automated fingerprint verification is a closely-related technique used in applications such as attendance and access control systems. On a technical level, verification systems verify a claimed identity (a user might claim to be John by presenting his PIN or ID card and verify his identity using his fingerprint), whereas identification systems determine identity based solely on fingerprints.

With greater frequency in recent years, automated fingerprint identification systems have been used in large scale civil identification projects in the US. The chief purpose of a civil fingerprint identifications system is to prevent multiple enrollments in an electoral, welfare, driver licensing, or similar system. Another benefit of a civil fingerprint identifications system is its use in background checks for job applicants for highly sensitive posts and educational personnel who have close contact with children.

National systems for biometric identification using fingerprints - AFIS systems known as national police - are proposing the creation of an environment safe and feasible for civilian

life through cooperation between European Member States. Achieving this vision has led to a set of recommendations which call for members to use facial images, fingerprints and iris images for biometric identification methods. The recommendations listed are led to a coherent framework to deal with biometric identification. Moreover, efforts by groups of specialists ANSI and NIST have created a standard, widely recognized, accepted and followed by most countries including the EU.

The types of biometrics with which Romania will be basically concerned with are face image and fingerprint.

In Romania the first step was already made, by implementing and adopting the biometric passports in 2009 - an integrated passport solution that can be tailored to existing systems and customer requirements for secure travel documents.

II. EXECUTIVE SUMMARY

This paper presents an opportunity to assure Romanian National Security by integrating, and operating international electronic exchange of fingerprint images and data, by providing the digital fingerprint technology to the Ministry of Administration and Interior, in order to generate a win-win situation both for the Romanian state security, and for the RBS company. Due to the fact that Romania is a developing country, the economic contraction has created a negative impact among its citizens, who are highly affected by the recent lack of capital. This economic impact has also led to an increase in crimes rate.

The crime combating systems used by civilian agencies and institutions do not yield the expected results, and the state authorities are unable to provide sufficient agents to protect all points of interest.

On the other hand, we live in a global society where people have the freedom to move, interact and consume like never before and hence associated risks, the most significant of all being impersonation.

In a modern society, identity is at the core of most transactions or interactions. Identity management's rapid growth is driven by the need to manage complex identity validation and security needs in sectors like defense, healthcare, finance and human services. Presently, the initiative technologies supports – like ID cards with embedded chips, mobile devices and biometrics – are used increasingly to minimize fraud, identity theft and data loss in countries like Germany, UK, Canada, Australia.

This is the main reason why I think that there is a high need of assuring the civilian protection, by acquiring new technology in the biometric security field, such as digital fingerprint systems, face recognition systems, and to be used on large scale.

The social aspects of the use of the biometric systems – such as digital fingerprints - rises a lot of concern about the balance of privacy, personal rights, public safety and security.

II.1 Scope Statement

Identification by fingerprint is the most mature biometric method being implemented at an early level since 1960.



Fig. 1 Fingerprint reader

Reader in the picture above is used for capturing real-time fingerprint. Readers are principles-based optical, thermal or ultrasonic, but is most widely used optical reader. The resulting image is black and white, with a resolution between 500-1000 DPI. JPEG compression is not suitable for fingerprint images, so using compression formats that do not result in loss of detail, for example, TIFF format or WSQ compression algorithm.



Fig. 2 The image obtained from the reader (left) and image processed using the method 'minutiae'

Fingerprints are compared with images, but a method based on characteristic points called 'minutiae'. A fingerprint identification method based on the 'minutiae', locates points 'minutiae' and creates a map of their locations on the surface of the finger. Points 'minutiae'

are the unique characteristics of each fingerprint in part, such as termination of ridges, bifurcations and divergences.

The biometric data chosen by the customers, from the three technologies of face, fingerprint and iris recognition, are stored in a contact less cheap embedded in the passport. Some countries from Europe, Asia, Australia and America have already implementing, for several years, electronic passports containing, in addition to biographical data, elements of biometrics: facial image, fingerprints (minimum two) and, more recently, fingerprints of iris. Among these latter initiatives can be mentioned in the e-Borders program, issue of the British biometric passport. Called IRIS (Iris Recognition Immigration System) initiative allows UK citizens to receive an electronic passport, including biometrics.

Going down the same principle and taking examples from Rio de Janeiro, Germany or UK, the ID cards printed in Romania will be fully digitized using a 2D bar code with information which can be matched against its owner off-line. The 2D bar code encodes a color photo, a signature, two fingerprints, and other citizen data. This technology was already developed in 2000 in Rio de Janeiro, in order to enhance the safety of the citizens ID cards. The database will contain their fingerprints and facial contours. Upon enrolling, a citizen would be issued a new form of an identification card containing this biometrics. The law is currently in its trial period, during which enrollment is optional; pending on successful trial, enrollment would be mandatory for all citizens.

Opponents of the proposed law, including prominent priests, scientists and security experts, warned that the existence of such a database could damage both civil liberties and state security, because any leaks could be used by criminals or hostile individuals against citizens.

Making a biometric system for some users may be relatively easy, but adapting to millions of users involves more complicated issues. While checking the speed and accuracy remains essential both for a system with 100 users, and for one with 22 million, how identification will become completely different. In addition to the errors of false acceptance and false rejection, there is another type of error that pertain to the false identification (FI), in this case, a user can be associated with the wrong of another biometric records.

The error rate associated with FI will wear the name string.

The calculation method for this type of error is based on FAR and has the following formula:

$$fiRx = 1 - (1 - faR1) (x-1)$$

Where x is the number of records in the database.

III. BUSINESS CASE

The following section provides a short description of the business case summarizing the substantial business justifications.

III.1. Company Overview

The main objective of this company, named Romanian Biometric Securities (RBS), is to focus on providing biometric systems to the Ministry of Administration and Interior.

The biometric systems are digital devices which use some algorithms to recognize individual human identity, based upon one or more intrinsic physical or behavioral traits. The equipment used varies from DNA identification systems used by the Medical Industry, to fingerprints scanners, voice recognition systems, face recognition, dental biometrics, and handwritten signature verification. All of the data acquired from these devices are stored on high security databases, which are continuously updated with more information.

Our efforts rely on law enforcement tools, which will help the authorities to identify the criminals at a faster rate, and thus, to prevent them to commit new crimes.

The first milestone will be to implement the fingerprint scanner in each police station from Romania, in every city of the 323 which Romania has at this time. In addition, we will provide servers in each county, which will store all of the citizen data, including: the classic data from the ID cards, adding the biometric signature and digital fingerprints.

III.2. ORGANIZATIONAL CHART OF THE RBS COMPANY

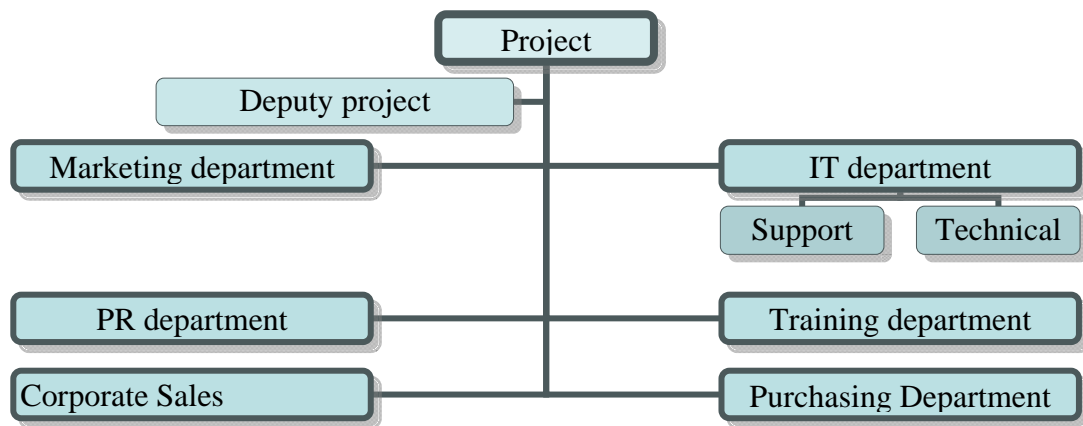


Fig.3 Organizational chart

IV. SCOPE MANAGEMENT

IV.1. Objectives, activities, deliverables

The main goal of implementing integrating, and operating international electronic exchange of fingerprint images and data on a compulsory national scale, is to assure Romanian National Security.

O1. To provide and implement the digital fingerprint technology to the Ministry of Administration and Interior by the end of 2011.

List of activities and deliverables:

That supposes to adjust a proper business plan for the RBS Company in order to integrate the concept in a smart and useful way. The main **activities in creating the business plan** are:

a) do a market research in order to understand the necessities both of the Romanian civilians and of the national security needs, needs that can be understood not only at a national level, but at a European level;

Also the market research implies the search and knowledge of the main producers and distributors of biometric systems and their reliability;

Deliverables: statistical documents and research documents in the area, main producers report

b) after the research is done, the next step would be to create the business plan in order to follow the right steps on right time;

Deliverables: the business plan

c) contacting the supplier and creating an agreement is the part where the *purchasing department* has the main responsibility

Deliverables: documents (to be signed) template, make an agreement format

d) the management team is in charge to contact project financing consultant for the project.

Deliverables: agreement format

O2. To find and use financing for the project:

List of activities and deliverables:

a) Through the management department to contact Phare funds consultant

Deliverables: application kit, agreement format

b) an Outsource Consulting Company will set up the eligibility issues of the business plan and contact Phare

Deliverables: legal documents (legal issues)

c) presenting project to Phare and obtaining the start-up funds is the Corporate Sales Department responsibility.

Deliverables: portfolio, funds.

O3. To set up an agreement with the Ministry of Administration and Interior

List of activities and deliverables:

a) to contact and present the portfolio to MAI

Deliverables: portfolio

b) to have a partnership negotiation

Deliverables: agreement negotiation format

c) to sign up an agreement

Deliverables: agreement format

d) to obtain financing from MAI.

Deliverables: documents (to be signed), funds (money)

O4. To develop the pilot project with the MAI by the end of 2010 .

List of activities and deliverables:

a). to acquire the servers and equipment for backup database

Deliverables: servers, equipment, implementation of a database

b) to connect the biometric servers to the MAI main servers

Deliverables: servers

c) to acquire the inventory

Deliverables: inventory (devices, equipment)

d) to install the fingerprint devices into the Bucharest police stations

Deliverables: fingerprint devices

e) to train the ID card personnel in the police stations

Deliverables: training kit

f) to offer technical support for the police station personnel.

Deliverables: support kit

O5. To set up a Public Relation campaign in partnership with the Ministry of Administration and Interior for informing population /civilians:

List of activities and deliverables:

a) to contact the PR personnel of MAI

Deliverables: make an agreement, sign format documents

b) to prepare the campaign information

Deliverables: establish/ follow procedures

c) to create materials for flyers

Deliverables: flyers (promotion)

d) to launch a small PR campaign for the local market

Deliverables: PR campaign, promote

e) to create and launch press conferences

Deliverables: establish/ follow procedures

d) to have television appearances to promote the security system

Deliverables: TV appearances

e) to create television spots to advertise the campaign

Deliverables: promote

O6. The last main objective is to implement the pilot project in prisons from 5 counties (Bucharest included) by the end of 2011.

List of activities and deliverables:

a) to acquire new inventory

Deliverables: equipments, devices

b) to implement the fingerprint equipment in prisons

Deliverables: equipments

c) to train the prison employees

Deliverables: training kit

d) to implement the fingerprint equipment into police stations from five other counties and train the Romanian police station personnel

Deliverables: equipments

e) to offer technical support.

Deliverables: support kit

IV.2. Financing Methods

The business plan will have two financial purposes:

- to acquire the necessary capital from the Phare funds,
- to complete the capital, if needed, in coordination with the national capital provided by the Ministry of Administration and Intern, in accordance with the *Order of Minister of Interior and Administrative Reform no.453 from April 13, 2008, approving the expenditure eligible for Administrative Capacity Development Operational Program 2007-2013, published in the Official Gazette of Romania, Part I, no. 370/15.05.2008;*

Our customer on short term is MAI. However we hold it as a self evident truth that Romanian society at large is to be the ultimate beneficiary.

IV.2. Key Benefits to Customers Ranges

For citizens

- Extending sense of safety
- Civilian protection

For end users/law enforcement institutions and agencies

- Accuracy
- Reliability
- Implementing a centralized database of fingerprints in the EU for security
- General guidance to countries/organizations acquiring, developing, integrating, and operating international electronic exchange of fingerprint images and data.

V. BIOMETRIC ID CARDS SOLUTION – A MODERNIZED ID CARD SOLUTION

One of the most well known providers, besides Bio-Key Inc. from the U.S. is MorphoTrak (Safran group) - formed in April 2009 from the merger of Sagem Morpho, Inc and Motorola's biometric division- the world leader in multibiometric technologies for fingerprint, iris and facial recognition, and an acknowledged expert in identification systems with solutions that meet a wide range of security needs for people, companies and governments worldwide, including identity management.

The biometric data chosen by our company, from the three technologies of face, fingerprint and iris recognition, are stored in a contactless chip embedded in the ID card with solutions that are fully compliant with the latest international requirements, such as the Basic Access Control (BAC) and Extended Access Control (EAC) standards.

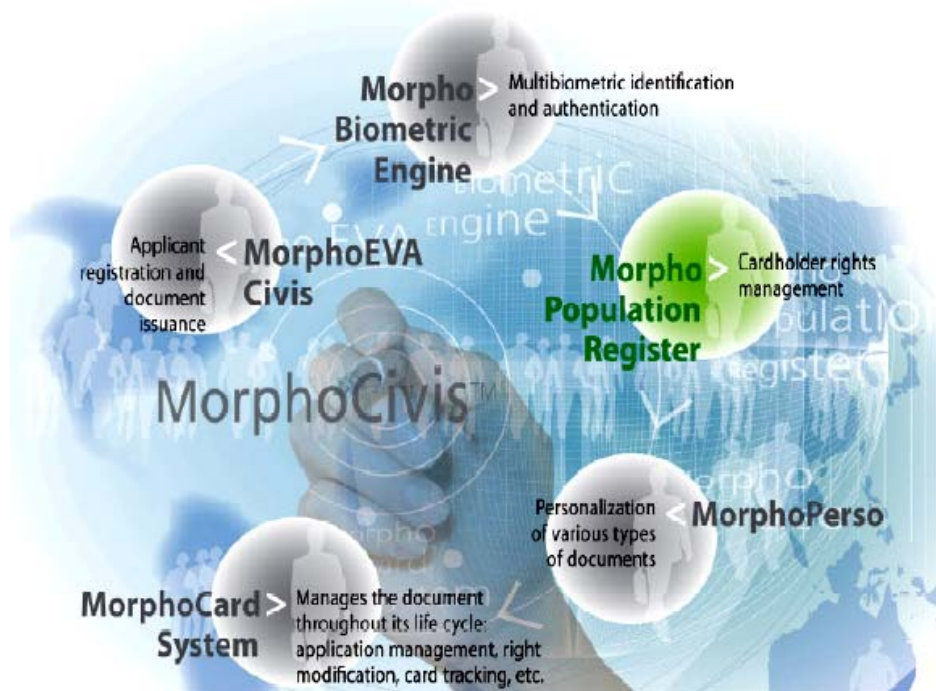
Among the very few companies in the world with full mastery of the three biometric technologies used in passports and identity management and a thorough experience in the management of very large databases, MorphoTrak and parent Sagem Sécurité have been implementing and deploying large-scale identity systems for many years. In total, Sagem Sécurité and its subsidiaries have issued 100 million ID documents, created 10,000 enrollment sites and trained 300,000 operators in more than 30 countries worldwide.

Developing and implementing the biometric system and promoting the identity management in Romania is not only a way of determine and combat the criminality, but also to prevent the national and international terrorism by creating an advanced national database that can eventually concur to the European Strategy for defense.

Finding the right producer and seller on the international market and evaluating the results from other states that already had implement the system from the same provider and making research at a national level are the main phases of a productive the market research in order to implement the pilot project of the digital fingerprint biometric system identity.

Based on these issues the RBS Company in collaboration with MorphoTrak Inc. represents the best way for this project at a national level.

The implementation of the biometric solution brings major advantages to government authorities.



MorphoPopulation Register is the central reference point that it is to be implemented, where individual rights (identity, driver's license, voting, health and welfare, passports, visas etc) are defined, stored and managed.



The end-to-end product portfolio is specifically designed to meet the unique needs of the identity management and security market. RBS Company and Morphotrak combines the latest technologies with proven expertise in biometrics, integration, implementation, and customer service to offer solutions that provide trusted identification.

With intuitive interfaces for users of any language, these solutions allow you to enroll, verify, and identify seamlessly and accurately. In addition, these innovative solutions are modularly designed to enable upgrades as system demand increases or as new technologies enter the market.

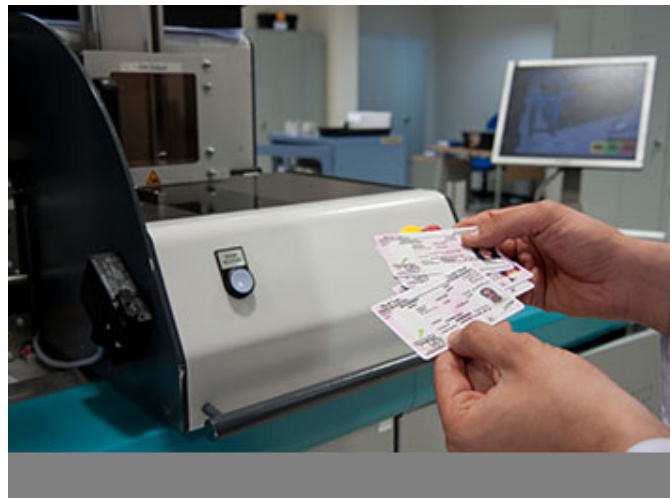


Fig. 6 Digital ID card system

VI. ENTERPRISE ENVIRONMENTAL FACTORS

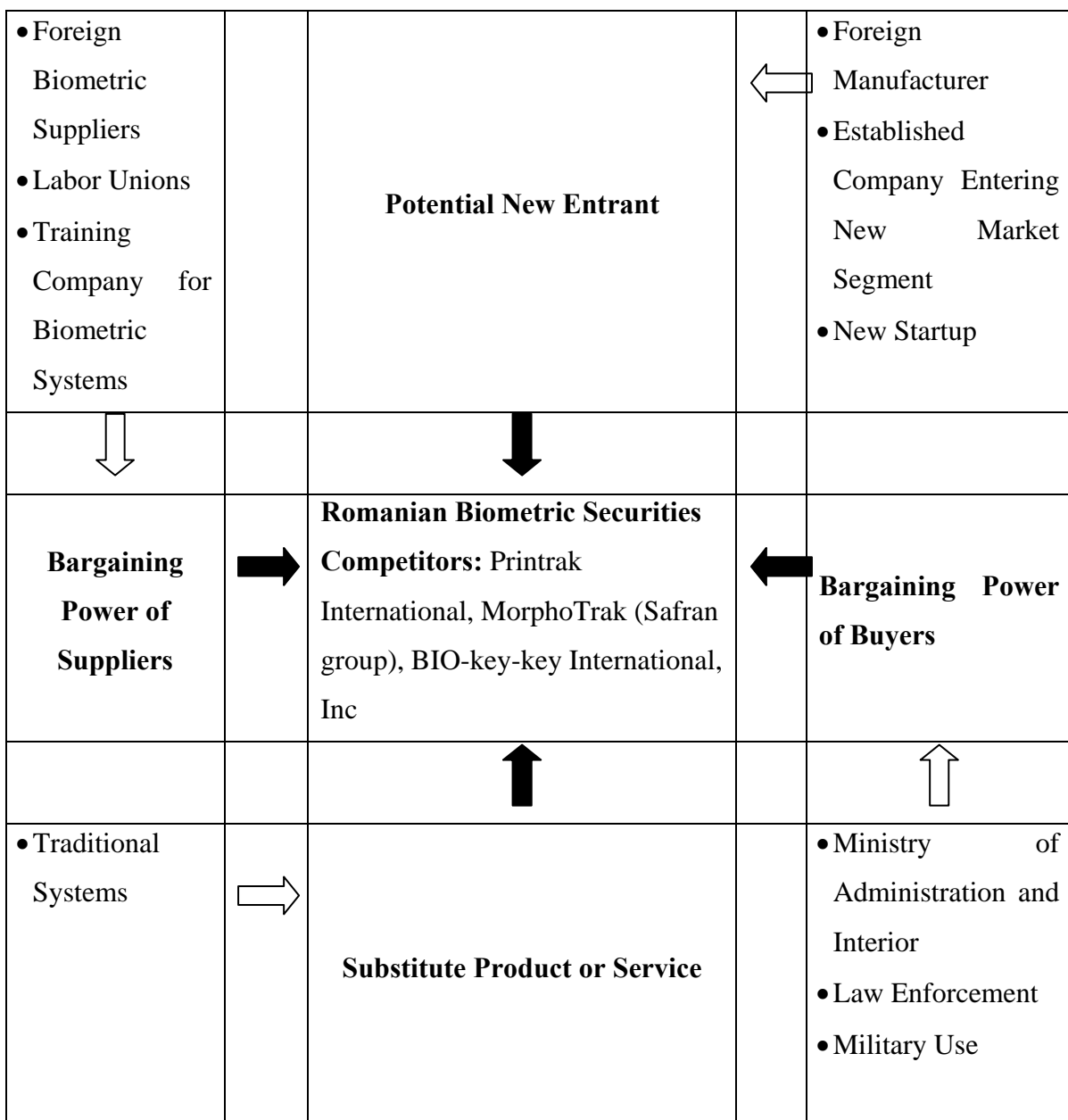
VI.1. Marketplace conditions

Security is a major concern in many facets of life today. Computer security, personal security, and homeland security have taken center stage with many people turning to technology to help protect themselves, their information, and their possessions. Biometrics has emerged as one of the most convenient, accurate, and cost-effective forms of security.

By far the most popular form of biometrics is fingerprint biometrics, which reads the identifying marks on a person's finger to authenticate them and control access to information,

a device, or a physical location. In the past, this technology was limited by cost and size -- but not any more. Fingerprint sensors that were once the size of a silver dollar and cost \$50 each are today tiny slivers of silicon costing under \$5 with projections for still lower costs in the near future. The market for fingerprint biometrics has been growing rapidly over the last few years and is estimated to reach \$5.6 billion by 2012.

Figure 1. Porter Competitive Model: *Biometric Security Systems Supplying Industry, Romania*



VI.2. Quality management for project activity results/deliverables

output /deliverable name	purpose	what is composed of	where information it is obtained from	quality criteria	The skills required to develop and test it	Date of assessment
1. statistical documents and research documents and main producers report	create an overall picture on the market and obtain information concerning the main producers of the system	market description, market survey, results, list of available producers and costs	market study, consumers to be, producers	a test plan to be developed	knowledge in the field of research and biometrics	08.03.2010-24.03.2010
2. the business plan	creating the start-up	in accordance with		business plan approval	knowledge in the field of management and development	13.03.2010-18.03.2010
3. application kit, agreement format	contact Phare funds consultant	in accordance with the company standard	producers, company's database	obtaining the European funds	consultant	02.04.2010-02.04.2010
4. documents (to be signed), founds (money)	obtain financing from MAI	portfolio, agreement with MAI		- a test plan to be developed	knowledge in the field of sales and negotiation	12.05.2010-22.06.2010
5. servers, equipment, implementation of a database	develop the pilot project with the MAI	in accordance with company's standards and national and international law	producers	acquiring, implementation and operation of the work	knowledge in the field of purchasing and IT	21.09.2010-21.10.2010

output /deliverable name	purpose	what is composed of	where information it is obtained from	quality criteria	The skills required to develop and test it	Date of assessment
6. fingerprint devices	implementing the system	equipments	producers, company	proper working and result evaluating of the product, the utility of the product	training kit in the specific area	08.11.2010-17.12.2010
7. PR campaign, image promotion	image promotion, good acceptance by the citizens	flyers, press conferences, television appearances	company in coordination with the Ministry of Administration and Interior	image promotion, good acceptance by the citizens	– knowledge in the field of promotion, advertising, handling people’s needs	10.05.2010-08.10.2010
8. training kit	training the police officers in order to handle the technology on a high level	in accordance with the producers requirements	producers and company trainers	large number of representative s of police officers in Bucharest and five other counties	specialized training in the IT area	21.01.2011-30.11.2011
9. support kit	offering technical support for the whole period since implementation and for how long it is necessary		company’s employees	assure the necessary quality for the whole period of function	special studies in accordance with the specifications of the activity	21.01.2011-30.11.2011

VI.3. Project communications management plan

Target audience	Person(s) to convey the message	When the message is conveyed	Format of a message	Message content
Marketing department	Team representative	Last week of march	written status report	<ul style="list-style-type: none"> • market description • market survey • results • list of available producers and costs
Marketing and PR department	PR team representative	October 2010	written status report meetings	<ul style="list-style-type: none"> • image promotion • creating materials for the campaign information
PR department	PR team representative	Weekly- starting March until September	Presentation Weekly reports Monthly meetings	<ul style="list-style-type: none"> • contact Ministry PR • flyers • organizing press conferences • preparing television appearances • campaign information • Project shape • Project status • Impact on customer
Corporate Sales Department	team representative	Last week of June	Weekly written status reports	<ul style="list-style-type: none"> • portfolio status • partnership negotiation status • Agreements concluded with Phare and with MAI

Target audience	Person(s) to convey the message	When the message is conveyed	Format of a message	Message content
Purchasing Department	team representative	Starting September 2010- until February 2011-or more	Monthly written status reports	<ul style="list-style-type: none"> • Acquiring devices and equipments from producers • Implementation and operation of the work
Training department	team representative	November 2010- November 2011	Weekly written reports	<ul style="list-style-type: none"> • specialized training in the IT area • training schedule • progress schedule
IT department	team representative	November 2010- November 2011	Intranet email Weekly written reports	<ul style="list-style-type: none"> • special studies in accordance with the specifications of the activity • offering technical support for the whole period since implementation and for how long it is necessary
Outsource Consulting Company	Consultant	April 2010	Weekly meetings	<ul style="list-style-type: none"> • agreement status concerning eligibility issues (of the business plan)
Ministry of Administration and Interior	Ministry representative	March 2010- as long as it is necessary	meetings video conferences	<ul style="list-style-type: none"> • Business context and benefits • Project overview • Stage overview • High level operational implications
Other Ministry/ Agencies	Ministry representative		meetings	<ul style="list-style-type: none"> • High level operational implications
State security/ or Producers	Producer representative		video conferences	-
Company management	Management representative		Weekly meetings Video conferences	<ul style="list-style-type: none"> • Project introduction • Sponsors committees • Teams and members • Project phases and deliverables • Current status • Results evaluation

VI.4. Project Risk Management

Type of Risk	Risk Conditions	Risk Description	Impact	Probability	Importance (impact X probability)	Risk mitigation strategy
Legal concerns	- Change of Minister of Administration and Interior - Eligibility issues	- Acquisition and financing laws to be changed	4	1	4	- drawing up documentation for the project and promoting it - knowledge in the field of negotiation
	- Privacy laws	Misunderstanding in attainment of a national clear law about private life	4	2	8	- a good legal documentation on a national and international level
Communications	- Customer perception/ acceptance	- Different expectations - Reluctance - low acceptance of the innovative idea	4	4	16	- educated and well-informed citizens - by using educational materials
	- Government/ political perception	- political influences	4	2	8	- application of the transparency principle
Quality	- Design difficulty	- not well defined interfaces and/or design	3	1	3	- adapting to daily needs by using database IT developers - established procedure
Human Resources	- New technology - Resource experience	- Not understanding the base of the technology completely	3	2	6	- good training courses - good documentation for whole team about the system

Integration	- MAI budget decrease/cuts	- The funds for IT acquisitions and implementation will be reduced	4	2	8	- preparing requests for Head of MAI Financial Department to approve the whole acquisition
	- Some issues about availability of Phare funds	- Obtaining lower funds than it was initially established	4	2	8	- contacting the Phare funds consultant and establish from the beginning the conditions of financing the project
Time	- Prices oscillation for IT products coming from abroad	- Poor estimation for overall project	4	3	12	- a good documentation for IT product prices - overall project approximate cost quota
	- Delays in acquisition of the inventory	- Date is being driven by external factors (transportation, weather, delivery etc)	3	3	9	- Set up a delay margin/ float
Scope	- poor knowledge concerning identity management systems	- non-acceptance of the completion of the mission, by state security point of view	5	2	10	- implementing and collaborating with other countries, concerning the identity management plan
Procurement	- Contract fit	- contract can have some open issues which could interrupt the work efforts	5	1	5	- Setting and resolve all eligibility issues
Costs	- cost controls	- difficult to obtain a proper maintenance for all the parts of the system	5	2	10	- calculating statistics the inflation rate, establish over allocated funds resources

VII. DEFINED RISKS AND SOLUTIONS/ ADVANTAGES

Biometric identification and verification systems have been in use for over 30 years, with no reported adverse health issues. Biometric identification and verification methods are non-invasive and pose no health risks.

But still new risks are being created in terms of efficiency, security and convenience of the envisaged applications

Is Big Brother watching what I do?

This is a common misconception of biometric implementations that your fingerprint is being forwarded to "Big Brother". Biometrics are simply a more private, more secure, and more convenient way for you to identify yourself to your bank, a web portal you are entering, a building you are accessing, or any of a wide variety of applications that you could enter in your daily routine that require you to establish your identity. They simply replace less secure (and more easily compromised) ID cards and PINs. Best yet, you are not required to remember (or constantly change) password or PIN numbers or carry an ID card to access the application- just touch the reader to establish your identity.

One of the biggest problems is the choice of a reliable biometric system, which is predictable in its performance and costs of ownership. Interoperability is a big concern for all, as well as performance and security, and the impact of biometric procedures at the front end processes such at embassies, consulates and border control check points.

VII.1. Stakeholder risk tolerances

Biometric-based authentication is replacing less secure, less convenient forms (such as passwords, PINs and ID cards that can be easily replicated or "compromised") for workstation, network, and domain access, single sign-on, application logon, building access, remote access to information and resources, financial transactions and Web based security systems. Utilized alone or integrated with other technologies such as smart cards, encryption

keys and digital signatures, the biometric solutions bring in the form of increased convenience and security are being recognized by security experts and the average consumer alike.

Opponents of the proposed law, including prominent priests, scientists and security experts, warned that the existence of such a database could damage both civil liberties and state Security, because any leaks could be used by criminals or hostile individuals against citizens.

Ultimately, the use of biometrics showed that consumer and end-user resistance can be significant. With that, education and awareness are critical issues in accelerating any new technology acceptance. The bottom line: Consumer and end-user resistance can sink even the best technology.

VII.2. Challenges and criticism

Consumers and their advocacy groups may consider covert tracking of users to be a violation of user privacy. Computer security experts may consider the ease of bulk parameter extraction to be a browser security hole.

The main challenge is to achieve the national roll out of the national biometric passport concept (and other biometric travel and identity documents) without introducing problems related to its large scale. These new problems would very likely fall into the category of technical problems of implementation or opposition in the context of a privacy debate. In general it can be argued that privacy enhancing technologies improve the trust of the citizens. Therefore, although privacy concerns and associated technical and regulatory solutions are delaying the process, they deserve full attention because the solutions thus found are instrumental in achieving successful implementation.

A second challenge can be found in improving the legal framework. There are several issues deriving from the current legal framework which need addressing. The prerogative here is to find a common understanding of legal issues and make this work. It has been suggested that the issuing of recommendations on privacy enhancing measures in the field of biometrics would increase rates of acceptance of the introduction of biometrics by the Romanian population, and why not, by the European population.

VII.3. Advantages and solutions

The Hague Programme EU governments have made use of the new technology applications that not only make European documents machine readable, but also involve the physical characteristics of European citizens. In the measures proposed or adopted, **biometric technology** is used to prove the linkage between an individual person and an identity document by using one or two biometric identifiers. The use of this link intended to reduce identity related *crime* and *illegal border crossing* and therefore also to detect or prevent *terrorists moving* into or throughout the European Union. For example, the use of a biometric identifier will make it difficult for a look-a-like to use a passport of another person or for an asylum seeker to apply for asylum in a second EU country when a request has been turned down in the first.

The current schemes only concern the limited use of the biometric as a means to prove a linkage between document and holder.

There should be **transparency** about the purpose for which the data may be used.

The impact on privacy had to be minimized at every stage of the process of introducing and designing a system involving biometrics.

VII.3.1. Solutions

^[1] Biometrics industry needs to educate the public to stop to ill-informed speculation on biometric technology.

The recent press coverage of biometric technology in the wake of HMRC losing 25 million records has been negative to say the least. A US academic paper proving that it is possible to partially recreate a fingerprint from unencrypted data has been quoted and more recently six leading academics have written to a Parliamentary committee to express their dismay at the way biometrics has been proposed as a means to secure data. The national biometric ID programme is back in the spotlight with few supporters.

And in the weeks preceding the HMRC data loss, a small group of concerned parents in London suggested “perverts will use (biometric) technology to track your kids”, a Shadow

Minister branded the biometric industry “worse than ID thieves”, and anti-biometrics websites run by unqualified campaigners are quoted verbatim in the national press with no attempt to seek comment from industry experts.

How is the UK biometrics industry to respond to ill-informed comment and wild speculation? The answer is simple: **Education**.

Biometrics is a fast moving, emerging technology. The challenge we faced ten years ago as biometrics began to come to market was again one of education. But opinion was more benign than it is today. The media and public were fascinated by the possibilities offered by biometrics, and our task was to explain how the science worked then speculate on possible applications.

Broadly speaking most people knows what biometrics is and has an idea how it works. But biometric technology even a year ago was not so advanced as it is today, and many media commentators are quoting facts that were relevant five years ago.

Today biometric readers are capable of returning error rates that will beat swipe cards or prox fobs hands down. The oft quoted myth that it is possible to cut off someone’s finger and use the dead finger as a key, is just that. **Myth**. Sub-dermal, multispectral imaging scans the fingerprint surface and the sub-dermal layers. It can tell if blood is pumping through the finger and if not, it will reject the scan. Another myth is the ‘spoof’ fingerprint recreated from a latent print or the authorized users own fingerprint. **Myth**. UK Biometrics has tested the J Series sub-dermal reader with over 20,000 spoof fingerprints ranging from the crude to the highly sophisticated. Not one has come close to fooling the scanner. We will continue to test spoof fingerprints and rigorously test the security of our products to ensure the myth of a gifted hacker recreating ID from stolen biometric data remains a myth.

The irony for the biometrics industry in the face of what sometimes appears to be a media onslaught, is that fact that the public, industry, Government and the military are voting with their feet. Biometric technology is protecting nurseries, schools, hospitals, the workplace, data and homes with more people signing up every day. Users, from school children and homeowners to industry bosses universally praise biometrics for its ease of use and the total security it provides.

In the face of this commercial success would be easy enough to simply ignore the media and the public debate. But a bunker mentality will not serve our industry in the long term. It is not pleasant to arrive at work and find the industry you represent branded as helping perverts, but the answer is **education and demonstration**. The thousands of users of

biometric technology throughout the UK differ from ill informed pundits in one vital respect. Adopters of biometric technology have been educated about its benefits and they have had the opportunity to ask searching questions face to face with an expert. As biometrics becomes ever more familiar technology, this group of educated users will grow. It is the duty of all in the biometrics industry to help speed and facilitate that process by engaging in the public debate, presenting the facts and *providing honest answers*.

^[1] *Opinion piece submitted by UK Biometrics Ltd Operations Director Shaun Oakes*

VII.4. Biometric Systems factors and their impact on society

Privacy is a concern of each individual, trust in any system is essential for its successful implementation.

The main non scale related **factors** are:

- the growing number of purposes for using biometrics
- the increased quality of biometric reference data
- interconnectivity with third party databases
- database ownership
- kind and level of organization that is in control of the application and data
- international data exchange (e.g. between EU Members States and/or between EU – US).

The impact on privacy had to be minimized at every stage of the process of introducing and designing a system involving biometrics.

A non-exhaustive list of requirements is needed each time you introduce a biometric system; this included a targeted implementation plan, a safe enrolment process, assessment of accuracy and efficiency of the system, continuous risk assessment, and a fall back procedure.

Large scale biometric systems have been chosen as a subject of discussion because of the (potential) impact of those systems on national communities and on European society as a whole.

A skilled and well trained front desk operator can have a significant impact on the quality, as well as a well informed and educated end user.

VIII. COSTS

One of the main immediate concerns of the Romanian information society is to find a widely acceptable, *cost-efficient*, *user friendly* and *effective solution* to the task of identification and verification of individuals which strikes the right balance between *privacy and security*.

One of the few issues that apply to traditional documents and databases is the principle of **proportionality**. Measures taken and costs involved must be proportionate to the goal they are destined to achieve. The introduction of biometrics indeed requires big investments, in terms of infrastructure on government side, and costs of obtaining a valid document for the citizen.

The costs project is presented in the appendix no.1 with detailed conclusions.

The approximate total cost for the RBS Company (including maintenance, consumables and other) is around **\$491,000**.

IX. CONCLUSIONS

The *promiscuity* of biometric implementation is not unique; magnetic stripe cards, for example, are promiscuous, but we assume that the owner of the card takes the physical responsibility of preventing unauthorized users from physically accessing the card.

So, in order to provide and accomplish the main necessity both of the citizens and governments – the need for social security and protection – biometric technology is the answer, for a better future, for a better and secure society.

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Appendix 1. Project costs - WBS

No.	Task name	Total costs
1	biometric system	\$490.927,86
2	business plan	\$3.617,60
3	market research	\$1.707,60
4	creating business plan	\$936,00
5	creating a contact with supplier	\$66,00
6	creating agreement with supplier	\$848,00
7	contacting project financing consultant	\$60,00
8	financing	\$2.290,00
9	contacting Phare funds consultant	\$36,00
10	setting up eligibility issues of the business plan	\$990,00
11	contacting Phare	\$504,00
12	presenting project to Phare	\$760,00
13	obtaining start-up funds	\$0,00
14	agreement with the Ministry of Administration and Interior	\$5.420,00
15	contacting the MAI	\$730,00
16	presenting the portfolio to MAI	\$1.460,00
17	partnership negotiation with MAI	\$830,00
18	signing up agreement with MAI	\$840,00

No.	Task name	Total costs
19	obtaining financing from MAI	\$1.560,00
20	PILOT PROJECT stage	\$117.718,50
21	acquiring the servers and equipment for backup database	\$37.535,50
22	connecting the RBS servers to the MAI main servers	\$5.848,00
23	acquiring the inventory	\$4.375,00
24	implementing the fingerprint systems into the Bucharest police stations	\$69.960,00
25	installing the fingerprint devices into the Bucharest police stations	\$61.800,00
26	training the ID card personnel in the police stations	\$2.664,00
27	offering technical support for the police station personnel	\$5.496,00
28	evaluating results	\$0,00
29	setting up a Public Relation campaign in partnership with the Ministry of Administration and Intern	\$15.056,76
30	contacting the PR personnel of MAI	\$640,00
31	brainstorming about the subject	\$1.586,00
32	preparing the campaign information	\$3.121,25
33	creating materials for flyers	\$1.942,00
34	launching a small PR campaign for the local market	\$2.000,00
35	creating press conference	\$1.548,00
36	launching press conference	\$575,00
37	television appearances to promote the security system	\$650,01
38	contacting advertising company	\$920,50
39	preparing the TV advert clip scenario	\$924,00
40	creating television spots to advertise the campaign	\$1.150,00
41	launching television spots	\$0,00

No.	Task name	Total costs
42	development stage	\$346.825,00
43	acquiring new inventory	\$198.496,00
44	implementing the fingerprint equipment in prisons	\$36.728,00
45	training the prison employees	\$3.474,00
46	implementing the fingerprint equipment into police stations from five other counties	\$84.634,00
47	training the Romanian police station personnel	\$6.741,00
48	offering technical support	\$16.752,00

Appendix 2.Resource costs

No.	Resource name	Type	Total costs
1	RBS Technical Team	work	\$10.960,00
2	RBS Support Team	work	\$13.248,00
3	RBS Training Team	work	\$12.879,00
4	RBS Marketing Department	work	\$3.984,59
5	RBS Management Department	work	\$492,00
6	RBS Corporate Sales Department	work	\$2.940,00
7	RBS Purchasing Department	work	\$2.040,50
8	RBS Public Relations Department	work	\$4.499,77
9	Outsource Consulting Company	work	\$864,00
10	Servers	material	\$60.000,00

No.	Resource name	Type	Total costs
11	Equipment	material	\$151.200,00
12	Special devices (kit)	material	\$176.400,00
13	Technical maintenance	material	\$34.500,00
14	Consumables	material	\$16.920,00

DELIVERY OF 30 INTEGRATE COMMUNICATION SYSTEMS ON T 72 TANK

Major Ilie TITA

I. BUSINESS CASE

The Romanian Land Forces intend to modernize his forces take into considerations an optimum balance between resources, actual structure and market opportunity.

From this point of view they actually use 100 T 72 tank witch have a limited communication systems witch can be affected by the electronic warfare because they use a single emission frequency.

To increase the capability tanks in new field conditions even the electronic warfare activities is important to upgrade the actual communications base on new communications technologies.

One of the solutions is to change the actual existing tank with new one but take into considerations the financial constrains this idea conduct to reduce the number of Romanian Land Forces tanks more then 75%.

In the same time, take in the consideration the last evolution in communication field the Romanian Land Forces decide to upgrade the communication systems for existing T 72 tank and maintain this system for the next 10 years.

Based on the financial limits the requirement from the Land Forces is to upgrade 30 existing T 72 tank with H external radio communication system and GD internal equipments communications systems because there are an homologated communications systems by the end-users with the communications systems supplier.

The project in composed by the 30 integrated communications systems developed by the XX Company, YY Company and ZZ Company based on the H radio communications stations and GD communications equipments.

The structure of the integrated communications systems is composed by the external communications systems made by the XX Company, internal communication systems made by the GD Company and integrations activities made by the ZZ Company.

The integration activities made by the ZZ Company consist in compatibilities test for the internal and external communications systems and technical solutions to remediate any malfunctions.

The internal communications systems consist in some radio communications stations delivered by the H Company and some integration components and activities delivered by the XX Company. The XX Company is the local representatives of the H Company and the warranties of all radio equipments delivered by this company are ensured by the XX Company.

The external communications systems made by YY Company consist in some communications equipments delivered by the GD Company and some components and activities performed by the YY Company which is in the same time the local representatives of the GD Company.

The activities of our Company are to ensure the Project Managements activities, to schedules this and to manage entire project.

These companies are competitors and have financial constrains imposed by the financial institutions which financed their activities in the past.

Taking into considerations the actual constrains existing on the market and our expertise in Project Management and good relations with the financial institutions we identify the opportunity to put together all involve parties in this matter and delivery the systems to the Romanian Land Forces.

The main idea is to sign the contract with the Romanian Land Forces as an end-user of the integrated communications systems for T 72 tanks based on the work develop by the H Company for Radio communications systems, GD Company for equipments communications systems, XX Company for integrations of radio communications systems delivered by the H Company (external communications systems), YY Company for integrations of communications equipments delivered by the GD Company (internal communications Systems) and with the ZZ Company which will integrate the communications systems made by the XX and YY Company.

II. Project scope management

II.1. Goals, objectives, activities

1. Delivery of 30 integrated communications systems installed on the T 72 platforms in accordance with the end-user requirements;

O1.1. Signed and finished the contract by our company with the Romanian Land Forces to upgrading of 30 T 72 tanks no later then 30 days after the intentions of offer was formulated;

List of Activities

Activities description

1.1.1 *Declare intention to the Romanian Land Forces to supply 30 upgrading T 72 tank with a new communication systems;*

Take into considerations the intention of Romanian Land Forces to upgrade their 30 T 72 tanks with a new communications systems the project manager will send an address to the end-user witch will declare our intention to initiate negotiation in terms to supply their systems.

The address will be sending until 01.04.2010 at the chief of the Romanian Land Forces and will conclude our intentions to be supplier for this systems and the point of view how to be conduct the negotiations in terms of time and activities.

1.1.2 *Negotiate with the Romanian Land Forces technical specifications for upgrading T 72 tank with a new communication systems;*

The technical leader and requirement analyst will conduct the negotiations with the Romanian Land Forces Representatives to identify the technical specifications for the new communications systems based on the homologated internal and external communications systems by the end-users with the our subcontractors.

The technical specifications will be modular one

List of Activities

Activities description

and will describe only the particular meters which are not clarify by the homologated systems.

The negotiations will be conduct at the end-users HQ after the Romanian chief of Land Forces will send to as the Invitation for Negotiations.

1.1.3 Negotiate with the Romanian Land Forces the delivery schedule of 30 upgrading T 72 tank with a new communication systems;

Based on the technical specifications agreed by the our company with the Romanian Land Forces and on the delivery schedules agreed with our subcontractors the Technical Leader will negotiate with the end-users the Delivery Schedule (DS).

The DS will agree the milestones, goods and services deliverables and documents signed by the end users at the end of each milestone.

1.1.4 Negotiate with the Romanian Land Force the payments schedule of 30 upgrading T 72 tank with a new communication systems;

Based on the milestones and DS agreed with the end-users and on the agreed Payments Schedules (PS) with our subcontractors the Subject Metter Expert 1 will elaborate the PS for the contracts.

First payment will be made at the beginning of the contract and will consist in 20% of the total value of the contract.

The payment made in advance will be justify during the entire project as a prorate value of the delivery goods or services.

1.1.5 Signed with the Romanian Land Forces the contracts for supply 30 upgrading T 72 tank with a new communication systems

The activity will conclude and engage bough parties in a contractual form and create the obligations for our Company to delivery 30 new communications systems for T 72 tanks in accordance with DS and for the end-users to made payments in accordance with PS.

The contract will be signed by the Project Managers form our Company and chief of Romanian Land Forces at the end-users HQ in 2 pieces, first to the end-users and second to our Company.

The contract will be signed after the DS, PS and all other matters will be agreed by bough parties.

List of Activities**Activities description**

1.1.6 Open by the Romanian Land Forces the Letter of Credit (L/C) for 30 upgrading T 72 tank with a new communication systems;

The activity will be conclude by the Financial Expert based on the letter received from the bank where the Romanian Land Forces.

The L/C will be opened no letter then 3 days from the signed contract and will be used as a warranty for as and for our supplier to ensure payments.

1.1.7 Deliver the upgrading T 72 tank with a new communication systems in accordance with delivery schedule;

The activities will be initiated when the integrations of external and internal communications systems will be certified by the ZZ Company and conclude in delivery to the end-user 30 new communications systems for T 72 tanks.

All the communications system will be delivered in a single faze by the Quality Manager Assurance based on the documents ensure by the subcontractors.

1.1.8 Receive payments from L/C opened by Romanian Land Forces in accordance with payments schedule and completed milestones;

The payments will be received from the L/C by the financial expert like:

20% of the total value of the contract 5 days after the L/C will be opened and the contract will be effective;

80% of the value, negotiated in contract, of the radio stations when the documents for the delivery of radio stations will be signed by the end-user;

80% of the total value, negotiated in contract, of the communications equipments when the documents for the delivery of communications equipments will be signed by the end-user;

80% of the total value, negotiated in contract, of the external communications systems when the documents for the delivery of external communications systems will be signed by the end-user;

80% of the total value, negotiated in contract, of the internal communications systems when the documents for the delivery of internal communications systems will be signed by the end-user;

List of Activities**Activities description**

80% of the total value negotiated in contract, of the integrated communications systems when the documents for the delivery of integrated communications systems will be signed by the end-user;

O1.2. Signed and finished the contract by our company with the H Company to delivery 30 radio stations 5800V-50W vehicular and 60 radio stations 5800V-20W vehicular in the same time with the Land Forces signed contract. The radio stations will by delivery with 5 days earlier then external communication systems will be delivery by the XX Company;

List of Activities**Activities Description**

1.2.1 Negotiate with H Company the delivery and payments schedules for 30 radio stations 5800V-50W vehicular and 60 5800V-20W vehicular;

The technical specifications and delivery schedule will be an annex to the contract and will be accepted by the Production Manager and Romanian Land Forces representatives.

The payment schedule and total value of the contract will be negotiated by the Project Manager and will take into considerations to pay the equipments after the delivery and acceptance from the end-user.

The objectives of the negotiation are to cut the initial price offer by the H Company with more 3 % and delivery terms to be in accordance with GD delivery schedule.

1.2.2 Signed the contract with H Company for delivery 30 radio stations 5800V-50W vehicular and 60 radio stations 5800V-20W vehicular;

The activity will conclude and engage bough parties in a contractual form and create the obligations for our H Company to delivery 30 radio stations 5800V-50W vehicular and 60 radio stations 5800V-20W vehicular in accordance with DS and for our company to make payments in accordance with PS.

List of Activities

Activities Description

The contract will be signed by the Project Managers from our Company and leader for East Europe of H Company or any other legal delegated authority in 2 pieces, first to our Company and second to H Company. The contract will be signed after the DS, PS and all other matters will be agreed by bough parties.

1.2.3 Use the L/C opened by the Romanian Land Forces to declare effective the signed contract with H Company;

The activity will be conclude by the Financial Expert on the letter received from the bank where the Romanian Land Forces open The L/C and will consist in a warranty assume by our Company to ensure all payments to the delivery radio communications equipments. The warranty will be send to H Company no latter then 3 day after the L/C will be opened by the Romanian Land Forces.

1.2.4 Receive the radio communications stations in accordance with delivery schedule;

The activities will be initiated when the H Company will send the invitation for receptions radio stations and will be lead by the Quality Manager Assurance Leaders.

This activity could be finished after the radio communications stations will be delivery and the end-user signed the acceptance documents for this milestone.

1.2.5 Make payments in accordance after delivery of the radio stations;

The payments will be made by our Company when the acceptance documents will be signed by the end-user and the bank accepts these documents for payment.

The activities will be lead by Financial Expert.

O1.3. Signed and finished the contract by our company with the GD Company to delivery 30 communications equipments in the same time with the Land Forces signed contract. The communications equipments will by delivery with 5 days earlier then internal communication systems will be delivery by the YY Company;

List of Activities

Activities Description

1.3.1 Ask to the GD Company to make an offer for 30 communications equipments;

Based on the technical specifications accepted by the end-users and homologated by the YY Company with the Romanian Land Forces for internal communications systems the project manager will send an address to ask the GD Company if they are available to delivery needed communications equipments for our systems and the delivery terms for this.

The request will be to delivery all the communications equipments in a single shipment as soon as possible. The request will be send to the regional commercial leader for East Europe of GD Company and will be mentioned our request to organize the negotiations in our company.

1.3.2 Negotiate with GD Company the delivery and payments schedules for 30 communications equipments with the GD Company;

The technical specifications and delivery schedule will be an annex to the contract and will be accepted by the Production Manager and Romanian Land Forces representatives.

The payment schedule and total value of the contract will be negotiated by the Project Manager and will take into considerations to pay the equipments after the delivery and acceptance from the end-user.

The objectives of the negotiation are to cut the initial price offer by the GD Company with more 3 % and delivery terms to be in accordance with H delivery schedule.

1.3.3 Signed the contract with GD Company for delivery 30 communications equipments;

The activity will conclude and engage bough parties in a contractual form and create the obligations for GD Company to delivery 30 communications equipments in accordance with DS and for our company to make payments in accordance with PS.

The contract will be signed by the Project Managers from our Company and leader for East Europe of GD Company or any other legal delegated authority in 2 pieces, first to our Company and second to GD Company.

List of Activities

Activities Description

The contract will be signed after the DS, PS and all other matters will be agreed by bough parties

1.3.4 Use the L/C opened by the Romanian Land Forces to declare effective the signed contract with GD Company;

The activity will be conclude by the Financial Expert on the letter received from the bank where the Romanian Land Forces open The L/C and will consist in a warranty assume by our Company to ensure all payments to the delivery communications equipments..

The warranty will be send to GD Company no latter then 3 day after the L/C will be opened by the Romanian Land Forces.

1.3.5 Receive the radio communications stations in accordance with delivery schedule;

The activities will be initiated when the GD Company will send the invitation for receptions radio stations and will be lead by the Quality Manager Assurance Leaders.

This activity could be finished after the radio communications stations will be delivery and the end-user signed the acceptance documents for this milestone.

1.3.6 Make payments in accordance after delivery of the communications equipments;

The payments will be made by our Company when the acceptance documents will be signed by the end-user and the banks accept this document for payment. The activities will be lead by Financial Expert

O1.4. signed and finished the contract by our company with the XX Company to delivery external communications Systems (services for 30 installations of 30 radio stations 5800V-50W vehicular and 60 radio stations 5800V-20W vehicular) in the same time with the H Company signed contract;

List of Activities

Activities Description

1.4.1 Ask the XX Company to make an offer for 30 external communications systems. The

Based on the technical specifications accepted by the end-users and homologated by the XX Company with the Romanian Land Forces for external communications

List of Activities

Activities Description

delivery schedule will be with 3 days latter then delivery schedule agreed with the H Company;

systems the Project Manager will send an address to ask the XX Company if the are available to delivery needed services to install and operate the radio communications equipments for our systems and the delivery terms for this.

The request will be send after the DS of radio communications equipments will be negotiated and accepted by the H Company and will ask to delivery all the external communications systems in a single shipment as sun is possible.

The request will be sending to the manager of XX Company and will mention our request to organize the negotiations in our company.

The radio communications stations will be BFE (Bayer for furniture) ensure by the Romanian Land Forces in accordance with the contract signed with H Company.

1.4.2 Negotiate with XX Company the delivery and payments schedules for 30 communications equipments;

The technical specifications and delivery schedule will be an annex to the contract and will be accepted by the Production Manager and Romanian Land Forces representatives.

The payment schedule and total value of the contract will be negotiated by the Project Manager and will take into considerations to pay the services after the integrations activities will be finalized by the ZZ Company.

The objectives of the negotiation is to cut the initial price offer by the XX Company with more 3 % and delivery terms to be in accordance with DS negotiated with YY Company.

1.4.3 Signed the contract with the XX Company for 30 external communications systems.

The activity will conclude and engage bough parties in a contractual form and create the obligations for XX Company to delivery 30 external communications equipments in accordance with DS and for our company to make payments in accordance with PS.

List of Activities

Activities Description

The contract will be signed by the Project Managers from our Company and manager for XX Company or any other legal delegated authority in 2 pieces, first to our Company and second to XX Company.

The contract will be signed after the contract with H Company will be signed and DS, PS or any other matters will be agreed by bough parties.

1.4.4 Receive the external communications systems;

The activities will be initiated when the XX Company will send the invitation for receptions of external communications systems and will be lead by the Quality Manager Assurance Leaders.

This activity could be finished after the external communications systems will be delivery and the end-user signed the acceptance documents for this milestone.

1.4.5 Make payments in accordance after delivery of the external communications systems;

The payments will be made by our Company when the acceptance documents for integrations of external and internal communications systems will be signed by the end-user and the bank accept this document for payment.

The activities will be lead by Financial Expert.

O1.5. signed the contract by our company with the YY Company to delivery internal communications systems (services for 30 installations of communications equipments) in the same time with the GD Company signed contract;

List of Activities

Activities Description

1.5.1 Ask the YY Company to make an offer for 30 internal communications systems. The delivery schedule will be with 3 days latter then delivery schedule

Based on the technical specifications accepted by the end-users and homologated by the YY Company with the Romanian Land Forces for internal communications systems the Project Manager will send an address to ask the YY Company if the are available

List of Activities

agreed with the GD Company;

Activities Description

to delivery needed services to install and operate the communications equipments for our systems and the delivery terms for this.

The request will be send after the DS of communications equipments will be negotiated and accepted by the GD Company and will ask to delivery all the internal communications systems in a single shipment as sun is possible.

The request will be sending to the manager of YY Company and will mention our request to organize the negotiations in our company. The communications equipments will be BFE (Bayer for furniture) ensure by the Romanian Land Forces in accordance with the contract signed with GD Company.

1.5.2 Negotiate with YY Company the delivery and payments schedules for 30 internal communications systems;

The technical specifications and delivery schedule will be an annex to the contract and will be accepted by the Production Manager and Romanian Land Forces representatives.

The payment schedule and total value of the contract will be negotiated by the Project Manager and will take into considerations to pay the services after the integrations activities will be finalized by the ZZ Company.

The objectives of th e negotiation is to cut the initial price offer by the YY Company with more 3 % and delivery terms to be in accordance with DS negotiated with XX Company.

1.5.3 Signed the contract with the YY Company for 30 internal communications systems.

The activity will conclude and engage bough parties in a contractual form and create the obligations for YY Company to delivery 30 internal communications equipments in accordance with DS and for our company to make payments in accordance with PS.

List of Activities

Activities Description

The contract will be signed by the Project Managers from our Company and manager for YY Company or any other legal delegated authority in 2 pieces, first to our Company and second to YY Company.

The contract will be signed after the contract with GD Company will be signed and DS, PS or any other matters will be agreed by bough parties.

1.5.4 Receive the internal communications systems;

The activities will be initiated when the YY Company will send the invitation for receptions of internal communications systems and will be lead by the Quality Manager Assurance Leaders.

This activity could be finished after the internal communications systems will be delivery and the end-user signed the acceptance documents for this milestone.

1.5.5 Make payments in accordance after delivery of the internal communications systems;

The payments will be made by our Company when the acceptance documents for integrations of external and internal communications systems will be signed by the end-user and the bank accept this document for payment.

The activities will be lead by Financial Expert.

O1.6. signed the contract by our company with the ZZ Company to delivery services for 30 integrations of external communications systems and internal communications systems in 3 days after the contract with XX and YY Company was signed;

List of Activities

Activities Description

1.6.1 Ask the ZZ Company to make an offer for delivery services for 30 integration of external and internal communications systems. The delivery schedule will be with

Based on the technical specifications accepted by the end-users and homologated by the ZZ Company with the Romanian Land Forces for integrated communications systems the Project Manager will send an address to ask the ZZ Company if are available to

List of Activities**Activities Description**

3 days latter then delivery schedule agreed with the XX Company and YY Company;

delivery needed services to integrate and operate the external and internal communications systems and the delivery terms for this.

The request will be send after the DS of internal and external communications systems will be negotiated and accepted by the XX and YY Company and will ask to delivery all the internal communications systems in a single shipment as sun is possible.

The request will be sending to the manager of ZZ Company and will mention our request to organize the negotiations in our company.

The internal and external communications systems will be performed by the XX and YY Company and the integrations communications system consist in an analysis on compatibilities between bough communications systems. If there are any discrepancy in terms of compatibility the ZZ Company will identify the deficiency and will request to XX or YY Company to remedies this.

1.6.2 Negotiate with ZZ Company the delivery and payments schedules for 30 integrated external and internal communications systems;

The technical specifications and delivery schedule will be an annex to the contract and will be accepted by the Production Manager and Romanian Land Forces representatives.

The payment schedule and total value of the contract will be negotiated by the Project Manager and will take into considerations to pay the services after the Romanian Land Forces will signed the finial acceptance documents.

The objectives of the negotiation is to cut the initial price offer by the ZZ Company with more 3 % and delivery terms to be in accordance with DS negotiated with XX and YY Company.

List of Activities

Activities Description

1.6.3 Signed the contract with the ZZ Company for 30 integration of external and internal communications systems;

The activity will conclude and engage bough parties in a contractual form and create the obligations for ZZ Company to delivery 30 integrated communications systems for T 72 tanks in accordance with DS and for our company to make payments in accordance with PS.

The contract will be signed by the Project Managers from our Company and manager for ZZ Company or any other legal delegated authority in 2 pieces, first to our Company and second to ZZ Company.

The contract will be signed after the contracts with XX and YY Company will be signed and DS, PS or any other matters will be agreed by bough parties.

1.6.4 Receive the integration of external and internal communications systems;

The activities will be initiated when the ZZ Company will send the invitation for receptions of integrated communications systems and will be lead by the Quality Manager Assurance Leaders.

This activity could be finished after the integrated communications systems will be delivery and the end-user signed the acceptance documents for final delivery.

1.6.5 Make payments in accordance after delivery of the integrated of external and internal communications systems;

The payments will be made by our Company when the final acceptance documents will be signed by the end-user and the banks accept this document for payment.

The activities will be lead by Financial Expert.

2. Maximize profit for the company using only the human resources necessary, without financial resources ensure by the company.

O2.1 the value of the contract signed with the Romanian Land Forces will be more then total value of the contracts signed with our subcontractors will more then 10%;

List of Activities

Activities Description

2.1.1 Negotiate the price with H Company;

The activity will be lead by the Project Manager with the support of financial expert and the internal objectives will be to reduce the value of the H company offer with more then 3%.

The negotiation of the price will take place after the DS and PS will be agreed in the same place with the contractual negotiations.

2.1.2 Negotiate the price with GD Company;

The activity will be lead by the Project Manager with the support of financial expert and the internal objectives will be to reduce the value of the GD company offer with more then 3%.

The negotiation of the price will take place after the DS and PS will be agreed in the same place with the contractual negotiations.

2.1.3 Negotiate the price with XX Company;

The activity will be lead by the Project Manager with the support of financial expert and the internal objectives will be to reduce the value of the XX company offer with more then 3%.

The negotiation of the price will take place after the DS and PS will be agreed in the same place with the contractual negotiations.

List of Activities

Activities Description

2.1.4 Negotiate the price with YY Company;

The activity will be lead by the Project Manager with the support of financial expert and the internal objectives will be to reduce the value of the YY company offer with more then 3%.

The negotiation of the price will take place after the DS and PS will be agreed in the same place with the contractual negotiations.

2.1.5 Negotiate the price with ZZ Company;

The activity will be lead by the Project Manager with the support of financial expert and the internal objectives will be to reduce the value of the ZZ Company offer with more then 3%.

The negotiation of the price will take place after the DS and PS will be agreed in the same place with the contractual negotiations.

2.1.6 Negotiate the price with Romanian Land Forces;

The activity will be lead by the Project Manager with the support of financial expert and the internal objectives will be to increase the value of our offer with more then 10% then total value of the our subcontractors payments.

The negotiation of the price will take place after the DS and PS will be agreed in the same place with the contractual negotiations.

2.1.7 Make financial analysis;

This scope of this activities is to analyze and demonstrate the ratability of the project and to establish if this project will be stop or not and what is the profit expectation.

The activity will be performed by the financial manager, inside the company, based on the results of the price negotiations with the all parties involve in the projects.

O2.2 as a preliminary requirement from our company will be the condition to be allowed 10% advance payments, L/C payments method and milestone payments

List of Activities

Activities Description

2.2.1 Evaluate the deliverables goods and services and cash-flow needed for the subcontractors in accordance with the negotiated offers;

Based on the DS negotiated with the subcontractors the Project Manager will negotiate with the Romanian Land Forces the delivery goods and services, documents for certifications of deliveries, the value of the goods and services delivered and the payments value.

The payments value will ensure the cash-flow needed to our Company to pay the subcontractors and to realize the profit sooner possible.

To avoid any financial risk expose of our Company the Project Manager will evaluate the cash-flow and the advance payment will be permitted for our Company.

2.2.2 Describe milestone, payments value of each milestones and the good and services deliverables;

The deliveries of the subcontractors will be considered milestones payments and the value of each payments will cover more then our financial obligation to the subcontractors.

Each delivery of our subcontractors will be taking into considerations only if it is an agreed one by the end-user.

2.2.3 Establish the value of the L/C and the bank validity of it;

The validity of L/C will be established by the financial expert based on the total value of milestones and the payments schedules derived from the subcontracts.

III. Project time management

The culture of our Company is to use the Project Managements skills and Team Managements spirits developed during the time by our employ without any financial risk exposure or additional responsibilities.

At the same time the most important thing is to use the good relations develop during the time by our Company with all our partners and subcontractors take into considerations good relations with financial market.

Our Company is a functional organization and team member involve in all projects are collocated from the existing structure. The Project Manager is responsible for budget program, work assignments persons and the motivations methods used inside the team.

For this project the teams members will be collocate from the technical compartment, financial compartment, quality compartment, project management compartment or any other compartments request by the Program Manager.

Project time management is illustrate in Gantt chart from **Appendix 1**

Period of time needed to accomplish our project is 32 days, which is a short period of time with small currency deviations.

IV. Project human resource management

Based on our Company culture it is not necessary to allocate any additional resources to increase the human resources quality.

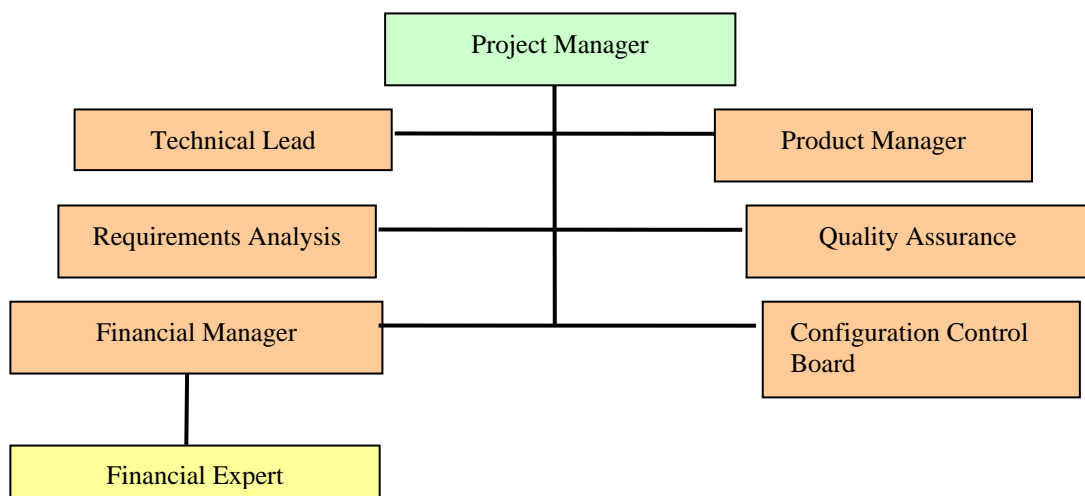
All administrative matter is covered by our Company and not involves any additional costs base on the company structure culture organization.

Total number of the team member allocated and necessary skills for this project are represented in the **Table 1**.

Table 1

Resource type	Position	Number	Skills
Human resources	Project Manager	1	System engineering skill in radio communications field
	Product Manager	1	Technical skill in radio communications field
	Technical Lead	1	Technical skill in radio communications field
	Requirements Analyst	1	Technical skill in radio communications field
	Configuration Control Board	1	Technical skill in radio communications field
	Configuration Management Manager	1	Technical skill in radio communications field
	Quality Assurance Manager Coordinator	1	Skills in quality and radio communications field
	Financial manager	1	Financial training and abilities
	Financial expert	1	Financial skills

IV. 1. Organizational chart



IV. 2. Responsibility matrix

Named activities/position	Project Manager	Product Manager	Technical Lead	Requirements Analyst	Configuration Control Board	Configuration Management Manager or Coordinator	Quality Assurance Manager, Coordinator, or Engineer	Financial manager	Financial expert
Declare intention to the Romanian Land Forces to supply 30 upgrading T 72 tank with a new communication systems	R	C	A	C	C	C	C	C	I
Negotiate with the Romanian Land Forces technical specifications for upgrading T 72 tank with a new communication systems	C	C	R	A	C	C	I	I	I
Negotiate with the Romanian Land Forces the delivery schedule of 30 upgrading T 72 tank with a new communication systems	C	C	R	A	C	C	I	I	I
Negotiate with the Romanian Land Force the payments schedule of 30 upgrading T 72 tank with a new communication systems	C	I	R	I	I	I	I	I	A
Ask to the H Company to make an offer for 30 radio stations 5800V-50W vehicular and 60 5800V-20W vehicular	R	C	A	C	C	C	C	C	I
Negotiate with H Company the delivery and payments schedules for 30 radio stations 5800V-50W vehicular and 60 5800V-20W vehicular	R	C	A	C	C	C	I	I	C
Ask to the GD Company to make an offer for 30 communications equipments	R	C	A	C	C	C	C	C	I
Negotiate with GD Company the delivery and payments schedules for 30 communications equipments with the GD Company	R	C	A	C	C	C	I	I	C
Ask the XX Company to make an offer for 30 external communications systems.	R	C	A	C	C	C	C	C	I

Named activities/position	Project Manager	Product Manager	Technical Lead	Requirements Analyst	Configuration Control Board	Configuration Management Manager or Coordinator	Quality Assurance Manager, Coordinator, or Engineer	Financial manager	Financial expert
Signed with the Romanian Land Forces the contracts for supply 30 upgrading T 72 tank with a new communication systems	R	I	A	I	I	I	I	I	I
Open by the Romanian Land Forces the Later of Credit (L/C) for 30 upgrading T 72 tank with a new communication systems	I	I	I	I	I	I	I	R	A
Signed the contract with H Company for delivery 30 radio stations 5800V-50W vehicular and 60 5800V-20W vehicular	R	I	A	I	I	I	I	I	I
Use the L/C opened by the Romanian Land Forces to declare effective the signed contract with H Company	I	I	I	I	I	I	I	R	A
Signed the contract with GD Company for delivery 30 communications equipments	R	I	A	I	I	I	I	I	I
Use the L/C opened by the Romanian Land Forces to declare effective the signed contract with GD Company	I	I	I	I	I	I	I	R	A
Signed the contract with the XX Company for 30 external communications systems	R	I	A	I	I	I	I	I	I
Signed the contract with the YY Company for 30 internal communications systems	R	I	A	I	I	I	I	I	I
Signed the contract with the ZZ Company for 30 integration of external and internal communications systems	R	I	A	I	I	I	I	I	I
Deliver the upgrading T 72 tank with a new communication systems in accordance with delivery schedule	C	C	A	C	C	C	R	I	I
Receive payments from L/C opened by Romanian Land Forces in accordance with payments schedule and completed milestones	I	I	I	I	I	I	I	R	A
Receive the radio communications stations in accordance with delivery schedule	C	C	A	C	C	C	R	I	I

Named activities/position	Project Manager	Product Manager	Technical Lead	Requirements Analyst	Configuration Control Board	Configuration Management Manager or Coordinator	Quality Assurance Manager, Coordinator, or Engineer	Financial manager	Financial expert
Make payments in accordance after delivery of the radio stations	I	I	I	I	I	I	I	R	A
Receive the radio communications equipment in accordance with delivery schedule	C	C	A	C	C	C	R	I	I
Make payments in accordance after delivery of the communications equipments	I	I	I	I	I	I	I	R	A
Receive the external communications systems	C	C	A	C	C	C	R	I	I
Make payments in accordance after delivery of the external communications systems	I	I	I	I	I	I	I	R	A
Receive the internal communications systems	C	C	A	C	C	C	R	I	I
Make payments in accordance after delivery of the internal communications systems	I	I	I	I	I	I	I	R	A
Receive the integration of external and internal communications systems	C	C	A	C	C	C	R	I	I
Make payments in accordance after delivery of the integrated of external and internal communications systems	I	I	I	I	I	I	I	R	A

Details:

- R - responsibility, only one R per task
- A - accountability
- C - consultation
- I - informed

V. Project communication management

Main reason of the communications management process is to determine the information and communications need to stakeholders based on their interest and the importance of their influence for project.

For this reason it is important to develop information management plans which include more then:

- description of a collection and filing structure for gathering and storing various types of information;
- distribution structure describing what information goes to whom, when, and how;
- format for communicating key project information;
- project schedule for producing the information.

As a first step in the activity to elaborate the communication managements plan t is to identify the stakeholders and the reason and intensity for their interest in the project. After that it is important to identify the stage of interest and the field of their interest.

Based on this information and the activities schedule will identify the moments when the each stakeholders will be inform and structure of the needed information.

For our project, based on the culture of our company, all the information will be send to the external (official) stakeholders under Project Manager authority and inside of our Company the information will be send by the accouter of each activity.

The moments for each communications activities will be at the beginning and the end of each activities refer.

The entire official letter used will be in accordance with the contractual annexes.

The e-mail used in the interior of our Company or between our team members will be in accordance with the software format use and include all relevant information considered by the responsible person to be communicated.

The project communication management plan is illustrated in **Table 2**.

Table 2: Project communications plan

Stakeholders	Influence level	Moments of interest	Expectation	Int. exp.	Moments/Activities	Format	Responsibility
Romanian Land Forces	D, E	P, C, CL	C S	m h	1.1.4;1.1.3, 1.1.7,1.2.5, 1.3.5,1.4.4, 1.5.4, 1.6.4	Official Letter	P.M.
Our Company	I,D,E	P,C, CL	C S	h h	1.1.4,1.1.8, 1.2.6,1.3.6, 1.4.5,1.5.5, 1.6.5,2.1.1, 2.1.2,2.1.3, 2.1.4, 2.1.5 2.1.6, 2.1.7 1.1.3,1.1.7, 1.2.5,1.3.5, 1.4.4,1.5.4, 1.6.4	Email	A person from RACI
H Company	P,E	P, E, CL	C S	h m	2.1.1, 1.2.2 1.2.6,1.2.1, 1.2.5	Official Letter	P.M.
GD Company	P,E	P, E, CL	C S	h m	2.1.2, 1.3.2 1.3.6,1.3.1, 1.3.5	Official Letter	P.M.
XX Company	P,E	P, E, CL	C S	h m	2.1.3, 1.4.2 1.4.5,1.4.1, 1.4.4	Official Letter	P.M.

Stakeholders	Influence level	Moments of interest	Expectation	Int. exp.	Moments/Activities	Format	Responsibility
YY Company	P,E	P, E, CL	C S	h m	2.1.4, 1.5.2 1.5.5 1.5.1, 1.5.4	Official Letter	P.M.
ZZ Company	P,E	P, E, CL	C S	h m	2.1.5, 1.6.2 1.6.5 1.6.1, 1.6.4	Official Letter	P.M.
Team Project	P,I,E	P, C, E, CL	Q S	m h	At the end of each activities	E-mail	A person form RACI

Description of:

- *Influence level* - P- performer, I – influencer, D - decision maker, E - technical or subject matter expert, N nonessential to the project but interested in it;
- *Moments of interest* - P - planning, E - execution, C - controlling, CL - closing, O - operating A - equally in all phases;
- *expectations/concerns* – C - cost, Q - quality, S – schedule;
- *rating* - h - high, m - medium, l – low;

VI. Project cost management

To elaborate the cost management process is important to know boundaries and constrains, historical elementary costs or any other methods for cost estimations based on company policy in this field, the Work Breakdown Structure and resources from our disposal.

Usually the main steps describe by the SAS/RTO 028 Task Group are:

- identify the stages for chosen Life Cycle Model;
- identify the goods and services which will be derived by the project for each life cycle stage;
- identify the activities develop for each good or service take into consideration each stage of Life Cycle;
- identify the resources needed for each activity;

In practice the steps are usually assisted by the lists of potential resources, activities and goods or services.

VI.1. List of resources

List of resources needed to be accounted in this project based on the company policy is shown in **Table 3**

Table 3: List of resources

Resource type	Named	Number
Human resources	Project Manager	1
	Product Manager	1
	Technical Lead	1
	Requirements Analyst	1
	Configuration Control Board	1
	Configuration Management Manager or Coordinator	1
	Quality Assurance Manager, Coordinator, or Engineer	1
	Financial manager	1
Equipments	Financial expert	1
	Computer	9
	Laptop	9
Material	Paper	3,6
	Toner	3,6
	Radio communications station 5800V-50W vehicular	30
	Radio communications station 5800V-20W vehicular	60
	Communications equipments	30
	External communications systems	30
	Internal communications systems	30
	Integration of external and internal communications systems	30
	Official diner	1
	Travel ticket	5
	Accommodations	9

VI.2 Cost of resources

Table 4: Human Resources Costs

Named and position	Number of work hours	Unitary cost	Total cost
Project Manager	24,08h	15,00 lei/h	361,25 lei
Product Manager	5,78h	14,00 lei/h	81,03 lei
Technical Lead	72,1h	14,00 lei/h	1.009,43 lei
Requirements Analyst	36,78h	13,00 lei/h	478,13 lei
Configuration Control Board	16,3h	11,00 lei/h	179,31 lei
Configuration Management Manager or Coordinator	11,5h	11,00 lei/h	126,44 lei
Quality Assurance Manager, Coordinator, or Engineer	7,15h	11,00 lei/h	78,60 lei
Financiar manager	2,2h	14,00 lei/h	33,00 lei
Financial expert	31,08h	15,00 lei/h	435,17 lei
TOTAL cost estimating			2.782,36 lei

Estimating cost for materials

Table 5

Description	Proposed supplier	Qty	Quoted currency	Exchange rate	Unitary price	Value
Paper	Free market	4	Lei	N/A	20	80 lei
Toner	Free market	4	Lei	N/A	300	1200 lei
Radio communications station 5800V-50W vehicular	H Company	30	USD	3,2 lei/USD	35.000	3.360.000 lei
Radio communications station 5800V-20W vehicular	H Company	60	USD	3,2 lei/USD	30.000	5.760.000 lei
Communications equipments	GD Company	30	GBP	4,9 lei/GBP	40.000	5.880.000 lei
External communications systems	XX Company	30	Lei	N/A	25.000	750.000 lei
Internal communications systems	YY Company	30	Lei	N/A	15.000	450.000 lei
Integration of external and internal communications systems	ZZ Company	30	Lei	N/A	5.000	150.000 lei
Official diner	Free market	1	Lei	N/A	3.000	3.000 lei
Travel ticket	Free market	5	Euro	4,35 lei/Euro	250	5.437,5 lei
Accommodations	Free market	9	USD	3,2 lei/USD	150	4.320 lei
TOTAL estimated value						16.364.037,05

The policy of our Company is not to compute the value of equipments used because this equipments means investments made by the company in past.

The requirements of our Company to have a profit more than 10% from the total amount of our subcontractors value impose the total value of the contract signed by our Company with the Romanian Land Forces will be more than 17.985.000 lei.

At the same time, the requirements of our Company to avoid any financial risks determine to use advance payments from the Letter of Credit opened by the Romanian Land Forces in an International Bank. This condition and the other conditions imposed by the activity 1.1.8 generate the image of the estimated cash-flow described in the **Table 6**.

Table 6: estimated cash-flow

Moments of delivery	T0	T0+L1	T0+L2	T0+L3	T0+L4	T0+L5	TOTAL
Details of delivery	Enforce Contract	Delivery radio stations	Delivery communications equipments	Delivery external communications systems	Delivery internal communications systems	Delivery integrated communications system	
Earn value	3.597.000,00	8.025.600,00	5.174.400,00	660.000,00	396.000,00	132.000,00	17.985.000,00
Earn Cash-flow	3.597.000,00	11.622.600,00	16.797.000,00	17.457.000,00	17.853.000,00	17.985.000,00	
Payments	14.037,50	9.120.000,00	5.880.000,00	750.000,00	450.000,00	150.000,00	16.364.037,50
Payment cash flow	14.037,50	9.134.037,50	15.014.037,50	15.764.037,50	16.214.037,50	16.364.037,50	
Balance cash-flow	3.582.962,50	2.488.562,50	1.782.962,50	1.692.962,50	1.638.962,50	1.620.962,50	1.620.962,50
Details:							
- T0 - effective date of the contract between Romanian Land Forces and our Company							
- T0+L1- planed date to delivery radio communications stations by the H Company							
- T0+L2 - planed date to delivery communications equipments by the GD Company							
- T0+L3 - planed date to delivery external communications systems by the XX Company							
- T0+L4 - planed date to delivery internal communications systems by the YY Company							
- T0+L5 - planed date to delivery integrated communications systems by the ZZ Company							

Based on the initial estimations regarding the exchange rate for all currency used in the contract it is possible to make a financial analysis in accordance with the international market trends. In this case if the exchange rate of the USD, GBP and EURO increase with more than 5% the profits of our Company decrees to 5.08%, but the financial risk exposure do not increase.

VII. Project quality management

Quality management process describes all activities needed to conduct the quality activities and to determine the same satisfactions of our stakeholders with similar product delivered last time.

Based on the deliverable products request by our stakeholders the Quality Management Plan is scheduled in Table 7.

Table7: Quality Management Plan

Requirements	Deliverables	Outline	Responsibility/Moment
Establish with the Romanian Land Forces technical specifications for upgrading T 72 tank with a new communication systems	Technical specifications	<ul style="list-style-type: none"> -Technical specifications represents a documents witch include all operational requirements asked by the end-users and transformed in technical needed; - Technical specifications consist of 6 parts: <i>radio stations technical specifications; equipments for communications systems technical specifications; external communications systems technical specifications; internal communications systems technical specification; integrate communications systems technical specifications.</i> - Each parts will be elaborate based on the homologated technical specifications accepted by the end-user and the subcontractors; 	Requirements analyst – at the end of activities 1.1.2, 1.2.2, 1.3.2, 1.4.1, 1.5.1, 1.6.1
Establish with the Romanian Land Forces technical specifications for upgrading T 72 tank with a new communication systems	Technical specifications	<p>The structure of the documents will be in accordance with the standard STP MIL 97352 used by the RoMOD to elaborate Technical Specifications; In additions, the Technical Specifications will include a traceability chart witch reflect all requirements of the end-users;</p> <ul style="list-style-type: none"> - The quality criteria will be considered pass only if the cheek list included in the standards STP MIL 97352 is completed and signed by the all requested representatives from the our Company. - The Technical Specifications could be consider assessed when the end-user accept and signed that document. 	Requirements analyst – at the end of activities 1.1.2, 1.2.2, 1.3.2, 1.4.1, 1.5.1, 1.6.1

Requirements	Deliverables	Outline	Responsibility/Moment
Financial analysis for project profits	Financial Report	<ul style="list-style-type: none"> - The Financial Report is a document which concludes the value of the expected profits, cash-flow schedule and the moments when the expected profits could be considered realized; - The structure of the Financial Report will consist of 3 parts: financial analysis – expected profits, cash-flow chart, financial balance and any other relevant analysis considered by the Financial Manager; premises and risks elements – premises take into considerations, identifications of risks elements, quantifications and evaluations of this and the influences on the profits; collected data based on the contractual forms; - Parts 3 – collected data will include the delivery schedule, payments schedule, milestone definitions, L/C validity and value from the contracts signed with the subcontractors (C1, C2, C3, C4, C5) and Romanian Land Forces (EU); - The Financial Reports will be elaborate based on the accepted software platform used in our Company; - The quality criteria is considered pass when all schedule populate the accepted software platform by the financial experts and the financial manager certify this activity; - The activity could be considered pass if the expected profit is more than 10%, the cash-flow expected is all time positive and the moments for maturity profits is no later than at the end of the projects. 	Financial manager – at the end of activities 2.1.7
Deliver the upgrading T 72 tank with a new communication systems in accordance with delivery schedule	30 tank with a new communication systems	<ul style="list-style-type: none"> - Delivery the upgrading T 72 tanks with new communications systems consist in delivery of 30 integrations communications systems based on the signed contracts with ZZ Company using the previous deliveries goods (radio stations, communications equipments, external communications systems and internal communications system) accepted by the end-user (as a results of milestones from the EU contract); - The new communications systems will be in accordance with the Technical Specifications appendix to the EU contract and will be based on the technology accepted by the end-users; 	Quality manager Assurance Leader – at the end of activities 1.1.7, 1.2.5, 1.3.5, 1.4.4, 1.5.4, 1.6.4
Deliver the upgrading T 72 tank with a new communication systems in accordance with delivery schedule	30 tank with a new communication systems	<ul style="list-style-type: none"> - The quality criteria is passed when the acceptance procedure, in accordance with homologated systems, is passed; - Because the integrated communications systems is homologate the acceptance activity will be develop on a single platform; - The activity is considered finished when the end-user signed the next documents: the acceptance documents for entire lot; the conformity document elaborate by the ZZ company; - the reception documents; the invoice is accepted and recognized by the end-user; the warranty certificate for each systems are signed by the ZZ Company. 	Quality manager Assurance Leader – at the end of activities 1.1.7, 1.2.5, 1.3.5, 1.4.4, 1.5.4, 1.6.4

VIII. Project risk management

Risk management process describe all activities needed to conduct the project to understand potential problems, the effect of this and how to avoid or to minimize the effect of identify risks and how much cost involve.

For this project, in accordance with the stakeholder interests and deliverables goods and services the main risks identified are:

- Increase the const of the integrated communications systems over then planed value of the Romanian Land Forces determines the end-user to reduce the quantity or to find additional money for this acquisition.
 - Stakeholders – Romanian Land Forces;
 - Risk categories – Cost;
 - Risk conditions – lack of planning
 - Impact – 2 from a scale from 1-5;
 - Criteria of appreciation – minimized;
 - Probability – 0,2;
 - Importance – 0,4
 - Level of acceptance from stakeholders- 1
 - Risk mitigation measure
 - in the content of the Letter for intentions (see the WBS) send to the Romanian Land Forces will be included the main conditions witch will be take into considerations during the negotiations;
- Increase the execution phase over the scheduled date from the project, more then 5 days determine the end-user to reduce the level of operations troops.
 - Stakeholders – Romanian Land Forces;
 - Risk categories – Time;
 - Risk conditions – lack of integrations management systems
 - Impact – 4 from a scale from 1-5;
 - Criteria of appreciation – minimized;
 - Probability – 0,2;
 - Importance – 0,8
 - Level of acceptance from stakeholders – 1
 - Risk mitigation measure

- during the negotiation activities (see the WBS) with the Romanian Land Forces and the subcontractors use realistic deliveries terms and at the begin and finish moment of each activities during the execution phase inform the end-user and all subcontractors about status of activities and necessary supplementary requirements in terms on delivery moments;
 - in the contents of the each contracts signed (see the WBS) with our subcontractors, mention value of penalties equal with the penalties calculate by the end-user to our Company, if the delivery terms in passed more then 1 day (1 day multiply by 5 subcontractors determine maximum 5 delay days);
- Reduce quality of the integrate communications systems delivered to the end-user by our subcontractors less then quality of homologated system determine the inutility of the systems and reduce the effectiveness level of T 72 tanks
 - Stakeholders – Romanian Land Forces;
 - Risk categories – Quality;
 - Risk conditions – lack of quality managements systems used by the subcontractors
 - Impact – 4 from a scale from 1-5;
 - Criteria of appreciation – maximized;
 - Probability – 0,05;
 - Importance – 0,2
 - Level of acceptance from stakeholders – 0,5
 - Risk mitigation measure
 - ask to the subcontractor to use homologated technology with the Romanian Land Forces and make supplementary audit for third part to the subcontractors (see the WBS);
 - ask to the subcontractor to present certificates of conformity for each raw material used in technological process and delivered the final products only with the certificate of conformity(see the WBS);
 - include in the contents of the contracts signed with the subcontractors conditions for financial penalties in case of malfunctions equal with the total expenditure supported by the end user in this case (see the WBS);

- Reduce the profit of our Company more than 10 % determine to stop the project or to reduce the internal costs through salaries reductions for the employ.
 - Stakeholders – Our Company;
 - Risk categories – Cost;
 - Risk conditions – lack of financial analysis
 - Impact – 4 from a scale from 1-5;
 - Criteria of appreciation – maximized;
 - Probability – 0,1;
 - Importance – 0,5
 - Level of acceptance from stakeholders – 0,8
 - Risk mitigation measure
 - signed the contract only after the financial analysis was accepted by our Company based on the accepted offers formulated by our suppliers and negotiated price with the Romanian Land Forces (see the WBS);
 - include in the content of the contract signed with the Romanian Land Forces conditions for upgrading unitary price in case of increasing interest rate (see the WBS);
 - ask to the Romanian Land Forces to opened a L/C for entire value of the contract in an international bank and request advance payments for our subcontractors (see the WBS).

- Increase the financial risk exposure for our Company has implications in new future contracts
 - Stakeholders – Our Company;
 - Risk categories – Risk;
 - Risk conditions – lack of financial analysis
 - Impact – 4 from a scale from 1-5;
 - Criteria of appreciation – minimized;
 - Probability – 0,08;
 - Importance – 0,32
 - Level of acceptance from stakeholders – 0,5
 - Risk mitigation measure
 - use the L/C opened by the Romanian Land Forces as a payment warranty for our subcontractors and the total value of the remained

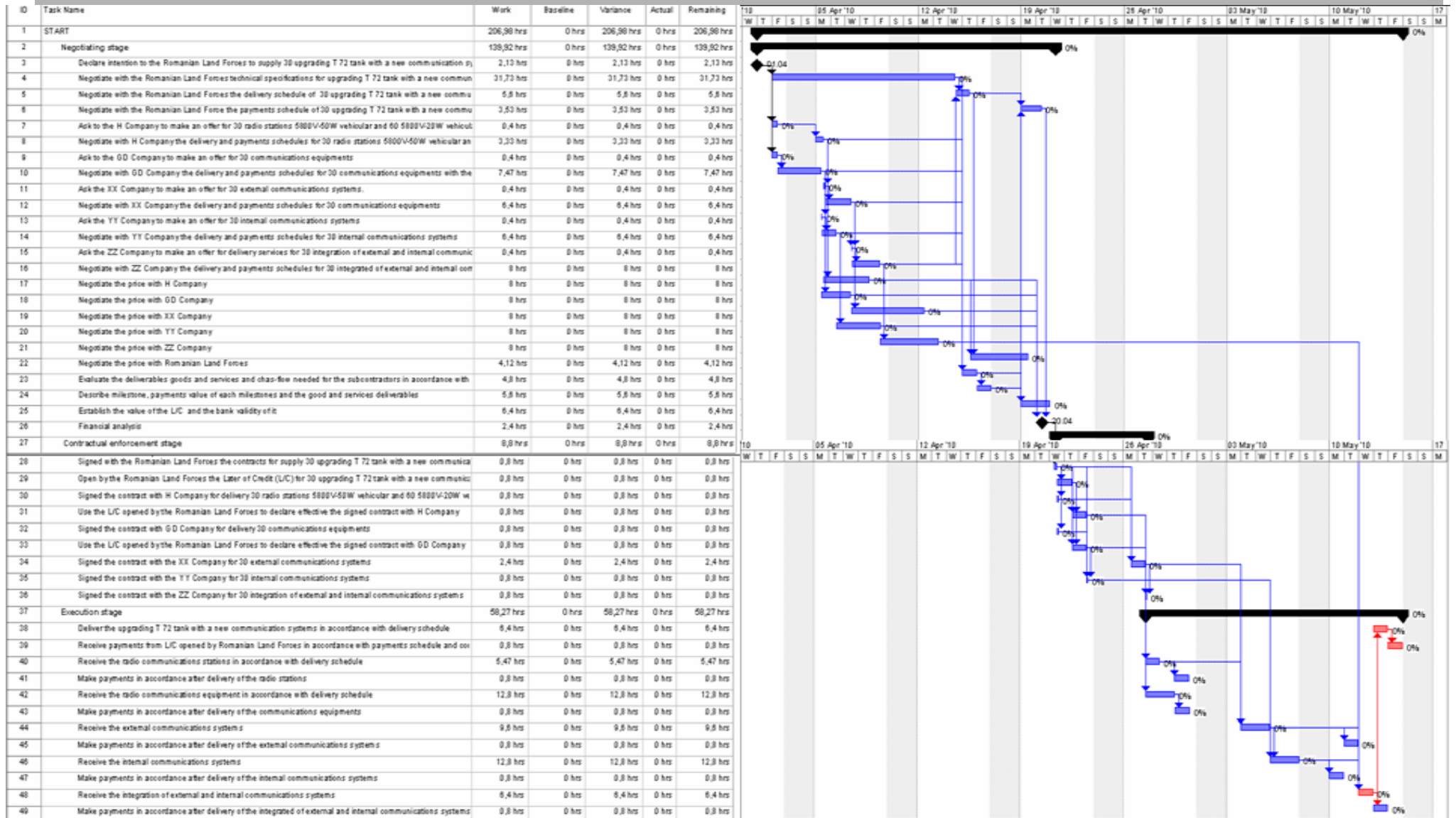
L/C has to be more than rest of the deliverables products to the end-user (see the WBS);














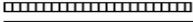

- request to the Romanian Land Forces advance payments and cover with this the total payments schedule until the first delivery will be made by our subcontractors (see the WBS);
- request to the subcontractors grace period for payments longer with 2 days then grace period for payments requested by the Romanian Land Forces and added with requested working time bank (see the WBS).

IX. REFERENCES

1. PMBOK Guide - A Guide To the Project management Body of Knowledge - Third Edition[1]
2. Cost Structure and Life Cycle Costs for Military Systems , RTO-TR-058 AC/323(SAS-028)TP/37;
3. Methods and Models for Life Cycle Costing, RTO-TR-SAS-054 AC/323(SAS-054)TP/51;
4. SR EN ISO 9000/2008 Quality Management Systems.
5. SR EN ISO 9001/2008 Quality Management Systems. Requirements.
6. <http://onelook.com>

Appendix 1. GANTT CHART



Project: project ilie tita	Critical		Baseline		Project Summary	
	Critical Split		Baseline Split		External Tasks	
	Critical Progress		Baseline Milestone		External Milestone	
	Task		Milestone		Deadline	
	Split		Summary Progress			
	Task Progress		Summary	