



**RISK MANAGEMENT AND ATHENS 2004 OLYMPIC GAMES**

**By**

**ANDRIKOU KOSTANTINOS**

**A THESIS REPORT**

**Presented to the Project Management Program in the**

**School of Management of**

**City University of Seattle**

**In Partial Fulfillment of the Requirements**

**For the Degree of**

**MASTER OF SCIENCE OF PROJECT MANAGEMENT**



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**12/2008**

***TITLE OF THESIS***

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## Biography

# Andrikou Konstantinos

### Personal data

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**2001–2005: The Technological Educational Institute of Larissa.**

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Bachelor's Degree in Project Management.

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- **February-October 2005:** Degree Dissertation: Title: 'Application of Project Management in Non-Governmental Organizations'. Grade: 'Excellent' 9/10.
- **February 2004-May 2004:** Socrates Erasmus Student Exchange Program-Tampere, Finland: Attending courses in International Marketing.
- **15<sup>th</sup>-24<sup>th</sup> of April 2004:** Seminar in Management of E-Business, Internet & IT in Marketing Operations, in Pirkanmaa Polytechnic School in Tampere, Finland.

### Professional Experience

**April 2005-October 2005:** 'Zero Float (P.M. Solutions)' Athens.

- Supervision, Management and Time-Planning of various Public Projects such as Attiki Odos ( Attiki Highway, Athens), Egnadia Odos (Egnatia National Highway, Northern Greece) , ELTA (Greek Post Office Headquarters in Thessaloniki) and the new Acropolis Museum (Athens, Greece).

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- Supervision as a Project Control Engineer at the construction of a Power Integration Station 15,5 MW at the Island Revithousa

### Computer Skills

Excellent knowledge of Internet, Windows XP and MS Office XP(Word, Excel, Power Point, Access), Primavera Project Planner, Microsoft Project.

### Interests

Scouting, computer, music, football.

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## **Risk management and Athens 2004 Olympic Games**

The author during his graduate experience has realized that the risk management is one of the most important parts of project management. Risk management is one of the most important issues of PMBOK.

In the course of his studies, the author realized that prediction of risks is vital for any project. A project manager must have a well organized risk management plan at the initial phase of the project in order to lead the project to success. All projects have problems and risks and if the project manager does not foresee them from the beginning it is very difficult for him to solve them during the project's execution cycle.

For this reason the author believes that the risk management plan is very important for a mega event such as the Olympic Games.

As we know, the Olympic Games are one of the largest sport events in the world. More than 15.000 athletes, 20.000 members of media, 150.000 volunteers and 5.5 million ticket spectators took part during these Games.

As we understand, the country which organized these Games faced many problems in different fields.

Through this final thesis, the author will try to identify these risks and create a risk management plan for a mega event like the Olympic Games, in order to be used as a useful tool for the organization of future Olympic Games.

A big part of the final thesis is based on personal experiences of the author, since he has participated as a volunteer for the Athens 2004 Olympic Games. The people responsible for the organization during the Athens 2004 Olympic Games faced many problems and took a lot of risks that they couldn't predict before the games.

The purpose of this thesis is to identify these risks and to make a risk management plan in order to create a data for the people who will organize the Olympic Games in the future and create the knowledge in how to avoid similar risks.

The basic parts that this thesis is going to investigate are:

- Opening-end ceremonies
- Transportation
- Technology
- Security

For a mega event like the Olympic Games, the risk management plan is very important. The expectations from this plan are many. The author expects this plan to create a strong data for the better organization of the future Olympic Games. It may be useful not only for the Olympic Games but also for other mega events of this kind.

During Athens 2004 Olympic Games the organizers faced many problems in many fields, such as: transportation, tourism management, security, technology, communication etc. This thesis will identify these problems and will suggest solutions by using the theory and the techniques of risk management.

It ought to be mentioned that Greece is a country which plans to organize many athletic events like the Olympic Games in the near future.

This risk management plan can be used from the organizers of these future events as a guide, in order to predict and avoid similar risks.



### ***Problem Statement***

Mega events like the Olympic Games include many risks in many fields (open-end ceremonies, transportation, tourism, technology, security) and the people responsible for such organizations have to avoid them in order to make them successful.

### ***Preliminary Literature Review***

The author during his research concerning the risks and the difficulties that were faced at the Athens 2004 Olympic Games unearthed that the people who organized them faced many problems and had to avoid a lot of traps. This was the reason why he tried to find as much as possible information about the Olympics 2004 in the field of risk management.

Regarding the Athens 2004 Olympic games, one of the most important guides which provided a lot of information about the Games was the *Official Report of the XXVIII Olympiad; Athens 2004*. The authors of this Official Report are the Athens 2004 general managers. Their report was a creation which was born out from their experiences during the Games.

There are many other books and articles that refer at the Athens Olympic Games and provide important information. Some of the most important are:

*Contribution to the design of the Athletes Bus Network during the Athens 2004 Olympic Games*. This is an article from the part of transportation and research and describes the way the transportation system in Athens during the Olympic Games was organized. It has helped the author to understand how the transport system worked and what kind of main problems were faced during the Games.

Another important book is the *'Turnaround: Crisis, Leadership, and the Olympic Games (Hardcover)'*. This is a very important book due to the fact that it was

written after the end of Athens 2004 Olympic Games and it describes the importance of crisis management and leadership during the Games.

Also it was very useful the beliefs of Kerzner about how to manage project risks which are presented at his book "*Project Management: A Systems Approach to Planning, Scheduling and Controlling*". At this book Kerzner presents six basic steps which must be followed through the risk management process: Identification of the risk, Quantifying the risk, Prioritizing the risk, Developing a strategy, Project sponsor, executive review and Taking action. (Kerzner,2003).

Another book which is very important for the understanding of the development of risk management approach is the "*Managing the unknown: A new approach to managing high risk uncertainty and risk in projects.*" From och, C. H., DeMeyer A., and Pich M. T.

There are also many other books, articles and web sites which have helped the author to successfully complete his thesis and to create an efficient risk management plan based on the knowledge and the experiences that derived from the Athens 2004 Olympic games.

Finally, apart from using all the above sources, another very important source has been his personal meeting with the general managers and other people who were at key positions during the Games. By this way the author has gathered information from the heart of the problem and found the best solutions for it.

### ***Description of Methodology***

The basic methodology that will follow at this thesis will be the case study.

The author is planning to collect as much as possible information and data about the risks and the problems that were faced during the Athens 2004 Olympic Games.

Then, this data is going to be categorized, described and analyzed. Finally, the author's suggestions and conclusions will be presented.

The basic steps that will be followed for this thesis are:

- Identification of the reasons that make his problem statement important.
- Detailed description of the facts that are related to the case.
- Full description of the data and the resources.
- Description of the characteristics of the data.
- Suggestions.

Also, except from the basic methodology, the author is going to use the SWAT analysis and two templates in order to create a risk management plan.

The **first** template (table 1) is the **risk management plan** and consisted from the following parts:

1. The Risk
2. The description of the Risk
3. The adequacy of existing Controls (Separated at five categories of controls: Excellent, Good, Fair, Marginal and Poor)
4. The likelihood of the risk (Separated at five deferent levels. Level 5 represents a high probability risk and level 1 a low probability risk.
5. The Consequence of the risk (Separated at two deferent parts: Major Consequence and Minor Consequence)

6. The risk Treatment (At this part described five deferent strategies that we can use to address the risk: Avoid, Change the likelihood, Change Consequence, Share the Risk and retain the risk.
7. Owner of the risk (At this part we identify the owner of the risk in order to warn him about the risk and to help him find solutions).

The **Second** template (table 2) that we are going to use at the risk management plan is the **risk rating**.

As we can see at the table 2 the risk rating is separated in three levels: High, Moderate and Low. These three levels come from the relationship between the likelihood and the Consequence of the risk as these two described at the table 1.

At the following table we can see how the relationship between the Likelihood and Consequence reflected at the three levels of risk rating.

*Table 1. Levels of risk rating*

---

<b>Risk Rating</b>	<b>Likelihood</b>	<b>Consequence</b>
<b>High</b>	5	<b>Major</b>
	4	
<b>Moderate</b>	1	<b>Major</b>
	2	
	3	
	4	<b>Minor</b>
5		
<b>Low</b>	1	<b>Minor</b>
	2	
	3	

**Table 2. Risk Management Plan**

#	Risk	Description of Risk	Adequacy of Existing Controls	Likelihood	Consequence	Risk Treatment	Owner of Risk
			5 - Excellent 4 - Good 3 - Fair 2 - Marginal 1 - Poor or Non-existent	• 1 • 2 • 3 • 4 • 5	• Major • Minor	A – Avoid the risk L – Change the likelihood C – Change consequences S – Share the risk R – Retain the risk	
<b>1.</b>							
			4	1	Major	A	Project Manager
			4	3	Major	A S	Project Manager
			4	4	Major	L C	Project Manager
			3	5	Major	L C	Project Manager
			4	2	Major	L C	Project Manager

<b>2.</b>							
			3	2	Major	L S	Project manager
			4	3	Major	L C S	Project manager
			4	3	Major	A L S	

**Table 3. Risk Rating**

#	Risk	Description of Risk	Risk Rating H – High M – Moderate L – Low	Owner of Risk
<b>1.</b>				
			H	Project Manager
			M	Project Manager-
<b>2.</b>				
			H	Project Manager
			L	Project manager

Risk Rating	Risk management implication
High	Resolve or mitigate in baseline plan
Moderate	Mitigate or develop Contingency Plan
Low	Leave resolution to project team



## ***Results***

### Security Risks

- Terrorist attacks- CBRN threats
- Fire safety
- Olympic venue security risks
- Protection of Dignitaries and Athletes
- Vital installation security
- Border surveillance
- Protection of air space

### Open ceremony

### Transportation-Traffic management

### General courses of action for support of the Olympic Security Planning

## Security Risks

### *Terrorist Attacks – CBRN threats*

The Athens 2004 Olympic Games were the first Games taking place after the attacks of September 11/2001. After these tragic events, terrorism became a global threat and every mega event became the number one target for a terrorism attack.

The Athens 2004 Olympic Games was an event which attracted the world's attention. For this reason, the people who organized the Athens Olympic Games believed that these Games were the prime target of a terrorism attack. Another reason which made the terrorism threat bigger was the war in Iraq and the threats from Alcaida.

Not only the Game organizers had to face the external terrorism – they also had to face the internal terrorism. The Greek authorities had to ensure and eliminate the possibilities of an internal terrorism attack (internal terrorism organizations). In order to succeed this, they organized a police operation and uncovered the biggest terrorism organization in Greece, the “17<sup>th</sup> of November”.

Another threat that the Games faced and was directly connected with terrorism was a Chemical, Biological, Radiation and Nuclear (CBRN) attack.

*Courses of action.* In order to avoid or eliminate the possibilities of a terrorist attack the Greek authorities established a *Crisis management system, a Special antiterrorist plan and an intelligence Network.*

The *Crisis management system* was organized and controlled by the Crisis management council. This council was responsible to ensure the safety of the

Olympic Games – by dealing with dangerous criminal actions. It was also responsible of handling a possible security crisis.

The people who participated in the Crisis Management council, were: The Chief of Hellenic Police, Fire Brigade and Coast Guard, the director of Olympic Games security division, the director of the Olympics Intelligence Center, representatives from the Civil Defense General secretariat and the Ministry of Culture, the director of Olympic Security Center and, finally, the director of the Athens 2004 Olympic Games Organizing Committee.

In order to correspond at these terrorist threats, the Greek government created a *Special Antiterrorism Plan*.

About 700 million Euros were spent for the security infrastructure and equipment of the Olympic Games. In order to ensure the security of the Games the organizers paid a lot of attention at the security personnel. They focused in the high level training of the Special Units, such as: the Special Antiterrorist Unit, the Explosive Mechanisms Disposal Unit, the special negotiators team and the Submarine Missions Unit.

The manpower of the security personnel was about 50.000 people (25.000 police officers, 8.000 Special Forces, 3.500 Coast Guard Officers, 1.500 fire corps personnel 3.000 private companies and 6.000 security volunteers).

Another threat that the people who organized the Games had to predict, was, the possibility of a Chemical, Biological, Radiation or Nuclear (CBRN) attack. For that reason, they developed a plan in order to deal with CBRN threats, to ensure not only the safety of the Games but the country, as a whole.

In order to create a well organized plan which would include all parameters, they coordinated with experts from countries who participated in the Olympic

Advisory Group. The help from countries, who were more experienced at these kinds of threats, ensured the efficient training of personnel and the procurement of the required equipment. The International Atomic Energy Agency cooperated with Greek authorities by helping them on detecting and heading potential CBRN attacks.

The U.S.A. provided Greece with radiation detectors in order to be installed at several locations – especially at boarder crossings. These detectors were also used at Olympic events in order to ensure the safety of the spectators.

### ***Fire safety***

A high level risk that the organizers of the Games had to face was the safety in case of fire.

Athens 2004 Olympic Games was a mega event and many spectators from all over the world attended the Games. As we understand, the fire safety of the Olympic Venues and Events was of high importance regarding all people attending.

***Courses of action.*** In order to ensure the fire safety of the Games, the Fire Corps developed fire safety plans which were based on Special Volunteering and Threat Assessment Plans.

In order to make these plans work, the organizers created the largest fire safety force ever.

This force consisted from:

- 1.500 fire fighters which were supported by last technology equipment (4 helicopters, 150 all purpose vehicles, 12 fire fighting aircrafts).

- Also a Fire Corps Operation Center (FCOOC) linked to the Olympic Security Command Center.
- In order to ensure the fire safety of the Games, the organizers implemented an equipment supply program that would give them the opportunity to upgrade agency resources from the entire country. This equipment provision program included the supply of 735 high technology vehicles.

### *Olympic Venue security risks*

Olympic Venues were the heart of the Olympic Games. These places received millions of people and the prediction and elimination of all Olympic Venue security risks was vital for the success of the Games.

In order to implement a risk plan for the security of the Olympic Venues, we first have to identify the most important security risks of these Venues.

The basic types of the Olympic Venues were two: the **Olympic Competition Venues** and the **Olympic non competition Venues**.

The **Olympic competition Venues** were the places where all the Olympic sports took place and they were separated in four categories:

- Two Venue Complexes: Athens Olympic Sports Complex (OAKA) and Helliniko Olympic Complex.
- Five Olympic cities Venues
- Four temporary Venues
- Fourteen stand alone Venues

The **Non-Competition Olympic Venues** were separated in the following categories:

- Olympic Village
- Olympic Hotels
- Airports: Eleftherios Benizelos Airport, Airports of the five Olympic cities
- Ports: Piraeus Port, Flisvos Marina
- Seven Media Villages
- International Broadcasting Center
- Main Press Center
- Fourteen Technical Officials Villages
- Athens 2004 Olympic Games Organizing Committee buildings
- Training Sites

*Courses of action.* As we understand a security plan for the Olympic Venues must include many things, such as: security systems, creation of Control Zones and security perimeter, vehicle access procedure, parking, risk assessment etc.

The organizers of Athens 2004 Olympic Games, in order to ensure the safety of the Olympic Venues, created a Venue security plan which included the following actions:

- *Control Zones:* the control zones were two: The *Traffic Zone* which was the zone that controlled the surrounding area and gave access only to the vehicles that had the permission to pass. The *Parking Zone* which was the zone around the venue. This zone included specific

streets for vehicle parking in order to serve the transportation needs during the Olympic Games.

- *Security Perimeters:* There were two security perimeters: one *outer secure perimeter* at the places where the site allowed it and a *security zone* which was used by the police and the emergency vehicles.
- *Perimeter Control and Access Control Points:* It concerned the places outside and around the venues. There were guards, observation posts and patrols at these places, in order to check the people who were entering the Venues.
- *Perimeter Intrusion Detection and sensor systems.*

These parameters of the Venue security plan adapted to the needs of each Olympic Venue. Before the Security forces took charge of each Olympic Venue, specialized personnel checked each Venue and secured it. After inspecting, everyone and everything entering the Venue would have to pass from the access control procedure. For this reason trained security personnel using the latest technology tools such as: metal detectors, X-Ray machines and gates etc. were at the access places.

Below, we are going to analyze the security meters at the five high security risk Venues:

1. Athens Olympic Sports Complex (OAKA)
2. Olympic Hotels
3. Piraeus Port
4. Olympic Village

*Athens Olympic Sports Complex (OAKA):* The Athens Olympic Sports Complex (OAKA) is the complex in which the finals of the most important Games competitions took place. It was also the place which hosted the opening and the end ceremonies of the Olympic Games. Five venues consisted at this complex: The Olympic Stadium, Velodrome, Tennis Center, Aquatic Center, and Indoor Hall.

As we can imagine, thousands of spectators were hosted at OAKA during the Athens 2004 Olympic Games.

Athens Olympic Sports complex was the heart of the Games and because of that the security was of the highest level. The authorities had to ensure the security at OAKA, and for this reason, assigned a Security Force which consisted with high level trained personnel equipped with the latest technology devices. The coordination of OAKA security took place at a high tech Operation center.

*Olympic Hotels:* During the Athens 2004 Olympic Games more than 250 hotels in Athens and in the Olympic Cities were used. The security dangers at these hotels during the Olympic Games were many and for this reason the authorities implemented an Operational security plan.

At first they separated these hotels into categories: hotels that were accommodated by VIPs, Sponsors, Journalists etc, plus hotels that were occupied by ordinary spectators.

According to the first category, Hotels implemented the highest security level. For example, at the Hilton Hotel, the IOC Headquarters were hosted except for the other security measures.



As for the second category Hotels, Police details were available on a 24 hour basis.

*Piraeus Port:* Piraeus port is the biggest port in Greece and during the Olympic Games received thousands of spectators. During the Games twelve ships moored at this port in order to be used as hotels and provide accommodation for more than 10.000 spectators.

As we understand, the security of this port was at high importance according to the authorities. For the protection of Piraeus port many security measures were taken, such as:

- Use of cameras and patrols, sensor systems, X-ray machines and Gates.
- Special Forces which used latest technology such as: submarine control systems, sea-bed detectors.
- Cooperation between the forces of Coast Guard, Police and Fire corps in order to control the land and the sea.
- For the coordination of these forces a Command Center was created which was equipped with latest technology

*Olympic Village:* The creation of some villages was necessary in order to satisfy the needs of a Mega Event like the Olympic Games. Some of these were: The Olympic Village, the Media Villages, the Technical Official Villages etc.

All of these places were very important for the success of the Games and for this reason the security level was high.

The Olympic Village was the most significant. It accommodated around 15.000 people. Among them were 10.000 Athletes and many VIPs. As we understand

the security risks at Olympic Village were numerous and for this reason the authorities provided the highest level of protection.

First of all, they created the Olympic Village Security Command Center in order to coordinate and control people and vehicles and being able to make decisions in different situations.

The equipment used for the security of the Olympic Village included high quality and latest technology systems, such as:

- Communication security systems
- IT systems
- X-Ray machines, Magnetic Gates
- Perimeter sensors
- Police Vehicles
- Special operation equipment

### ***Athletes and VIPs protection***

One of the most important security threats during the Athens 2004 Olympic Games was the protection of the Athletes and the VIPs. The success of the Olympic Games depends on the Athletes and the important persons who support them. As we understand it was at high priority for the authorities to ensure the secure accommodation of these people.

***Courses of action.*** In order to ensure the safety of the Athletes and the VIPs the authorities deployed some measures which were based on threat assessment.

These security measures were applied on a daily basis from the moment that a person arrived to the country and were separated in two categories: the General measures and the Special measures.

The General measures were measures that operated at every Olympic Game activity or event, such as: Venue security forces, Venue security and monitor, secure of roads, perimeter zone around the events and the Venues etc.

The Special measures were measures that deployed especially for the protection of the Athletes and the VIPs. These measures included:

- Use of special material and technical equipment.
- Personal protection.
- Alternative routes of escape at a difficult situation.
- Air Space protection.
- Site inspections.
- Special security measures developed for Athletes and VIPs from high risk nations like the U.S.A., Great Britain, and Israel.

The protection of the VIPs and the Athletes was a very important sector for the authorities and for this reason a lot of attention had been given on the training of the personnel responsible for the VIPs protection. In order for the high training level of the personnel to be ensured, the Greek authorities cooperated with an American company with large experience in this field.

They had also created a Special Olympic Family and VIPs Protection Centre for the coordination of the operations.

### ***Borders Surveillance***

During the Athens 2004 Olympic Games thousands of spectators passed the borders in many ways (airplane, ship, car, bus etc.) and as we understand, the authorities were afraid that this was a chance of illegal actions. They also believed that the borders were the first step for every terrorist in order to pass guns, bombs, chemical weapons etc. into the country and use them in order to destroy the Games.

For these reasons they took on some security measures in order to ensure the safety of the borders.

***Courses of action.*** The Greek authorities created a Security Umbrella from Land and Sea in order to ensure the safety of the boarders.

In order to implement this, they used all the forces that they had: Coast Guards, Defense Forces, Police and Border Guards and they equipped them with the latest technology equipment and recourses.

They also organized operations and spot checks from police in a 24 hour basis before and during the Games.

In order to ensure the safety of the sea, the authorities took on the following measures: Coast Guard Helicopters, surveillance systems, open sea boats, coastal high speed crafts.

They also increased the controls at all entry points of the Country.

### ***Protection from Air –Space***

After the tragic events of 11<sup>th</sup> of September 2001 the protection of the flights and generally the airspace was highly considered by the Greek authorities. The dangers were many, such as: hijackers, private terrorist aircrafts, flight safety etc.

***Courses of action.*** As we understand the protection of the air space was vital for the Greek authorities during the Olympic Games and for this reason they implemented protection measures, such as:

- Technical support to special forces
- Flight safety reinforcement
- Airspace surveillance
- Fire-fighting
- NATO provided air cover with special aircrafts during the Games
- Air Medical Evacuation
- Banning Flights over Specific Areas

### ***General courses of action for support of the Olympic Security Planning***

***Olympic Intelligence center (OIC).*** The Olympic Intelligence Center was one of the most important parts of the Olympic security and was responsible for the collection, synthesis, analysis and final threat assessment. It was coordinated by sharing intelligence with more than 100 countries and organizations.

The Olympic Intelligence Center also coordinated with the Police, the Coast Guard, the Army, the Fire Corps and the National Intelligence Service.

Yet, the Olympic Intelligence Center was responsible for checking people who were involved at the preparation and the organization of the Olympic Games.

**Personnel Training.** The organizers of the Games believed that the high training quality of the personnel would be vital for the success of a Mega Event such as the Olympic Games. For this reason they developed an Olympic Training Program. This program was separated in three parts:

- **The General Training:** was a program which included seminars and electronic and printed resources for all personnel.
- **The Specialized Training:** was a training program which was specialized at each one of the different sectors of personnel positions. For example, the specialized training for security personnel included: negotiations, management of difficult situations, hijackings, tactics for attack teams, electronic crime, suicide bombers etc.
- **The Practical Training:** In order to ensure the high training level of the personnel, the authorities organized Exercises before the Games which helped the personnel to become more familiar with the conditions of their responsibility sector (technology, security, Olympic Venues etc.). Some of the Exercises before the beginning of the Athens 2004 Olympic Games for security personnel – and not only – was:
  - Trojan Horse 2001: It was a scenario of bus hijacking and bomb incidents. About 150 people participated.
  - Hydra 2003: It was a scenario of terrorist threats at an Olympic Venue. About 500 people took part.

- Blue Odyssey: It was a scenario of CBRN threat. About 2,000 people participated.
- Hercules Shield: It was a scenario with the participation of the USA and other countries.

*Co operations.* The Cooperation's for the organizing of the Athens 2004 Olympic

Games were composed of two levels: the National and the International.

- **The National:** it included Cooperation with organizations and authorities from inside of the Country, such as: Police, Coast Guard, Defense Forces, Deferent Agencies, the Athens 2004 Organizing Committee, different ministries, personal organizations etc.
- **The International:** it included Cooperation with international organizations and countries, such as: Neighboring countries, EU Member States and organizations (Interpol, CIA etc), Sponsors, International Olympic Committee (IOC) etc.

## **Transportation-Traffic Management**

During the Athens 2004 Olympic Games the transportation of the spectators, the athletes, the media people and the daily operation of the city played a very important role for the success of the Games. The threats for the daily transportation during the Games for a big city like Athens with more than seven million of people were many, such as: traffic, accidents, delays etc.

### ***Courses of action***

In order to eliminate the transportation dangers, the authorities implemented a special operation plan for Olympic road transports. The authorities that participated in the organization of this plan were: the Olympic Games Security division, Traffic Police divisions, the Athens 2004 Olympic Games Organizing Committee and other agencies.

This operational plan covered all the spaces where the Olympic Games took place, such as:

- The five Olympic cities
- The National Highway Network
- Places where cultural events took place

Through Sotirio Tene (Olympic Games Security Division deputy director), the basic parts of the transportation plan were:

- The Olympic Road Network
- The Olympic Lanes
- Olympic Zones



- Bus lanes
- Measures for Traffic and accidents
- The vehicles of Olympic Family
- Coordination of the units

***The Olympic road Network.*** Had a total length of 600 kilometers and was separated in four parts:

- *The Olympic ring or Olympic perimeter road* which had a total length of 36 kilometers and was created in order to cover the transportation needs of the Olympic Family members.
- *The Primary road network:* had a total length of 238 kilometers and was the Network on which the main routes were planned.
- *The secondary Olympic Road Network* had a total length of 330 kilometers and was the road on which the secondary routes were planned.

***The Olympic Lanes:*** Were roads and lanes which were used for the emergency vehicles such as police, ambulances, fire corps, Olympic Game vehicles, buses for spectators etc. They were placed on the left side of the roadway.

The Olympic Perimeter road and a part of the Primary road network were covered by Olympic Lanes.

***The Olympic Zones:*** During the Athens 2004 Olympic Games two zones were established around of the competition Venues: The Controlled Traffic Zone and the Parking zone.

The Controlled zone was the zone at the perimeter of the Venues with a distance of 50 up to 300 meters. Only the accredited vehicles were allowed into this zone.

The Parking zone was the zone outside from the Controlled zone with a distance of 100 up to 1000 meters. All spectator vehicles were allowed to enter and park into this zone.

***The Bus Lanes:*** Were Lanes on the right side of the basic roads of Olympic Network roads in order to serve the needs of the passenger public. These Lanes were about 40 kilometers long.

***Measures for Traffic and accidents:*** The authorities took on some measures in order to control the Traffic during the Olympic Games. These measures included:

- Policing of the Olympic and Bus lanes in order to ensure the free movement of the public transport vehicles.
- In order to ensure – except from the traffic control – that the vehicles would not park nor stop in areas that parking were not allowed they placed police officers around these places.
- Control and monitor of the traffic by air, by using 3 helicopters and one aircraft.
- Use of cameras for the control of traffic.
- Use of stand by vehicles around the city to utilize wherever it may be needed.
- Use of sensors in order to measure the traffic concentration.
- Use of Electronic message boards for the information of drivers regarding traffic conditions.

- Use of the Digital Radio Multy-Chanel Network for the communication of traffic police operations.
- In order to eliminate the possibility of traffic accidents, the authorities ran a program which was called “On the Road 2001-2005”. This program included: police officers along the Olympic road network, traffic police controls, use of electronic and technical equipment at these controls, deployed of 60 mobile units at the Olympic Road Network in order to make the investigations at the traffic accidents and had been provided with special toe trucks regarding the removal of such vehicles.

***The Olympic Families vehicles:*** In order to serve the transportation needs of the Olympic Family, the Game organizers used 1.280 buses (Athletes buses, Venue Personnel buses, journalist buses etc.) and 3.350 automobiles (Auxiliary cars, technical staff –members, mini-vans, National Olympic Committee cars etc.).

***Coordination of the units:*** Regarding the coordination of the traffic units, the Traffic Control and Monitoring Operations Room was responsible. This unit was structured in three levels: the tracing, the verifying, and the confronting.

The tracing level included the ability of the immediate information of the authorities about specific points of the road where the traffic problem existed.

The verifying level included the automated information of the operators about the cause of any traffic problem by using pictures from the cameras.

Finally, the confronting level was the level where the operators made the appropriate actions in order to resolve the problem.

## **Opening Ceremony**

The Opening Ceremony is traditionally the presentation of the culture of the country which hosts the Olympic Games to the world. For some countries this is a unique chance, in the case of Greece this is not only a unique chance, but also an opportunity to show that the culture of Greece is the same as the culture of the Olympic Games. Greece is the country where the Olympic Games were “born”. The element of “birth” involves the element of “love”. Therefore the point that Greece would present to the world through the opening ceremony of the Olympic Games is “Love” for human beings which gives “birth” to Civilization and is the essence of Greek Culture throughout the Centuries.

### ***Risks***

The Risks are defined as the solutions that must be given within the frame of the Opening Ceremony in order that:

- Aesthetic values like “love”, “birth”, “civilization” to be transformed into easily digestible images of high quality and artistic performance so that the majority of viewers understand and enjoy basic elements of Greek Civilization within a limited time
- To integrate the artistic content with the ceremonial content in such a way that the viewer does not lose interest
- To use the state of the art technology to transmit the message and impress the viewers
- To complete every part of the program within a limited time schedule

- To use safe effects thus the safety of the artists, the VIPs and the public is guaranteed
- To make public feel happy and viewers eager to watch the Olympic Games as a result of making them visit Greece in the near future in order to assist to the commercial success of the Games and the total effort the host country put into the Games
- To advertise the Greek Culture and Civilization to the world in order to promote future tourism and business
- To improve the image of Greece towards the general public
- To transmit the message not only to the spectators inside the stadium but also to the people who watching from TV

Using TV records it is known that the opening ceremony of the Olympic Games is a favorable event to watch among billions of people. Therefore, popularity of the event is almost guaranteed.

Given this fact, then problem definition points (7) and (8) are justified because there is a good chance to introduce Greece through TV broadcasting to billions of people at the same time.

The word “love” appeals easily to all people of any race and any nation because it lies within the areas of fundamental drives for survival and it has a meaning that anybody has no problem to associate with. If technology is used in such a way that proper effects are created in the stadium at the opening ceremony in order to create visual images of the word “love” (see picture 1) then there is a great chance to pass the message “love-birth-civilization” to many people simultaneously without particular difficulties.

Once gained the interest of the audience in the stadium and on TV then many ideas and images can be transferred with almost no “barrier” or “filters” in communication<sup>(1),(2)</sup> In this way the audience can understand and be associated with specific references to the civilization milestones of the Greek culture. In this way the culture of the famous Parthenon monument could be easily understood as a product of “love” and its artistic value would be appreciated by most people on earth.

These images would have a great impact to the public but in order to convince the audience of its reality they have to be employed with all means modern technology offers, (water coming in, fire in the stadium, laser lights). These effects must be safe so the spectators can enjoy, because if any kind of accident happens, the results would be disastrous for the performance and the event in general.

### *Courses of action*

In order to satisfy ceremony’s spectators, the ones who are inside the Olympic Stadium and the television viewers, Greece had set as goal to make them feel part of everything that was presented. Greece had to motivate those who were inside to participate in such manner that no one would feel bored.

The Project team after identifying those points informed all projects’ stakeholders about the topics in which the country had to succeed namely; we have a two hours duration live program to present GREECE in all over the World.

To secure that all the above would be carried out successfully, every part of the Ceremony was scheduled with an injection of the Greek Culture. Specifically, the total of planning was focused on 5 Management Departments:

- Organizational

- Artistic
- Contractual Aspects
- Schedules
- Personnel Resources

### ***Ceremonial Management***

The Greek culture was presented with dancing human statues. Further, the Greek vision was presented not by animation but with the use of real human figures namely, people-human resources, in time representation.

***Technology.*** The nearly four-hour long ceremony had it all: spectacle, imagination, originality, history, song and dance, love and war, modern technology with computer animated images, and last but not least the feature that Greece is - its crystal clear waters.

As we may realize, the technology was the key for the success of the opening ceremony and for these reason the organizers trasformed the Olympic stadium into a huge studio which was equipped with the latest technolgy. Giant Video screens, Amplefires around the stadium, Lazers and lights, a huge pool at the center of the stadium, Fireworks and many other tools of the modern technology created a fantastic atmosphere at the opening ceremony.

***Technical infrastructure.*** The technical infrastructure involved more than 11.000 computers, over 600 Servers, 2.000 printers, 23.000 fixed-line telephones, 9.000 mobile phones, 12.000 TETRA devices, 16.000 TV and video displays and 17 Video

Walls interconnected by more than 6.000 kilometers of cabling (both optical fiber and twisted pair (UTP)).

This infrastructure would not only be used for the needs of the start ceremony but for the entire games too.

***Digital Effects.*** The digital effects were the most important part for the success of the opening ceremony and the technology support for this was huge.

From the beginning of the ceremony the digital technology had been used to surprise the audience.

The Opening Ceremony began with a twenty-eight second countdown paced by the sound of an amplified heartbeat played by two drummers, one inside the stadium and one projected on the stadium screen from the ancient stadium of Olympia.

As the countdown was completed, fireworks were ignited illuminating the skies overhead.

At the end of the drum duet, a single flaming arrow had been launched from the video screen (symbolically from ancient Olympia) into a reflecting pool, which resulted in fire erupting in the middle of the stadium creating a burning image of the Olympic rings rising from the pool.

Next, a young boy was sailing into the stadium on a 'paper-ship' waving the host nation's flag to haunting music by Hadjidakis.

Then a centaur would appear, followed by a gigantic head of a cycladic figurine which eventually flared into many pieces.

After the presentation of the teams from each country, it was the time to light the Olympic flame. As the athlete ascended the steps to light the cauldron, it seemed



to bow down to him, symbolizing that despite the advanced technology, it is still a creation and tool of humanity and that it is meant to serve humanities needs.

Finally, the ceremony ended with an amazing rain of fireworks which surprised the audience.

As we understand, the technology had played the most important role at the opening ceremony because it had given the opportunity to the organizers to create a fantastic atmosphere and not only surprised the 70.000 spectators who are expected to watch this event from the stadium, but also every person in the world.

***Personnel & Resources.*** In order to run the best ever-opening ceremony in Olympic Games in history, a great number of highly qualified and expertise personnel of international standards had to be selected, trained and assigned to various posts. Athens is a place where qualified personnel from home and abroad concentrate, therefore, ample number of domestic and international human experts ought to be available to ensure the success at the opening ceremony.

Training qualified personnel – efforts had been made to train more managing personnel who understood international practice in arts, and who have had international vision, and who were able to establish direct contact and exchange relations with foreign specialists and professional organizations. Specialists, who have had the knowledge of international ceremonies and Olympic affairs, international law, international business, international finance and insurance, electronic information technology, environment protection technology, would also be trained. Government officials at all levels and leaders of enterprises should enrich their Olympic related knowledge and intensify their study of market operation, international business and law, so as to update their knowledge structure and better their competence.

Improving human resource policies for employee recruitment, placement and retention – reform had been intensified in regard to payment and personnel management policies and reasonable income distribution systems had been adopted to arouse the initiatives of the personnel. Foreign scholars and specialists had been invited to work in Athens. Personnel in the fields of science, technology, administration and business management were selected to further training in foreign countries. The development of human resource market and employment agencies had been promoted.

In accordance with the principle of “precaution, prevention, interruption and strict supervision”, various rules and regulations were formulated and effective supervisions and auditing mechanisms were set up to prevent corruption from happening.

A piece of the success of the opening ceremony depends on volunteers. Volunteers are the people who make the ceremony happen, supporting every athlete, spectator and visitor for the most amazing event in the world. In Athens, there were more than 10.000 of them exclusively for the opening ceremony. The greatest celebration of humanity is only possible through the will, the passion, the dedication and the professionalism of each volunteer. It is a unique opportunity for everyone present to witness the magic of the ceremony. Participating in the 2004 Olympic Games means participating in the greatest celebration of humanity. Thousands of volunteers were trained to offer their help at the Athens 2004 Olympic ceremony. Anyone interested was welcomed to become a volunteer. There were no restrictions based on sex, race, creed, physical ability, social standing or education. The only qualification asked was that applicants must be 18 years old by 2004.

For such a complex project like the opening ceremony of Olympic Games of Athens, there was a need of a wide variety of equipment. From high technology equipment that would ensure the normal process of ceremony to fireworks, telecommunication systems, headlamps, audiovisual equipment and clothing for dancers, actors and performers. In general, the exact equipment depended on each task and because of its variety the people responsible for the organization managed an excellent collaboration with the suppliers in order to cover needs on time and in high standard quality. As a standard, all equipment needed must have been secured for the personnel and spectators, high technology used in some cases and efficient. Finally, it was strongly believed that stock equipment had to be foreseen in order to be sure that everything needed was existed, regardless to occasional problems.

### ***Evaluation Plan***

***Evaluation Methods.*** The preparation of a huge project such as the opening ceremony will need continuous evaluation from its initialization to the final rehearsal, two days before the event. The necessary evaluation methods will implemented with the help of expert consultants for each phase of the project. Some of them are the following:

- **Software and computer support.** Development and use of new software. This will help the organizers go through the calculating and the presentation of instructions and quantitative data for each phase, the investigation and search for alternative scenarios, the cost parameters evaluation etc. At the same time, they will develop the appropriate digital drawing applications.

- **Training and on the spot attendance of the involving staff.** Studies and nice drawings alone, cannot carry out and become successful without any problems regarding the preparation of the opening ceremony. The staff (including the volunteers) may not have the ability or the level of knowledge to learn what is right and proposed by the printed documents. That is why the appropriately trained staff will have to stand by them in order to support, explain and help them while applying or sometimes, work along with them until it is certain that everything is crystal clear. It is already been established and it is soon going to occur, training courses and lectures will be systematically developed. There is a constant search of the available technology and know-how. The purpose is to bring to worksite all useful, usable and applicable information along with the scientific knowledge.
- **Close attendance and management** of all the problems and issues that will arise. There is no such project in process that does not face questions and various technical problems. When it concerns various implementations, such issues should be comforted immediately. On the other hand, there is always time and field for improvement, alternative solutions, interventions that aim at prevention or anticipation of potential problems.
- **Constant reporting and annotation.** All the above demand constant contact and communication with the staff of the sub projects. Reporting express views and speculations; comments aim at restoring or altering a situation, at spotting or stressing some particular undesirable effects. Submitting the only typical output of a monitoring

system has neither been sufficient nor good enough. Besides, the persons responsible for the organization believe in “scripta manent” and, that is what makes a consultant more responsible and careful about what he/ she writes and suggests; on the other hand, this is how he/she strengthens, documents and states the submission of his/her suggestions and viewpoints.

## Conclusions-Recommendations

*Table Example 1. Risk Management Plan*

#	Risk	Description of Risk	Adequacy of Existing Controls	Likelihood	Consequence	Risk Treatment	Owner of Risk
			5 - Excellent 4 - Good 3 - Fair 2 - Marginal 1 - Poor or Non-existent	• 1 • 2 • 3 • 4 • 5	• Major • Minor	A – Avoid the risk L – Change the likelihood C – Change consequences S – Share the risk R – Retain the risk	
<b>1. Security Risks</b>							
	<b>Terrorist Attacks-CBRN Threats</b>		4	4	Major	A,L,S	Government, Crisis Management Council
	<b>Fire Safety</b>	Threats of Fire at the Olympic Venues	4	5	Major	A, L, C	Fire Corps operation centre, Olympic Security Command Centre

#	Risk	Description of Risk	Adequacy of Existing Controls	Likelihood	Consequence	Risk Treatment	Owner of Risk
			5 - Excellent 4 - Good 3 - Fair 2 - Marginal 1 - Poor or Non-existent	• 1 • 2 • 3 • 4 • 5	• Major • Minor	A – Avoid the risk L – Change the likelihood C – Change consequences S – Share the risk R – Retain the risk	
	<b>Olympic Venue Security (four basic venues)</b>	OAKA Olympic Hotels Piraeus Port Olympic Village	5	4	Major	A,L,S,C	Olympic Security Command Centre
	<b>Athletes and VIP protection</b>	Protection of important people and VIPs from high risk Nations	5	5	Major	A,L,S	Olympic families VIPs protection Centre
	<b>Borders Surveillance</b>	Danger to pass guns, Chemical weapons etc from the boards because of the many visitors	4	5	Major	A, S	Coast Guard, Army, Police, Boarder Guards

#	Risk	Description of Risk	Adequacy of Existing Controls	Likelihood	Consequence	Risk Treatment	Owner of Risk
			5 - Excellent 4 - Good 3 - Fair 2 - Marginal 1 - Poor or Non-existent	• 1 • 2 • 3 • 4 • 5	• Major • Minor	A – Avoid the risk L – Change the likelihood C – Change consequences S – Share the risk R – Retain the risk	
	<b>Protection of Air-Space</b>	Take lesson from the tragic events of 11 Sep 2001	4	2	Major	A,S	Greek Authorities (Police, Army)
<b>2. Transportation –Traffic Management</b>							
	<b>Traffic-Accidents</b>	Danger of traffic and accidents because of the many visitors	2	5	Minor	L	Traffic Police Division, Athens 2004 Organizing Committee, Olympic Games Security division
	<b>Delays</b>	Key people and spectators can not arrive on time at the Games because of the Traffic and the accidents	3	4	Minor	L	Traffic Police Division, Athens 2004 Organizing Committee, Olympic Games Security division



#	Risk	Description of Risk	Adequacy of Existing Controls	Likelihood	Consequence	Risk Treatment	Owner of Risk
			5 - Excellent 4 - Good 3 - Fair 2 - Marginal 1 - Poor or Non-existent	•1 •2 •3 •4 •5	• Major • Minor	A – Avoid the risk L – Change the likelihood C – Change consequences S – Share the risk R – Retain the risk	
<b>3. Opening Ceremony</b>							
	<b>Viewers don't understand the basic elements of Greek Civilization within a limit time</b>		5	2	Minor	A,C	Athens 2004 Olympic Game Organizing Committee
	<b>Viewers lose interest</b>	Fail to integrate the artistic and ceremonial content in such a way that the viewers don't lose interest	4	3	Major	A,L	Athens 2004 Olympic Game Organizing Committee
	<b>Viewers from TV don't understand the concept and lose interest</b>		4	3	Minor	L,A,S	Athens 2004 Olympic Game Organizing Committee

#	Risk	Description of Risk	Adequacy of Existing Controls	Likelihood	Consequence	Risk Treatment	Owner of Risk
			5 - Excellent 4 - Good 3 - Fair 2 - Marginal 1 - Poor or Non-existent	• 1 • 2 • 3 • 4 • 5	• Major • Minor	A – Avoid the risk L – Change the likelihood C – Change consequences S – Share the risk R – Retain the risk	
	<b>Complete the program out of schedule</b>		3	4	Minor	A,L	Athens 2004 Olympic Game Organizing Committee
	<b>The Effects doesn't ensure the safety of the athletes and the spectators</b>		4	2	Major	A,S	Athens 2004 Olympic Game Organizing Committee, Olympic Game Security division
	<b>Fail to improve image of Greece</b>	Failed to advertise Greek culture & civilization to the world in order to promote future tourism and business	3	4	Minor	L,C	Athens 2004 Olympic Game Organizing Committee

Table Example 2. Risk Rating

#	Risk	Description of Risk	Risk Rating H – High M – Moderate L – Low	Owner of Risk
<b>1. Security Risks</b>				
	<b>Terrorist Attacks-CBRN Threats</b>		H	Government, Crisis Management Council
	<b>Fire Safety</b>	Threats of Fire at the Olympic Venues	H	Fire Corps operation centre, Olympic Security Command Centre
	<b>Olympic Venue Security (four basic venues)</b>	OAKA Olympic Hotels Piraeus Port Olympic Village	H	Olympic Security Command Centre
	<b>Athletes and VIP protection</b>	Protection of important people and VIPs from high risk Nations	H	Olympic families VIPs protection Centre
	<b>Borders Surveillance</b>	Danger to pass guns, Chemical weapons etc from the boards because of the many visitors	H	Coast Guard, Army, Police, Boarder Guards
	<b>Protection of Air-Space</b>	Take lesson from the tragic events of 11 Sep 2001	M	Greek Authorities (Police, Army)

#	Risk	Description of Risk	Risk Rating H – High M – Moderate L – Low	Owner of Risk
<b>2. Transportation-Traffic Management</b>				
	<b>Traffic-Accidents</b>	Danger of traffic and accidents because of the many visitors	M	Traffic Police Division, Athens 2004 Organizing Committee, Olympic Games Security division
	<b>Delays</b>	Key people and spectators can not arrive on time at the Games because of the Traffic and the accidents	M	Traffic Police Division, Athens 2004 Organizing Committee, Olympic Games Security division
<b>3. Opening Ceremony</b>				
	<b>Viewers don't understand the basic elements of Greek Civilization within a limit time</b>		L	Athens 2004 Olympic Game Organizing Committee
	<b>Viewers lose interest</b>	Fail to integrate the artistic and ceremonial content in such a way that the viewers don't lose interest	M	Athens 2004 Olympic Game Organizing Committee
	<b>Viewers from TV don't understand the concept and lose interest</b>		M	Athens 2004 Olympic Game Organizing Committee
	<b>Complete the program out of schedule</b>		M	Athens 2004 Olympic Game Organizing Committee

#	Risk	Description of Risk	Risk Rating H – High M – Moderate L – Low	Owner of Risk
	<b>The Effects doesn't ensure the safety of the athletes and the spectators</b>		M	Athens 2004 Olympic Game Organizing Committee, Olympic Game Security division
	<b>Fail to improve image of Greece</b>	Failed to advertise Greek culture & civilization to the world in order to promote future tourism and business	M	Athens 2004 Olympic Game Organizing Committee

Risk Rating	Risk management implication
<b>High</b>	Resolve or mitigate in baseline plan
<b>Moderate</b>	Mitigate or develop Contingency Plan
<b>Low</b>	Leave resolution to project team

## SWOT Analysis

### *Strengths*

#### 1. Security

- Help from USA and other countries with more experience at the organize of the Olympic Games (especially at security measures).
- The success of the Greek police which had uncovered one year before the Games the biggest Terrorism Organization in Greece, the “17<sup>th</sup> of November”.
- The creation of a large fire safety force with a lot of experienced and trained people.
- Excellent security plan for the protection of the Olympic Venues.
- Well trained and organized Security Forces and plans in order to ensure the safety of the Athletes and the VIPs, the Borders Surveillance and the protection from the Air-Space.
- The Creation of the Olympic Intelligence Center (OIC) which was responsible for the Collection, Synthesis, Analysis and final threat assessment. It had also cooperated by sharing intelligence with more than 100 Countries and Organizations.
- Cooperation’s on National and International level.

#### 2. Transportation-Traffic Management

- The Creation of the Olympic road Network.
- Use of last technology (Camera, Sensors etc.).

- The implementation of a high quality communication system which was very important in order to coordinate the authorities and to resolve any problems occur, immediately.
- The construction of underground and the highway with stations close to the Olympic Venus that would help the release of the traffic in Athens.

### 3. Opening Ceremony

- Greece is the Country where the Olympic Games were born.
- The use of last technology in order to impress the viewers.
- Well trained and qualified personnel.

### 4. General

- Using the knowledge from the previews Olympic Games.
- Greece was the country who created the Olympic Games. The fact that the Games returned back to the place they were born is a strength point by itself.
- The Use of many Volunteers.

## ***Weaknesses***

### 1. Security

- Greece had no previews experience at the Security organization of a Mega Event like the Olympic Games (Especially at Terrorist and CBRN threats).
- The Olympic Venues were separated in different places around Greece and therefore it was more difficult to be controlled (the manpower must have been also separated).

## 2. Transportation-Traffic

- The construction of Olympic Road networks was not alone enough to resolve the traffic and transportation problems which had already existed in a big city like Athens, especially during the Olympic Games were thousands of spectators were planning to visit Athens.

## 3. Opening Ceremony

- No previous experience in the organization of the opening ceremony for a Mega event like the Olympic Games.

### *Opportunities*

#### 1. Security

- Receive knowledge from more experienced countries like USA concerning security standards that followed at Mega Events.
- Improve the knowledge of Greek forces about the new technology and the techniques that are used globally in order to take the appropriate security measures.
- Buy security Equipment at preferential prices from the countries that took part at the Olympic Game security plan.

#### 2. Transportation-Traffic Management

- Create new roads which can resolve the traffic problems in Athens in general.
- Create new roads that are safer and can decrease traffic accidents.
- Having experience and learning implement techniques in order to control the traffic and accidents.



- The Traffic Control and Monitoring Operations Room can still serve after the end of the Olympic Games in order to coordinate the units.

### 3. Opening Ceremony

- To advertise the Greek Culture and Civilization to the world in order to promote future tourism and business.
- To improve the image of Greece towards the general public.
- To receive knowledge concerning the organization of this kind of Ceremonies in order to use them at possible future Mega events that Greece plans to organize.

## ***Threats***

### 1. Security

- Terrorist attack at Olympic Venues.
- Fire at Olympic Venues.
- Kidnappings and attacks of VIPs and athletes.
- Terrorist threats from Air Space.
- Kamikaze attacks at stadiums.
- A security mistake is possible to destroy the Games and the image of Greece in front of the whole world (Something like that is possible to decrease the tourism).

### 2. Transportation-Traffic management

- Because of the many spectators there is a high possibility of traffic and accident.

- Delays towards important people (athletes, VIPs).

### 3. Opening Ceremony

- Fail to improve the image of Greece towards the general public.
- Fail to complete every part of the program within a limited time schedule.
- The use of effects could be dangerous for public safety.
- Fail to advertise the Greek Culture and Civilization as presentation to the world in order to promote future tourism and business.
- Fail to integrate the artistic content with the ceremonial content in such a way that the viewer does not lose interest.
- Fail to make the ceremony interesting to the people that were watching it from TV.

Athens 2004 Olympic Games ended successfully. The risks for a Mega event like this were many, and it was difficult for the organizers to cover every possible danger.

This thesis tried to organize these risks and to create a risk management plan at three important fields (Security, Transportation, Opening ceremony) which was vital for the success of the Games.

The author expects this plan to create a strong data for the better organization of the future Olympic Games. It may be useful not only for the Olympic Games but also for other mega events of this kind.

## Bibliography

[Athens 2004 General Managers and Managers](#)(2005). *Official Report of the XXVIII Olympiad; Athens 2004 2 Book Set*. ATHOC 2004.

[Mitt Romney](#)(2004).*Turnaround: Crisis, Leadership, and the Olympic Games*.  
Regnery Publishing.

[Peter Stavroulakis](#)(2003). *Reliability, Survivability and Quality of Large Scale Telecommunication Systems: Case Study: Olympic Games*. Wiley.

[Peter E. Tarlow](#)(2002). *Event Risk Management and Safety (Hardcover)*. Wiley.

[Stephen Page](#)(2006).*Tourism Management, Second Edition: Managing for Change*.  
Butterworth-Heinemann.

Mike Lee(2006). *Race For The 2012 Olympics*. Virgin Books.

Patrick Bingham-Hal(2000).*Olympic Architecture: Building Sydney*. Watermark  
Publications, Architecture Guides (Watermark Press).

[Konstadinos G. Goulias](#)(2006).*Transport Science and Technology*.Elsevier Science.  
Retrieved May 5,2007, from <http://nupa.gr>

Haydn Middleton(1999). *Crises at the Olympics*. Heinemann Library, Olympics  
[Electronic version].

[I. Minis](#), [E. Keys](#), [T. Athanasopoulos](#)(2005). *Contribution to the design of the Athletes Bus Network during the Athens 2004 Olympic Game*. Transportation  
Research. Retrieved May 6, 2007, from <http://amazon.com>.

Barkley, B. T., & Saylor, J. H. (2001). *Customer-driven project management: building quality into project processes* (2<sup>nd</sup> ed.). New York: McGraw Hill.

Kerzner, H. (2006). *Project management: A systems approach to planning, scheduling, and controlling* (9<sup>th</sup> ed.). Hoboken, NJ: John Wiley & Sons.

- Project Management Institute. (2004). *A guide to the project management body of knowledge (PMBOK® Guide)* (3<sup>rd</sup> ed.). Newtown Square, PA: Author.
- Scholtes, P. R. (1998). *The leader's handbook: Making things happen, getting things done*. New York: McGraw Hill.
- O'Rourke, IV, J.S., (2001), *Management communications, A case analysis approach*.  
Chapter 2. Upper Saddle River, NJ: Prentice Hall
- Flames, S. W., & Levin, G. (2005). *Essential people skills for project managers*.  
Vienna, V.A: Management Concepts.
- Smith, K. (2007). *Teamwork and project management* (3<sup>rd</sup> ed.). New York: Mc Graw-Hill Companies, Inc
- Meredith, J. R., & Mandel, S.J., Jr. (2006). *Project management: A managerial approach* (6<sup>th</sup> ed.). New York: John Willey & Sons.
- CH2M Hill. (2001). *Project delivery system* (4<sup>th</sup> ed.). Denver, CO: Author
- Loch, C. H., DeMeyer A., & Pich M. T. (2006). *Managing the unknown: A new approach to managing high risk uncertainty and risk in projects*. Hoboken, NJ: John Wiley & Sons.





