



TWINNING PROJECT FICHE

Assistance to the Egyptian Metro Company (ECM) in Reforming Railway Safety Regulations, Procedures and Practices.

Under the

**Support to the Implementation of the action plan
and Association Agreement Programme (SAAP III)**

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ANNEXES TO PROJECT FICHE

ANNEX 1. LOGICAL FRAMEWORK MATRIX

GLOSSARY OF TERMS

AA	Association Agreement
AIB	Accident Investigation Body
ATP	Automatic Train Protection
BC	Beneficiary Country
ECM	Egyptian Company for Metro
EN	European Normative
ECM	Egyptian Company for Metro Management and Operation
ENP	Egyptian National Plan
ENR	Egyptian National Railways
EU	European Union
HR	Human Resources
HSE	Health and Safety
KE	Key Expert
MODSAFE	Modular Urban Transport Safety and Security analysis
MoT	Ministry of Transport
MS	Member State
NAT	National Authority for Tunnels
NSR	National Safety Regulations
PL	Project Leader
PSC	Project Steering Committee
QMS	Quality Management System
RAMS	Reliability, Availability, Maintainability and Safety
RSRU	Railways Safety Regulatory Unit
RTA	Resident Twinning Advisor

1. BASIC INFORMATION

1.1. Programme

Support to the Implementation of the Action Plan and Association Agreement Programme (SAAP III)

1.2. Twinning Number

EG/13/ENP/TP/21

1.3. Title

Assistance to the Egyptian Metro Company (ECM) in Reforming Railway Safety Regulations, Procedures and Practices.

1.4. Sector

Transport

1.5. Beneficiary country

Egypt

2. OBJECTIVES

2.1. Overall Objective(s)

To enhance the overall capacity of the Egyptian administration in the field of Metro Safety, in line with the National Safety Regulations (NSR), and the EU Acquis and international best practices

2.2. Project Purpose

To support the Egyptian Company for Metro in enhancing its capacities related to the implementation of the Safety Management System, and the development of new safety regulations.

2.3. Contribution to National Development Plan/Cooperation Agreement/Association Agreement/Action Plan

EU-Egypt bilateral relations takes place within the scope of the European Neighbourhood Policy (ENP) and is funded through the European Neighbourhood Policy Instrument (ENPI), devoted to supporting the EU Southern partner countries and their Association Agreements (AA). Egypt is one of the major beneficiaries of the ENPI to support its reform process reflected in the priorities jointly agreed in the EU-Egypt ENP Action Plan. Within the framework of and relevant to the ENPI strategic objectives this project will focus its contribution on one of the four principle axes, institutional support.

With the entry into force of the AA on the 1st of June 2004, relations entered into a new and more intense phase, through which the Barcelona process, the multilateral forum of dialogue between the EU and its Mediterranean partners, whose work programme includes a wide range of action lines including the Transport Sector Policy Support Programme.

Based on respect for democratic principles and fundamental human rights, the AA aims at furthering regional integration with a view towards the creation of an area of shared prosperity as well as providing a framework for political dialogue and closer economic, social and cultural relations between the two parties. Economic cooperation includes the liberalisation of trade in goods and services, as well as capital movement. It also proposes the completion of a Free Trade Area by 2015 (2018 for a very limited number of industrial goods). In addition, the AA aims at supporting Egypt's economic and political reform efforts through the approximation of laws, regulations and standards applied in Egypt to those of the EU.

It also aims to establish the appropriate framework for co-operation and partnership, within the larger regional context and building on the significant development assistance co-operation between Egypt and the European Union. It also has a role in supporting and encouraging domestic reform.

Furthermore, a set of shared priorities has been defined within the EU-Egypt ENP Action Plan of March 2007.

To support the Egyptian Administration in implementing the AA and the ENP, the European Commission launched the “Support to the EU-Egyptian AA Program (SAAP)” with the aim of contributing to Egypt’s efforts for upgrading the overall capacity of public administrations. The Program focuses on three core areas: (i) trade and economic liberalization; (ii) improvement of the legislative and regulatory framework; and (iii) institutional strengthening and reform.

The SAPP makes available to the Egyptian Government institutions the expertise of the European Member States so as to harmonize their institutional and administrative framework and to create a competitive climate for economic growth, with the help of the EU Acquis. The institutional twinning instrument is given particular importance as it is perceived to be an efficient and appropriate vehicle for technical expertise and knowledge transfer for the achievement of institutional strengthening and legislative harmonization.

The Union for the Mediterranean (UfM), created at the Paris Summit of EU-Mediterranean Heads of State and Government on 13th July 2008, is the framework of multi-lateral relations between the EU and the Mediterranean non-EU countries which includes Egypt. The EU fully supports the UfM which complements bilateral relations, which will continue to develop under the ENP/ENPI. The UfM builds on the acquis and reinforces the achievements of the Barcelona Process, launched in 2005. While the Barcelona Declaration, its goals and its cooperation areas remaining valid, the UfM gives a new impulse to the Barcelona Process by making the above relations more concrete and visible through additional regional and sub-regional projects, relevant to the citizens of the region. These projects are in the core of the UfM and should have visible impact on the life of the citizens of the whole region by promoting growth, employment, regional cohesion and socio-economic integration, by supporting the creation of infrastructure for interconnections and supporting businesses.

Within EuroMed transport cooperation, Egypt is beneficiary of a regional land transport programme (road/rail/urban transport). The present twinning is encouraged to create synergies between these two complementary (bilateral and regional) ENP tools which technically support the urban transport reform based on the relevant EU directives and best practices.

The present Twinning is in line with current overall Egyptian policy, as it is defined in the Egyptian Strategic Plan to support the implementation of the Action Plan and the Association Agreement Programme – SAAP covering the period 2010 to 2016.

Regarding the Transport Sector, *the EU Egypt joint action plan stressed on the importance of cooperation in the transport field especially with regard to developing transport infrastructure applying air, maritime, and road safety measures.*

In particular with what refers to the urban transport, the Plan establishes the objective of ***improving the safety operations of the Egyptian Company for Metro through the review of the overall applied safety operations rules (for Line 1 and 2), assisting the company in putting in place a Safety Management System, implementing a Safety Governance, introducing procedures for audit programmes, hazard identification and risk assessment, reviewing the current accident database and introducing a new computerized database system, and a training component.***

European Policy

In the field of Railways, a great effort to develop and implement common regulations for all national railways companies has been made, and a clear set of EU Directives has been issued. The three central objectives of the European Commission with this regard can be summarized as follows:

- To promote greater competition in the supply of transport within each mode, in order to reduce cost and increase quality. In particular, transparency is required in the relationship between the state and the national companies. In the rail sector, European standardisation in technical operating conditions is desirable to reduce market entry costs and increase competition between manufactures.
- To ensure competition is fair between the modes. The relative price of different modes should reflect all the costs to society from using a particular mode (including external costs such as pollution, congestion and accidents). Rules over how to price access to infrastructure should be coordinated across modes.
- To provide sufficient infrastructure, particularly across borders, in which the individual Member States have insufficient incentive to invest.

Generally, Railways Directives do not apply to Metros. Nevertheless, those related to Safety may be used as the basis for the Metro Safety Enhancement. This related normative may be found in the following documents.

- **Directive 2004/49:** (main Directive on Railway Safety). It provides a mechanism for harmonising safety standards and requirements (Common Safety Indicators, Common Safety Targets, and Common Safety Methods). Safety Bodies are introduced by this Directive, as well as Accident Investigation recommendations.
- **Commission Regulation 352/2009** on the adoption of a common safety method on risk evaluation and assessment
- **Directive 2007/59**, on certification of train drivers operating locomotives and trains on the railway system in the Community.

In addition to the abovementioned Railways Directives which will be used as basis for the enhancement of the Safety in the Metro field, **best practices essential to “acquis communautaire”** which are also relevant to the project is found in the documentation prepared by the **MODSAFE Project**.

MODSafe - Modular Urban Transport Safety and Security Analysis - is one of the latest projects in the European Transport sector under the Seventh Framework Programme (FP7) for Research and Technological Development of the EU. The purpose of the project was to undertake research of major steps of the Safety Life Cycle of urban guided transport systems. The project started in 2008 and its closure took place in August 2012. During the MODSafe, hazard analyses, safety requirements as well as functional and object models were developed, while a life cycle approach proposal and an approval approach were established in the process sector. For the security sector, the existing means and technologies for security systems were analysed, forming the base for a model reference.

MODSafe is now the guidance on how to deal with the diversities, to find a common European strategy in the Metro environment. **Mainly, the contents of said *European Guidance* may be found in the published results of the MODSafe project:**

- D1.2 "Final report - State of the art on safety responsibilities and certification"
- D2.1 "First List of Hazards, Preliminary Hazard Analysis (PHA)"
- D2.2 "Consistency Analysis and Final Hazard Analysis"
- D2.3 "MODSafe Risk Analysis"
- D3.2 "Final Hazard Control and Safety Response Measures Analysis"
- D4.1 "State of the Art Analysis and Compilation of Results from Previous Projects"

- D4.2 "Analysis of Common Safety Requirements Allocation for MODSafe continuous Safety Measures and Functions"
- D4.3 "Analysis of On-Demand Functions and Systematic Failures"
- D5.1 "Urban Guided Transport Object Safety Model"
- D5.2 "Functional and Combined Object/Functionl Guided Transport Model"
- D5.3 "Safety Attributes Allocation Matrix"
- D6.1 "Survey of current safety life cycle approaches"
- D6.2 "Comparison of current safety life Cycle approaches"
- D6.3 "Proposal of common safety lify cycle approach"
- D7.1 "Review of current AAC procedures"
- D7.2 "List of elementary activity modules"
- D7.3 "Generic model of AAC processes"
- D7.4 "Acceptance, Approval, Certification - Proposal of typical optimizes AAC process"
- D10.5 "MODSafe Glossary"

3. DESCRIPTION

3.1. Background and justification

3.1.1. Background specific to the Metro Sector

The Egyptian Company for Metro Management and Operation (ECM) is a Joint Stock, Limited Liability Company established in 2003. Its sole shareholder is the Egyptian state through the Egyptian National Railways (ENR). The Assets of the Cairo Metro which are currently owned by ENR, are in the process of being transferred to the National Authority for Tunnels (NAT), which is an implementation agency under the umbrella of the Ministry of Transport.

Accordingly, NAT should continue providing support to ECM in evolving into a commercially oriented entity. Construction of the metro (civil works, associated fixed equipment, rolling stock etc.) is carried out by National Authority for Tunnels (NAT).



ECM mission is presently to operate and maintain Cairo’s underground metro (“the metro”). ECM is currently operating three lines:

1. Line 1, began operation in 1987 and its full construction finished in 2000. It has a total length of 44 km,
2. Line 2 began operation in 1996 and its full construction finished in 2005. It has a total length of 25.5 km,
3. Line 3, which started operation in February 2012 (phase 1), is under construction. Currently there are 5 stations and 4.3 km in operation. Phase 2 should be ready for operation at the end of 2013 (7.7 km and 4 new stations). Phase 3 (18km and 16 stations) and Phase 4 (8 stations and 13.8 km) will be implemented from 2013 to 2017.

ECM is responsible not only for operating and maintaining the existing lines, but also for renewing and rehabilitating the rolling stock, signalling and telecommunication, track and stations, and expanding existing lines.

Annual ridership is estimated at 810 million passengers, with demand already exceeding capacity by about 20% during peak hours. The metro meets about 22% of Greater Cairo motorized transport demand. So far, ECM revenues (about 450 million EGP/year) cover more than cash operating costs (OPEX), including a payment of 25% of revenues to ENR allocated to depreciation of assets transferred from NAT, which gives ECM a margin of action to implement its investment plan.

	Line 1	Line 2	Line 3
Lines	Helwan - New El Marg Line length: 44 km	El Mounib - Shubra Line length: 21.5 km	Attaba – Abbasiya Line length: 4.3 km
Operational Start	Phase 1-3: 1987	Phase 1-5: 1996	Phase 1: 2012
Assets	55 trains of 9 cars Number of stations: 35	35 trains of 8 cars Number of stations: 20	Number of stations: 5
Annual Ridership	485 Million passengers	325 Million passengers	Not Available
Total Employees	6.218 employees		

Within the Organization of Metro Cairo, there is a department named “Safety and Quality”. It is divided into three different areas:

- Operation Safety & quality
- Infrastructure Safety & quality
- Quality system and standardization

This department is in charge of the Quality Management System and the Safety Management System. Therefore the staff of this department carries out tasks regarding quality control and tasks regarding operational safety management.

According to the ECM strategic report published in 2008, the situation in 2008, in terms of safety, was:

- Pro-active organizational structure, in terms of defining standardized rules and processes.
- Accident investigation process is done in a joint effort between safety, operations and maintenance – no standardized investigation protocol in place
- No well defined safety meeting schedule
- Safety equipment is outdated and requires urgent upgrade
- Training program in place, but on very infrequent basis
- Lack of skills and technical expertise evident for safety staff

This Strategic Plan recommended a Safety Improvement Program and Safety Responsibilities within New operating Model. These recommendations were:

- Comprehensively rehabilitate safety equipment on Line 1
- Install active and standardized accident investigation protocol

- Investigation boards composed of representatives from key divisions
- Detailed Causal analysis performed on regular basis
- Install regular safety meeting schedule
 - Monthly joint industrial accident safety meetings and weekly rolling stock failure trend discussions
 - Weekly industrial safety meetings and monthly safety bulletins
- Intensify safety training cycle for all employees
- Specific employee health problems to be inspected by contracted specialized doctors assigned to hospitals

From 2008 until 2012 the situation has remained quite similar to the initial situation, with the proposed measures only partially completed. In this period the following aspects should be pointed out:

- The organization and personnel of the department, more aware of safety and wanting to improve. It has generated a specific “Quality and Safety” department.
- Investigation of accidents and incidents. There is a standard format for these, and they are classified by the specialisation with which they are related. These reports are set out in the operations manual as an independent ‘accident report’ chapter.
- Availability of an updated database, in MS Access, incorporating all metro network incidents and accidents related to quality and safety.
- All incidents and accidents are reported in writing to company management, by the “Safety & Quality” department.
- Monthly situation reports are sent to company management, with a list of the incidents and accidents that have occurred.
- Availability of maintenance manuals for fixed equipment and rolling stock.
- Availability of two Health and Safety(HSE) training program centres. This training is aimed at all company personnel: drivers, operators, agents, etc.
- Availability of a document titled Safety Management System, which is currently in the development phase and hasn’t yet been implemented in the organization.

National Safety Regulations and the Safety Management System

The Egyptian National Safety Regulations, dated June 2011 (second version), define all the obligatory safety requirements that national railways, whether operators or rail infrastructure managers, must comply with.

These regulations indicate that all operators and infrastructure managers should have a Safety Management System, and defines all elements of this system in great detail. The system is defined in the regulations as:

“Safety management system is intended to meet the measures and regulations established by the concerned parties of the railways authority to guarantee the safety of its operations management. The safety management system of the railways operator must include all the components related to the nature of operation for that accredited operator – or who shall be accredited on its basis. The safety management system, also, has to include an appropriate level of details of these articles clarifying the nature of operation and the risks that resulted or that could result from the said operation”.

The SMS proposed by the National Regulation is composed of the following sections:

- **Safety Policy:** The safety management system must include a safety policy approved by the highest managerial level, also, the safety management system has to be communicated to all individuals participating in its enforcement or employed in a function related to safety.
- **Safety Goals and Schemes:**
The safety management system must include quantitative and qualitative annual goals to improve safety, in addition to procedures and plans necessary to achieve those goals, to be applied by the concerned parties at the railways.
- **Safety Data System:** The safety management system must include systems and measures to disperse information amongst the individuals participating in the enforcement of safety management or employed in a function related to safety.
- **Annual Report:** The concerned parties at the railways should present an annual report - regarding safety - to the Railways Safety Regulation Unit within two months of the start of the following year, about what has happened throughout the previous year.
- **Document Administration:** The safety management system must have specific processes and measures to follow, in regards to managing documentations and information related to the safety and control of the railways operations.

It should be highlighted that this definition of SMS follows international SAFETY directives, particularly European SAFETY directives and the MODSAFE project for the development of specific Metro safety systems.

3.1.2. Justification

This project will contribute to all three of the SAAP core areas mentioned above; in particular the following:

- Improvement of the legislative and regulatory framework
- Institutional strengthening and reform.

A SMS provides a systematic way to identify hazards and control risks while maintaining assurance that these risk controls are effective. SMS can be defined as a businesslike approach to safety. It is a systematic, explicit and comprehensive process for managing safety risks. As with all management systems, a safety management system provides for goal setting, planning, and measuring performance. A safety management system is embedded into the structure of an organization. It becomes a part of the culture, the way people do their jobs.

Particularly, this project aims to the reduction of risk to a level that is as low as is reasonably practicable. There are three imperatives for adopting a safety management system for a business – these are ethical, legal and financial.

There is an implied moral obligation placed on an employer to ensure that work activities and the place of work to be safe, there are legislative requirements defined in just about every jurisdiction on how this is to be achieved and there is a substantial body of research which shows that effective safety management (which is the reduction of risk in the workplace) can reduce the financial exposure of an organisation by reducing direct and indirect costs associated with accident and incidents.

3.2. Linked Activities

A number of serious challenges have already started to be tackled in order for this strategic sector to reach its full potential.

The following main projects for the Egyptian Company for Metro Management and Operation (ECM) and the Ministry of Transport have been carried out:

- Starting 2008 and foreseen to be concluded by the beginning of 2014: The Transport Sector Policy Support Programme including the Technical Assistance granted by the EU to support the Reform of the Egyptian Transport Sector. Three main fields are included in the TA:

- Promote Private Sector Investment
- Strengthen Institutional Capacity
- Improve Competitiveness (Multimodality & Logistic Platforms)
- Replacement and upgrading of the catenary equipments to adapt the system to the future increase in number of trains.
- Renovations of the trains operating on Cairo Metro Line 1 funded by the Agence Francaise de Developpement (AFD) to be finalised by 2014.
- Construction of Cairo Metro Line 3 funded by the EU, the Agence Francaise de Developpement (AFD) and the European Investment Bank (EIB) to be fully concluded by 2017.
- Planning of Cairo Metro Line 4 funded by the Japanese Government.
- Creation of a new organisation structure for Safety and Quality to ensure the accurate and uncompromised implementation of safety regulations and procedures. This new departments consist of three sub-departments which are:
 - Quality and systems and Standardisation
 - Safety and quality of operation processes
 - Safety and quality of maintenance processes
- A twinning project titles “Supporting the Egyptian Ministry of Transport in the Implementation of the Railway Safety Management System” which will be simultaneously launched with this project.

3.3. Results

3.3.1. *Component 1: Setting Up the Safety Management System (SMS)*

The following are the mandatory results related to component 1:

- A Safety Management System manual for ECM, has been developed within ECM, including all related procedures, is developed and implemented.

3.3.2. *Component 2: Legal Component*

The following are the mandatory results related to component 2:

- Legislation and regulatory framework for the relation between the Railways Safety Regulation Unit (RSRU) at the MoT and the Egyptian Metro Company (ECM), has been reviewed and developed.
- Standard Operating Procedures (SOPs) for the Egyptian Metro Company (ECM) have been drafted and implemented.

3.3.3. *Component 3: Capacity Building*

The following are the mandatory results related to component 3:

- Adequate safety chart has been implemented at ECM.
- Training program for ECM Safety department and ECM employees has been conducted, considering technical and legal aspects.
- Standard Operating Procedures (SOPs) for the Egyptian Metro Company (ECM) have been drafted and applied

3.4. Activities

The main principle governing the twinning is applying the relevant EU directives and best practices, including the most appropriate framework for the ECM, in the assimilation of best European management and operational practice in the railway safety field.

Sections below describe the activities for each of the project components. All components will include know-how transfer and training of relevant staff to ensure the effectiveness of the twinning partnership and to reinforce the capacity building and sustainability.

In addition, the components will include study tours to ECM officials and staff, to give first-hand experience, to broaden understanding and to provide the opportunity for exchange of know-how through international co-operation. The Beneficiary staff will be able to assess best practices and practical solutions for achieving the objectives and results of this twinning project.

3.4.0. *Kick-off and final meetings*

In addition to the project components, the following general activities are envisaged to be implemented:

- A kick-off meeting at the beginning of the project, inviting all stakeholders to provide them with background information on project components; this activity takes place with the aim of increasing project visibility.
- A final meeting to ensure that the results achieved by the end of the project are available to all stakeholders; this activity will be held to ensure awareness and visibility in addition to wrapping-up of projects activities.

3.4.1. *Component 1: Setting Up the Safety Management System (SMS)*

The activities of this component focus on the elaboration and documentation of the SMS, completing the existing draft, and adding all the associated procedures.

- **A document for Safety Management System for ECM, has been developed within ECM, with all necessary procedures, is implemented within ECM, and under operation.**
 1. Developing Safety Management System for the whole company, including L1, L2 and L3, and other correlated tasks.
 2. Introducing safety governance and organization methods (roles, responsibilities and accountability).
 3. Fixing qualitative and quantitative targets. Supervising qualitative and quantitative targets, and how to feed back into the system. Annual Revision of the safety targets, and measures to improve (feedback), including development of annual reports issued by ECM and RSRU. It is required to close at least one feed-back cycle.
 4. Reviewing overall existing rules, in order to introduce safety issues and life cycle cost analysis.
 5. Preparing and implementing the new SMS and Safety procedures and processes in the organization: to carry out risk evaluation and hazard identification, to document and control vital safety information, to investigate accidents/incidents, to take corrective and preventive actions.
 6. Reviewing the current accident database.
 7. Introducing and implementing a new computerised accident/incident database, in order to fulfil the new procedures of accidents/incidents investigation.
 8. Introducing and implementing procedures for audit programmes.
- **Standard Operating Procedures (SOPs) for the Egyptian Metro Company (ECM) have been drafted and applied.**

1. Drafting Standard Operating Procedures (SOPs) for the Egyptian Metro Company (ECM).
2. Establishment of working groups to discuss the drafts of the new procedures and decisions concerning implementation procedures and to provide feedback

3.4.2. Component 2: Legal Component

The activities of this component focus on the legal issues, mainly on legislation and regulatory framework for the relation between the Railways Safety Regulation Unit (RSRU) at the MoT and the Egyptian Metro Company (ECM), in addition to the Standard Operating Procedures (SOPs):

- **Legislation and regulatory framework for the relation between the Railways Safety Regulation Unit (RSRU) at the MoT and the Egyptian Metro Company (ECM), has been reviewed and developed.**
 1. Revising the existing legislation and regulatory framework for the relation between the Railways Safety Regulation Unit (RSRU) and the Egyptian Metro Company (ECM).
 2. Developing new regulations for the relation between the Railways Safety Regulation Unit (RSRU) and the Egyptian Metro Company (ECM).

3.4.3. Component 3: Capacity Building

The activities of this component focus on the Capacity building of ECM organization, taking into consideration safety staff, and other people that may need specific training on safety.

- **Adequate safety chart has been implemented at ECM.**
 1. Assessing the current ECM, Chart and evaluating whether it is feasible/advisable that ECM create a new the S&Q Department within its chart.
 2. Developing the new chart of the safety department, in accordance with activity 1 conclusions
 3. Drafting job descriptions based on skills requirements and on responsibilities definition for each member of the Safety Department
- **Training program for ECM Safety department and ECM employees has been conducted, considering technical and legal aspects.**
 1. Preparing and implementing a specific training programme on SMS, for ECM and RSRU staff to be carried out in Egypt
 2. Preparing and implementing a specific training programme on legal framework and regulations for ECM and RSRU staff to be carried out in Egypt
 3. Preparing and implementing Study Tours, for MoT – RSRU department and ECM safety department

3.5. Means/ Inputs from the MS Partners Administration

The implementation of the activities mentioned above requires:

One (1) Project Leader with the responsibility of the overall coordination of project activities,

One (1) Resident Twinning Advisor (RTA) to manage project activities especially those conducted within the BC. The RTA will be assisted by a local assistant.

Three (3) Key Experts (component leaders) and additional specialized short term experts for specific activities.

3.5.1. Profile and Tasks of the Project Leader

The project leader (PL) will be responsible for the overall conception and implementation of the MS inputs in the twinning project and will ensure the achievement of the mandatory results. He/she should have a sound knowledge of the metro railway sector and EU safety directives as well as having leadership skills. These types of qualifications can only have been gained through management experience at a high level position in a Metro Operator. The Project Leader will be expected to spend a minimum of 3 days per month in his home base, providing project management, as well as undertaking at least one mission for the beneficiary entity every three months for attending the Steering Committee meetings. In coordination with the BC Project Leader, she/he will be responsible for the organization of the project's steering committee which includes the Beneficiary and representatives of the PAO, EU Delegation.

Profile: the PL should have a university degree or higher in one of the fields of management or engineering, and should have proven experience in coordinating MS public administration structures in the field of urban transport.

Qualifications and Skills:

The project leader will be expected to have the following qualifications:

- Inter-personal and leadership skills
- Thorough knowledge of EU directives particularly those related to safety.
- Good command of the English language both written and oral.

Management Capacity:

- Hold a senior position at a Metro Operator.

Professional Experience:

- Experience in establishing and/or managing a SMS on a Metro Operator.
- Experience in implementing safety management systems.
- Working experience in Egypt or other countries in the region will be advantageous

Tasks:

- Managing and coordinating the overall direction of the project in cooperation with the PL counterpart
- Ensuring the achievement of the project results
- Overseeing project implementation and progress
- Liaising with the PL of the beneficiary institution
- Mediating in the event of conflicts
- Overseeing financial management of the project
- Managing and supervising the RTA
- Preparing, with the assistance of the RTA, interim quarterly and final reports
- Attending and moderating the PSC meetings.

3.5.2. Profile and tasks of the RTA

The Resident Twinning Adviser (RTA) assignment is 24 months. He/she will lead all aspects of the work of the MS team and will work directly with the BC project leader and RTA counterpart on a daily basis to support and coordinate the activities being implemented in the BC. The RTA is expected to provide high level advice and direction on all project activities. The RTA will ensure that best European know how will be fed into the day to day activities and the decision making process at the Beneficiary organization.

Profile: the RTA should have a university degree or higher in management, engineering, HRM or a related discipline and will work directly with the BC project leader and RTA counterpart on a daily basis to support and coordinate the activities being implemented in the BC.

Qualifications and Skills:

- Expert in RAM's management under CENELEC EN50126 regulations, with experience in the development of Reliability, Availability and Maintainability specifications related to safety management.
- Good communication skills.
- Fluency in English.

Management Capacity:

- Familiar with program management.

Professional Experience:

The RTA should have current or recent experience in working in a Metro Operator of transport at a senior position, in a safety department. The RTA is expected to have:

- Minimum 5 years' experience in a safety department in a metro operator company.
- Professional experience in metro transport policy development in an EU environment with significant experience abroad.

Tasks:

- Overall direction and supervision of project implementation according to the agreed work plan.
- Preparing periodical and non-periodical reports in accordance with the project work plan and twinning manual guidelines.
- Coordinating and supervising short term experts' input.
- Providing professional support and local knowledge to medium and short term experts.
- Supervising the execution of training programmers.
- Ensuring the quality of manuals and printed outputs.
- Ensuring effective and optimal utilization of available resources;
- Acting as a contact point and liaison with PAO and EC Delegation.

RTA Assistant

The RTA will have a full-time Assistant, who will support him/her in the performance of his/her duties during the entire project period. S/he will assist in the translation, interpretation on a daily basis and general project duties at his/her disposal.

3.5.3. Profile and tasks of the Short-term Experts

The project depends on the engagement and commitment of Key Experts and STEs who will be provided by the MS or mandated body. They will be presented in the MS proposal and finalized together with assignments' duration during the drafting of the work plan by the MS and the BC.

The Key Experts are senior positions and have the key responsibility of leading their respective components.

The Key Experts will work in close liaison with the PL/RTA to coordinate and carry forward the objectives and activities of the project. They will be responsible for the supervision of their respective components and their STEs and the timely submission of mission reports.

The STEs will be specialists in the fields related to the defined activities and will provide the focus on the particular expertise when it will be required during the project.

For each component a **working group** shall be formed (comprised both by MS experts and BC counterparts). These groups should meet regularly to review progress, schedule activities and address any issues or constraints that may have arisen.

The STEs should all have university degrees with wide experience in the relevant discipline with demonstrable expertise in the specific field for which they will be engaged in the project. Previous experience in Egypt or other countries of the region will be considered an asset and they should be proficient in English language, both written and spoken. All the STEs will have the following tasks to perform:

- Providing expertise and knowhow transfer in their respective areas of specialism.
- Preparing and delivering workshops, seminars, on-the-job training as appropriate to the needs of the project.
- Preparing and submit brief mission reports to the RTA.

Type	Profile	Tasks
Component 1 Setting Up the Safety Management System (SMS)		
1) Safety Issues Key Expert	<ul style="list-style-type: none"> • Minimum 8 years experience in the field of railway/metro safety. • Experience in implementing Safety Management Systems in an EU member state and if possible abroad. • Specialized expert should have previous experience in reviewing operational and maintenance rules in connection with safety matters and proposing improvement measures. • Expert in Risk analysis, with experience in Hazard Log definition and creation of the Risk Map of an operator company. • Experience in a railway company in areas related to the following fields: <ul style="list-style-type: none"> ○ Railway operations. ○ Track maintenance. ○ Signalling & telecom maintenance. ○ Rolling stock maintenance. • Good communication and management skills. • Networking, organizational and facilitation skills. • Training skills and ability to actively involve various of stakeholders. • Capacity to work respecting deadlines and under tight schedules. 	<p>Expert in Safety issues is expected to:</p> <ul style="list-style-type: none"> • Assisting in preparing and implementing the Safety Management System at ECM . • Introducing functional schemes for Safety Management System. • Reviewing overall safety procedures and regulations in ECM. • Creating new safety procedures. • Providing on the job training to ECM personnel. • Creating new data base for accident investigation.
2) STE: Safety procedures expert	<ul style="list-style-type: none"> • Minimum 3 years experience in the field of metro. • Experience in implementing Safety Management Systems in an EU member state and if possible abroad. • Good communication and management skills. • Networking, organizational and facilitation skills. • Independent Safety Assessor certified by an EU competent body, to validate the process' formulation and implementation. 	<ul style="list-style-type: none"> • Reviewing overall safety procedures and regulations in ECM. • Creating new safety procedures.
3) STE: Risk Assessment Expert	<ul style="list-style-type: none"> • Minimum 3 years experience in the field of railway/metro safety • Experience in implementing Safety Management Systems in an EU member state and if possible abroad. • Expert in Risk analysis, with experience in Hazard Log definition and creation of the Risk Map of an operator company. • Good communication and management skills; • Networking, organizational and facilitation skills; • Training skills and ability to actively involve various of stakeholders; 	<ul style="list-style-type: none"> • Assisting in preparing and implementing the Procedures for Inspection Methodology for Operations, Track, Signalling / Telecommunication and Rolling Stock. • Formulating and implementing Operational Risk Evaluation. • Creating new data base for accident investigation.

Type	Profile	Tasks
Component 2. Legal Component		
4) Legal Issues Key_Expert	<ul style="list-style-type: none"> • Advanced university degree in law, public administration or other fields relevant to this assignment. • Minimum 8 years experience in legal issues related to regulatory matters, preferably with specific experience in the field of railway/metro safety law. • Previous experience in providing legal advice to EU Member States and abroad is an asset. • Previous experience in Middle East countries is desirable. Experience in Egypt is an asset. • Solid knowledge of Egyptian laws and regulations in the area of metro safety is an asset. • Fluency in written and spoken English is essential; good knowledge of Arabic is an asset. • Excellent communication and management skills. • Experience in development, organisation and conducting of training. • Experience in training quality assurance. • Networking, organisational and facilitation skills. • Training skills and ability to actively involve various of stakeholders. • Capacity to work respecting deadlines and under tight schedules. 	To deliver training measures for the management and operational staff on European legal and regulatory framework of metro safety, in particular, the Railways Safety Directive.
Component 3. Capacity Building		
5) Capacity building Key Expert	<ul style="list-style-type: none"> • A Safety Management and Development Expert with a minimum of 8 years experience in a railway company with significant experience abroad. • Capacity building expert will take part in the training as instructor and will use his/her findings as case studies. This expert should has knowledge about problems facing railway management as well as practical experience in the following: <ul style="list-style-type: none"> a. railway operations. b. track maintenance. c. signalling & telecom maintenance. d. rolling stock maintenance. e. drivers / CTC. f. and other related matters. • Excellent communication and management skills. • Experience in development, organisation and conducting of training. • Experience in quality assurance training. • Networking, organisational and facilitation skills. 	<ul style="list-style-type: none"> • Reviewing ECM organizational Chart. • Organizing study tours for top managers. • Developing and delivering specialized training programmers for ECM middle management and operational staff on safety issues. • Developing and delivering specialized training programmers for ECM employees. • Developing a safety culture inside the company.

Type	Profile	Tasks
	<ul style="list-style-type: none"> • Training skills and ability to actively involve various stakeholders. • Capacity to work respecting deadlines and under tight schedules. 	
6) STE: General Safety training (culture company)	<ul style="list-style-type: none"> • A Safety Management and Development Expert with a minimum of 3 years experience in a railway/metro company with significant experience abroad. • The expert should have knowledge about problems facing railway management as well as practical experience in the following: <ul style="list-style-type: none"> a. railway operations, b. track maintenance, c. signalling & telecom maintenance, d. rolling stock maintenance, e. drivers / CTC f. and other related matters • Excellent communication and management skill. • Experience in development, organisation and conducting of training. • Experience in quality assurance training. • Networking, organisational and facilitation skills. • Training skills and ability to actively involve various stakeholders. 	<ul style="list-style-type: none"> • Developing and delivering specialized training programmers for ECM middle management and operational staff on safety issues. • Developing and delivering specialized training programmers for ECM employees. • Developing a safety culture inside the company.
7) STE: Specialist in HR Capacity Building	<ul style="list-style-type: none"> • An HR Expert with a minimum of 3 years experience in a railway/metro company. • Experience in quality assurance and safety. • Networking, organizational and facilitation skills. 	<ul style="list-style-type: none"> • Reviewing ECM organizational Chart.

4. INSTITUTIONAL FRAMEWORK

The direct beneficiary of this project is the Ministry of Transport (MoT) which is the body responsible for overseeing the railway sector in Egypt including formulating and overseeing the implementation of overall transport sector strategies and plans.

MoT will be in charge of ensuring coordination of project activities with EMC. MoT is committed to the implementation of Twinning projects to achieve the mandatory results. This commitment includes both high level political commitment and a more practical commitment of BC human and financial resources.

Regular internal coordination meetings should be organized between the Ministry of Transport and the Egyptian Metro Company in order to liaise all activities related to the project.

MoT must therefore include in the work plan details of the departments or bodies concerned, the official(s) responsible for the changes to be made and for achieving the desired outcome, availability of appropriate office space and logistics, the budgetary resources to be mobilised and the timetable for the work it will itself undertake at each stage of the project's progress.

Several activities of this project will be implemented within the Egyptian Metro Company (EMC) which is responsible for the day to day operation of the Metro network, with an emphasis on social aspects including the provision of high quality passenger services.

5. BUDGET

The maximum total budget of the Twinning project is Euro 1.3 million.

6. IMPLEMENTATION ARRANGEMENTS

6.1. Implementing Agency responsible for tendering, contracting and accounting

The Programme Administrative Office is the Contracting Authority and is in charge of the coordination of all activities and the administrative management of the Support to the Association Agreement Programme. The PAO will be the institution in charge of the management of this twinning project. It manages the tenders, contracts and payments in accordance with the procedures of ex-ante control defined in the Practical Guide to contract procedures financed from the general Budget of the EC in the context of external actions.

However, the BC will make available appropriate office and equipment (including desks, internet access, telephone, fax, photocopier, etc.) for the RTA, RTA Counterpart, RTA Assistant, Key Experts and Short-Term Experts within EMC premises and close to the BC's Project Leader. Co-financing of the BC will be in kind.

Contact person at the PAO:

Ambassador Gamal Bayoumi
Programme Director
The Support of the Association Agreement Programme (SAAP)
9, Abdel Kader Hamza Street, 4th floor, Apt 401, Garden City, Cairo (Egypt)
Tel (+202) 27920583
Fax (+202) 27920583
E-mail: gbayoumi@ee-aa.net

6.2. Main counterpart in the BC

6.2.1 Egyptian Project Leader

The Egyptian Project Leader (PL) is a senior civil servant at a decision making level. The PL will act as the counterpart of the Member State PL and will ensure the overall steering and coordination of the project from the Egyptian side, including proper policy dialogue and political support.

The PL's seniority will ensure the mobilisation of the necessary staff in support of the efficient implementation of the project. H/She will lead/coordinate the Project Steering Committee (PSC) from the Egyptian side.

6.2.2 RTA Counterpart

The RTA Counterpart is a senior civil servant who will work with the RTA on a daily basis to ensure proper coordination and implementation of all the activities of the project and achieve an efficient transfer of knowledge and information. The RTA may be involved in one or more of the components of the twinning fiche and should preferably have good command of written and spoken English. Also, together with the RTA will be responsible for finalizing the reports to be submitted to the PLs which will be discussed and approved by the PSC

Project Leader in the BC

Mr. Ahmed Hassan
General Manager for R & D
Egyptian Metro Company
Ramsis, Cairo (Egypt)
Tel (+202) 24008220
Fax (+202) 24008627

RTA counterpart in the BC

Mr. Mohamed Ashraf
General Manager for Operation
Egyptian Metro Company
Ramsis, Cairo (Egypt)
Tel (+202) 24008220
Fax (+202) 24008627

The Egyptian partner shall contribute to the project by making available furnished and equipped office space (telephone with international connection, fax machine, internet connection, copier, 2 desks computers, printer, scanner and basic daily consumables) within or close enough to the relevant services of MoT / EMC to enable effective performance of the Experts.

The Egyptian counterpart will ensure that the equipment including computers and networks necessary for the implementation of project activities are in place and operational. The necessary local counterparts will also be made available as required for each field of expertise.

A new Financial Regulation applicable to the general budget of the European Union entered into force on 1st January 2013¹. This implies several changes to the Twinning contract templates. An updated version of the Twinning Manual and of its Annexes, incorporating these changes, is in preparation and

¹ Financial Regulation: Regulation (EC, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:298:0001:0096:EN:PDF>

Rules of Application: Commission Delegated Regulation (EU) No 1268/2012 of 29 October 2012 on the rules of application of Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council on the financial rules applicable to the general budget of the Union.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:362:FULL:EN:PDF>

shall be published soon on EuropeAid website². The Twinning contract that shall be signed as a result of the present procedure shall follow the templates of the updated Twinning Manual and Annexes.

6.3. Contracts

The PAO intends to enter into Supply Contracts as required for the different components of the twinning project. This will be funded separately from the SAAP budget. The supply will be provided upon the needs assessment that will be undertaken by the experts during the implementation of the twinning project.

7. IMPLEMENTATION SCHEDULE (INDICATIVE)

7.1. Launching of the call for proposals

February 2013

7.2. Start of project activities

November 2013

7.3. Project completion

February 2016

7.4. Duration of the execution period

27 months (24 + 3 months closure)

8. SUSTAINABILITY

A higher safety level will provide substantial results for the sustainability of the railway system.

Through strengthening safety and related administrative capacity of both MOT and EMC, the Metro System situation will become a more reliable means of transport and thus increasing the financial sustainability of ECM through revenues generated by activities such as urban passengers

The project shall continue its effects and benefits in the long term after the end of the envisaged activities. This can be achieved by ensuring the transfer of know-how with the institutions involved. In this sense, all training materials elaborated under the Twinning Project will continue to be used by the ECM and the Ministry of Transport after the project's completion. All materials - Training Material and Manuals - elaborated within the project shall be submitted both in English and in Arabic, so as to ensure smooth dissemination of the project results and sustainability of results.

The institutional sustainability of the project results will also be guaranteed by the direct involvement of both ECM and the Ministry of Transport, which will ensure the synergies and the connections of all stakeholders.

9. CROSSCUTTING ISSUES

The project will be carried out in accordance with EU policy regarding key cross-cutting development issues

² http://ec.europa.eu/europeaid/where/neighbourhood/overview/twinning_en.htm

▪ **Good Governance and Human Rights**

Implementation of the project will contribute to the following principles of *Good Governance*:

- Enhancement of the role of public administration institutions: the project will bring wider benefits for the full implementation of the missions of the RSRU within the MoT.
- Reinforcement of the rule of law and the administration: the project will support the full implementation of the NSR within the EMC.
- Enhancement of the role of non-state actors and their capacity building: the project will support EMC in the implementation of its Safety Management System, which will increase its capability to effectively develop a safety culture within the EM Company.

▪ **Environmental**

Implementation of the project has no negative impact on the environment.

On the contrary, improving the safety culture in rail transport will contribute to increased utilization of the railway network vis-a-vis other transport modes thus reducing pollution.

In addition, improved safety contributes to the reduction of the risk of accidental pollution.

▪ **Equal Opportunity**

Opportunity for both men and women to participate in this project will be guaranteed on equal basis.

10. CONDITIONALITY AND SEQUENCING

▪ **Conditionality**

It is crucial to the success of the Twinning Project that the BC and other stakeholders are committed to implementation of the recommendations agreed between the Project Team and the beneficiaries. Such implementation may result in recommendations to change the structure, functions and procedures employed by ECM. and other stakeholders.

It is also vital that the changes resulting from the Twinning Project itself are seen, not as a final steady state, but as steps forward in a continuing process of change to reflect the current and future need for the development of the organisation.

Both the Ministry of Transport and ECM should empower the safety and quality department to carry out its responsibilities as recommended by the twinning project.

▪ **Sequencing**

Within each component of the Project, the Activities entered in the log frame are, generally, sequential. It is important to note however that some components will demand careful synchronisation; in particular, the training needs analysis will need to be completed at an early stage, so that the amounts of training included in the Project are delivered at the appropriate time. Training/study tours for technical tasks may be started early in the project though management-related training will be determined based on the decisions about structure and personnel selection. In this particular Twinning Project the sequencing is highly important. It has a huge component of Capacity Building that it should be implemented at the first phase in order to success with the other components.

Further details about scheduled activities shall be arranged among the BC and the selected MS PL and the RTA during the phase of project preparation.

ANNEX 1. LOGICAL FRAMEWORK MATRIX

A) OVERALL OBJECTIVE

OVERALL OBJECTIVE	OVI/BENCHMARKS	SOURCE OF VERIFICATION	ASSUMPTIONS
To enhance the overall capacity of the Egyptian administration in the field of Metro Safety, in line with the National Safety Regulations (NSR), and the EU Acquis and international best practices	<p>A Safety Governance methodology is developed</p> <p>Risk Assessment methods are developed and applied (hazard identification and risk assessment)</p> <p>A new computerized database system is introduced</p> <p>Reduced number of accidents</p>	<p>Official government reports.</p> <p>Press statements.</p> <p>Project's progress reports</p> <p>ENP Subcommittee and progress reports</p>	<p>Commitment of the Egyptian Government to pursue reform in that area, in particular, Ministry of Transport.</p>

B) PROJECT PURPOSE

PROJECT PURPOSE	OVI/BENCHMARKS	SOURCE OF VERIFICATION	ASSUMPTIONS
To support the Egyptian Company for Metro in enhancing its capacities related to the implementation of the Safety Management System, and the development of new safety regulations.	<p>The SMS is approved</p> <p>Standard Operating Procedures are introduced</p> <p>Procedures for audit programmes are introduced</p> <p>Specific training on SMS for ECM is developed and carried out.</p>	<p>MoT official documentation</p> <p>ECM official documentation</p>	<p>Allocation of sufficient human and financial resources needed to efficiently implement the project activities and ensure the sustainability of this project after its finalization.</p> <p>Commitment and appropriate level of coordination among all stakeholders involved in the different project levels and areas.</p>

C) RESULTS (COMPONENTS)

RESULTS (COMPONENTS)	OVIs/BENCHMARKS	SOURCE OF VERIFICATION	ASSUMPTIONS
Component 1. Setting Up the Safety Management System (SMS)			
<ul style="list-style-type: none"> • A document for Safety Management System for ECM, has been developed within ECM, with all necessary procedures, is implemented within ECM, and under operation. 	<ul style="list-style-type: none"> • SMS Document, and procedures for description of the methodology for risk assessment, hazard identification, audit and inspection programme are formulated and implemented. • Qualitative and quantitative targets as safety indicators are fixed. • Operational Risk Evaluation. Procedures for Inspection Methodology for Operations, Track, Signalling/Telecommunication and Rolling Stock are formulated, operationalized and implemented. • Accident Investigation Guide. Procedures of investigation Accidents/Incidents are formulated and implemented. • Database for Accidents/Incidents is formulated and implemented. • Inspection and Audition Plans. Procedures of corrective and preventive actions are elaborated and implemented. • Reviewing all existing procedures, including safety issues of SMS, has been done. • Revision of the safety targets and measures to improve has taken place, and has been implemented. • Risk management of the human factor has been studied and measures to decrease it implemented. • A regulation for the accreditation/enabling process of Maintenance Centers (workshops), Control Centers, and Maintenance Centers' Managers has been developed and implemented. • Functional scheme for SMS has taken place. 	<p>MoT official publications ECM official publications Project regular reports KE/STE mission reports</p>	<ul style="list-style-type: none"> • It is required to close at least one feed-back cycle • Full cooperation of safety department staff . • Cooperation of other departments at ECM.

RESULTS (COMPONENTS)	OVI _s /BENCHMARKS	SOURCE OF VERIFICATION	ASSUMPTIONS
<ul style="list-style-type: none"> Standard Operating Procedures (SOPs) for the Egyptian Metro Company (ECM) have been drafted and applied 	<ul style="list-style-type: none"> Drafted and applied Standard Operating Procedures (SOPs) for the Egyptian Metro Company (ECM). 	ECM official publications Project regular reports KE/STE mission reports	
Component 2. Legal Component			
<ul style="list-style-type: none"> Legislation and regulatory framework for the relation between the Railways Safety Regulation Unit (RSRU) and the Egyptian Metro Company (ECM), has been reviewed and developed. Standard Operating Procedures (SOPs) for the Egyptian Metro Company (ECM) have been drafted and implemented. 	<ul style="list-style-type: none"> Revision of the existing legislation and regulatory framework for the relation between the Railways Safety Regulation Unit (RSRU) and the Egyptian Metro Company (ECM). Development of new regulations for the relation between the Railways Safety Regulation Unit (RSRU) and the Egyptian Metro Company (ECM). 	MoT official publications ECM official publications Project regular reports KE/STE mission reports	Cooperation with national governmental entities
Component 3. Capacity Building			
<ul style="list-style-type: none"> Adequate safety chart has been implemented at ECM. 	<ul style="list-style-type: none"> Safety Policy, integrated in the framework regulation and organization and responsibilities are defined, Reviewing ECM current chart is performed. New Safety Department chart has been decided. Roles of the Safety Department Personal have been identified and defined. 	ECM official publications Project regular reports KE/STE mission reports	It will need flexibility for the adoption of measures over the organization chart
<ul style="list-style-type: none"> Training program for ECM Safety department and ECM employees has been conducted, considering technical and legal aspects. 	<ul style="list-style-type: none"> Training Programme on SMS, for ECM and RSRU staff has been carried out in Egypt Training Programme on legal framework and regulations for ECM and RSRU staff has been carried out in Egypt. Study Tours, for MoT – RSRU department and ECM safety department have been carried out. 	Benchmarks of the Twinning project, including Programme and Study tours contents description and satisfaction tests signed by all participants. Project regular reports KE/STE mission reports	Commitment of MoT and ECM management.

D) ACTIVITIES

ACTIVITIES	ASSUMPTIONS
Component 1. Setting Up the Safety Management System (SMS)	
<ul style="list-style-type: none"> • A document for Safety Management System for ECM, has been developed within ECM, with all necessary procedures, is implemented within ECM, and under operation. <ol style="list-style-type: none"> 1. Redacting Safety Management System for the whole company, including L1, L2 and L3, and other correlated tasks. 2. Introducing safety governance and organization methods (roles, responsibilities and accountability). 3. Fixing qualitative and quantitative targets. Supervising qualitative and quantitative targets, and how to feed back into the system. Annual Revision of the safety targets, and measures to improve (feedback), including development of annual reports issued by ECM and RSRU. 4. Reviewing overall existing rules, in order to introduce safety issues and life cycle cost analysis. 5. Preparing and implementing the new SMS and Safety procedures and processes in the organization: to carry out risk evaluation and hazard identification, to document and control vital safety information, to investigate accidents/incidents, to take corrective and preventive actions. 6. Reviewing the current accident database. 7. Introducing and implementing a new computerised accident/incident database, in order to fulfil the new procedures of accidents/incidents investigation. 8. Introducing and implementing procedures for audit programmes. 	<p>For activity No. 3, it is required to close at least one feed-back cycle.</p>
<ul style="list-style-type: none"> • Standard Operating Procedures (SOPs) for the Egyptian Metro Company (ECM) have been drafted and applied. <ol style="list-style-type: none"> 1. Drafting Standard Operating Procedures (SOPs) for the Egyptian Metro Company (ECM). 2. Establishment of working groups to discuss the drafts of the new procedures and decisions concerning implementation procedures and to provide feedback. 	<ul style="list-style-type: none"> • Full cooperation of safety department staff . • MS expert assistance in the establishment and the work of the working groups. • Cooperation of other departments at ECM.

ACTIVITIES	ASSUMPTIONS
Component 2. Legal Component	
<ul style="list-style-type: none"> • Legislation and regulatory framework for the relation between the Railways Safety Regulation Unit (RSRU) and the Egyptian Metro Company (ECM), has been reviewed and developed. <ol style="list-style-type: none"> 1. Revising the existing legislation and regulatory framework for the relation between the Railways Safety Regulation Unit (RSRU) and the Egyptian Metro Company (ECM). 2. Developing of new regulations for the relation between the Railways Safety Regulation Unit (RSRU) and the Egyptian Metro Company (ECM). 	Cooperation with national governmental entities
Component 3. Capacity Building	
<ul style="list-style-type: none"> • Adequate safety chart has been implemented at ECM. <ol style="list-style-type: none"> 1. Assessing the current ECM, Chart and evaluating whether it is feasible/advisable that ECM create a new the S&Q Department within its chart. 2. Developing the new chart of the safety department, in accordance with activity 1 conclusions 3. Drafting job descriptions based on skills requirements and on responsibilities definition for each member of the Safety Department 	Commitment of MoT and ECM in the adoption of measures over the organization chart
<ul style="list-style-type: none"> • Training program for ECM Safety department and ECM employees has been conducted, considering technical and legal aspects. <ol style="list-style-type: none"> 1. Preparing and implementing a specific training programme on SMS, for ECM and RSRU staff to be carried out in Egypt 2. Preparing and implementing a specific training programme on legal framework and regulations for ECM and RSRU staff to be carried out in Egypt 3. Preparing and implementing Study Tours, for MoT – RSRU department and ECM safety department 	Availability of resources for the implementation and dissemination of SMS procedures