



Emergency Management System of Saudi Arabia

YAO Hao-wei^{a,b}, LIU Fei^{a,b}, ZHANG Liang^c, LIANG Dong^{a,b,*}

^a*School of Engineering, Sun Yat-sen University, Guangzhou 510006, China*

^b*Guangdong Provincial Key Laboratory of Fire Science and Technology, Guangzhou 510006, China*

^c*Guangzhou SCUT Architectural Technology Consulting Co., Ltd, Guangzhou 510641, China*

Abstract

The ECO (Emergency Call and Operation Center), is an Emergency system which used to enhance and improve the Saudi Arabia's safety and security related operational capabilities. It included 6 scopes: Constructions, C4IS (Command, Control, Communication, Computers, Intelligence and Surveillance) systems, Organization Design and Change Management, Training, Operation and Maintenance, and Facility Management.

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1. Introduction

This ECO is part of the Ministry of Interior's Modernization Program, and it will be used by the Public Security Directorate (PSD) and the Civil Defense (CD) departments of the Arabia Kingdom. The ECO Centers will provide multi agency event reporting and dispatch operations for the public contact element of the PSD and CD. The ECO Centers will be interlinked via wide area networks providing a robust and resilient network of control centers that will enhance and improve the efficiency of response to the general public of Saudi Arabia.

1.1. Characteristics

The ECO Center infrastructure, systems and capabilities will be designed to support a fully co-located governance model that maintains the mission focus and command structure of the participating agencies and supports shared use of facilities, technology, processes and people who are primarily engaged in front-line event handling (call-taking and dispatch). And the key operational characteristics of it as follow:

- Simplified public access through a single emergency number.
- Delivery of all emergency calls to multifunction cross-trained call takers.
- Seamless call & information transfer for, and interoperability with, external providers (e.g. Red Crescent)
- Consolidated dispatch services within each Agency.
- Common Operational Picture by incident or area that can be shared with field Commanders and among Agencies.
- Centralized facility with backup sites.
- Standard operating procedures and technology support that comply with Agency-managed rules.
- Better workforce skills through enhanced training and higher utilization.
- Service quality and performance metrics that drive continuous improvement

* Corresponding author.

1.2. Current situation

Current operations for PSD and CD are conducted in all Provinces of the Kingdom. There are 13 Provinces with a varying number of governorates in each province (Fig 1.).

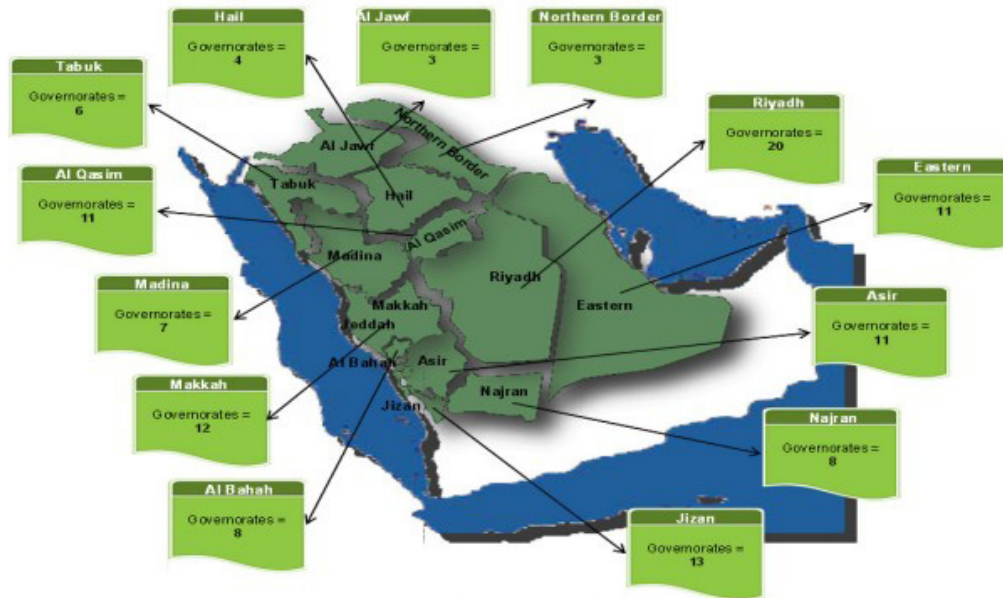


Fig.1. Kingdom of Saudi Arabia Governorates

The long term goal of the ECO Project is to consolidate all the current operation centers that provide call taking and dispatching operations in each governorate into one central ECO Center for each province.

2. Constructions

An ECO Center will be located in each province of the Kingdom with an additional combined ECO and Hajj Command & Control Center in Makkah. And a Fallback Center will be located in Riyadh and there are a number of Remote sites, some requiring refurbishment that will require interconnection to ECO Center systems. The ECO Centers fall into 3 categories:

- A+ Type: the largest ECO Center, located in Makkah and functioning as the ECO and Hajj Command & Control Center.
- A Type: located in main urban cites and will also be the type used for the Fallback Center.
- B Type: approximately half the size of an A Type ECO Center, located in provincial towns.

The locations of the A+, A and B type ECO Centers are depicted in Fig.2.below.

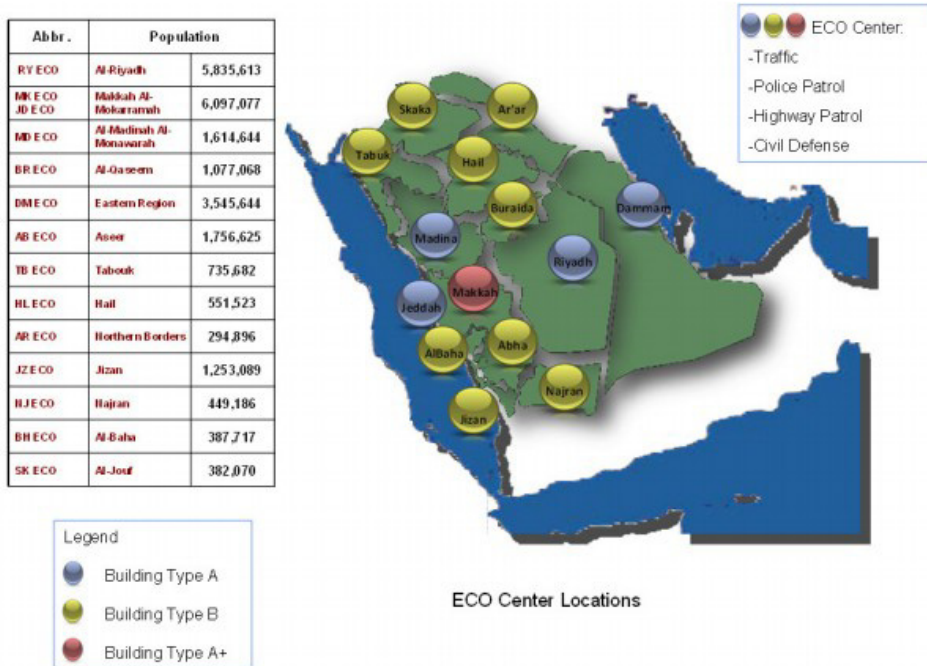


Fig.2. ECO Center Locations

3. C4IS Systems

The ECO Centers will be designed to support the operational and functional requirements of the PSSAs through the use of existing and new systems. These systems are referred to as: C4IS - Command, Control, Communications, Computers, Intelligence and Surveillance systems. The term C4IS is defined as the systems, supporting infrastructure and tools that provide situation awareness to Security Commanders, and support their decision making process and the associated communication of information.

The C4IS systems will be deployed in all ECO Centers and associated Remote Sites to form a robust nationwide system for the management and control of day to day Public Safety and Security operations, pre-planned events, escalations and crisis management.

The C4IS systems have been divided into many work-packages. Example of these work-packages as follows:

- Integrated Communications and Control System
- Incident Management System
- Emergency and Crisis Management System
- Geographical Information System
- Mobile Incident Command Unit
- Resource Management System
- Hajj Specific systems
- Interactive Video Management System

4. Organization Design and Change Management

Organizational Design and Change Management is a continuous process that will be conducted throughout the lifecycle of the project. Contractor will be required to Conduct the reengineering of structures, business processes, and formal reporting relationships that best enable the ECO Center Concept of Operations (CONOPS) to arrive at the future state operating model, and Design the MOI operational organization necessary to implement that operating model. The likely high level MOI PMO functional structure is depicted in Fig.3.

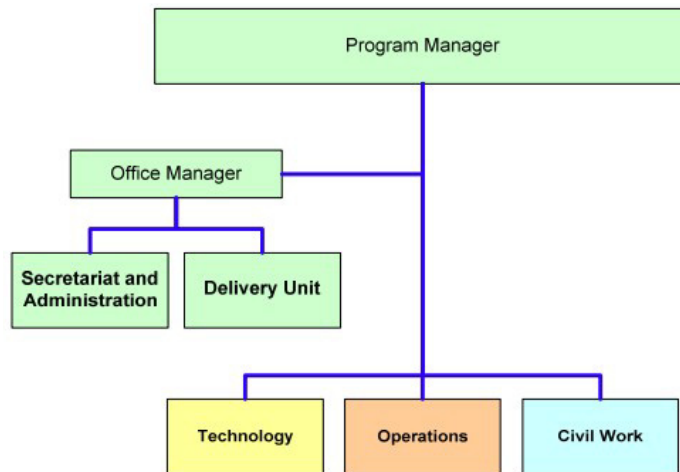


Fig.3. Proposed MOI PMO Functional Structure

5. Training

Training has been divided into the following sections:

- 1) Foundation: Arabic and English language, PC and keyboard skills. This training will begin at the start of the project and will be ongoing until all ECO Centers are operational
- 2) C4IS Technical (6 months): Administrator, Supervisor, Policy & Procedures and Technical Support training. To begin 9 months before scheduled migration into an ECO Center
- 3) C4IS User (3 months): User training on C4IS systems installed in the ECO Center. Training intended to ensure operators are skilled to an acceptable level to perform live operations.
- 4) Induction: for all users of the ECO Center, to be conducted in the migration phase of the project.

6. Operation and Maintenance

The ECO Centers including the Fallback Site, the Remote site locations and the Training Center shall require a fully managed Operations and Maintenance (O&M) program for all C4IS systems and system components.

The O&M Services shall be managed in support of the MOI's business aims and objectives and be delivered by directly employed personnel or sub-contracted personnel.

The provision of the O&M Services shall include competent and qualified team to manage and supervise operational staff to ensure delivery of the services in accordance with the RFP.

7. Facility Management

The ECO Centers including the Fallback Site in Riyadh and the Training Center shall require a fully managed Facility Management (FM) Service that shall be provided and delivered to a high standard of service throughout the life of the Contract.

The MOI will maintain the overall strategic control of the ECO Centers and shall delegate the day-to-day management and delivery to the FM Services CONTRACTOR.

Contractor must also provide all the required implementation and completion of the project and the fulfillment of all duties and obligations to meet the requirements and needs of the ministry.

Since the works of the project include different elements, the Contractor must be classified in the dominant activity in the project.

Acknowledgements

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