



وزارة الدولة لشؤون  
التخطيط والتنمية



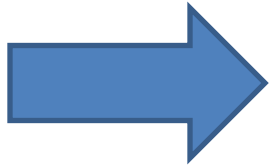
# **Project Conference 24 Jul 2013**

## **National Traffic and Transport Strategy 2010-2020 for Kuwait**

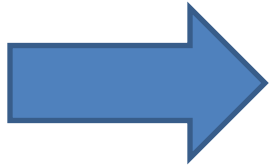
### **UNDP**

**مشروع الإستراتيجية الوطنية الشاملة للمرور وقطاع النقل  
2010-2020 في دولة الكويت**

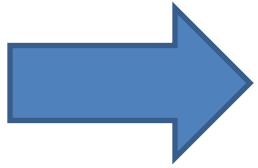
# Contents



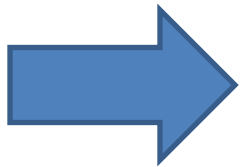
Traffic Problems in Kuwait



National Traffic and Transport Strategy  
2010-2020



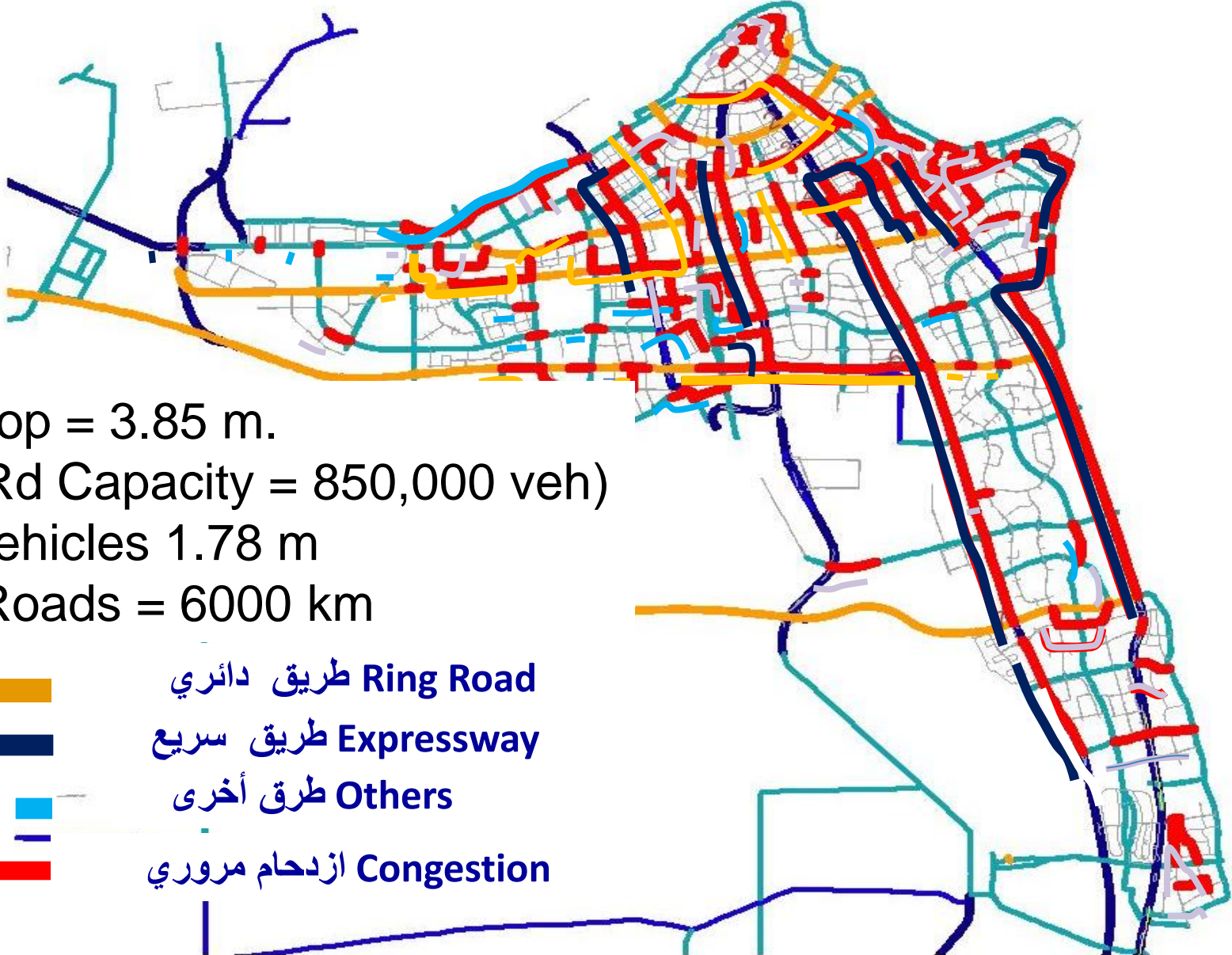
Project Methodology



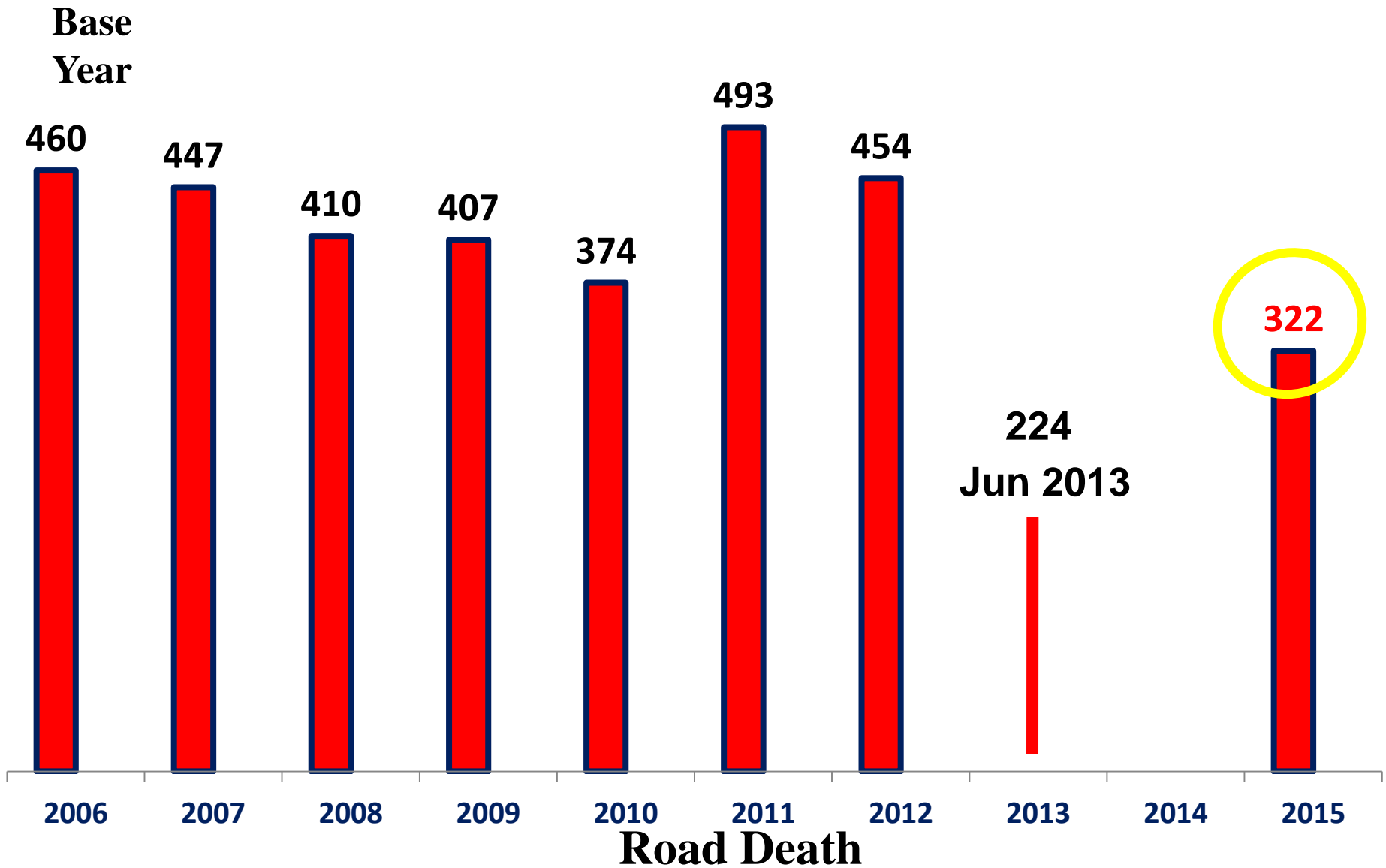
Samples of Outputs and Monitoring



# Kuwait



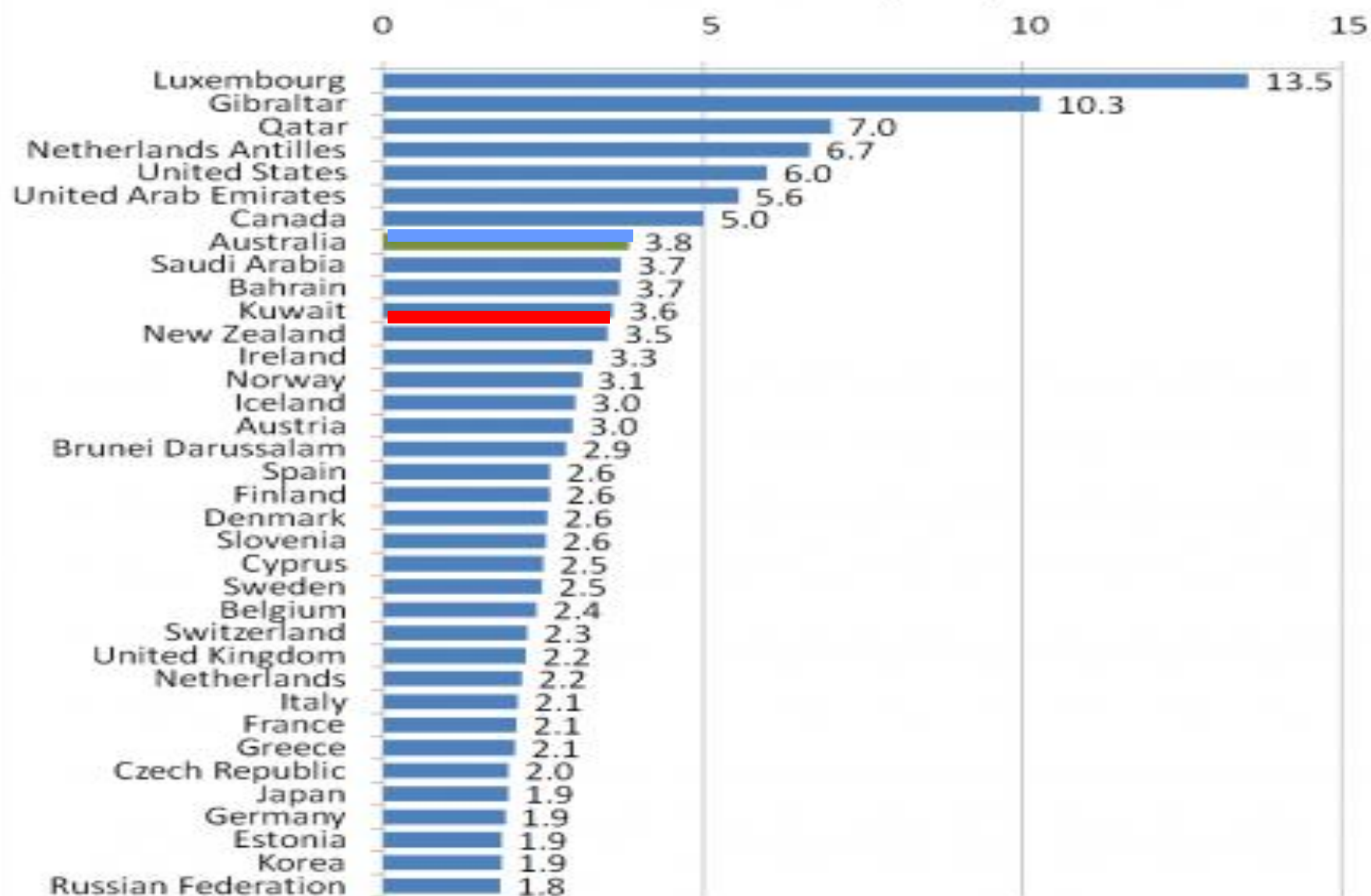
# Road Fatalities in Kuwait



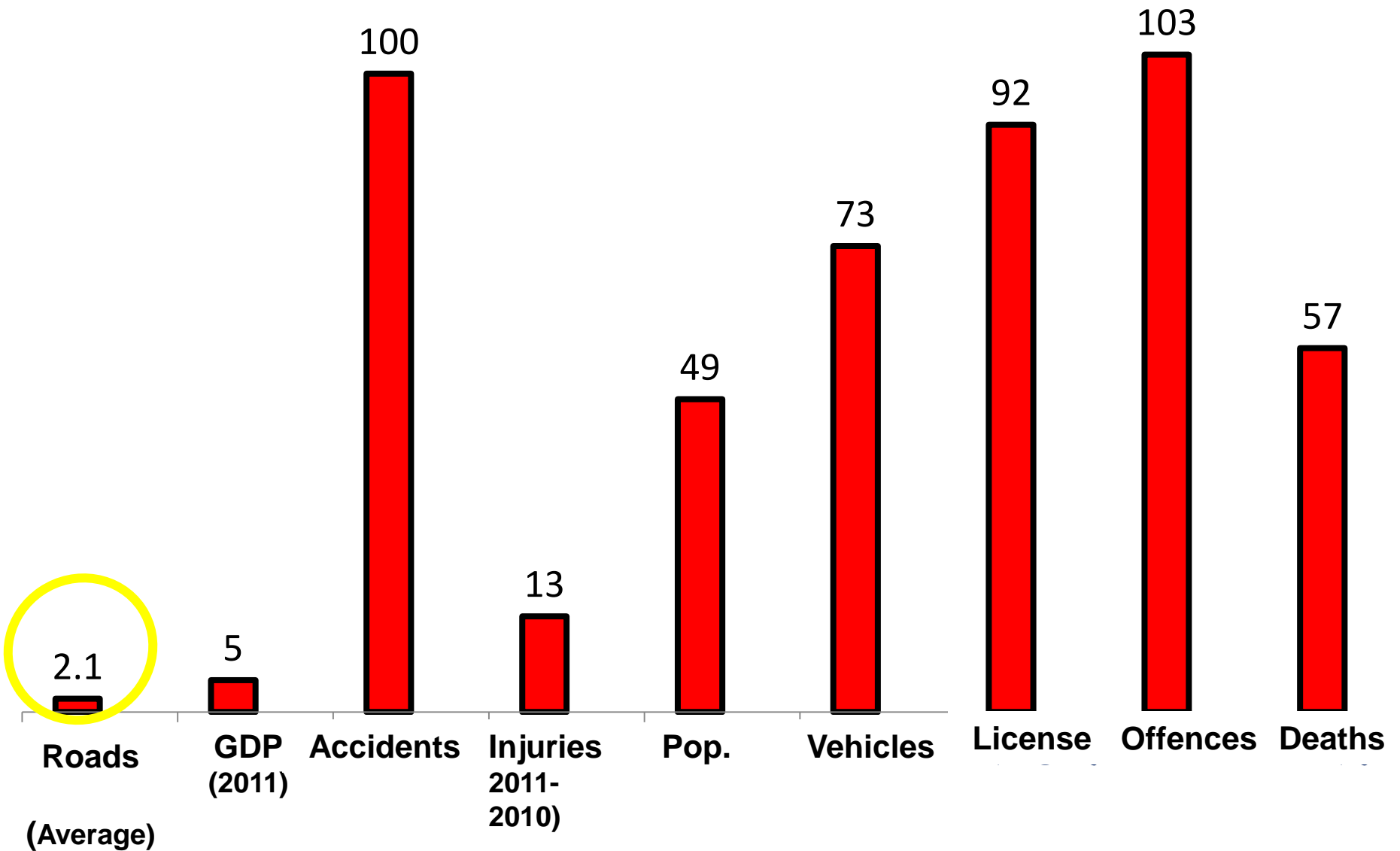
# 2007 Transport emissions per capita

(source: IEA 2009, including electricity)

tonnes CO<sub>2</sub>e per capita



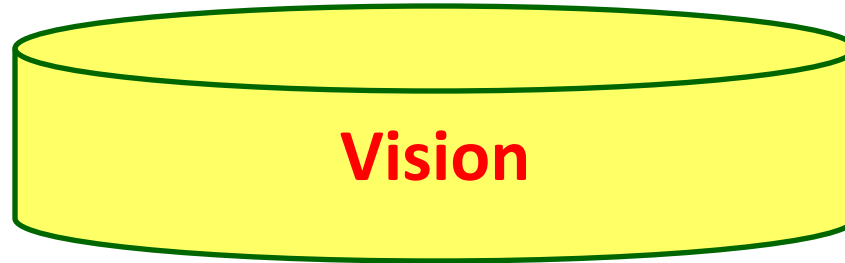
# %Growth During 2002-2011 Kuwait





National Traffic and  
Transport Strategy

# **National Traffic and Transport Strategy for Kuwait 2010-2020**

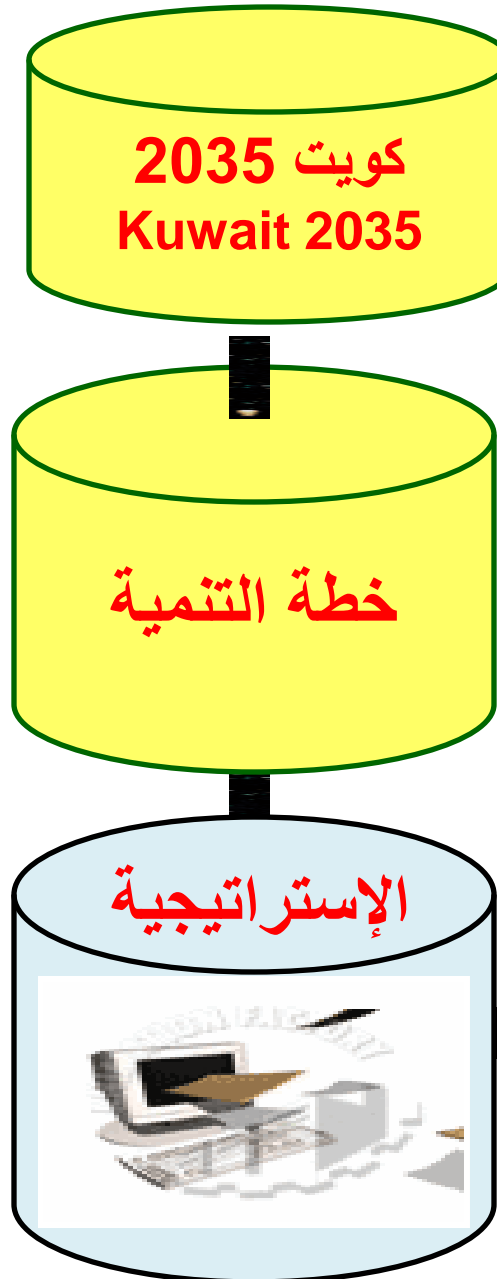


**Towards Sustainable and Safe Transport System For  
Current and Future Generations**

# Strategy Components and Link with Kuwait 2035 Vision

## Ingredients

- Capacity Building
- Human Resources Development
- Institutional Reform
- Transport - Land Use Planning
- Roads, Traffic and Public Transport
- Traffic Police
- Ambulance and Emergency
- Information System
- Research and Studies
- Education and Awareness
- Sustainable Development
- Negative Impacts, e.g accidents
- Technology Use
- Other Sectors



## محاور الإستراتيجية

تخطيط النقل – المدن  
هندسة المرور والطرق  
النقل الجماعي  
شرطة المرور  
التطوير المؤسسي والإدارة  
نظم المعلومات والبحوث  
الإسعاف والطوارئ  
الخدمات  
التعليم والتوعية المجتمعية  
الازدحام وسلامة الطرق  
حماية البيئة  
التنمية المستدامة  
علاقة مع القطاعات الأخرى

# Resolutions of the Ministers Council Regarding the Strategy



# Kuwait Website – UN Decade of Action Website for 18 Leading Country Activities in 2013

[Argentina](#) , [Australia](#) , [Canada](#) , [China](#) , [Czech Republic](#) , [Belgium](#) , [France](#) , [Georgia](#) , [India](#) ,  
[Kuwait](#) , [Mexico](#) , [Nigeria](#) , [Philippines](#) , [Romania](#) , [Spain](#) , [Uganda](#) , [UK](#) , [USA](#)

Most Visited Getting Started file:///C:/Users/DELL/Fa... Latest Headlines

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YTD Yahoo Search Download Youtube Amazon eBay Coupons Radio Options

WHO | Kuwait

عربي 中文 English Français Русский Español

## United Nations Road Safety Collaboration

Search Search

UN Road Safety Collaboration  
About  
Projects

### Kuwait

5th International Training of the Traffic and Transport Agencies Cadres & 2nd Anniversary of the UN Decade of Action 2011-2020 Plan  
1 April - 31 May 2013, Government of Kuwait and UNDP


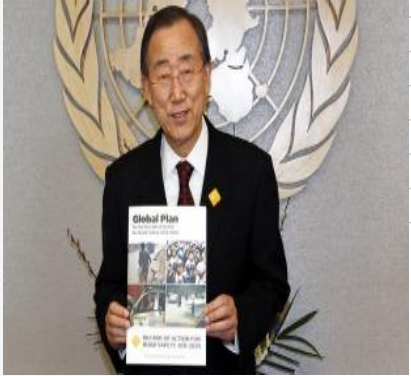
The Government of Kuwait and UNDP commenced implementation of the 2nd stage of the National Traffic and Transport Strategy 2010-2020 for Kuwait in 2013 to create Sustainable and Safe Transport System, including development of:

- Web Based National Integrated GIS / Traffic Information System
- National Road Safety and Black Spot System
- National Traffic Engineering and Enforcement System
- National Accident Investigation System
- National Traffic Awareness Campaign
- Establishment of National Road Safety Center
- Monitoring & Evaluation

The activities include international training workshops during the Gulf Traffic week and Day of Remembrance of Road Accident Victims, celebration of anniversary of the UN Decade of Action 2011-2020 Plan, and various projects, and guidelines development. The goals include reduction of road accident fatalities by 30% and reduction of fatality death rate per 100,000 population to 7 by 2015.

Contact: Prof Dr Kim Jraiw  
Tel: +965 9744 7604

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# Project Methodology

## Sectors

## Subsectors

**Sustainable  
Development**

Decision Makers / National Strategy  
Socioeconomic Issues / Budget  
Institutional Reform  
Capacity Building and Training

**Planning /  
Engineering**

Transport – Land Use Planning  
Road Design / Traffic Management  
Accidents Reduction  
Congestion Alleviation  
Integrated Transport System  
Transport Services

**Project**

**Enforcement**

Driver & Vehicle Testing  
Legislation / Operations  
Skills / Knowledge

**Monitoring**

**Medical /  
Emergency**

Ambulance / Fire / First Aid  
Emergency  
Hospital Facilities

**Research /  
Technology**

Improve Understanding  
Address Issues of Concern  
Assess Effectiveness  
Promote Technology Use / Innovation

**Education**

Education - Schools / Community  
Driver Training  
Remedial Programmes

**Social / Promotion**

Community Awareness

# Project Stages

Stage 2

- **Foundation 2013 – 2014**  
(Development)



- **Foundation 2014 – 2015**  
(Data Collection, Test, Enhancement & Maintenance)

Stage 3

- **Smart Kuwait 2015 – 2020**  
(National Development Plan)



# Project Components

**Integrated Data  
Management  
System**

Data collection, input,  
output, training

**Traffic  
Engineering and  
Enforcement**

Patrol capacity, databases  
(emi, border), interface,  
guidelines, training

**Road Safety  
and Black  
Spot**

Process, guidelines,  
training

**Reform and  
National  
Traffic  
Centres of  
Excellence**

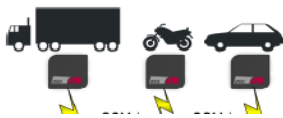
Proposals by individual  
consultants

**National Traffic  
Awareness  
Campaign**

Campaign and Proposals  
by individual consultants

**Monitoring  
& Evaluation  
System**

KPI, dashboard, analysis,  
training



## Design Relevant Forms for



Manual / Field Data  
Control Centers Data

Electronic Data  
PACI Data ..etc  
Mainframe Data  
Paper Work Data

GPS Data

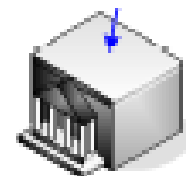
1



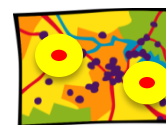
Server



2



Web-Based  
Traffic Demand Management,  
Road Safety and Enforcement  
System



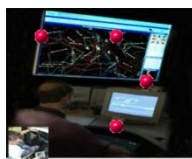
3



M & E

5

Monitoring  
&  
Evaluation



Information / Data

Training and Capacity Building

Traffic Management / Congestion Levels

Traffic Police / Emergency Services

Road Safety / Black spots

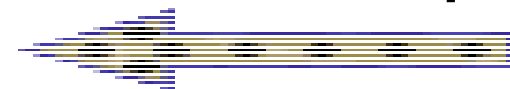
Stakeholder Services

Guidelines

Vehicle Emissions

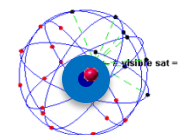
Decision Makers /  
Practitioners Outputs

4



Website

Mobile



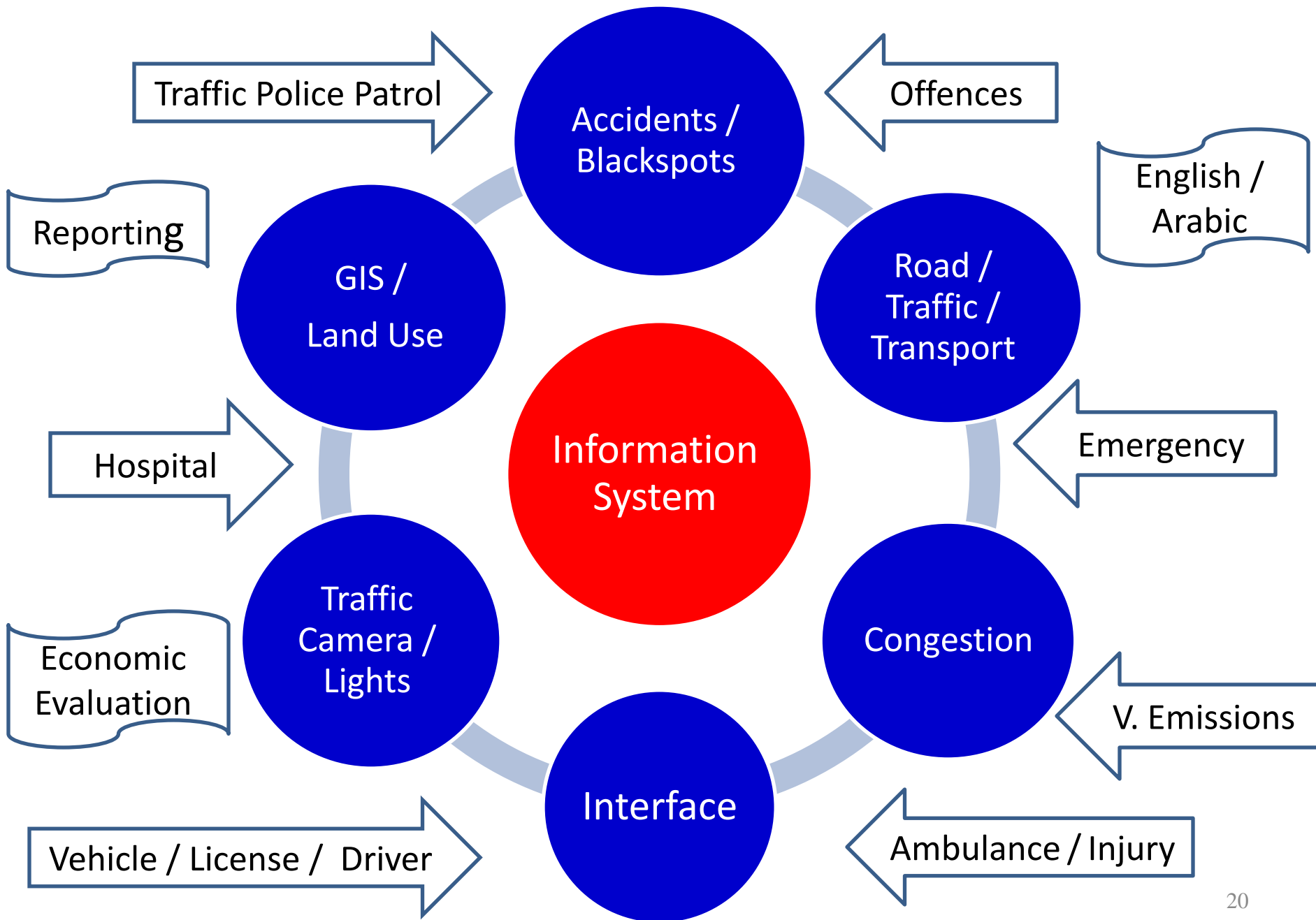
Reports



# Sources of Data

Source	Remarks
<b>Traffic Count</b>	There is no thorough traffic count system.
<b>Congestion</b>	There is no thorough system and index.
<b>Traffic Control Center</b>	Only center in Kuwait with : <ul style="list-style-type: none"> <li>•Traffic Monitoring Cameras (57) – CCTV to facilitate traffic management.</li> <li>•Traffic Cameras (63) at some intersections for traffic count</li> </ul>
	Link of 157 Traffic Signal Intersections with the control center using QuickNet4 to manage their timing program. Work in progress to convert the system from Off-Line (manual process) to On-Line (automated process).
	Variable Message Sign – 21 VMS for awareness.
	Fixed Speed Cameras – 40 cameras (double sided photo with flash). 50 more cameras will be installed soon.
	Portable Speed Cameras – 18 cameras.
	Red Light Cameras – 100 cameras.
	Some Point to Point cameras to monitor vehicle speed through distance and time.
<b>Patrol Vehicle Operations Center</b>	<ul style="list-style-type: none"> <li>• Tracking System to monitor patrol vehicle.</li> <li>• Paper work to register distribution of vehicles of various police stations.</li> <li>• Link with the national emergency center - 112.</li> </ul>
<b>Traffic Offences</b>	<ul style="list-style-type: none"> <li>• Indirect system through cameras of the Traffic Control Center.</li> <li>• Direct system through traffic police activities.</li> <li>• Mainframe for manual entry of data.</li> </ul>
<b>Traffic Fatalities</b>	Manual / Paper information. The control center has some information.

<b>GIS</b>	GIS and Maps available for all Governorates.
<b>Ministry of Electricity &amp; Water (MEW) Electricity Pole information / numbering</b>	The Pole numbering (available electronically with the project team) will help in identifying locations, e.g offences, accidents, and congestion, and can be used to identify the geographical areas and create link with the GIS.
<b>PACI</b>	The public web-based system provides road networks, buildings, civil ID number, address, population, best travel route, website link, and mobile phone link, using GIS and system called “ <b>Kuwait Finder</b> ” and link with Facebook and Twitter, phone, iPod, Android System. <a href="http://gis.paci.gov.kw">http://gis.paci.gov.kw</a> .
<b>Ambulance</b>	<ul style="list-style-type: none"> <li>• Electronic dispatch system.</li> <li>• Reports / paper on the location of various ambulance centers, and number of people transferred to hospitals.</li> <li>• No hospital data system.</li> </ul>
<b>Accident Investigation System</b>	Limited paper work with no thorough system. Accident Investigation Technicians have some information.
<b>Vehicles</b>	Vehicle numbers and classification available for all Governorates.
<b>International Border Crossing Stations</b>	Paper work about the vehicles.



# Data Availability

The Project Team/ GDT will

- provide / facilitate collection of some data, e.g fatalities, offences, injuries
- Interface / link with exiting systems, e.g Traffic Control Center

# Offices

The GDT will provide

- Office for the useful bidder team during working hours.
- Offices for data collection and entry in the Governorate, currently Hawali and Alasama Offices are available.

# Training Rooms

The UNDP / GDT will provide

- Venue for the workshops
- Training rooms for the group training, and translation.



Sample of  
Links /  
Interface

# Sample of Data Form

CRASH		ENVIRONMENT		ROAD USERS	
<b>Location</b> <input type="checkbox"/> road border <input type="checkbox"/> dist		<input type="checkbox"/> objects struck	<input type="checkbox"/> road surface	<input type="checkbox"/> all road users	<input type="checkbox"/> seatbelt worn
<input type="checkbox"/>		<input type="checkbox"/> mvmta	<input type="checkbox"/> wet / dry	<input type="checkbox"/> road user - simplified	<input type="checkbox"/> death preventable
<input type="checkbox"/>		<input type="checkbox"/> mvmtb	<input type="checkbox"/> road wetness	<input type="checkbox"/> dvr/pass/other	<input type="checkbox"/> driver causes
<input type="checkbox"/>		<input type="checkbox"/> mvmta + mvmtb	<input type="checkbox"/> dark / light	<input type="checkbox"/> sex	<input type="checkbox"/> driver cause cats
<input type="checkbox"/>		<input type="checkbox"/> party 1	<input type="checkbox"/> street lights	<input type="checkbox"/> age	<input type="checkbox"/> driver at fault
<input type="checkbox"/>		<input type="checkbox"/> party 2	<input type="checkbox"/> road lanes	<input type="checkbox"/> age 5 years	<input type="checkbox"/> non driver causes
<input type="checkbox"/>		<input type="checkbox"/> dirn role 1	<input type="checkbox"/> total lanes	<input type="checkbox"/> injury	<input type="checkbox"/> non dvr cse cats
<input type="checkbox"/>		<input type="checkbox"/> street	<input type="checkbox"/> road marks	<input type="checkbox"/> role	
<input type="checkbox"/>		<input type="checkbox"/> env. causes	<input type="checkbox"/> flat / hill		
<input type="checkbox"/>		<input type="checkbox"/> env. cause categories	<input type="checkbox"/> road char		
<input type="checkbox"/>		<input type="checkbox"/> speed limit	<input type="checkbox"/> junction		
<input type="checkbox"/>		<input type="checkbox"/> temporary speed limit	<input type="checkbox"/> traffic control		
<input type="checkbox"/>		<input type="checkbox"/> urban / open road	<input type="checkbox"/> aweather		
<input type="checkbox"/>		<input type="checkbox"/> advisory spd limit	<input type="checkbox"/> bweather		
<input type="checkbox"/>		<input type="checkbox"/> road curvature			
<b>Severity</b> <input type="checkbox"/> severity f/s/m/n <input type="checkbox"/> # fatal cas <input type="checkbox"/> severity f/i/n <input type="checkbox"/> # serious cas <input type="checkbox"/> severity i/n <input type="checkbox"/> # minor cas				<b>DRIVERS and their PASSENGERS</b>	
<b>Date/Time</b> <input type="checkbox"/> day <input type="checkbox"/> 6 hour blocks <input type="checkbox"/> month <input type="checkbox"/> minute <input type="checkbox"/> year <input type="checkbox"/> day of week <input type="checkbox"/> hour <input type="checkbox"/> weekend/day <input type="checkbox"/> 4 hour blocks <input type="checkbox"/> holiday period				<b>Driver</b> <input type="checkbox"/> vehicle type <input type="checkbox"/> injury <input type="checkbox"/> sex <input type="checkbox"/> role <input type="checkbox"/> age <input type="checkbox"/> driver causes <input type="checkbox"/> age 5 years <input type="checkbox"/> driver cause categories <input type="checkbox"/> driver at fault	
<input type="checkbox"/> all causes <input type="checkbox"/> all cause categories				<b>Passenger(s)</b> <input type="checkbox"/> sex <input type="checkbox"/> injury <input type="checkbox"/> age <input type="checkbox"/> non-driver causes <input type="checkbox"/> age 5 years <input type="checkbox"/> non-driver cause cats	
<input type="checkbox"/> crashid <input type="checkbox"/> police/non-police rptd <input type="checkbox"/> siteid <input type="checkbox"/> multi/single vehicle				<b>List Type</b> <input checked="" type="radio"/> crash <input type="radio"/> vehicle <input type="radio"/> person <input type="radio"/> site	
<input type="checkbox"/> casualty hierarchy overall : <input type="checkbox"/> movement category <input type="checkbox"/> alcohol/speed				<b>Available Lists</b> <input type="text"/>	
				<input type="radio"/> Injury <input type="radio"/> Non-Injury <input type="radio"/> Both	
				<b>Year Range</b> <input type="text"/> To <input type="text"/>	
<b>View</b> Title: <input type="text"/>		<b>Output Options</b> <input type="button" value="SpdSht"/> <input type="button" value="Text File"/> <input type="button" value="Table"/>		<input type="button" value="Clear"/> <input type="button" value="View Crash List"/> <input type="button" value="Help"/> <input type="button" value="Exit"/>	

# Interface

## Control Center



## Offences Data



# Sample of Field Data Collection



# Interface with Kuwait Finders

## – Free Web-Based

Address

Location

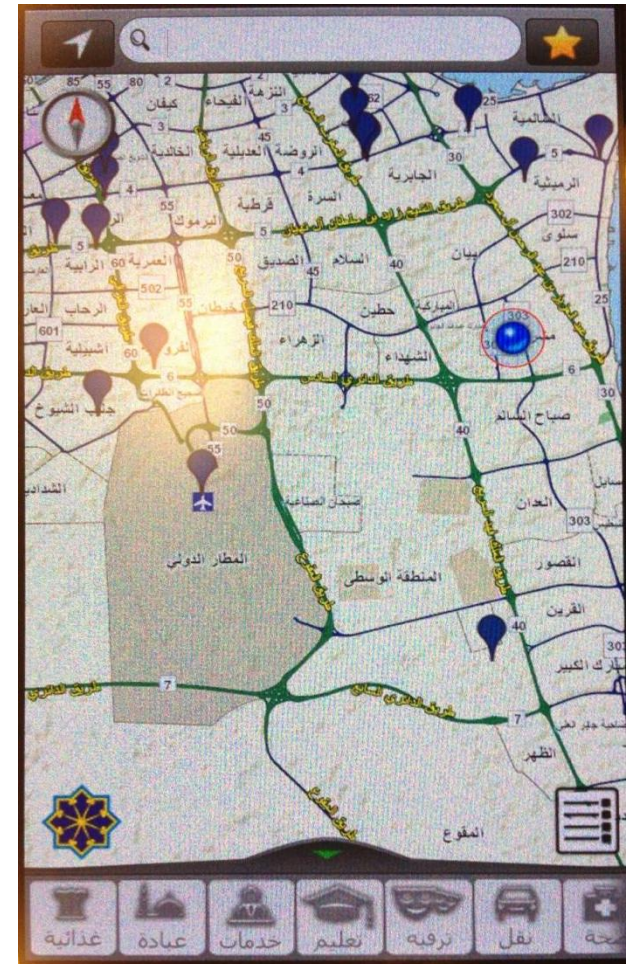
Government Building

Place by Nature of Use

Markets

Hospitals

Schools ...etc





تسوق

صحة

نقل

ترفيه

تعليم

خدمات

مساجد

غذائية

المسار المفضلة نتائج البحث

لقد بحث عن: مستشفى

## Kuwait Finders - PACI

### مستشفى المواساة

منطقة السالمية - قطعة 2 - شارع يوسف بن حمود -  
قسمة 8202 - منزل 35 - الدور الأرضي -  
الرقم الآلي للعنوان 11165134



نسخ النص نسخ الرابط



بقربي

مسار من مسار الى اضافة الى المفضلة توسيط الخريطة هنا

### 1 شركة مستشفى دار الشفاء

منطقة حولي - قطعة 9 - شارع بيروت -  
قسمة 6647 - الدور الأرضي -  
الرقم الآلي للعنوان 16219496

### 2 مستشفى رويال حياه

منطقة الجابرية - قطعة 13 - شارع 201 -  
قسمة 101 - الدور الأرضي -  
الرقم الآلي للعنوان 16988025

### 3 شركة مستشفى السلام

منطقة بنيد القار - قطعة 1 - شارع بورسعيد -  
قسمة 279 - الدور الأرضي -  
الرقم الآلي للعنوان 17131189

### 4 مستشفى مبارك الكبير

منطقة الجابرية - قطعة 4 -  
قسمة 900008 - الدور الأرضي -  
الرقم الآلي للعنوان 12145661

### 5 مستشفى الهادي

منطقة الجابرية - قطعة 8 - شارع 110 -  
قسمة 16 - الدور الأرضي -  
الرقم الآلي للعنوان 12163739

### 6 مستشفى الراشد

منطقة السالمية - قطعة 10 - شارع عمان -  
قسمة 22220 - منزل 41 - الدور الأرضي -  
الرقم الآلي للعنوان 11505821

### 7 شركة مستشفى الراشد

منطقة السالمية - قطعة 10 - شارع عمان - منزل 39 -  
قسمة 22221 - الدور الأرضي - شقة 1 -  
الرقم الآلي للعنوان 11505864

### 8 مستشفى الاميري

منطقة شرق - قطعة 3 - شارع ابن مسباح -



Utilizing Electricity Pole Number



Sample of  
Outputs

# Building of National GIS Hawali Governorate

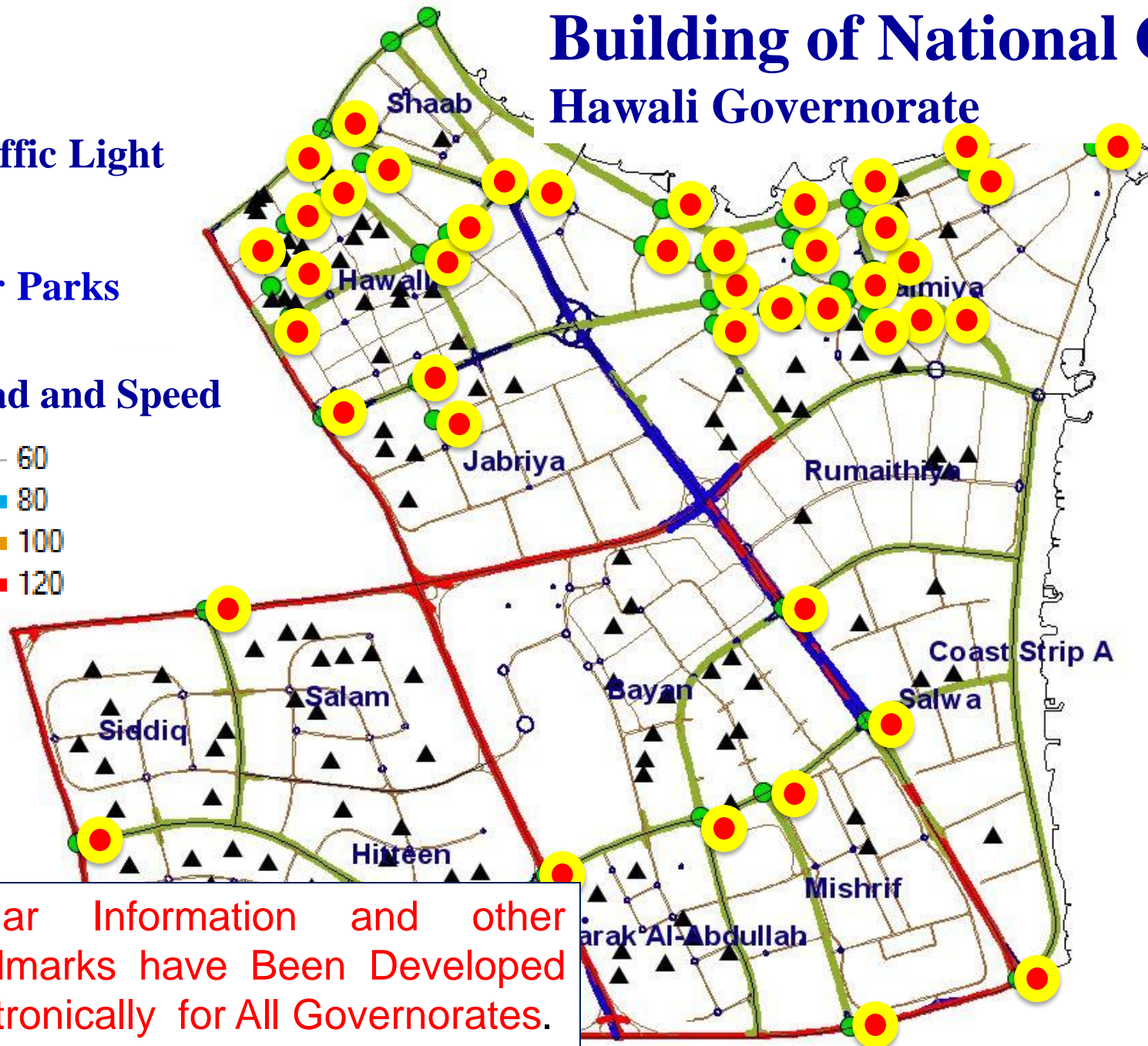
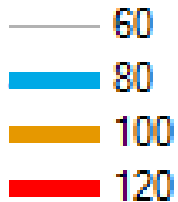
Traffic Light



Car Parks



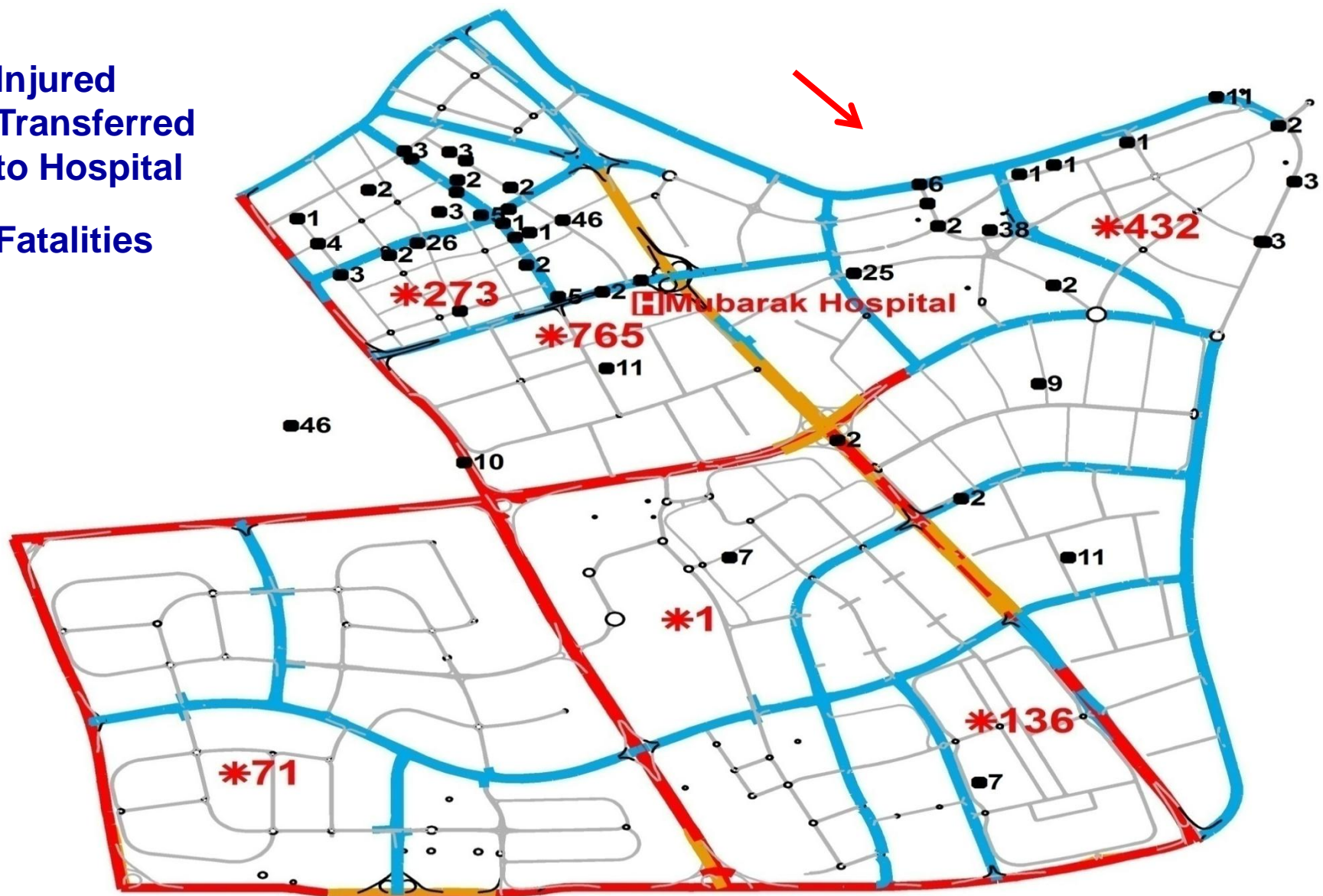
Road and Speed



Similar Information and other Landmarks have Been Developed Electronically for All Governorates.

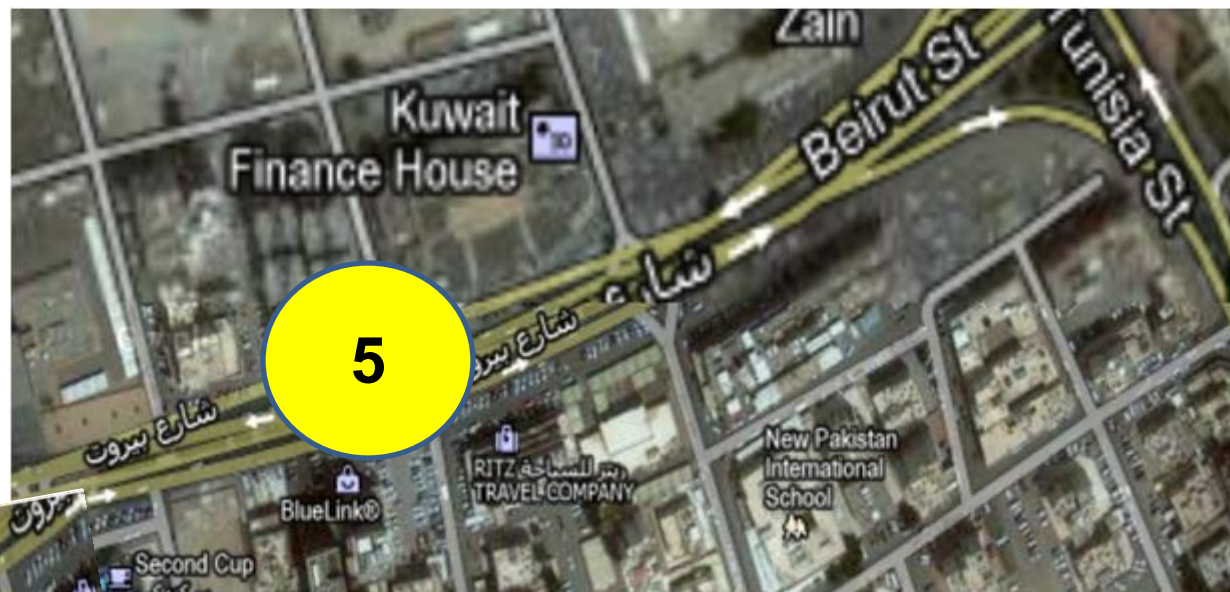
# Building National Black Spots System - Hawali Governorate 2010

-  Injured  
Transferred  
to Hospital
-  Fatalities



# Identification of the Black Spots

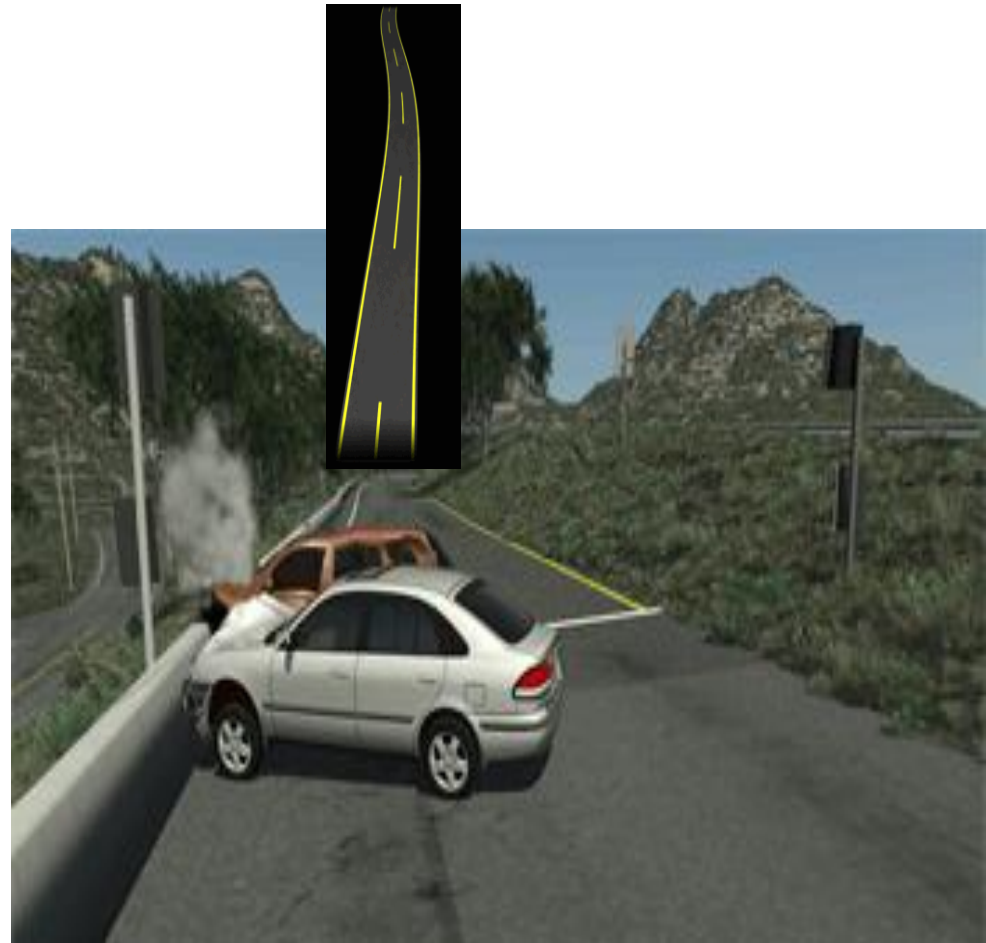
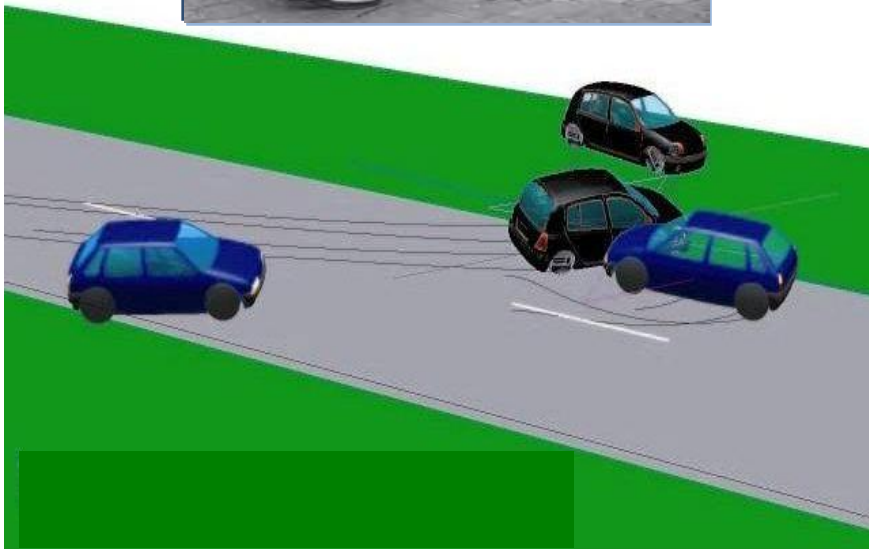
Beirut Street –  
Beirut Complex



Beirut Street –  
Dar-Alshefa Hospital

# Accident Investigation / Reconstruction

1. Energy evaluations (according to real accident -tests)
2. Impact angles (pre and post)
3. Vehicle technical data (mass, dimension, center of gravity...)
4. Road geometry and friction coefficient
5. Driver actions





# Building Traffic Police Patrol System

عدد المحافظات

المناطق

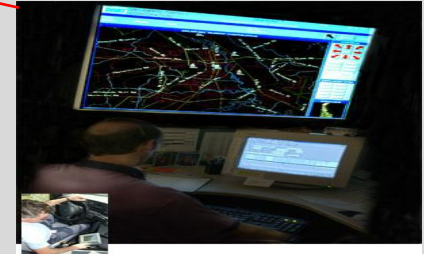


عدد المركبات

عدد رجال الشرطة

التاريخ

الوقت



الصباح

الظهر

الليل

تفاصيل الدوريات  
حسب المحافظة

العاصمة

حولي

الفروانية

الجهرة

مبارك الكبير

الاحمدي

الخروج من  
الصفحة

# Tracking System

