

# 2014 FIDIC – GAMA ANNUAL CONFERENCE

LOCAL INVOLVEMENT IN MAJOR PROJECTS FOR SUSTAINABILITY

MAPUTO: 23 TO 26<sup>TH</sup> MARCH 2014



Group of African  
Member Associations



International Federation  
of Consulting Engineers



Association of Consultants  
Mozambique

## Developing Local Competencies For Large Projects in Morocco

Amine AMAR

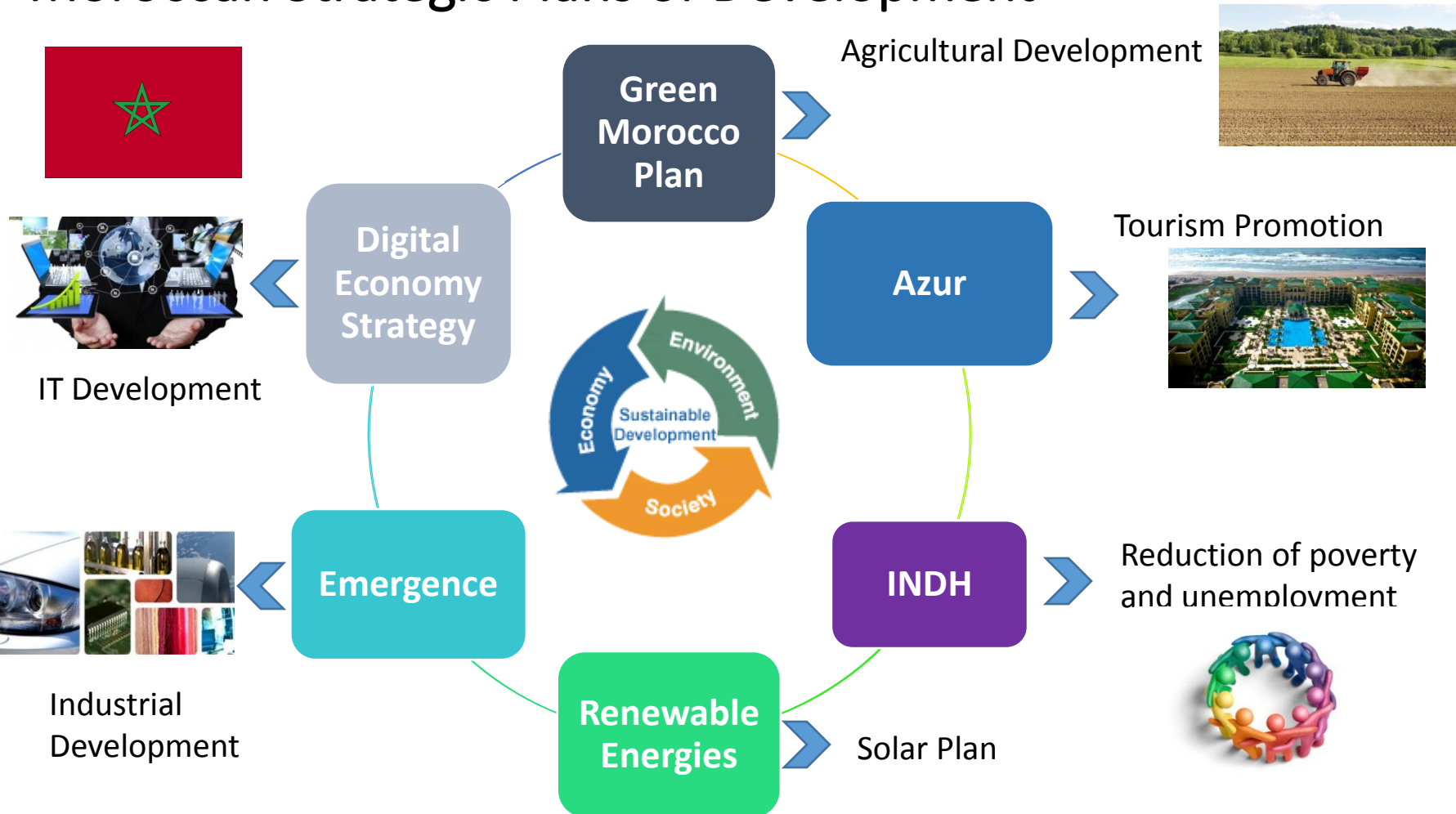
FMCI Morocco

# Contents

- **Brief outlook of main Moroccan Strategic Plans of Development**
- **Large scale Infrastructure Projects**
- **The Consulting Engineering : a Booming Sector**
- **Main Development Challenges of CE**
- **Action Plan to meet the challenges**



# Moroccan Strategic Plans of Development

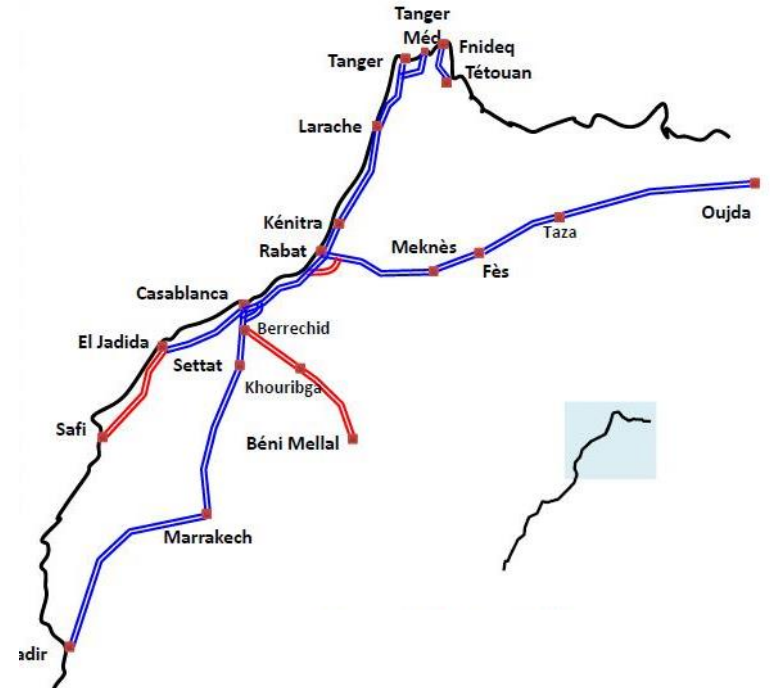


*The Government's strategic choices also focus on infrastructure development*

# Moroccan Infrastructure Development

## Transportation Sector : Highways & Expressways

- 2008-2015 : NHP 1 : 1800 km of Highways
- 2015-2030 : NHP 2 : 1500 km of Highways



- 2012-2016 : 600 km of Expressways  
(out of 1100 Km)

# Moroccan Infrastructure Development

## Transportation Sector : Roads

- 1995-2005 : National Rural Roads Programme NRRP 1 : 11 300 km constructed  
Reached Rural access index (RAI) : 54%
- 2005-2013 : NRRP 2 : 13 100 Km constructed / Reached RAI : 80%
- 2005 – 2012 : Construction of mediterranean coastal road (600 Km)

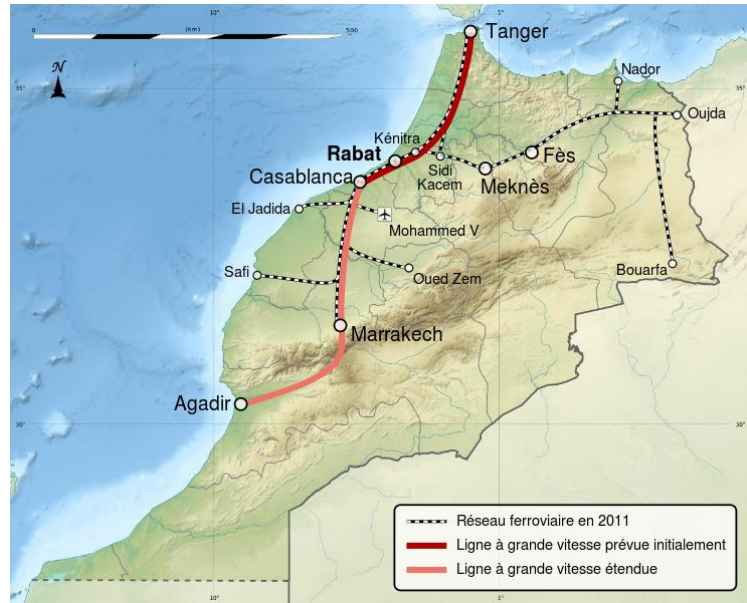




# Moroccan Infrastructure Development

## Transportation Sector : Railways

- 2005 – 2015 : Upgrading and modernising existing railway lines : 2110 Km with a maximum speed of 160 km/h
- 2008 – 2020 : High speed Railway Line Tanger – Casablanca (350 km) under construction
- By 2035 : 1500 Km of High Speed Railway Lines will be constructed



# Moroccan Infrastructure Development

## Transportation Sector : Maritim Development



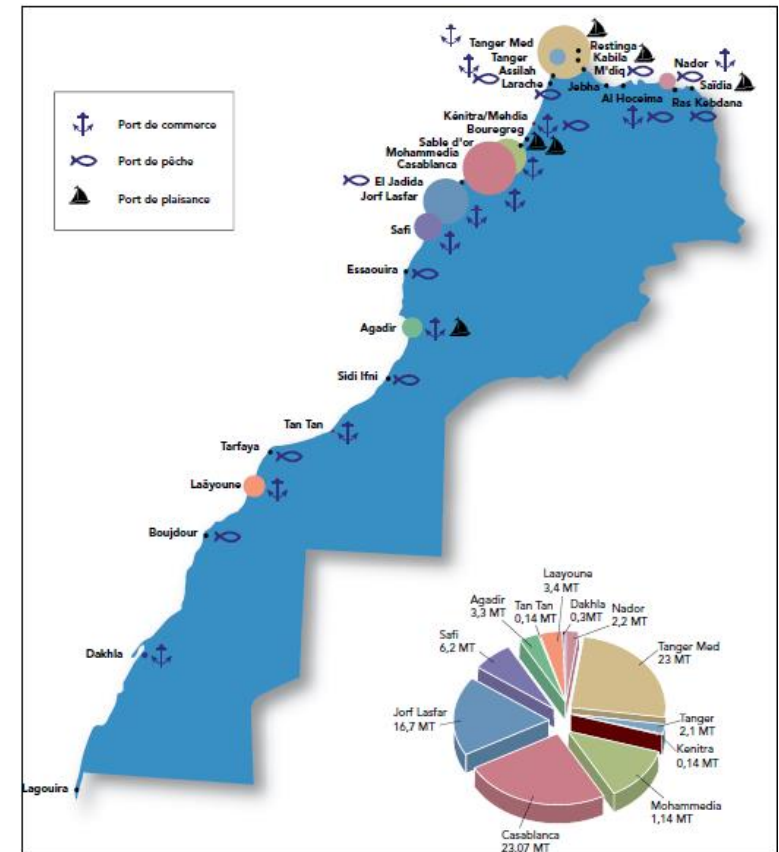
### Existing ports :

- 13 INT'L trade ports
- 19 Fishing Ports
- 6 Marinas

4 large Ports under construction :

Expected Total investment by 2035 :

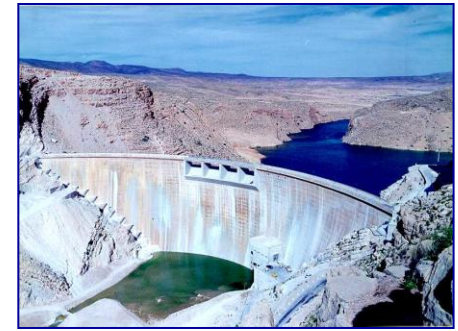
6 Billion USD



# Moroccan Infrastructure Development

## Water Ressources Sector

- **Morocco : Water-stressed country (MENA)**  
*22 billion m3 per year (730m3/inhab/year)*
- **An Efficient model of water Management Internationally recognized**  
*130 large dams constructed with a capacity of 16 billion cubic meter*  
*13 Water Transfer System (785 Km / 175 m3/s)*  
*70 km of drilled wells*
- **National Water Strategy by 2030**  
*Construction of 60 large dams and 1000 small dams*  
*Desalination plants (400 Million m3)*





# Moroccan Infrastructure Development

## Water & Sanitation

- Access to drinking water : 100% of urban population  
93% of rural population
- 30% of Moroccan Sewage is currently treated and 60% foreseen by 2020
- Investment are currently driven to WWTP, Desalination Plants and water distribution projects

*35 water-treatment and desalination plants are currently being constructed to strengthen the urban drinking water supply*



## National Solid Waste Program (2008 – 2012)

- 100% of solid wastes collected
- Recycling 20% of solid wastes by 2015

# Moroccan Infrastructure Development

## Environment

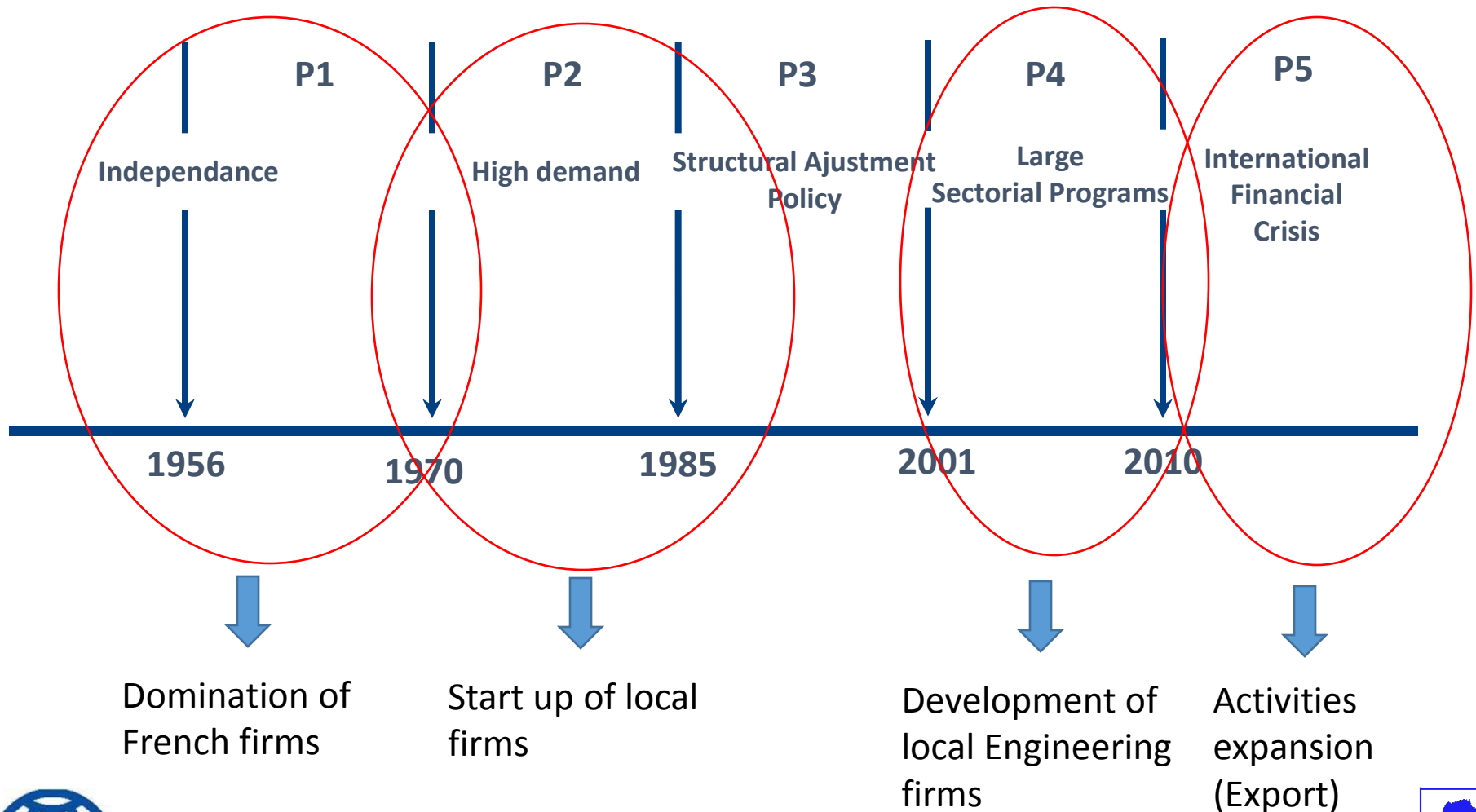
### Renewable Energy

- Solar plan  
2000 MW by 2020
- Wind plan  
2000 MW by 2020
- Objectives : Energy generated from RE  
12% (2010)      42% (2020)



# Consulting Engineering : a Booming Sector

## Context Evolution



# Consulting Engineering : a Booming Sector

## Current Situation

### ✓ Local

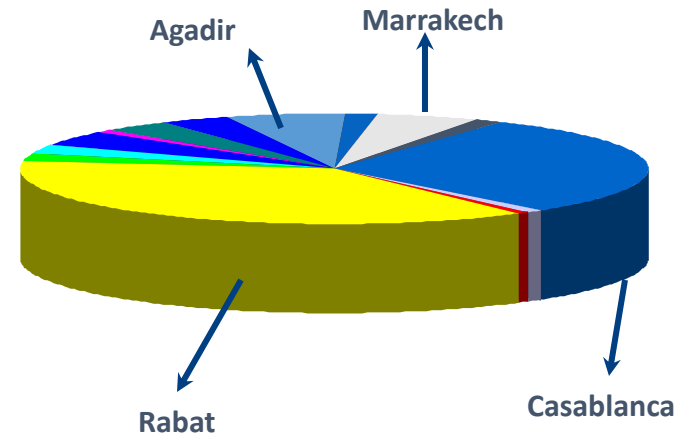
- 500 local firms
- Mainly CE
- Concentrated in 4 large cities
- National Federation : FMCI

### ✓ International

- Mainly from EU, some from USA
- Firms from european countries facing crisis

### ✓ Market share

- Local : 70 to 100%



# Consulting Engineering : a Booming Sector

## Main Challenges

- **Lack of human resources (technicians, specific engineering profiles )**
- **Lack of qualified Project Managers**
- **International Development (decreasing local demand, dumping,....)**





# Consulting Engineering : a Booming Sector

## Undertook Actions to meet the challenges

- Enhancement of cooperation with foreign engineering firms



- Involvement in the “National Competencies Development Program” aiming the training of 10.000 Engineers by 2010
- Express the needs among Moroccan Engineering schools by taking part of their Management Boards
- Cooperating with an international engineering school for setting up an executive master in Project Management
- Implementing a career management system (building employee loyalty)