

UNECE Working Party on Rail Transport

Ministry of Transport

Egyptian National Railway at a glance

Geneva, November 2014

The railway network consists of:

1-four-tracks lines	(20*4)	80Km
2-double lines(two-tracks)	(1466*2)	2932Km
3-single lines(one-track)	(3667*1)	3667 Km
Total length of ENR lines Tracks		6679Km

2891Km Total length of(station yards and sidings)

Total network length **9570Km**

All tracks compliant with the international standard gauge of 1,435 mm

Lines on the Delta and Nile valley

4364Km

Lines on Desert

2315Km

Total network length

6679Km

Lines with Electrical and Electronic signaling system

10%

Lines with Electrometrical signaling system

3%

Lines with RETB signaling system

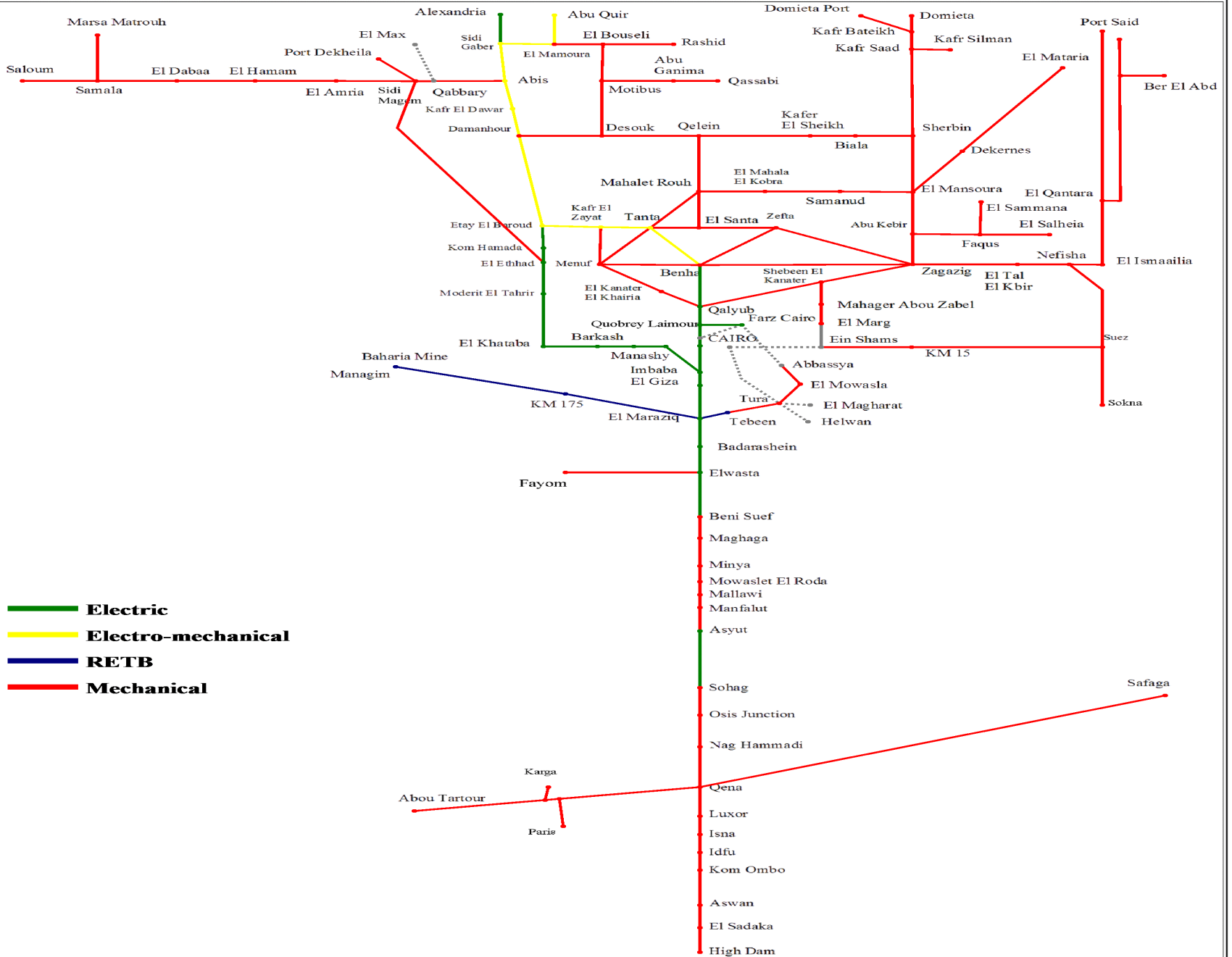
2%

2%

Lines with Mechanical signaling system

85%

85%





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EGYPTIAN NATIONAL RAILWAY AUTHORITY
(ENR)



وزارة النقل

Bridges over Nile and waterways
Bridges over railway for cars
Tunnels for cars and pedestrian
Bridges over railway for pedestrian

Total (bridges ,tunnels)

511

58

37

179

885



ENR locomotives

Locomotives Fleet													
	Freight			PLD			PSD			ENR			
Type	Fleet	Red Label	Operating fleet	Fleet	Red Label	Operating fleet	Fleet	Red Label	Operating fleet	Fleet	Red Label	Operating fleet	Avg Age (years)
ADT 2475 Hp	45	21	24	23	7	16				68	28	40	15,4
ALSTOM 1200 Hp			-	25		25	5		5	30	-	30	8,1
EMD 3250 Hp			-	40		40				40	-	40	3,4
GE 1800 Hp			-	30		30				30	-	30	15,3
GE 4000 Hp	80		80			-				80	-	80	3,8
GM 1650 Hp			-			-	254	13	241	254	13	241	31,6
GM 2475 Hp			-	30	17	13	15		15	45	17	28	28,0
HENSCHEL 2475 H	99	36	63	175	5	170				274	41	233	30,3
Total	224	57	167	323	29	294	274	13	261	821	99	722	24,5

ENR Coaches

Passengers Long Distance Fleet				
Type	Fleet	Red Label	Operating fleet	Avg Age (years)
A/C French	135	-	135	29,7
A/C Spanish	585	27	558	33,3
A/C Sleeping	138	5	133	35,7
Momayasa	1.046	39	1.007	18,1
Total	1.904	71	1.833	24,9

Passengers Short Distance Fleet				
Type	Fleet	Red Label	Operating fleet	Avg Age (years)
Motawara	1.493	192	1.301	29,7

Foreword

- ENR restructuring and development plan is based on the results of the study that was made by Booz Allen Company from 2006 to 2008.
- The transformation plan of ENR is based on five strategic priorities translated into 20 “rail compliant strategic projects”.

The Plan includes all the actions able to transform ENR in a transport Organization in line with its mission to be an efficient rail operator providing safety and quality public services and competitive commercial products on a sustainable financial basis.

Transformation Plan: 20 strategic projects

ENR Transformation Plan is expected to be completed within 2015 with a progress today.

Transport Sector
Regulatory framework

ENR Organization and
operating model

Assets management and
investment

Revenues optimization

Safety capabilities upgrade

- 
- 1 Public Sector Framework
 - 2 Operating Model
 - 3 Efficiency Improvement
 - 4 Human Resources
 - 5 IT Systems and Procedures
 - 6 Finance
 - 7 No-Core Activities
 - 8 Asset Improvement
 - 9 ERMAS
 - 10 Freight Services
 - 11 Passenger Services
 - 12 ERJET
 - 13 Passenger Revenue Optimization
 - 14 Safety
 - 15 Customer Service
 - 16 Communication
 - 17 Procurement
 - 18 Scrap
 - 19 Maintenance
 - 20 Quality Assurance

Strategic projects progress status

The transformation Plan of the Egyptian national railways pursue two main objectives:

1

Enhance skills and competence in order to manage ENR according to international standards of safety and quality of services through new practices, process reengineering and technology.

2

Open to cooperation with third Parties (domestic and international) through new projects and business opportunities.

Egyptian National Railways

Current projects



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1-Modernization of Cairo/Alex corridor

Line description:

- 208 km, double line, and equipped with relay interlocking

Modernization scope:

- Modernization of the signaling systems from relay interlocking to EIS(Electronic interlocking).the modernization comprises(signaling , telecommunication, CTC, power supply,...etc.)

Project objectives:

- Increase the line capacity from 224 trains/day to 320 trains/day to cover the forecasted traffic demands.
- Supervision of the whole line from one CTC
- Increase the line speed from 140Km/h to 160Km/h

Financing institution:

WORLD BANK

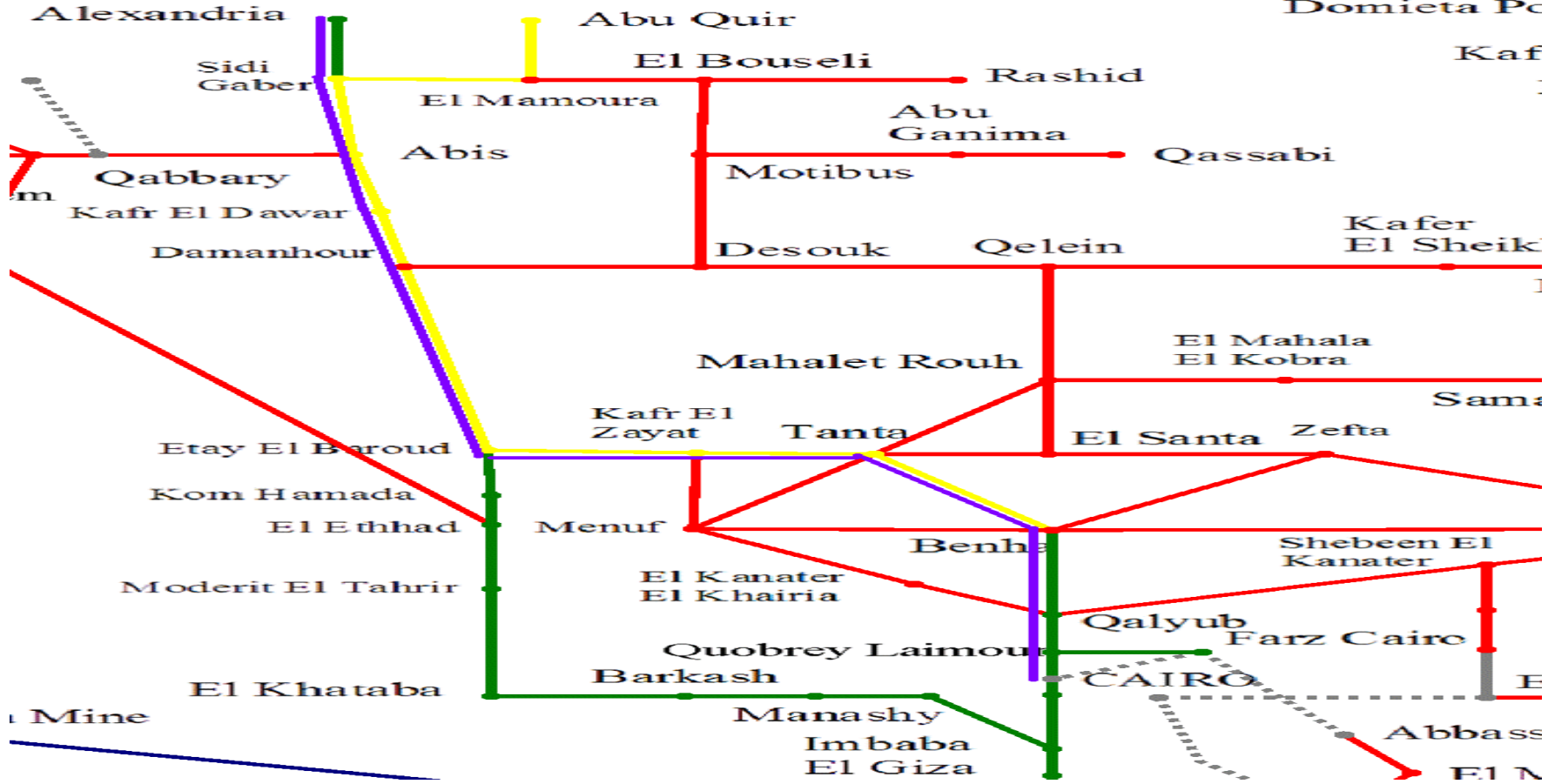
Project progress

The project is under construction. The contract was signed on 26/5/2013



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2-Modernization of Beni Suef/Asyut corridor

Line description:

- 250 km, double line, and equipped with mechanical interlocking

Modernization scope:

- Modernization of the signaling systems from mechanical interlocking to EIS(Electronic interlocking),the modernization comprises(signaling ,telecommunication, CTC, power supply,...etc.)

Project objectives:

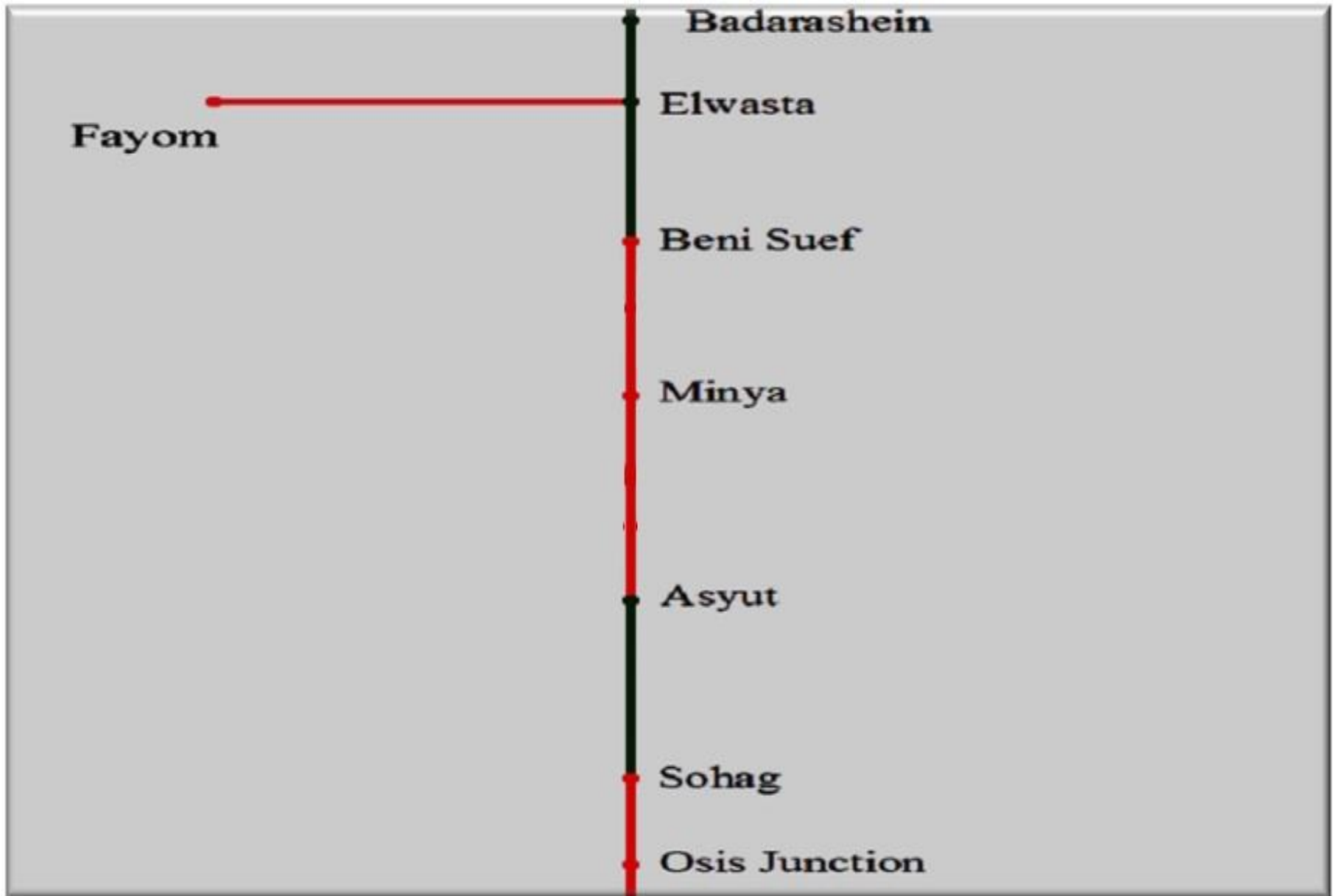
- Increase the line capacity from 90 trains/day to 200 trains/day to cover the forecasted traffic demands.
- Increase the Safety level
- Supervision of the whole line from one CTC
- Increase the line speed from 120 Km/h to 160 Km/h

Financing institution:

WORLD BANK

Project progress:

Waiting for the signing of the contract at the beginning of December 2014



3-Modernization of Benha / Zagazig / Port Said and Zagazig / Abu-Kebir Corridors

Line description:

213 KM, double line, and equipped with mechanical interlocking system

Modernization scope:

Modernization of the signaling systems from mechanical interlocking to EIS(Electronic interlocking), the modernization comprises(signaling ,telecommunication, CTC, power supply, ,ETCSL1...etc.)



Project objectives:

Increase the line capacity from 90 trains/day to 200 trains/day to cover the forecasted traffic demands.

Increase the Safety level

Supervision of the whole line from one CTC

Increase the line speed from 120 Km/h to 160 Km/h

Financing institution:

Kuwaiti Fund + Arab Fund

Project progress:

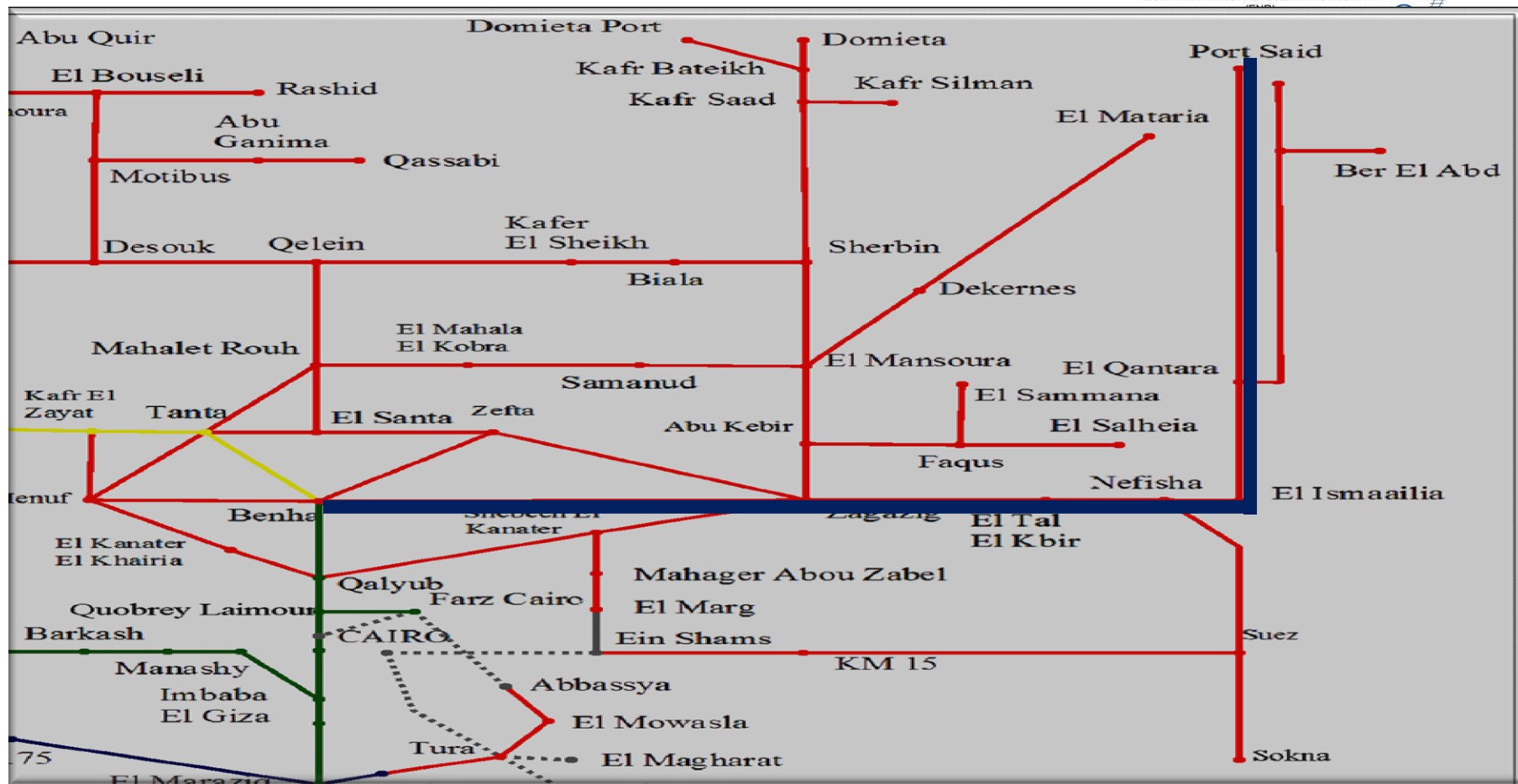
The technical/financial proposals is Under Study



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ENR Level crossings automation

1,332 level crossings on ENR network.

ENR has now a very huge project to develop all LXs on the network through many phases
To increase the safety level on it



Rolling Stock

**Modernization of Rolling Stock fleet
by purchasing 212 A/C Coaches**

Human resources main activities

- **ENR new Organization**
- **Key performance Indicators**
- **New procedures of Medical tests for drivers**
- **ENR Managers assessment**
- **Discipline procedure (revision)**

Egyptian National Railways

Future projects

Migration to ETCS lev.1 on board and track side on Alexandria / Cairo / Asyut main corridor



Line description:

- 582 KM, double , equipped with track side equipment and 400 locos

Modernization scope

- Migration from the current ENR ATC(ZUB) system to the international standard ETCS lev.1 on board and track side on the Alexandria-Cairo-Asyut main corridors

Project objectives:



meets the SIL4 (safety integrity level 4) requirements

Upgrade the system from ZUB(German system) to a common system which gives advantages concerning(interface with other systems ,spare parts,...etc.)

ETCS L1 is an upgradable system, which can be upgraded to Level2 without any loss of equipment.

Financing institution:

WORLD BANK

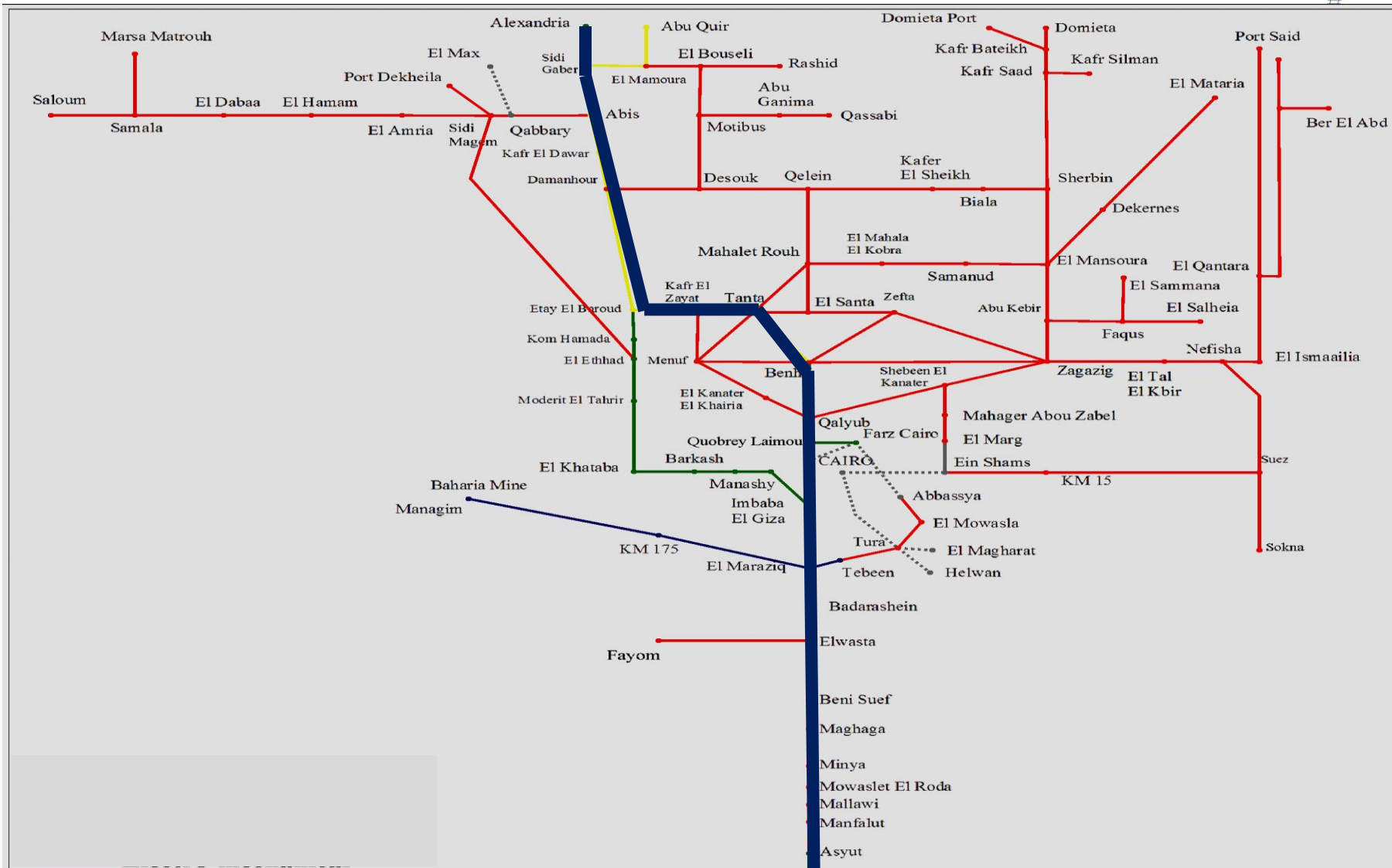
Project progress

Waiting to open Financial Offers for the Consultant.



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Equipping the following lines with Electronic Interlocking Signaling with ETCS level.1 “Wayside and onboard”

1- Tanta / El-Mansoura / Domieta

2- Assiut /Sohag

3- Nagh Hammady / Luxor

3- Luxor /Aswan.



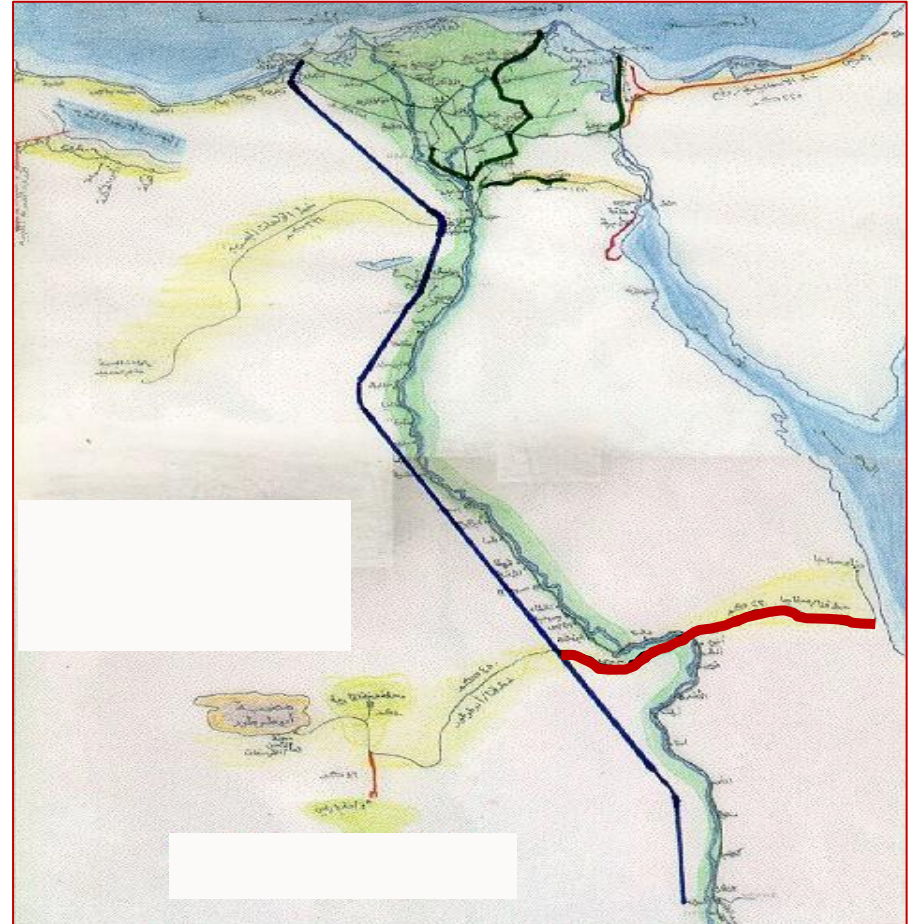
Rolling Stock



- 1- Purchasing of 10 new railway stock equipped with Air-conditioning.
- 2- Purchasing of 700 coaches with different types

High speed train

The path of high-speed train:-



Lines planned to have high-speed train in Egypt are:-

Link between Alexandria/cairo /Aswan



Link between hurghada_luxor





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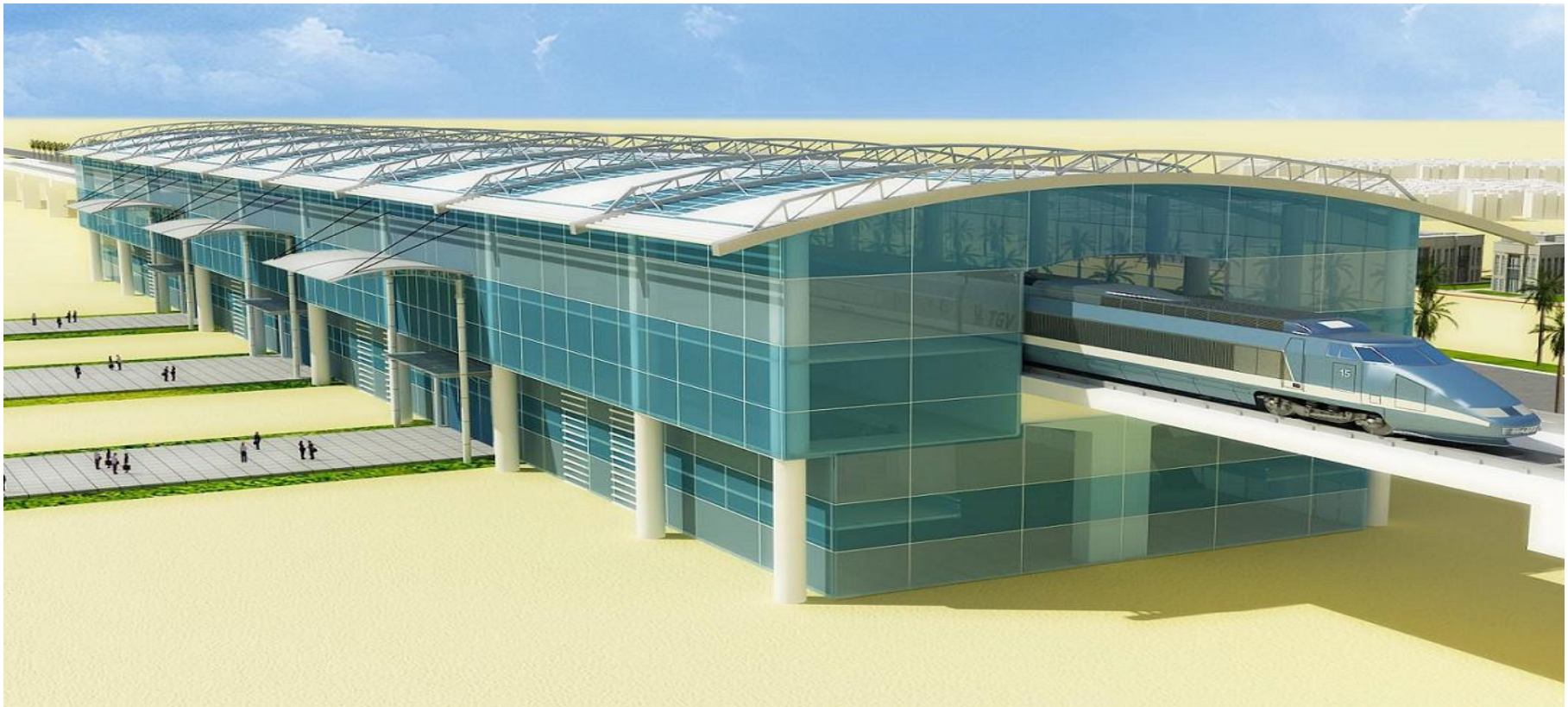
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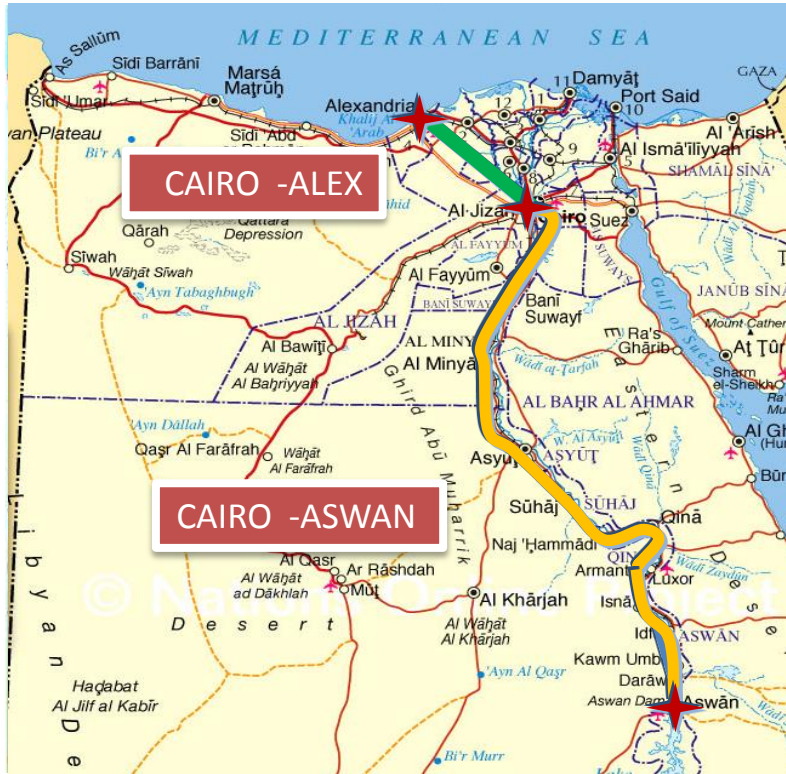
Snapshots perspective of the proposed train line



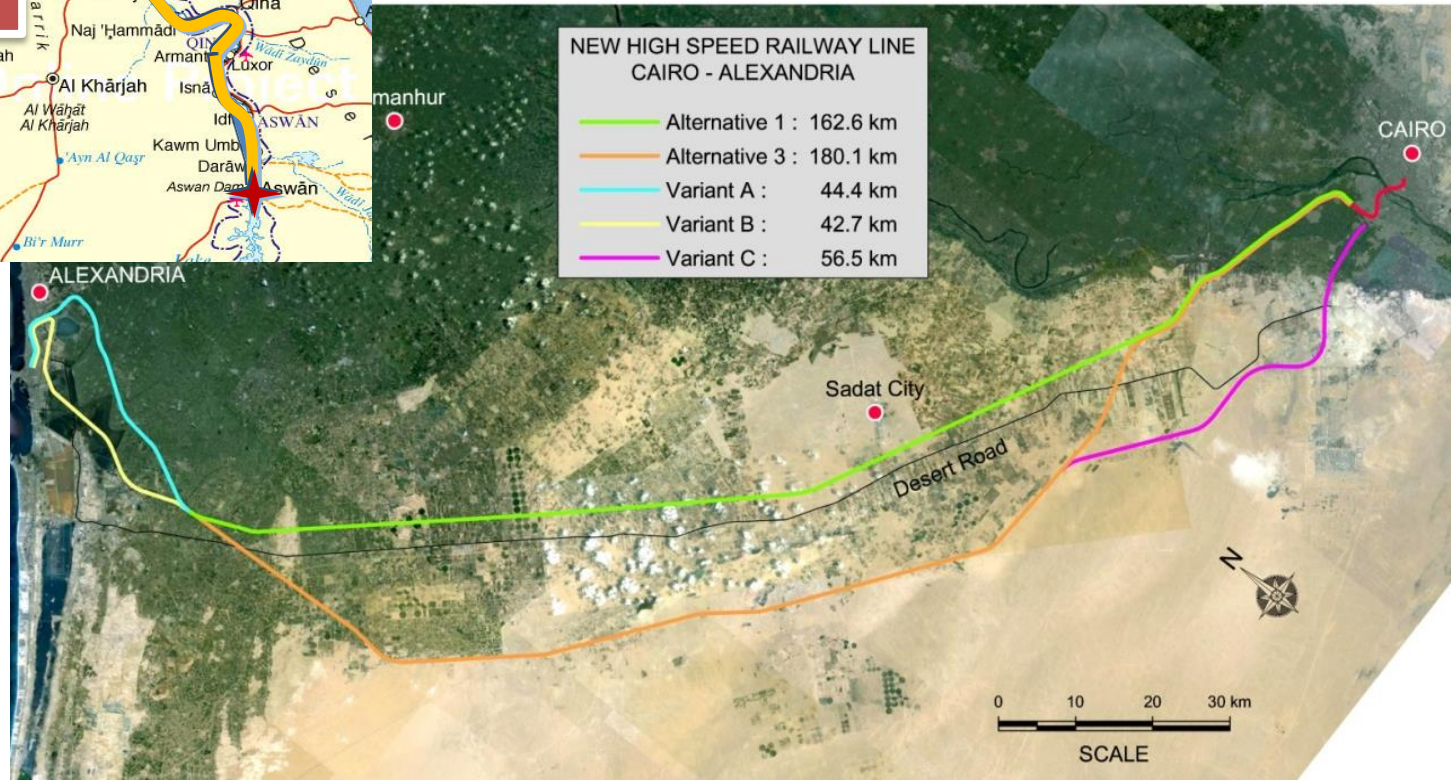
Snapshots perspective of the proposed train station



ENR High Speed Train pass



The new suggested lines are completely independent from the current Alex - Cairo - Aswan connections (electrified, faster and with a higher frequency between the relevant cities)



New line Alex - Cairo – Aswan

Line characteristics

Alexandria - Cairo

- Line length: 202 km
- Journey time: 1 hour (no-stop)
- Trainsets: 10 (960 seats each)
- Frequency: every 40 min. (then 30 min.)
- Passengers: from 7 to 20 Mln yearly

Alexandria - Cairo - Aswan

- Line length : 1087 km
- Speed Limit: 350 km/hr
- Construction period : 10 years (Alex – Cairo 4 years)
- Expected infrastructure total cost : € 10 billion
- Expected Rolling Stocks cost (35 trains) : 875 Mln EUR

Network developments for freight

New railway sidings for freight transport to meet customer demand and increase rail share on transportation.

- **Transport of cereals:** construction of new sidings for below silos in coordination between ENR and GASC Authority:
 1. *Kom abu Radi*
 2. *Sandub (Mansoura)*
 3. *Sheebin el Kom* *(feasibility study)*

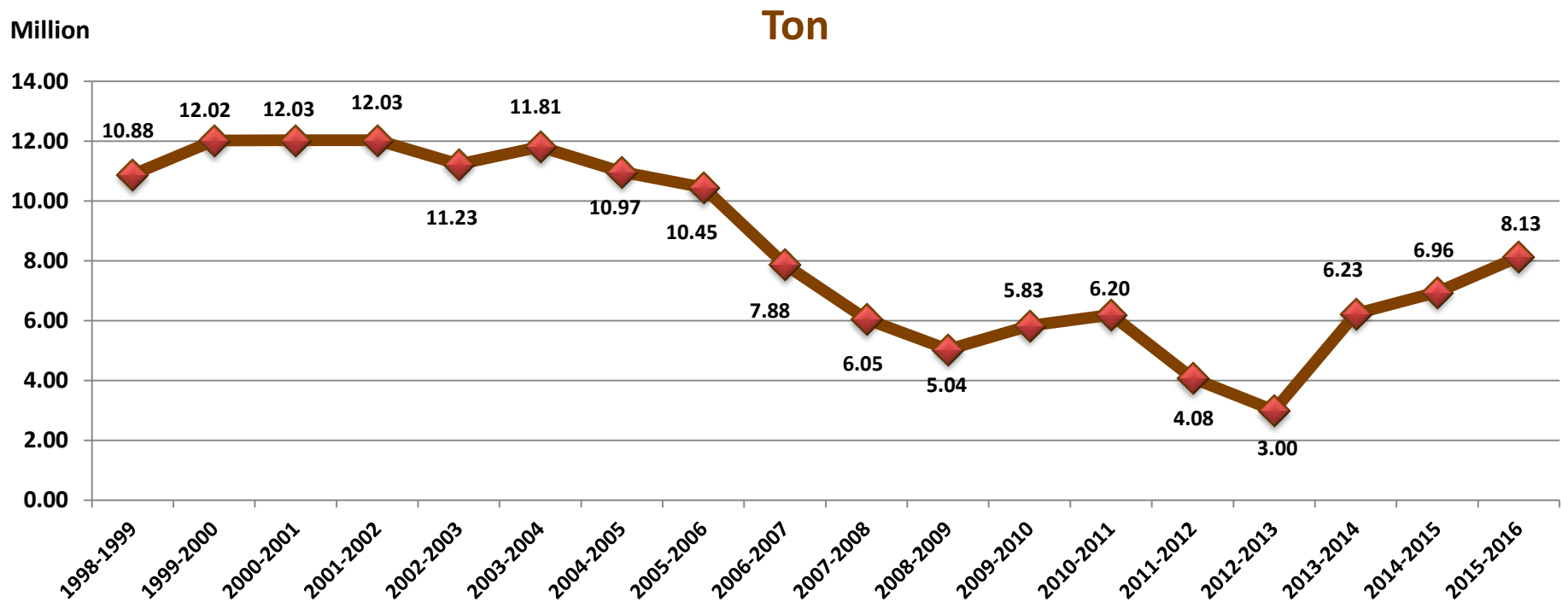
- **Transport of cement:** construction of new siding of about 35 Km to connect three Factories to the rail network *(feasibility study)*.

- **Transport of phosphate :** Qena-Safaga line rehabilitation due to 110 km of tracks stolen, work duration 35 months, costs:265 MEGP *(ON HOLD)*.

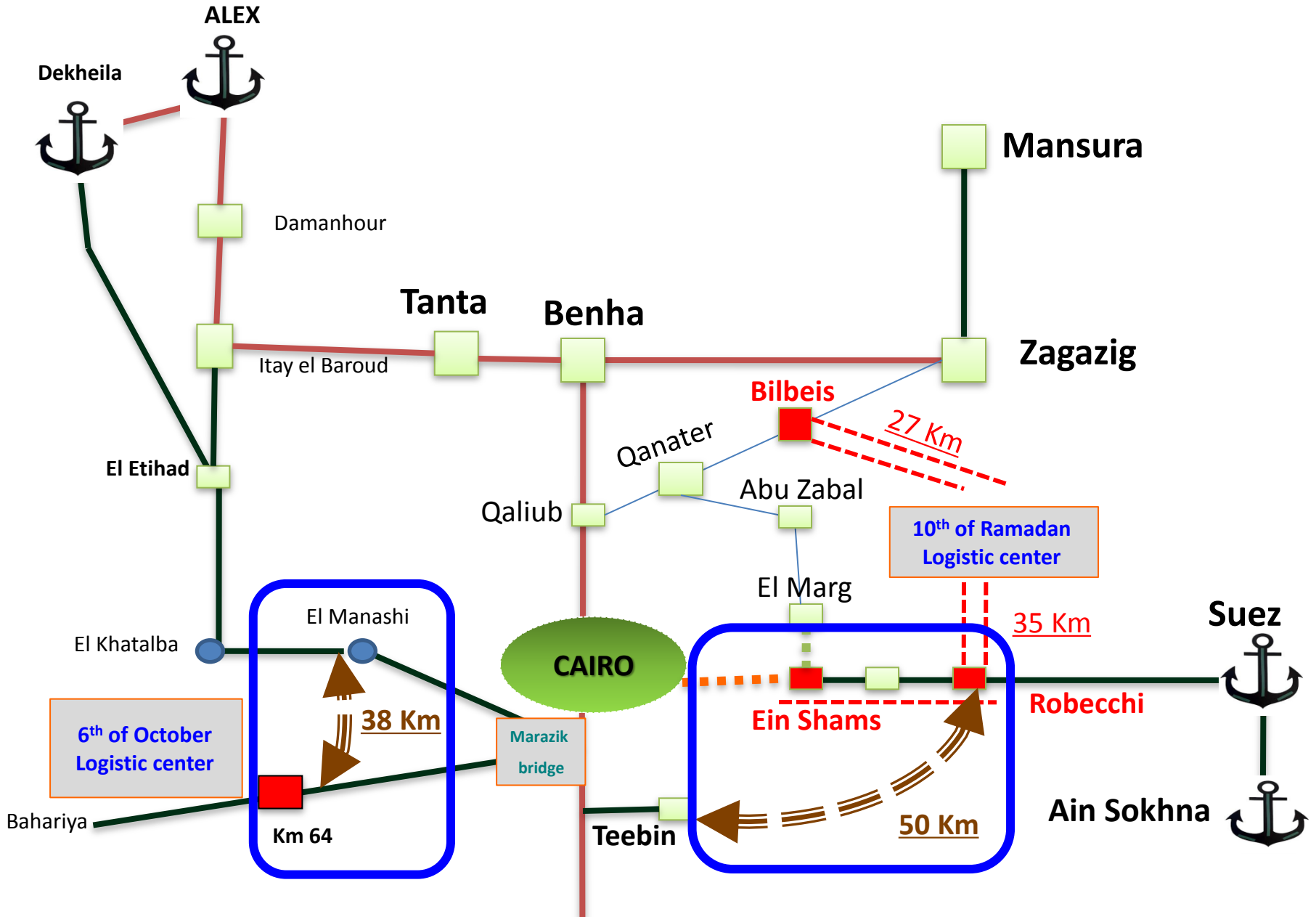
- **El Fardan line:** rehabilitation of about 80 Km to connect Ismailia – El Fardan- Port Said east , work completion: march 2014, costs: 240 MEGP.

Freight transport plan and new target

Total tons transported by ENR trains over the last 15 years and the plan for the future.

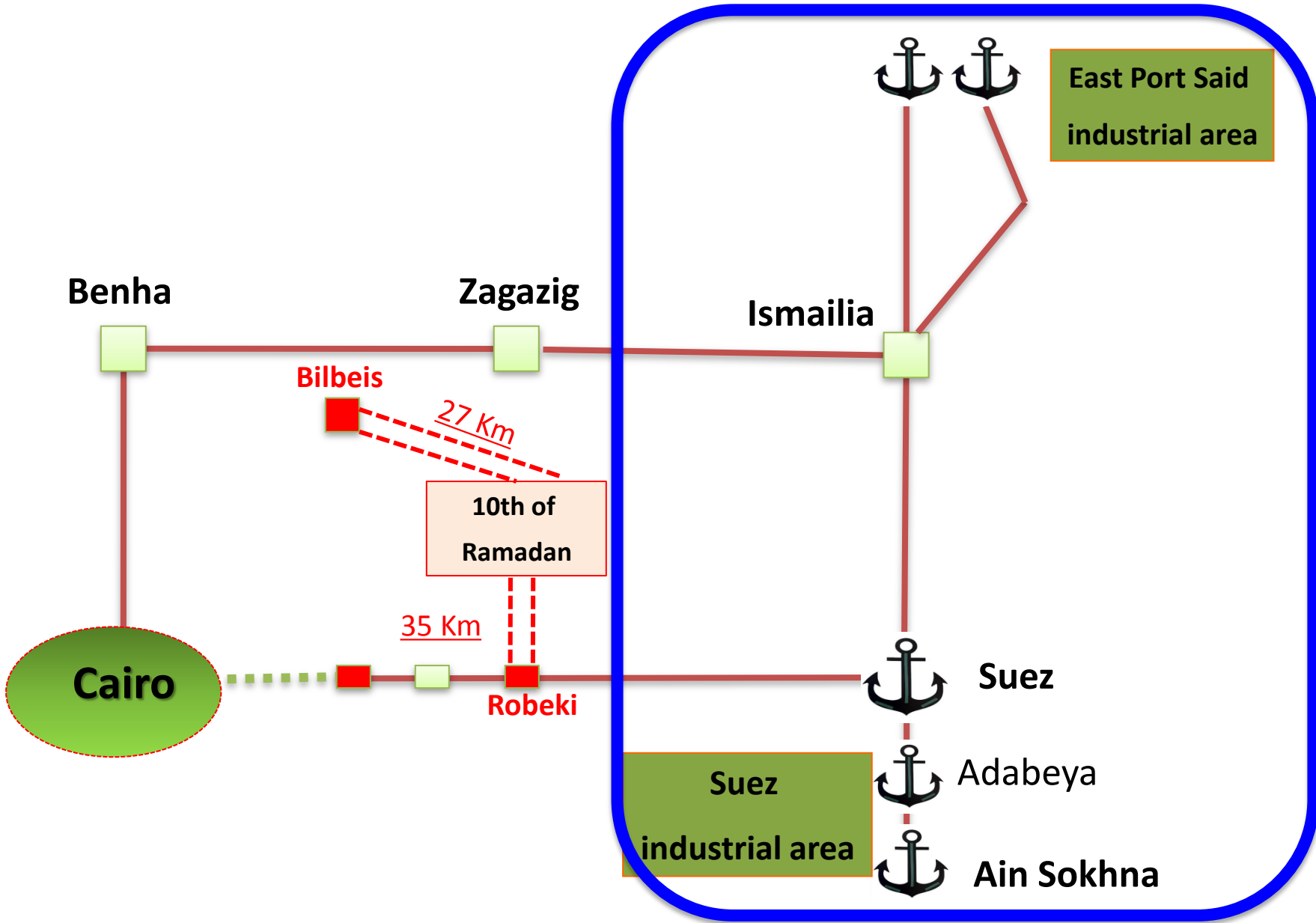


— Double track
 — Single track
 - - - - - Metro line
 - - - - - New line



Corridor 5 Sokhna-Port Said

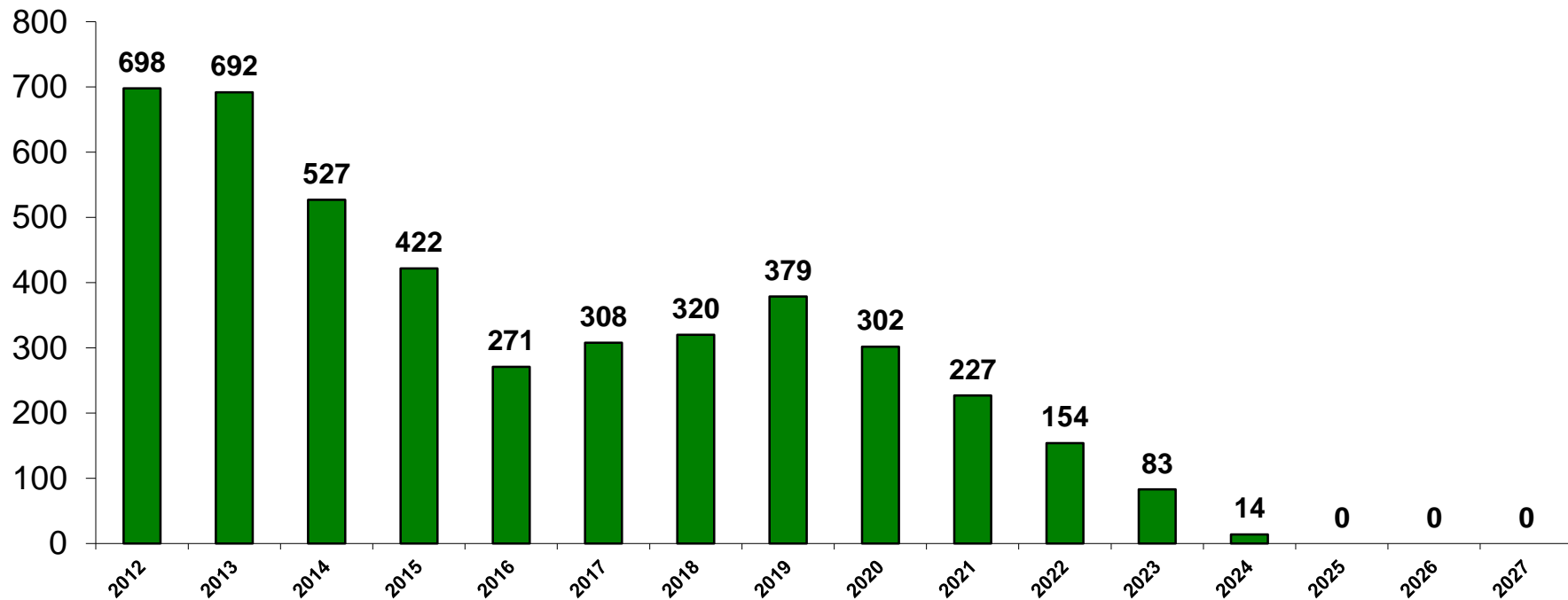
West & East Port Said Ports



New siding for cement factories in Wadi Hagul



Track Renewals: current situation



The current strategy for track renewals has two main scope:

- bring the current cumulated backlog of 698 km to zero km within the next 13 years enhancing the level of internal track renewal production to **not less than 140 km per year**;
- build an organization able to perform the asset management through procedures, systems, planning interventions through diagnostic systems and control.

ENR track maintenance: main actions

Bring the current cumulated backlog of 698 km to zero km within the next 13 years enhancing the level of internal track renewal production to **not less than 140 km per year**;

through:

- **Revamping existing 35 track renewals machines;** (2014 – 2017)
(tender launched, waiting for offers - September 2013)
- **New 7 + 12 track renewals machines;** (2012 – 2015)
delivery is on going (4 new machines in operation), other 3 will be delivered by October 2013; the final documents for the funding of the other 12 machines are under preparation at Ministry level.
- **Track Diagnostic machine (existing coach and new machine);** (2013 - 2015)
(tender launched in August 2013)
- **Welding machine;** (2013 – 2014)
(available from November 2013)
- **Two new World Bank loans for track renewals;** (2014 – 2018)
(Procedure for request are on going with concerned Ministries)

THANKS