



# THE ADPC WAY

Giving ADPC staff the A-Z on Khalifa Industrial Zone Abu Dhabi (Kizad) and Khalifa Port megaproject.





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شركة أبوظبي للموانئ

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# How we are making history

As we help build the future of Abu Dhabi, we are making history. Our focus is the day in Q4, 2012, when one of the world's greatest feats of contemporary engineering is launched.



Khalifa Industrial Zone Abu Dhabi (Kizad) and Khalifa Port are extraordinary achievements. The industrial zone will become one of the biggest in the world. Its dedicated Port will be the first of its kind in the region.

Their parent company, ADPC will hand over the project on time and to budget, with an outstanding health and safety record.

The megaproject has already gone global, featured on Al Jazeera, Discovery Channel and BBC Worldwide. It's not just for awesome engineering. Our green work has seen us win international awards for preserving the unique and beautiful coral reef next to the port.

The progress of our staff and contractors – a huge multinational team – bears witness to the support of the leadership of the Government and the ADPC Board.

We want you to feel proud of KIZAD and Khalifa Port. You are part of the team, part of the Emirate's bright future, which we are building day by day, hour by hour.

**Tony Douglas**

CEO, ADPC

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# What the Handbook tells you

Welcome to the Kizad and Khalifa Port Program Management Handbook. We will tell you all about the extraordinary megaproject under development at Taweelah, half way between Abu Dhabi and Dubai. It is an engineering marvel.



## ● Facts

### **FACTS**

We will supply you all the facts about how we will hand over the project on time and to budget.

We will look in detail at how we work. You will learn how the project is organized, managed and structured. We will simplify the complexity.

## ● Answers

### **GIVING ANSWERS**

If you're someone who's just joined ADPC, welcome!

And if you have been here for a while but just want to find out more, you've come to the right place. We aim to answer any questions you may have.

We want you to feel proud of being part of our team as the megaproject comes alive before our eyes.

# Abu Dhabi's Roadmap

We are helping to build the future, playing a powerful role in the Abu Dhabi Economic Vision 2030, which sees the Emirate move away from oil and gas by diversifying into other industries.



Kizad was launched in November, 2010 (replacing the previous title of "KPIZ") with the aim of contributing with its integrated Khalifa Port a up to 15% to the non-oil and gas GDP by 2030.

## EMIRI DECREE 6 IN 2006

ADPC, the parent company of Kizad and Khalifa Port, was set up by Emiri decree 6 in March 2006, mandated to be the owner, master developer and operator of commercial ports (many of which are in Al Gharbia, the Western Region) and Kizad, our designated industrial zone.

## ECONOMIC ASSUMPTIONS

When ADPC was set up, it was boom time. Things have changed. We did not get carried away: we did not take unnecessary risks. It's paying off now.

## FLEXIBILITY

From square one, we have embraced flexibility. This is why we are developing Kizad and Khalifa Port in modular stages. They can be expanded over time, not necessarily all at once.

Over the next twenty years, both will grow according to demand. The Port will open in five different phases, and Kizad is planned to become 420 square kilometers in size, the equivalent of a small country.

With Kizad offering both a free zone and non-free zone status, we have built in operational as well as physical flexibility.

So, in Q4, 2012, we open Kizad Area A and Khalifa Port phase 1.

- Diversifying
- Our Mandate
- No Risk
- Future
- Ready

# Facing Challenges

It's tough, very tough, to construct from scratch one of the world's largest industrial zones. And remember that only five years ago, Khalifa Port was... the sea!

We have faced many constraints in terms of logistics, time, cost, skill and availability. We have met head on extraordinary challenges imposed by the harsh environment. We are making remarkable progress, with green thinking central to our operations.

## CORAL REEF

We have won international awards for protecting a national treasure - the Ras Ghanada coral reef, lying right next to Khalifa Port. At 35 square kilometers in size, the largest UAE reef is home to flourishing marine life such as turtles, dolphins and clownfish.

The entire Port island was built nearly 5 kilometers out to sea. Why? To protect the reef.



## ENVIRONMENTAL BREAKWATER (EBW)

We built an astonishing breakwater, 8 kilometers long, which curls around the Port island like a mother's arm to protect the delicate reef. We brought the rocks from Ras Al Khaimah and cleaned them specially. The entire EBW cost AED 900 million (USD 240 million). It's worth it.

## CORAL SURVEYS

We have made a detailed map of the reef. Two independent marine scientists from Florida, USA, have been regularly visiting the reef for several years to check on it. It has, without fail, been given a clean bill of health.

- Constraints
- Protecting Nature

- EBW

- Health Checks



# Facing Challenges

## ● Bridges

### CAUSEWAY BRIDGES

Khalifa Port boasts the longest and third longest bridges in the entire UAE, at 1.6 kms and 1 kilometer long respectively. We designed them to maintain current sea flow to the reef. Water passes easily underneath the bridges.

## ● Water

### WATER QUALITY

We keep a close eye on the quality of water around the reef. We have implemented an elaborate water quality monitoring system. It checks on the temperature, too.

## ● Air

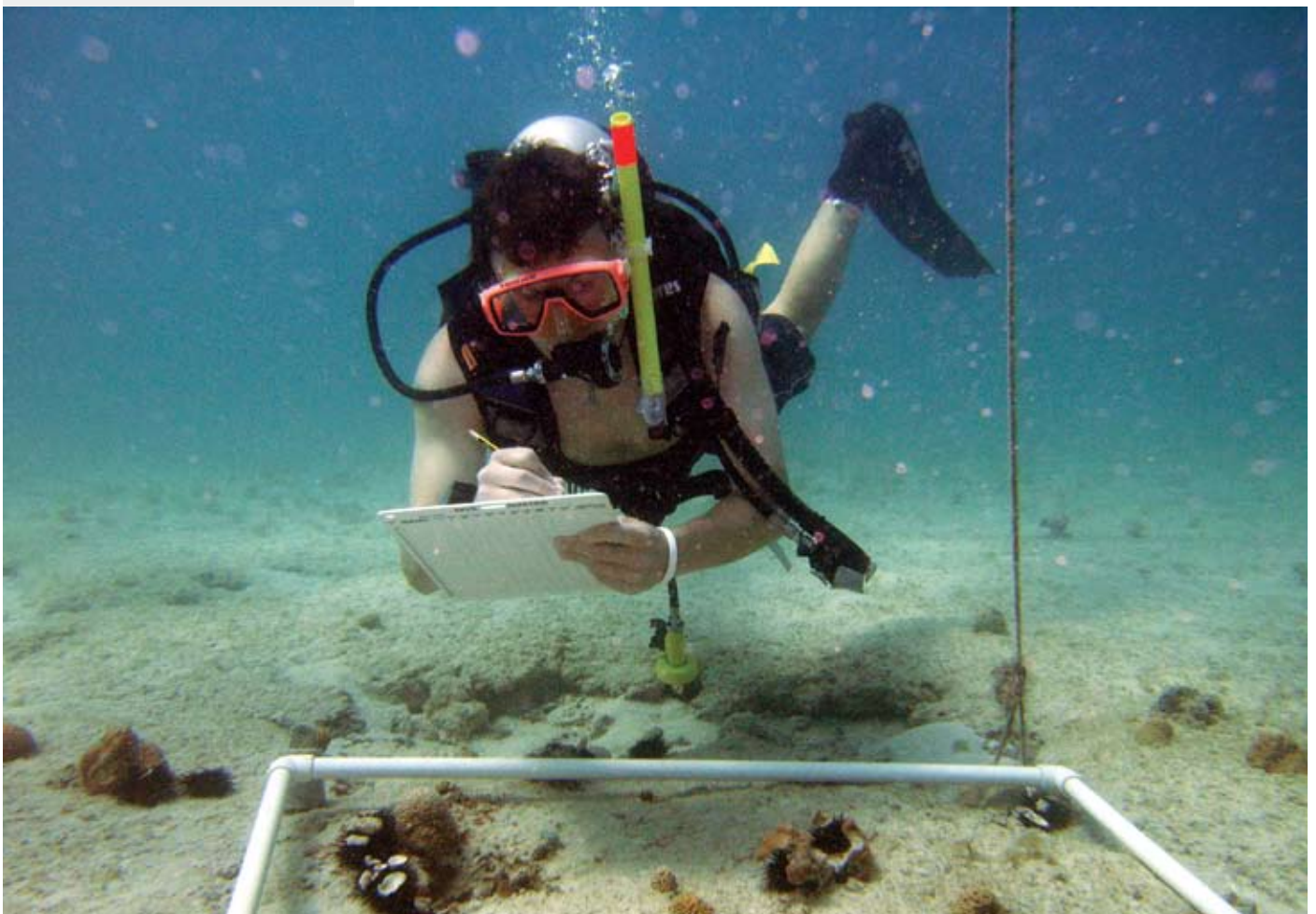
### AIR QUALITY MEASURES

The air that we breathe: it's important! That's why we have a permanent air quality modeling and monitoring program. It tracks the quality of what we call Kizad's "airshed".

## ● Wildlife

### WILDLIFE PROTECTION

Before we even began construction at Kizad, we brought in experts to move animals living on the site. We translocated nearly 700 animals. These included Arabian gerbils and lizards.



# Achievements

We have come a long way in a short time. Not only are we involved in a race against time – it's a race to finish safely, on time and within budget.

- Final 25% of project
- Hitting Targets
- Momentum

## THE FINAL COUNTDOWN

Four years since starting, we are now entering the last 25% of our megaproject... In this last year we will spend just over half of the budget.

## HIGHLIGHTS

- The project is progressing ahead of schedule and on budget
- Over 62 million man-hours have been spent to date
- 13 million man-hours have been worked without one Lost Time Incident
- All construction targets have been exceeded

## THE TASK AHEAD

In the final phase of the project we maintain maximum momentum in order to:

- Deliver best value
- Emphasise responsibilities
- Demand accountability

# Partnering for Success

We chose the best partners and contractors in the world to help us build our dream.

- Teamwork
- Agreement
- Experience
- Who does what?
- Know-how
- Alignment

## TEAM APPROACH

The megaproject at Taweelah is unprecedented in the Middle East. We called on the savvy of experienced partners.

## PARTNERSHIP

We signed a Program Management Agreement (PMA) with Bechtel, our chosen Program Management Consultant (PMC).

## RUNNING START

Working with Bechtel enabled ADPC at the start of its journey to make immediate progress owing to their knowledge of regulatory approvals and standards.

## AGREEING OBJECTIVES

We aligned objectives through commercial program performance incentives and drew up a Project Execution Plan which went into nitty-gritty detail. It asked “who does what ?” , and examined key issues such as individual responsibilities, project execution, reporting, key performance indicators, procedures, work instructions, and deliverables.

## MULTI-SKILLING

With Bechtel we got off to a lively start. We drew on their skills and knowledge in the management of projects, contracts, project controls, engineering, construction, health and safety issues, environmental factors, risk assessment, document control and so on.

## ALIGNING OBJECTIVES

ADPC and the PMC work hand in hand 24/7. In late 2010, we amended the PMA with Bechtel to make it more focused on delivery. It was an unusual move in the region and designed to make savings.



# What?



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# Objectives and Goals

The success of the whole project depends on the team, not just the individual.  
Everybody must share the same goals.

- Delivery

- Efficiency

- Readiness

**We have three main objectives for Q4, 2012:**

**PROJECT DELIVERY:**

- To complete the 100-Steps Plan on time
- To complete the 100-Day Sprints on time
- To make savings, and secure Government funds

**LEASING KIZAD:**

- To rent out the maximum land area
- To boost trade volumes

**GETTING READY**

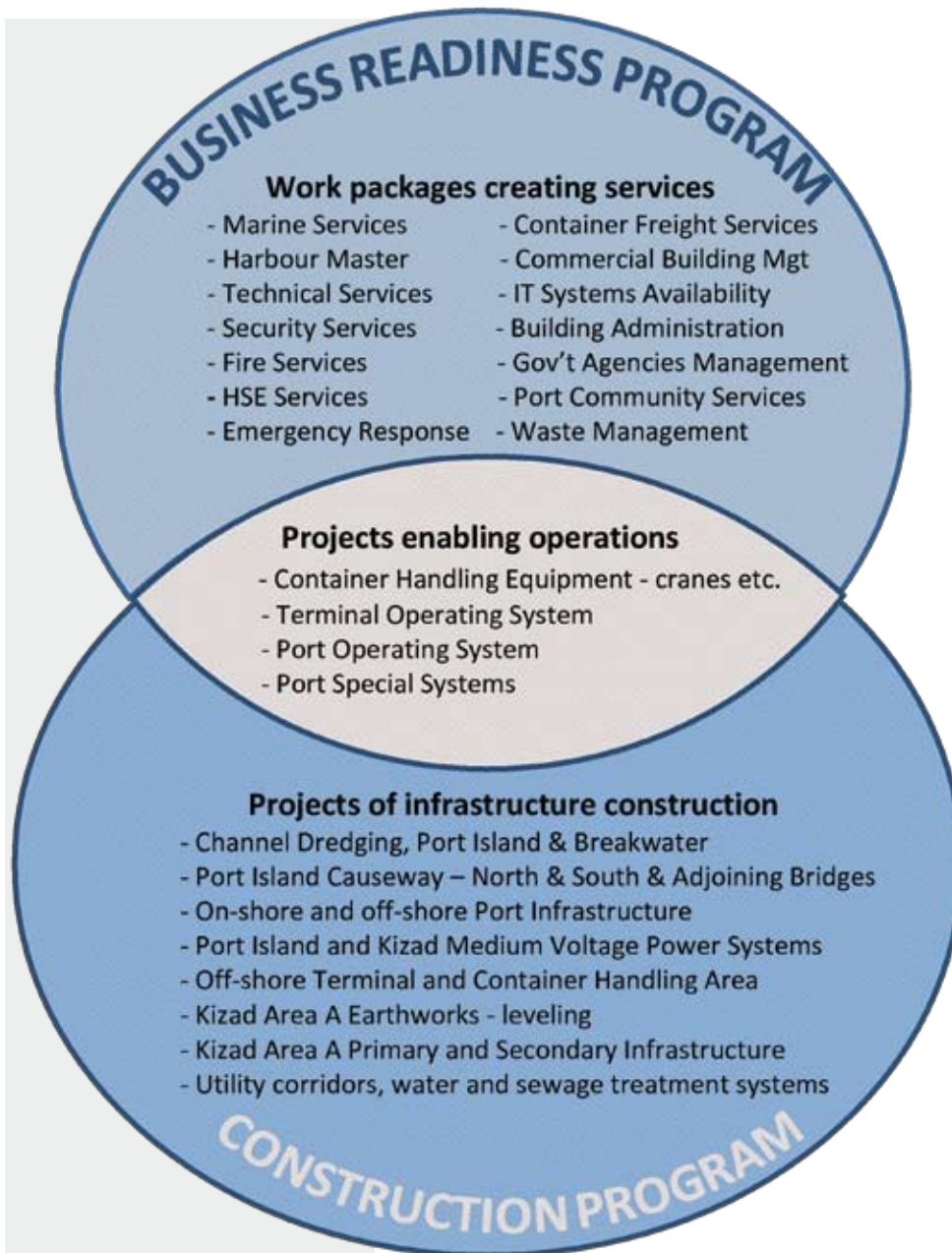
- To complete a blueprint for Khalifa Port and Mina Zayed Port
- To action the Business Readiness milestone plan
- To plan extra exports of containers and cargo





# Construction & Business Readiness Programs

We build in Construction, furnish in Project Enabling, then prepare for launch in Business Readiness



For the megaproject to be delivered successfully, we need to complete the entire range of projects. Starting with construction, continuing with enabling and finishing with business readiness projects.

The construction program consists of many construction Projects, executed under Contracts. Whereas the Business Readiness Program is broken down directly into much smaller pieces or work, called work packages, executed mainly internally.

For example, to work on the construction program, the Indian firm Larsen and Toubro was awarded the massive construction project/contract 207. And one of the small work packages on this was the construction of a power substation.

And another example is the Business Readiness Program where we did not go to tender for Marine Services work packages, Internally the Ports Unit carried out the work, delivering pilot boat and tug boat services under this work package.

# Scope of the Mega Project

Kizad and Khalifa Port see their first phases open for business in Q4, 2012.

Kizad is initially 50 square kilometers in size. Khalifa Port is initially 10 square kilometers in size.

- Khalifa Port

- On-shore Port Area

- Off-shore Port Area

- Semi-automated Container Terminal and General Cargo

- Kizad

- Primary Infrastructure

- Secondary Infrastructure

## THE PORT

Khalifa Port is composed of two main sections

### 1) ON-SHORE PORT AREA

This is where the port connects with Kizad. This nerve centre hosts Customs, security scanning facilities, immigration, documentation, container freight and inspection facilities. It includes the main gate complex with police, security and civil defense services included.

### 2) OFF-SHORE PORT AREA

This consists of the Port island, the north and south causeways, and the one kilometre long road and utility bridges. The area incorporates the port operation building, master harbour facilities, civil defense services, coastguard, police station, security facilities, warehouses and workshops. It is 2.7 square kilometers in size – the equivalent of 340 football pitches.

This area houses the semi-automated container terminal, designed to handle two million TEUs a year from Q4, 2012, with a quay length of one kilometer. The remaining 2.2 kilometers of the quay wall are used for general cargo. The container yard features 10 Quay Cranes, 52 automated stacking cranes and 33 shuttle carriers. Phase One sees full utilities and infrastructure supplied to Khalifa Port including transport links, power supply, communication networks and so on.

## KHALIFA INDUSTRIAL ZONE ABU DHABI (KIZAD)

Kizad, located to the south-east of Khalifa Port, will attract selected industries throughout its development, with imports and exports passing through Kizad gates and the quays of Khalifa Port. Kizad's development is split into two steps.

### Step 1 – Primary Infrastructure

One chief feature of the first step is the building of the Sheikh Khalifa Industrial trunk road. This links the E11 Abu Dhabi/ Dubai road to the onshore port complex and is 13 kilometres long. It features 2 interchanges and 3 arterial roads perpendicular to it: the Ras Ghanada, Al Sadr and Mina roads. Phase 1 sees the construction of infrastructure and provision of utilities for Kizad tenants, such as water, sewage, power and communications.

### Step 2 – Primary Infrastructure

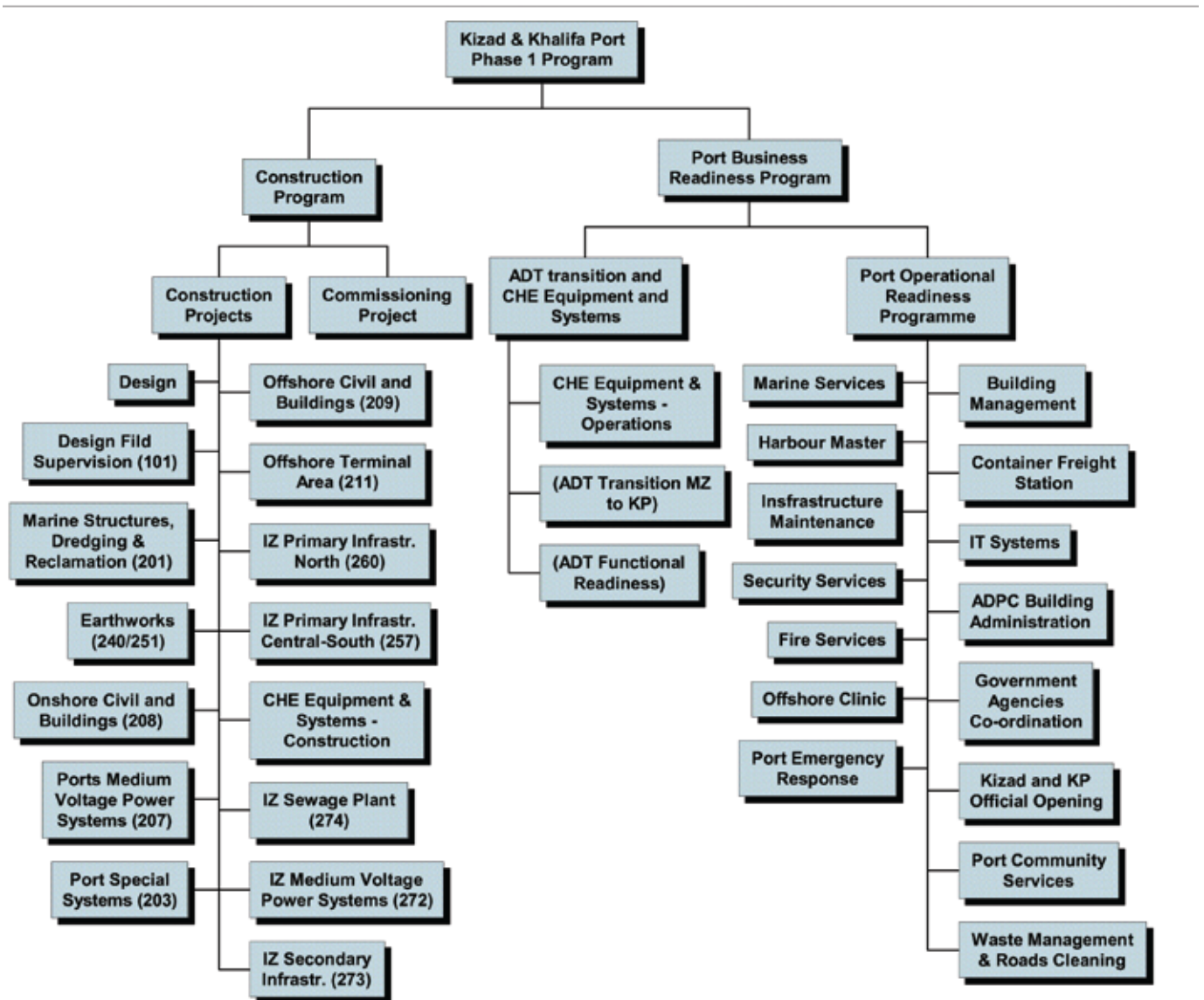
This features building the secondary roads (66 kilometres in length) that serve Kizad's tenants. Phase 2 also sees utilities delivered to the perimeter of tenants' plots. All provision is based on the master business plan.

# Work Breakdown Structure

To manage the Kizad and Khalifa Port program effectively, the work has been broken down into manageable sections, known as Work Breakdown Structure (WBS).

Kizad and Khalifa Port Program First Phase consists of 14 major construction projects and 15 Business Readiness Work Packages (medium sized organizational projects).

Abu Dhabi Terminals (ADT) are part of the team and fully integrated into our framework.





# Major Construction Projects

These are the major contracts which have been awarded for Kizad and Khalifa Port Phase 1



# Contract 101

● Project name

● Facts

● Description

## CONTRACT 101

### DESIGNING THE MEGAPROJECT AND DESIGN FIELD SUPERVISION

**Scope:** Design for Marine Structures; dredging and reclamation; Port Island and Port Facilities; Offshore Port area and buildings, Kizad Primary Infrastructure

**Value:** AED 95 million (USD 28 million)

**First stage:** Design contract (no number specified)

**Program start:** September, 2006

**Completion:** September, 2010

**Contractors:** Scott Wilson; Moffatt and Nichol

**Second stage:** Contract 101, Design Field Supervision

**Program start:** October, 2010

**Completion:** Q3, 2012

**Contractors:** Mouchel Middle East; Atkins

**Interesting fact:** Tens of thousands of drawings were produced

### Description

The design brief was awarded to several world renowned design and engineering companies in order to enhance best port practice and to supply options for flexibility and delivery.

The work began with concept design and lead to successful master planning; the teams delivered detailed analysis of contract documentation through to the award of works and are keeping a watching brief until completion.

While the first stage focused on master planning, the second stage took it to next level of design detail and construction supervision.



# Contract 201

● Project name

● Facts

● Description

## CONTRACT 201

### DREDGING THE APPROACH CHANNEL AND BASIN, BUILDING KHALIFA PORT ISLAND AND ENVIRONMENTAL BREAKWATER

**Value:** AED 5.5 billion (USD 1.3 billion)  
**Program start:** October, 2007  
**Completion:** October, 2010  
**Contractor:** KPMC (Khalifa Port Marine Consortium)

**Interesting fact:** Spectacular project, completed 14 months ahead of time

#### Description

We completed the figurehead AED 5.5 billion (\$US 1.3 billion) Marine Structures, Dredging and Reclamation contract scope fourteen months ahead of schedule. The contract had been awarded in October, 2007, to the KPMC (Khalifa Port Marine Consortium), consisting of Archirodon, Boskalis Westminster and Hyundai.

Highlights of this work included dredging and reclaiming over 43 million cubic metres of material, building over 3.5 kilometres of concrete quay wall (22 metres high), providing over 300,000 square metres of rock / concrete armour unit revetment, building the Environmental Protection Breakwater with its 2.3 million cubic metres of rock and revetment, and delivering the 1.6 kilometres long trestle bridge connecting the EMAL facility to their dedicated berth (and thus, in the process, creating the longest bridge in the UAE).







# Contract 240 and 251

● Project name

● Facts

● Description

## CONTRACT 240 and 251

### MOVING EARTH FROM KIZAD AREA B TO KIZAD AREA A

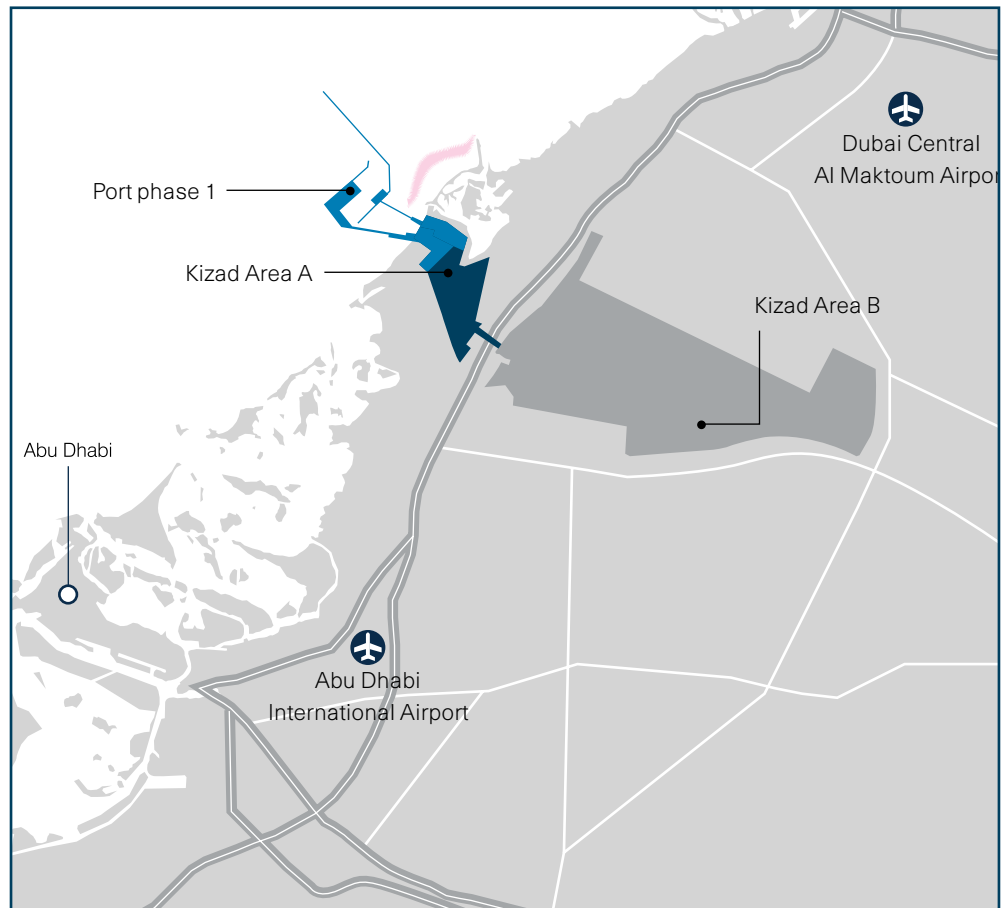
**Value:** AED 940 million (USD 255 million)  
**Program start:** March 2008  
**Completion:** March 2011  
**Contractor:** Ghantoot A1/Al Jabber A2 Earthworks

**Interesting fact:** 40 million cubic meters of earth were moved

#### Description:

The work saw the mass excavation of earth from second-phase Kizad Area B (east of the E11 Abu Dhabi highway) and its transportation to first-phase Kizad Area A where it was compacted and leveled.

The overall output was 200,000 cubic metres using over 250 trucks a day.







# Contract 208

● Project name

● Facts

● Description

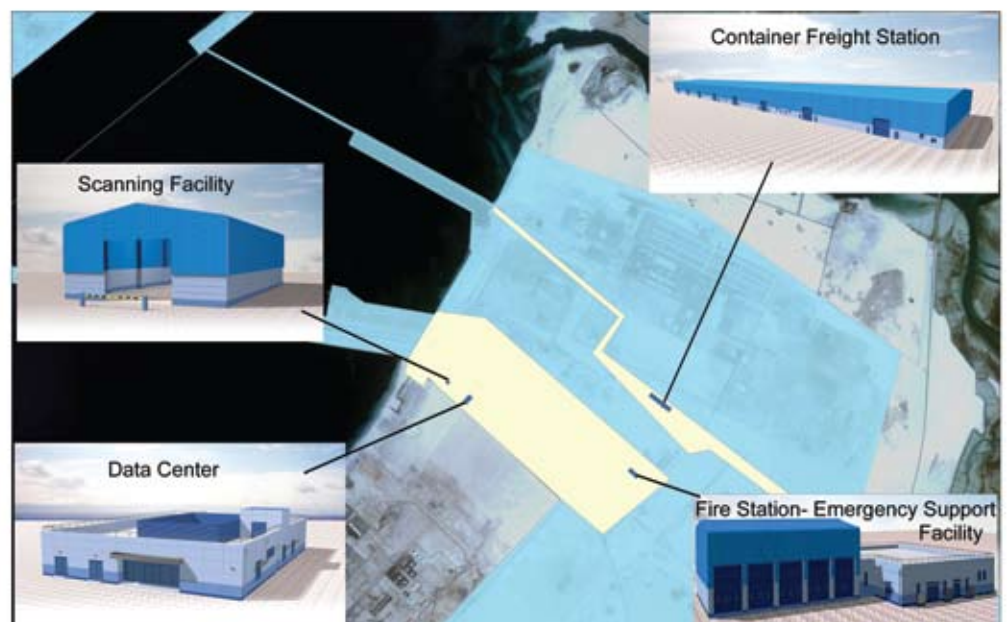
## CONTRACT 208

### CIVIL WORKS INCLUDING MAJOR ROADBUILDING

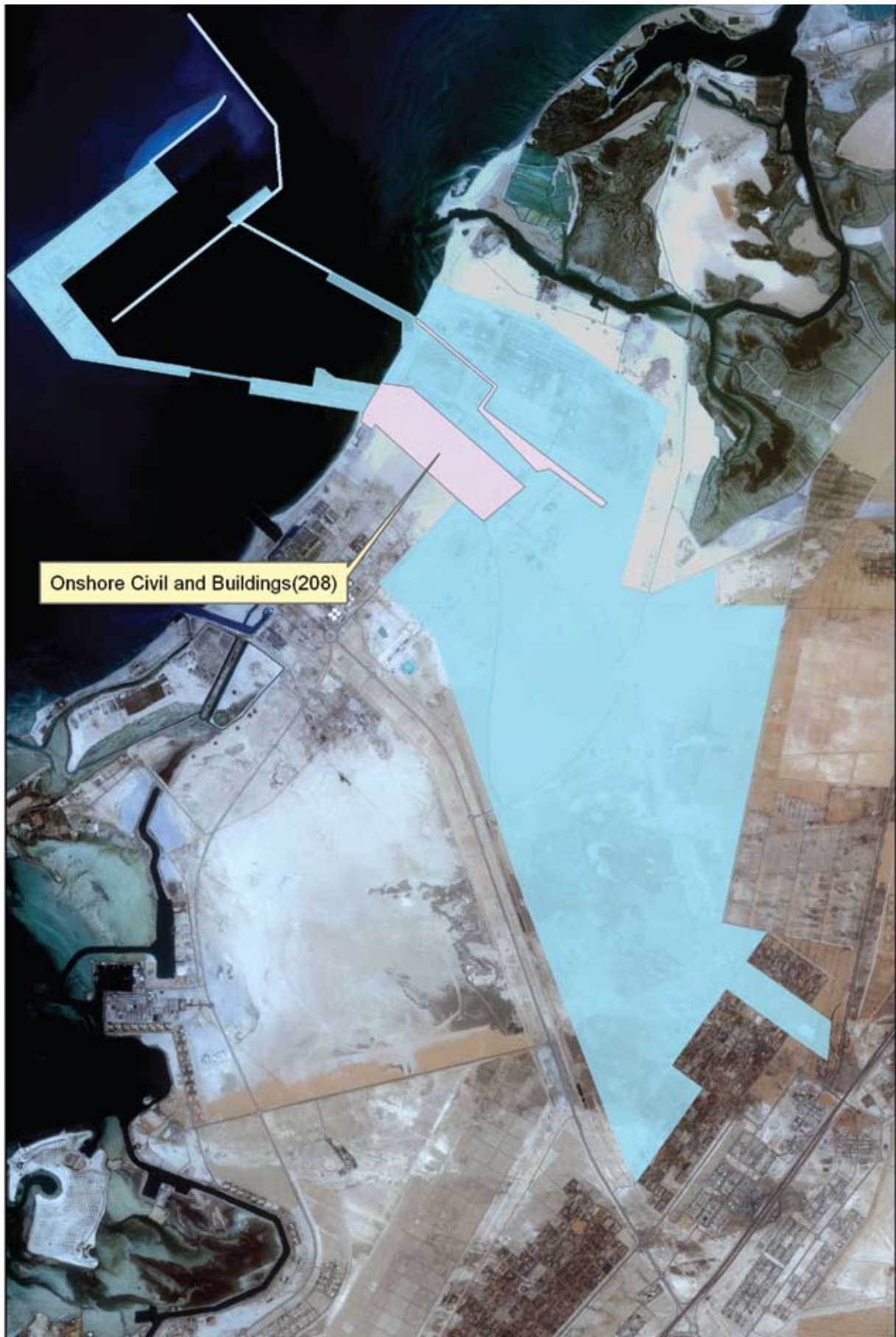
**Value:** AED 1.1 billion (USD 300 million)  
**Program start:** July 2009  
**Completion:** September 2011  
**Contractor:** Al Habtoor Leighton Group (HLG)

### Description

HLG's scope of work contains the construction of the on-shore port facilities and includes the construction of 52 permanent construction unit buildings, the largest being the Container Freight Station which is over 200 metres long. Also included is the associated infrastructure works which consists of a series of road networks, parking, sheds, utility installations and hard and soft landscaping.







# Contract 207

● Project name

● Facts

● Description

## CONTRACT 207

### MEDIUM VOLTAGE (MV) POWER SUPPLY TO KHALIFA PORT

**Value:** AED 320 million (USD 85 million)

**Program start:** February, 2010

**Completion:** May, 2012

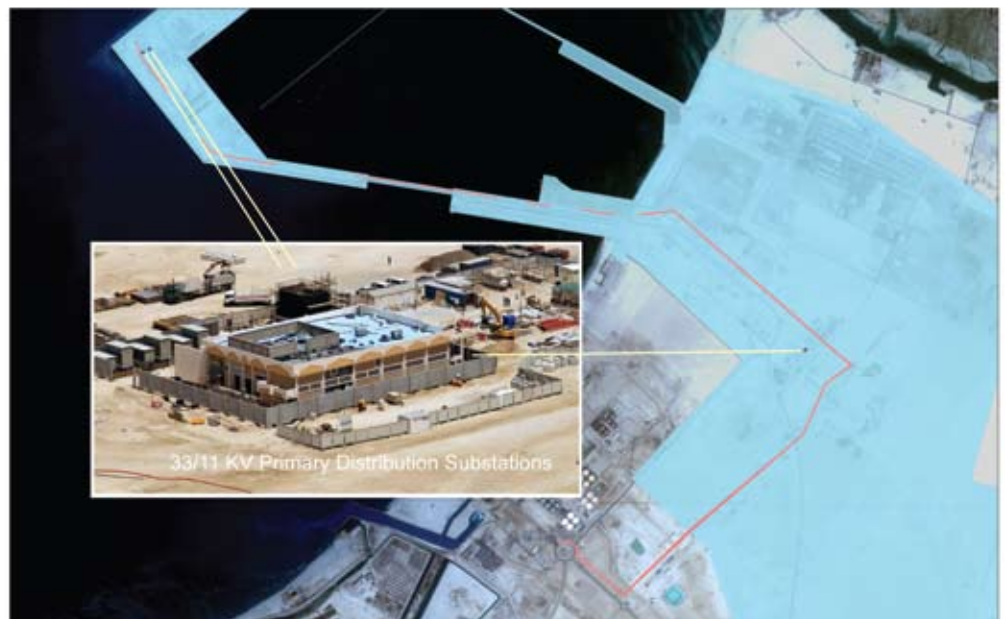
**Contractor:** Larsen and Toubro

**Interesting fact:** 250 kilometres of underground cabling will be used

#### Description

Contract 207 is to provide the medium voltage (MV) power supply via a 33 Kilovolt power cable network and three 33/11 KV primary distribution substations. This will provide all power supplies to the entire phase 1 of Khalifa Port.

Power is supplied from Taweelah Power Station, adjacent to the megaproject.







# Contract 203

● Project name

● Facts

● Description

## CONTRACT 203

### BUILDING KHALIFA PORT'S SPECIAL SYSTEMS

**Value:** AED 345 million (USD 95 million)

**Program start:** May, 2010

**Completion:** Q3, 2012

**Contractor:** Al Jaber-GIS

**Interesting fact:** Milestone megacontract

#### Description:

Al Jaber-GIS won the tender, with sub-contractor Page Europa. The contract covers Khalifa Port's special systems. Altogether close to 30 systems were retained, broadly categorized as follows:

#### Control

Vessel Traffic Service (VTS), Vehicle Monitoring Systems, building management, fire alarm and Supervisory Control and Data Acquisition (SCADA)

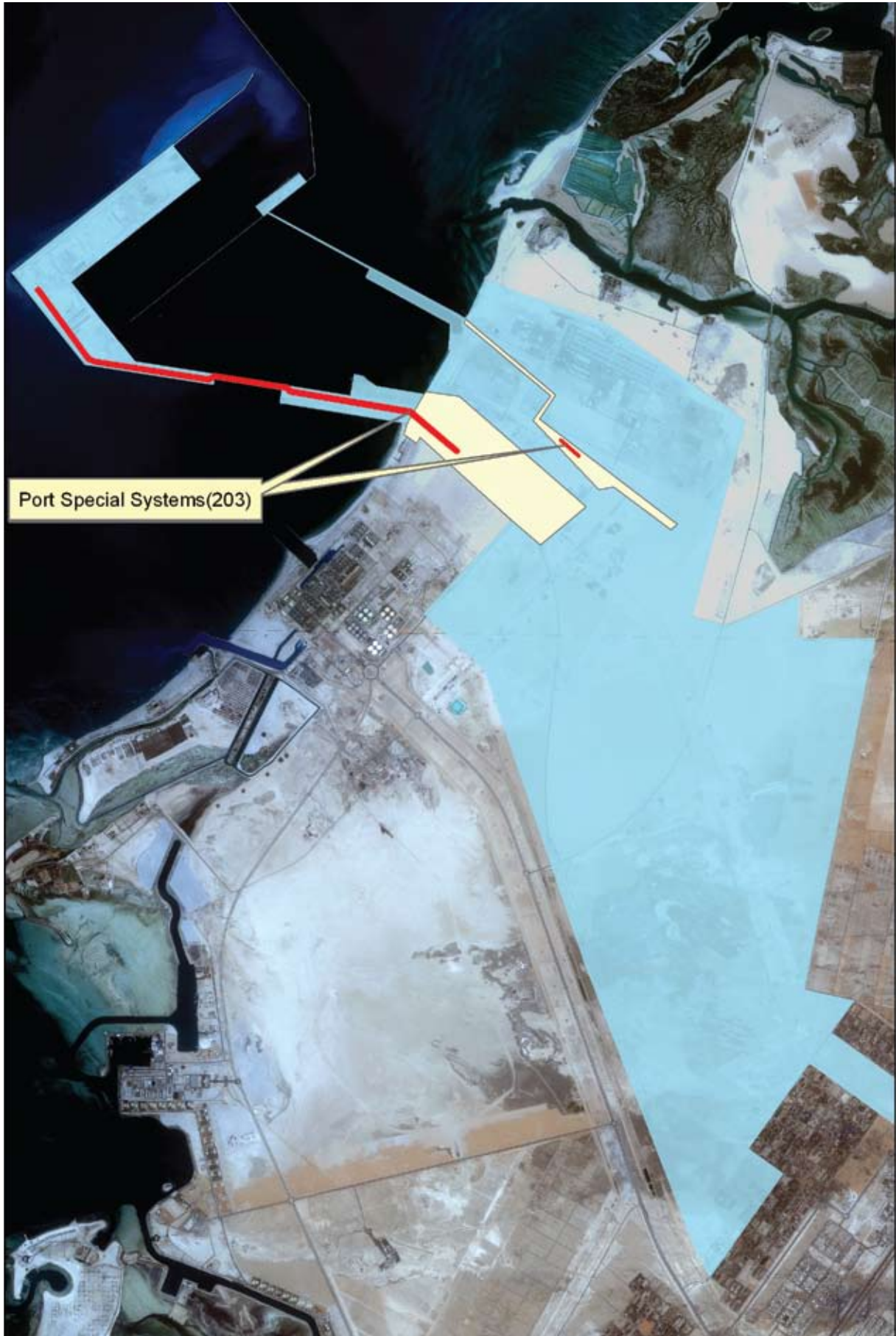
#### Telecom

Telephony, Uninterrupted Power Supply (UPS), master clock, Local Area Network (LAN), Wide Local Area Network (WLAN), structured cabling, outside plant and Terrestrial Trunked Radio (TETRA – formerly known as Walkie - Talkie)

#### Security

Perimeter intrusion detection, closed-circuit television (CCTV), security screening, gate management and access control

The design was based on Scott Wilson reports and specifications.





# Contract 209

● Project name

● Facts

● Description

## CONTRACT 209

### OFFSHORE INFRASTRUCTURE AND BUILDINGS AT KHALIFA PORT

**Value:** AED 1 billion (USD 280 million)  
**Program start:** July, 2010  
**Completion:** August, 2012  
**Contractor:** ED Zublin AG and Al Jaber Transport

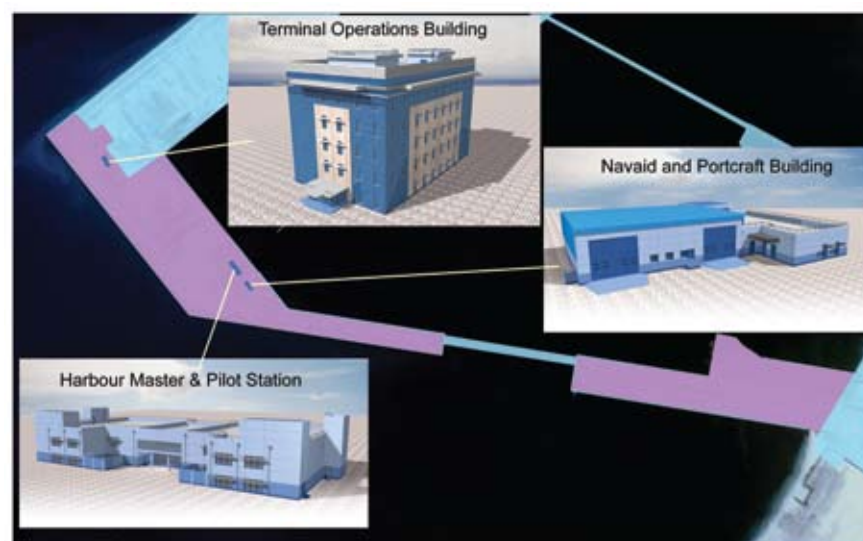
**Interesting fact:** The contract features the construction of the figurehead Terminal Operations Building (TOB).

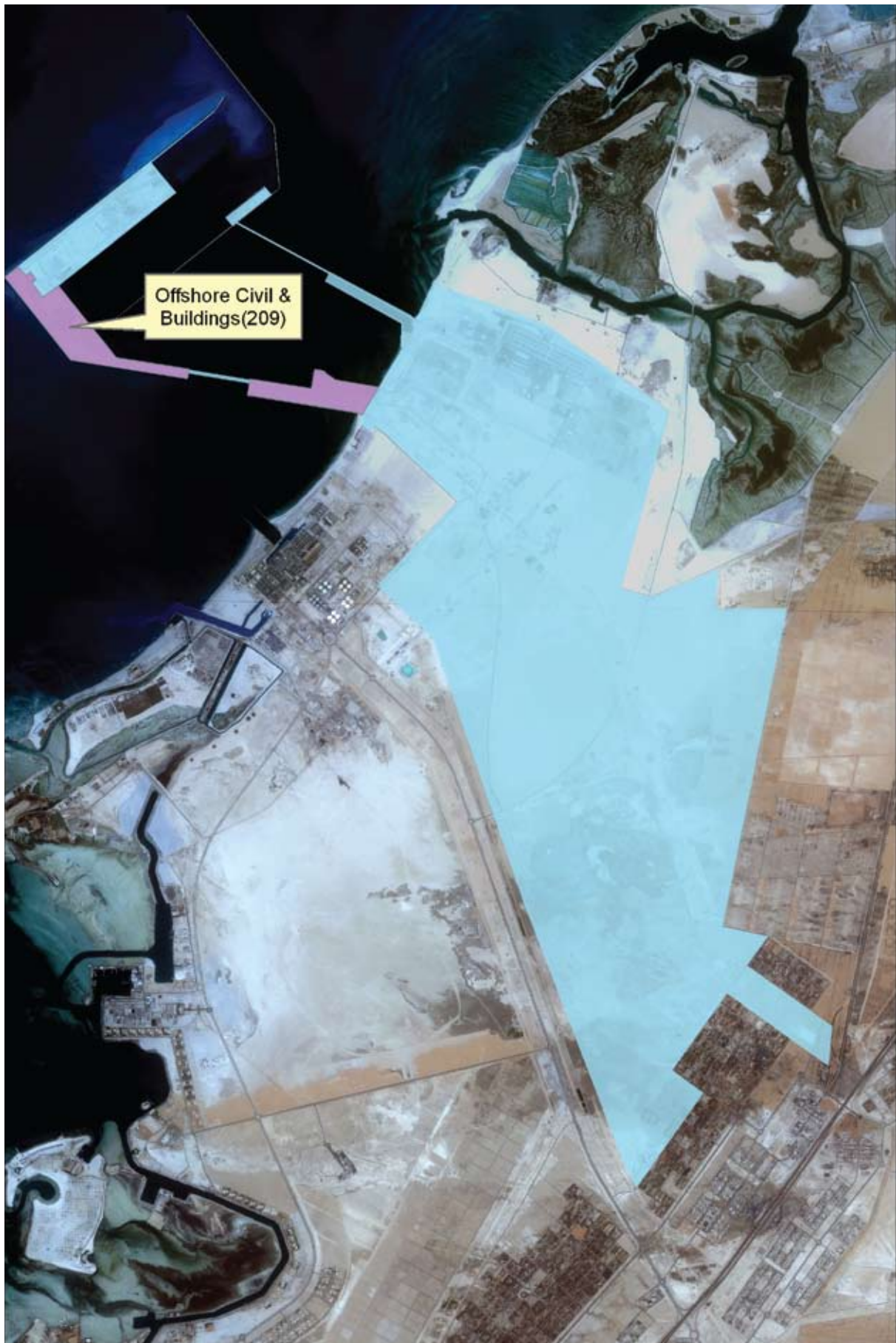
#### Description

The contract was signed with ED Zublin AG and Al Jaber Transport and General Contracting for the detailed design, construction, fit-out, testing and commissioning of the offshore port's civil and structural building works.

Highlights include construction of 23 buildings and associated structures, including the Terminal Operations Building – a six storey construction which will become the port's centre of operations. Other significant buildings include an offshore clinic, harbour master building, worker services building and four 11kV substations.

In addition - over 1000m of quay wall and associated marine fenders and bollards; a 5.4 kms dual carriageway linking the offshore port to the mainland with associated service roads, street lighting and two helipads. And there is provision of site-wide utilities including electrical, drainage, sewerage, potable water, and telecoms.





# Contract 211

● Project name

## CONTRACT 211

● Facts

### BUILDING KIZAD'S INFRASTRUCTURE WORKS

**Value:** AED 1.2 billion (USD 330 million)

**Program start:** July, 2010

**Completion:** Q2, 2012

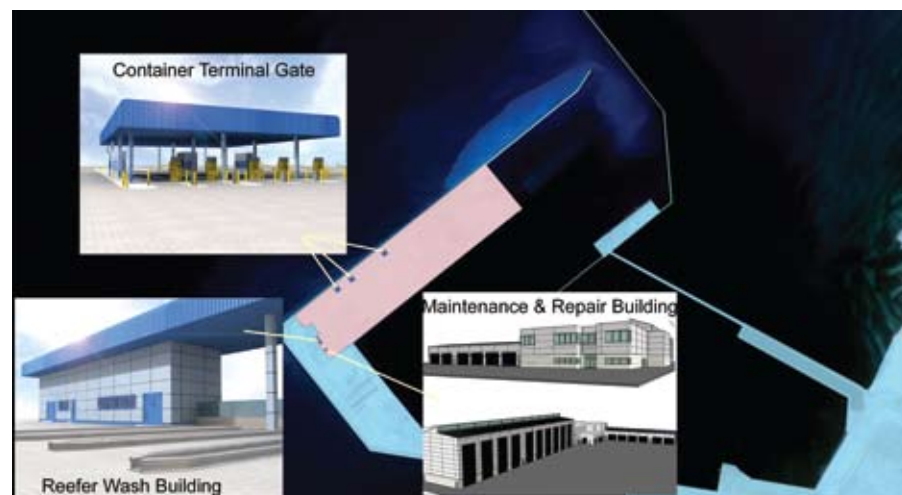
**Contractor:** Hyundai Engineering and Construction

● Description

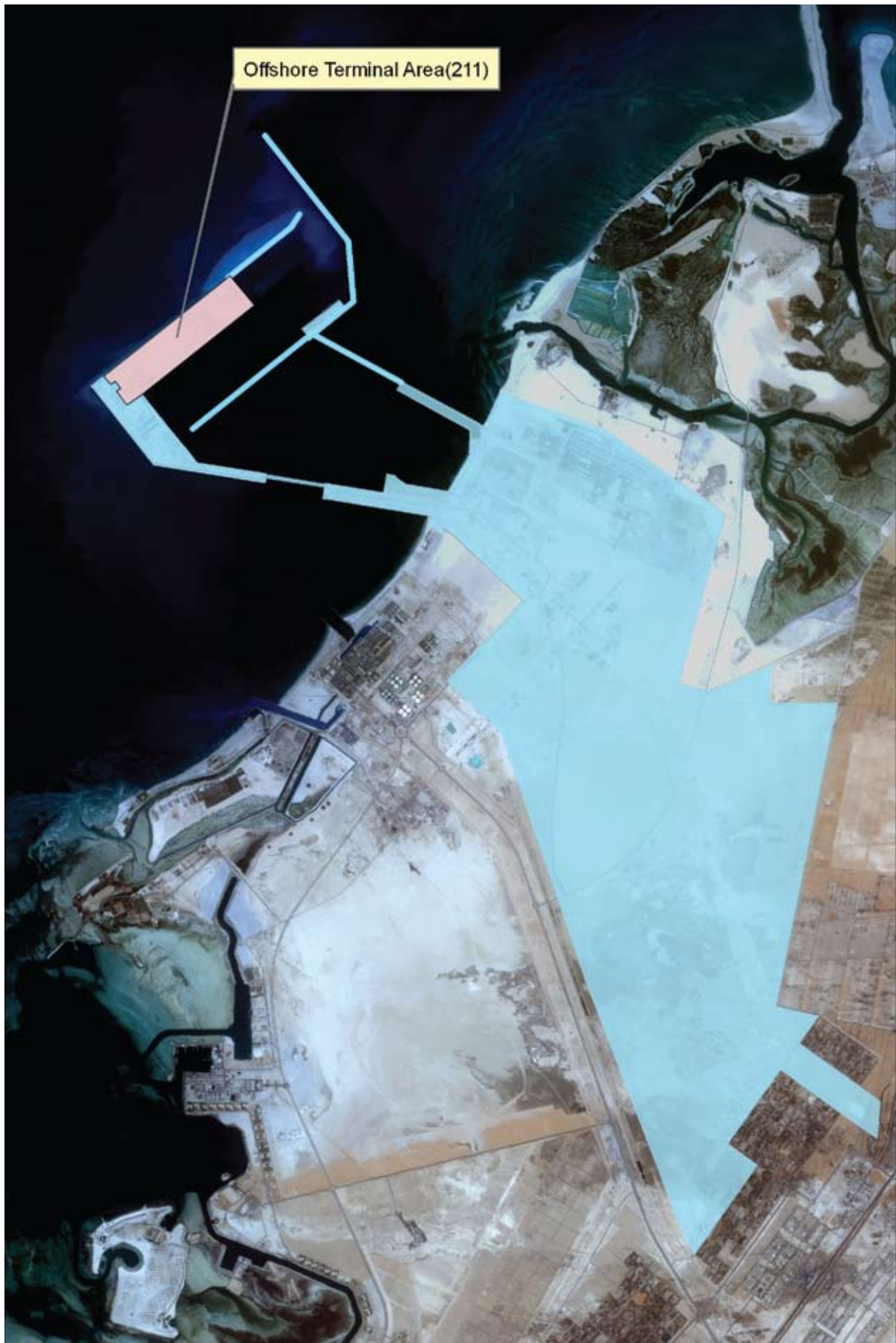
### Description

The agreement includes project management, design, procurement, construction, testing and commissioning of all civil works associated with the construction of the Offshore Terminal Area, consisting of a 1000 metres semi automated container terminal and a 400m Break bulk /general cargo terminal and 1000m of future expansion area.

Highlights of the contract include over 2400m of quay wall capping beam and associated furniture such as marine fenders, ladders and bollards; filling and grading for entire offshore area, comprising of 275 hectares, including the filling at the rear of the capping beam in the container terminal, break bulk areas and selected fill under roads and paving; heavy duty pavement for the Container Terminal area includes all striping and final markings; detailed design and construction of a diesel fueling facility and a 2 storey maintenance and repair building for a 2.5 million TEU container terminal with all supporting structures including tyre storage and repair, welding bay, paint shop and hazardous storage and wash bay, and a 3 kilometres dual carriageway and associated street lighting, signage and marking.







# Contract 260

● Project name

● Facts

● Description

## CONTRACT 260

### BUILDING KIZAD'S PRIMARY INFRASTRUCTURE – NORTH

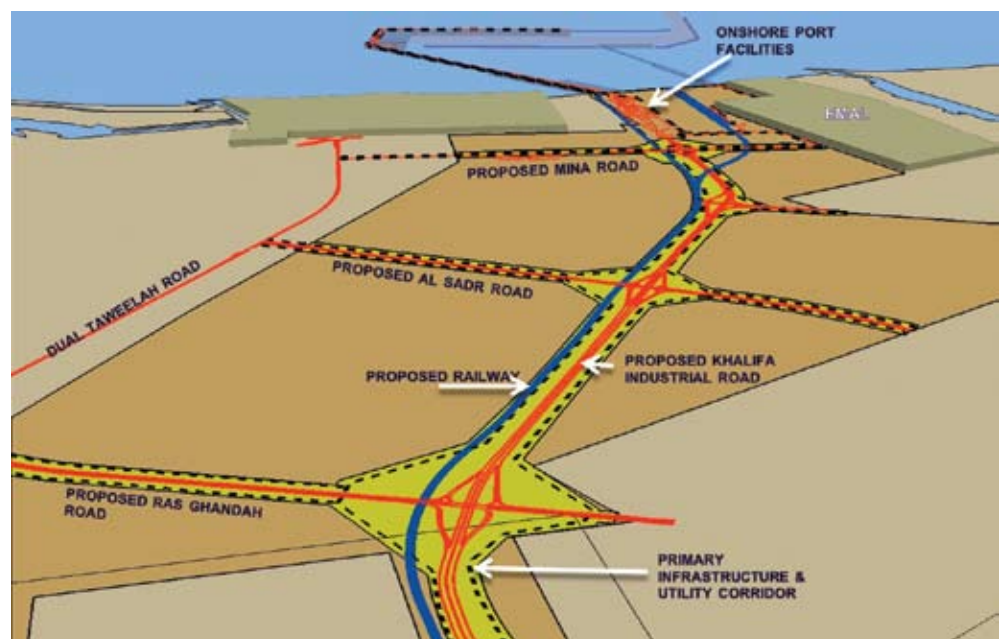
**Value:** AED 485 million (USD 130 million)  
**Program start:** August 2010  
**Completion:** July, 2012  
**Contractor:** CCC

Interesting fact: Milestone megacontract

### DESCRIPTION

Consolidated Contracting Engineering and Procurement S.A.L (CCC) signed the agreement for the construction, fit-out, testing and commissioning of the civil and structural works for Industrial Zone Area 'A' primary Infrastructure (North).

Highlights of the contract include construction of a 4.5 kilometre dual 3-lane carriageway (Mina Road) and a 1.5 kilometre dual 4-lane carriageway (Sheikh Khalifa Industrial Road) linking the onshore port to the Industrial Zone, with associated road services including street lighting, and drainage; construction of an interchange that connects Mina Road and Sheikh Khalifa Industrial Road, and provision of site-wide utilities including electricity, telecoms, potable water, combined waste water and irrigation.







# Contract 257

● Project name

● Facts

● Description

## CONTRACT 257

### KIZAD PRIMARY INFRASTRUCTURE CENTRAL AND SOUTH

**Value:** AED 1.04 billion (USD 285 million)

**Program start:** September 2010

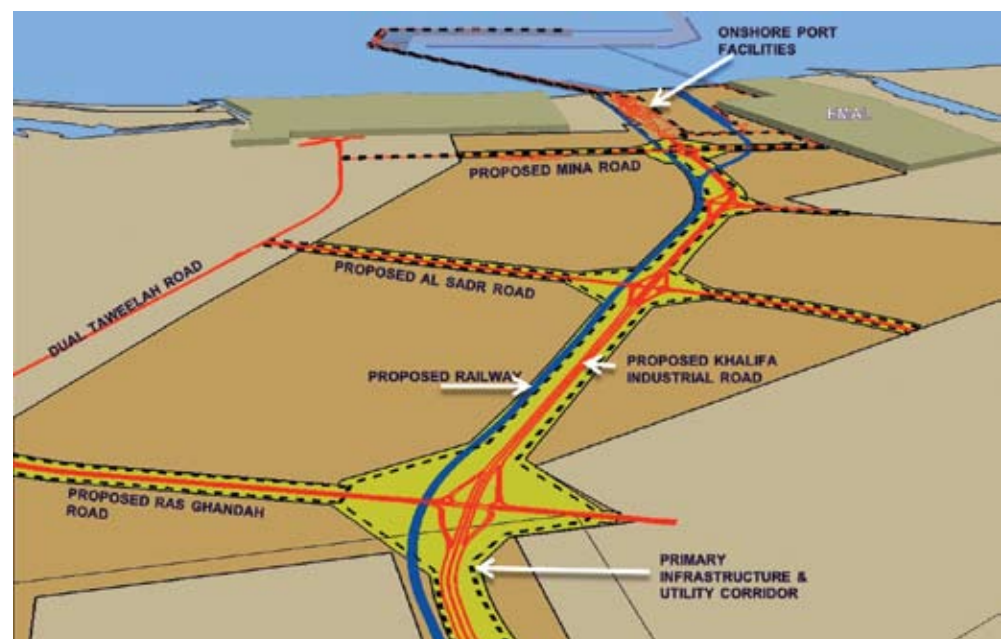
**Completion:** September 2012

**Contractor:** Al Habtoor Leighton Group (HLG)

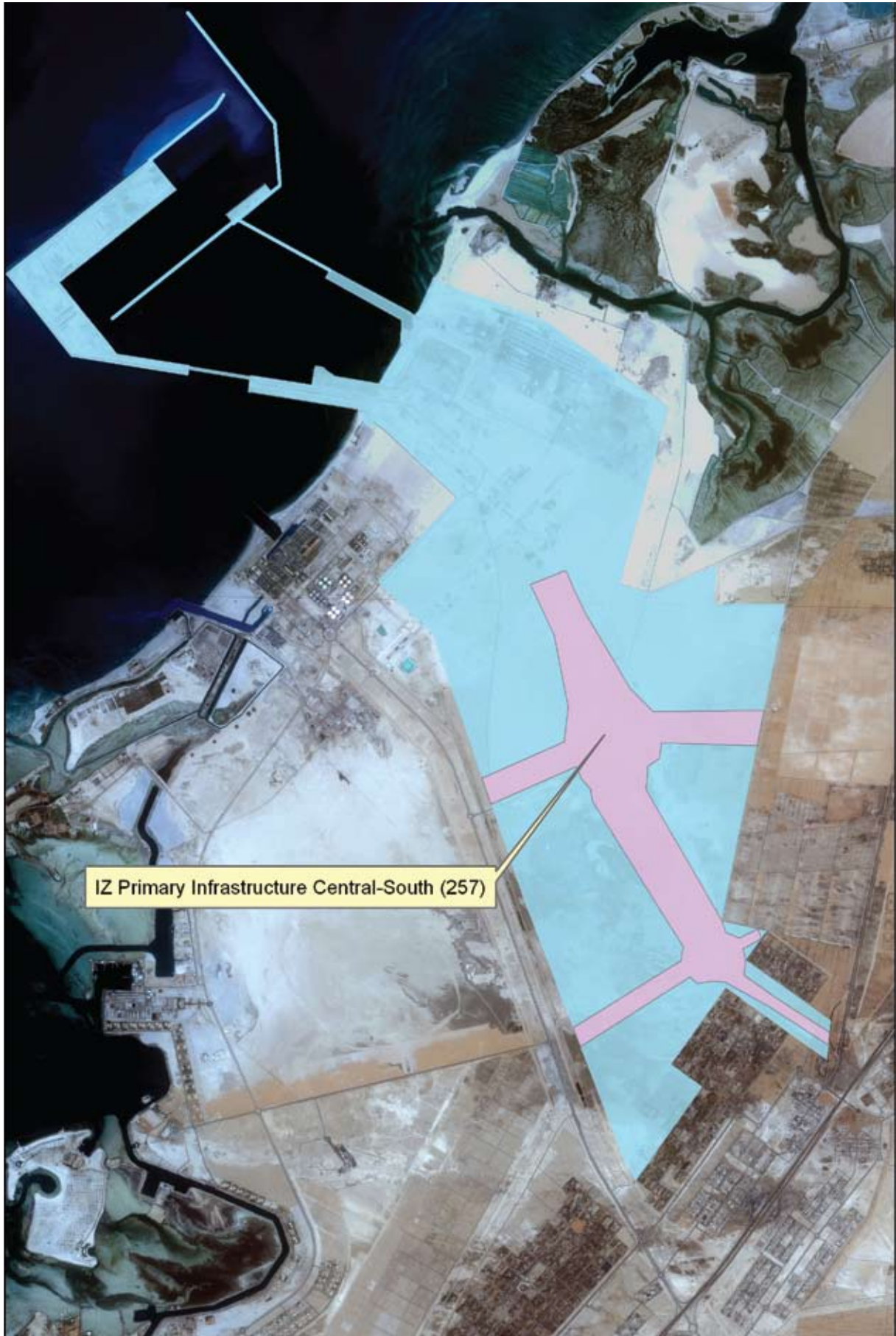
**Interesting fact:** 9 kilometres "Modular Path" for massive oversize cargo is being built

### Description

The agreement is for the construction, fit-out, testing and commissioning of the civil and structural works for Industrial Zone Area A primary infrastructure (Central and South), the second and the third of the three construction packages that will provide the facilities for an industrial centre catering for a wide range of heavy, medium and light industries. Highlights of the contract include construction of a 9 kilometre dual 3-lane carriageway (Al Sadr Road and Ras Ghanada Road) and a 9.5 kilometre dual 4/6-lane carriageway (Sheikh Khalifa Industrial Road) linking the onshore port to the Industrial Zone, with associated road services including street lighting and drainage. Also under construction are two major grade separated interchanges, including 5 highway and railroad bridges that connect Al Sadr/Ras Ghanada Roads and Sheikh Khalifa Industrial Road.







# Contract 274

● Project name

● Facts

● Description

## CONTRACT 274

### SEWAGE TREATMENT PLANT KIZAD AREA A

**Value :** AED 81 Million (USD 22 Million)

**Program Start:** 12th May 2011

**Completion:** Q3, 2012

**Contractor:** Metito LLC

**Interesting fact:** Treats per day the equivalent of more than 100 containers a day.

### Description

Contract 274 provides sewage treatment facilities for the Industrial Zone through the design and construction of Phase 1 of the Sewage Treatment Plant with a treatment capacity of 3,500 m<sup>3</sup>/day, including all associated infrastructure and utilities, connections and tie-ins, pumping plant installation and a 11/0.4kV electrical substation.







# Contract 272

● Project name

● Facts

● Description

## CONTRACT 272

### MEDIUM VOLTAGE ELECTRICAL SUBSTATIONS KIZAD FOR AREA A

**Value :** AED 344 Million (USD 94 Million)

**Program Start:** 30th May 2011

**Completion:** Q3, 2012

**Contractor:** Larsen and Toubro

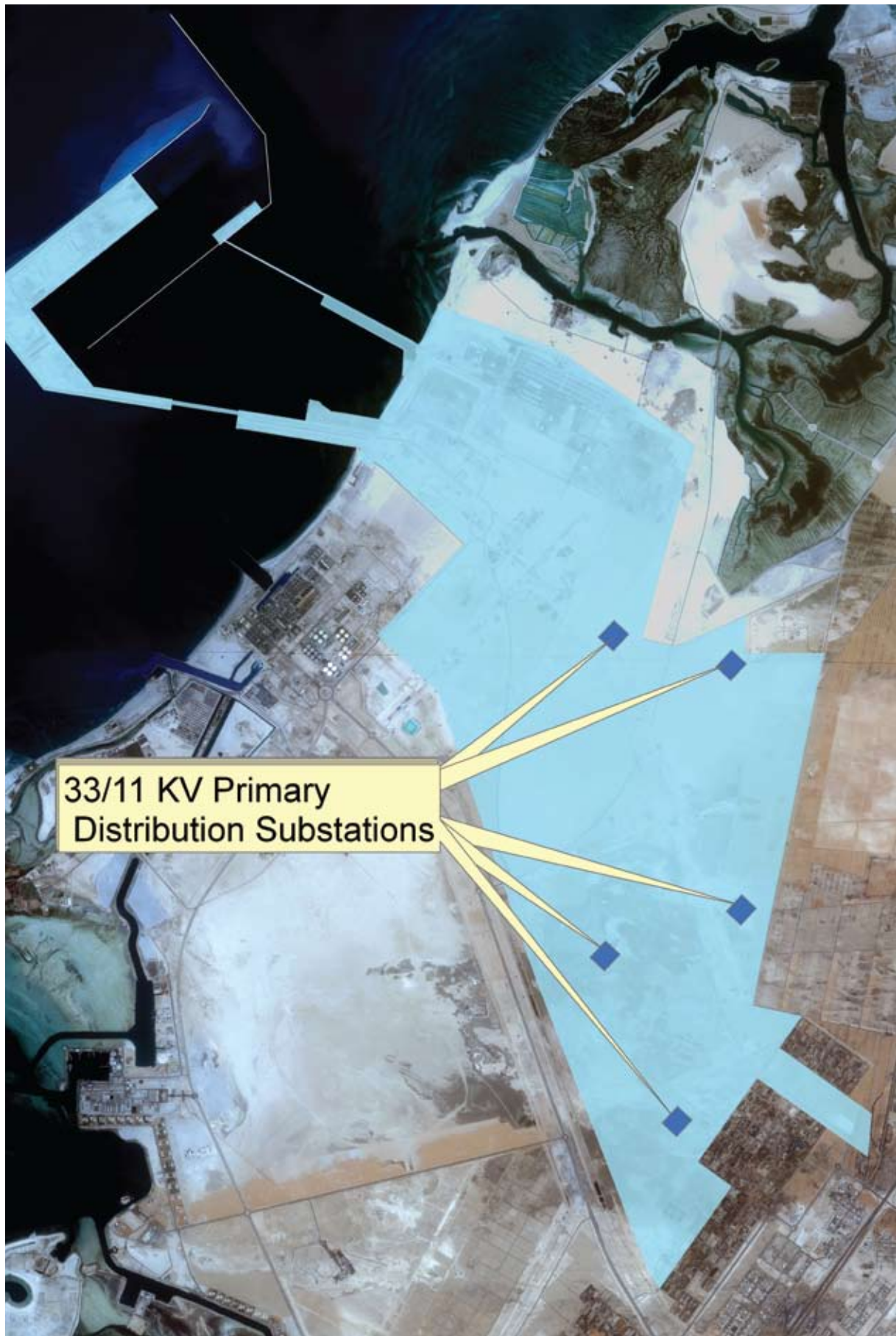
**Interesting fact:** Second major contract for the Indian firm Larsen and Toubro

### Description

Contract 272 will provide power supply to the Industrial Zone through design and construction of five (5) 33/11kV electrical substations and associated 33 kV cable network connecting each of the substations directly to the 33kV switchgears located in Taweelah Power Plant.







# Contract 273

● Project name

● Facts

● Description

## CONTRACT 273

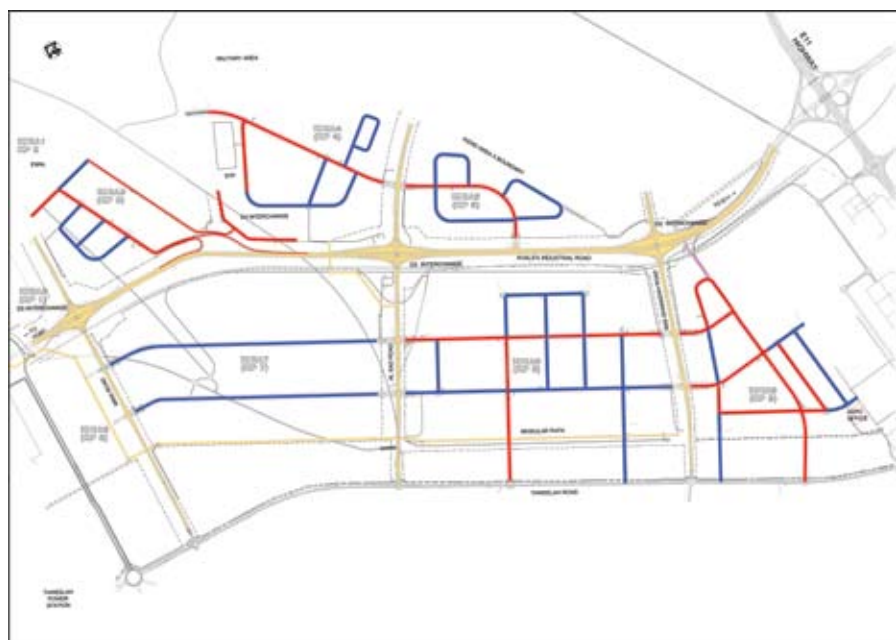
### SECONDARY INFRASTRUCTURE KIZAD AREA A

**Value :** TBA  
**Program Start:** TBA (TENDERING IN PROGRESS)  
**Completion:** 520 Days from NTP (Notice to Proceed)  
**Contractor:** TBA

**Interesting fact:** Major milestone contract for secondary infrastructure

#### Description

Contract 273 will provide Secondary Infrastructure for the Industrial Zone. The scope includes construction of secondary roads, electrical substations for the 11kV and 0.4kV electrical systems, telecommunication works, potable and fire fighting networks, process water networks, combined waste water networks, storm water and groundwater drainage system.







# CHE Project

● Project name

● Facts

● Description

## CONTAINER HANDLING EQUIPMENT (CHE) PROJECT

### DESIGN AND BUILD: CONTAINER HANDLING EQUIPMENT (CHE)

**Value:** AED 700 million (USD 200 million)

**Program start:** November 2010

**Completion:** Q3, 2012

**Contractors:** ZPMC China (6 ship to shore container cranes):  
AED 193 million (USD 52.4 million).

KoneCranes Finland (30 automated stacking cranes):  
AED 430 million (USD 116.98 million);

Terex Germany (20 straddle carriers):  
AED 84 million (USD 22.9 million)

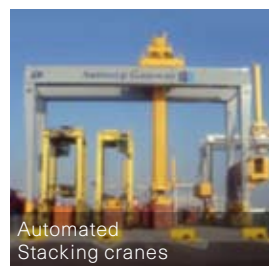
**Interesting fact:** State of the art equipment

### Description

The STS cranes that will be supplied by ZPMC are designed with a single hoist and a rated load of 110 tonnes that will support tandem lift (2 x 40') operations in the future. An outreach of 65 metres and a lifting height of 44 metres under the spreader will secure the capacity required to handle ultra large container ships.

In November, 2010, we announced the contract for twenty (20) Terex Noell SC624E Diesel-Electric Straddle Carriers (1 over 1, 9' 6") for Khalifa Port from the German Terex Port Equipment (Noell Mobile Systems). The straddle carriers will be delivered to Khalifa Port by mid 2012.

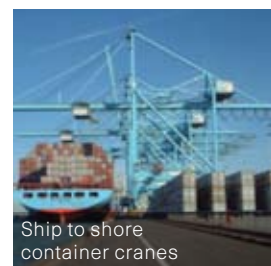
Konecranes Finland Corporation will deliver 30 automated stacking cranes to be used at the semi-automated Khalifa Port Container Terminal. The cranes will be delivered in two batches to Khalifa Port: 14 units shall be delivered at the end of March 2012 with another sixteen units three months after the first batch.



Automated  
Stacking cranes



Straddle Crane



Ship to shore  
container cranes

# Business Readiness

Each Business Readiness Work Package is tackled head-on with a powerful blend of the right people, processes and tools.

This overlaps with the end of the Construction mode, when the infrastructure is built and handed over.

When Business Readiness ends, the Port starts to operate. To run it we recruit staff from HQ in Mina Zayed or hire new people. The completion of Business Readiness Work Packages will make Khalifa Port operationally ready.

And when we achieve Stakeholders' Operational Readiness (when all necessary operational services are put in place such as ADT's Ports Operation program, Customs, Immigration, Security) – and after a period of integrated testing of the whole system - Khalifa Port will be business ready.

## MARINE SERVICES WORK PACKAGE

Marine services are responsible for maintaining Khalifa Port. This covers procurement operation and maintenance as well as mooring and ship handling. They also respond to any operation emergency and marine pollution; they have a responsibility to maintain the relevant shipping channels and ensure the upkeep of buoys and beacons.

## HARBOURMASTER WORK PACKAGE

The Harbour Master is responsible for enforcing port regulations and controlling marine traffic as well as operations, licensing of pilots and marine services' assets such as the Vessel Traffic System (VTS). He enforces all national and international rules and regulations and monitoring compliance, crisis management and marine environmental protection. He liaises with stakeholders and clients.

## INFRASTRUCTURE MAINTENANCE WORK PACKAGE

This contract covers Port infrastructure: inspection and maintenance (roads, buildings, breakwaters, bridges, and quay walls). It provides services for concession and lease agreements. The team co-ordinates major maintenance and repair of marine equipment; they also manage and update technical documents.

## SECURITY WORK PACKAGE

This is responsible for building the Onshore Gate operations, issuing of access card security monitoring and patrolling of the port. They also carry out traffic control and look after emergency response. They co-ordinate with tenants and port users.

- Hand over
- Marine Services
- Harbourmaster
- Infrastructure Maintenance
- Security

# Business Readiness

- Fire Services

## **FIRE SERVICES WORK PACKAGE**

ADPC will provide and operate two fire stations: one onshore, and one offshore to respond to emergencies on vessels. Ashore they will deal with chemical spillages and other emergencies and accidents.

- Offshore Clinic

## **OFFSHORE CLINIC WORK PACKAGE**

ADPC will provide a first aid treatment centre for accidents and injuries in the port area. Paramedics will travel to accident locations, and provide back up services for ships' crews and port workers. They will act as doctors for ships at anchorage offering emergency response.

- Port Emergency Response

## **PORT EMERGENCY RESPONSE WORK PACKAGE**

ADPC will co-ordinate the response to onshore and offshore accidents and incidents. It will liaise with rescue agencies and government departments in an emergencies and will initiate accident and incident investigation.

- Commercial Building Management

## **BUILDING MANAGEMENT WORK PACKAGE**

ADPC will ensure that our customer needs are satisfied. We aim for a profitable port facility, with responsibility for leasing of plots, premises, offices, facility usage, agreements and concessions with cost recovery initiatives for cost centre activities and billing services.

- Container Freight Station

## **CONTAINER FREIGHT STATION WORK PACKAGE**

ADPC will operate a container freight station for the storage of empty containers, with facilities provided for repair.

- IT Systems

## **IT SYSTEMS WORK PACKAGE**

ADPC will provide IT systems and connections which are needed for port efficiencies. The integrated system is necessary to monitor and control business demands and make responses accordingly.

- ADPC Buildings Administration

## **ADPC BUILDINGS ADMINISTRATION WORK PACKAGE**

Buildings are administered, serviced and maintained by ADPC. Work includes internal and external cleaning and support for the smooth running of people at their work stations.

- Government Agencies Co-Ordination

## **GOVERNMENT AGENCIES CO-ORDINATION WORK PACKAGE**

ADPC closely co-ordinates with third party stakeholders to run and operate our ports. We liaise with Customs, Department of Transport, Abu Dhabi Food Control Authority, Environment Agency, Police Departments and Critical National Infrastructure Authority.



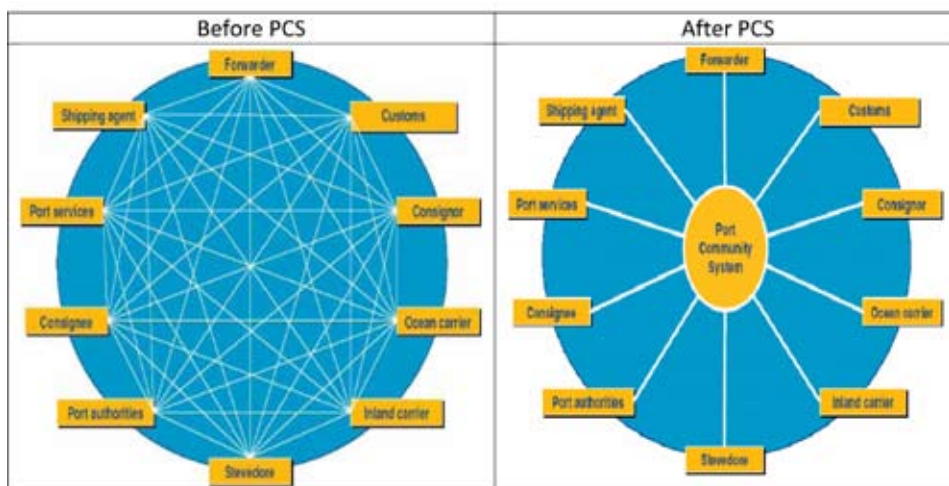
# Business Readiness

## KIZAD AND KHALIFA PORT OFFICIAL OPENING

In Q4 2012 ADPC will stage the official opening ceremony for completion of Phase 1 Khalifa Port and Area A of Kizad. ADPC will stage an exciting and appropriate event to mark this occasion.

## PORT COMMUNITY SERVICES WORK PACKAGE

We will provide a Port Community System (PCS). This is a business-friendly open electronic platform to enable the intelligent and secure exchange of information between public and private stakeholders. It optimizes, manages and automates port and logistics processes through a single submission of data and connecting transport and logistics chains.



The PCS offers many benefits, such as centralized access for all Port services. It saves Port stakeholders' time, cost and effort by providing automated on-line services. It provides the Port Authority with full control and the supervisory ability to look at all transactions and processes. It enables and help stakeholders plan their daily work by providing Business Intelligent reporting about Port processes and transactions. It facilitates communication between stakeholders, and reduces redundant data entry and ensures fewer errors.

## WASTE MANAGEMENT AND ROAD CLEANING

ADPC will provide full waste management services to our customers both onshore and offshore. We will look after shipping and industrial waste, in addition to providing road cleaning services.

● Official Opening

● PCS

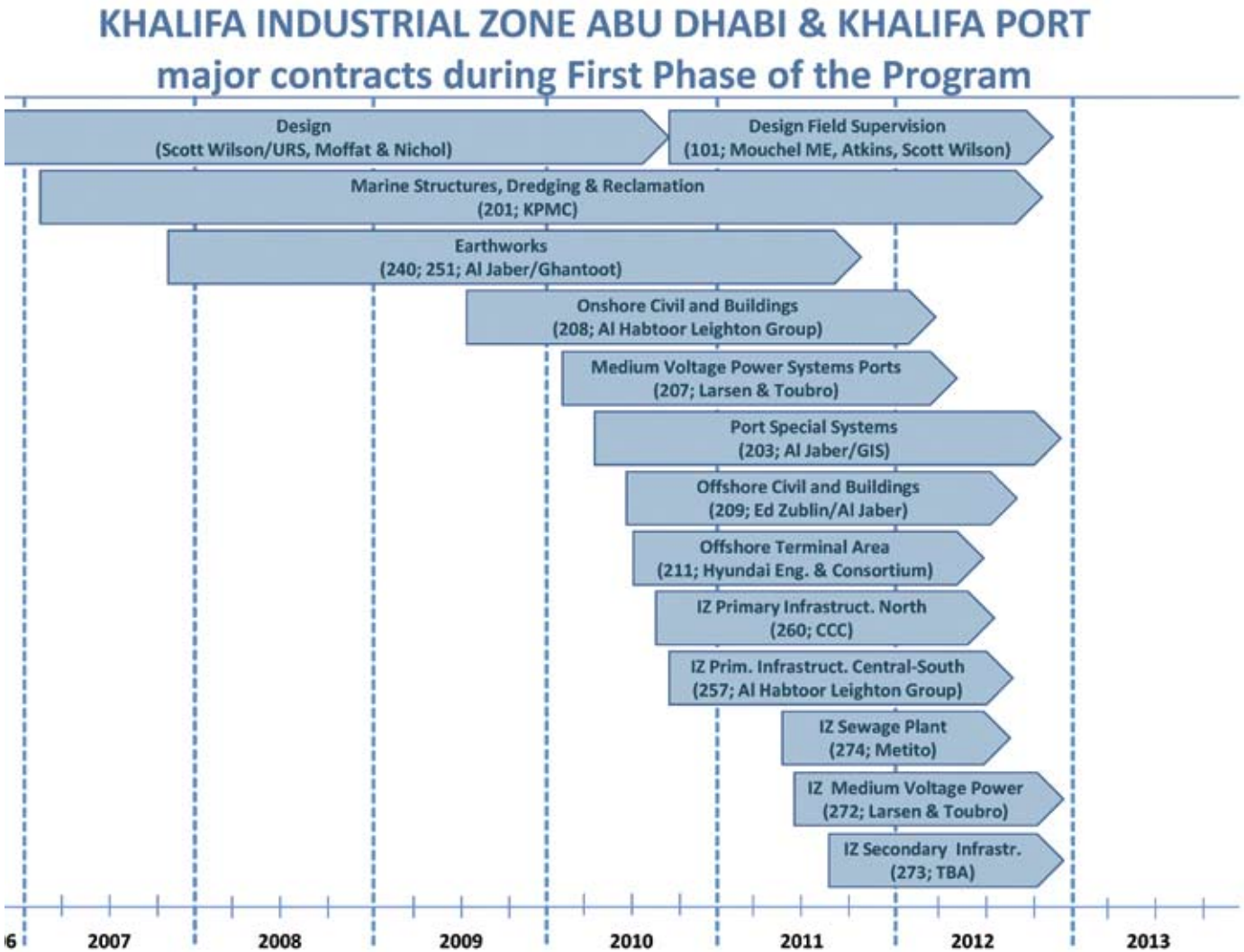
● Waste Management and Road Cleaning



# When?

# Overall Lifespan of the Program

The timeline show our contracts – when they start and how long they take...



# 100 Steps Plan

The 100 Steps Plan shows the milestones of the Master Schedule Plan (MSP).

Covering the 18 months leading up to the Q4, 2012 opening, it tells us very clearly where we're going.

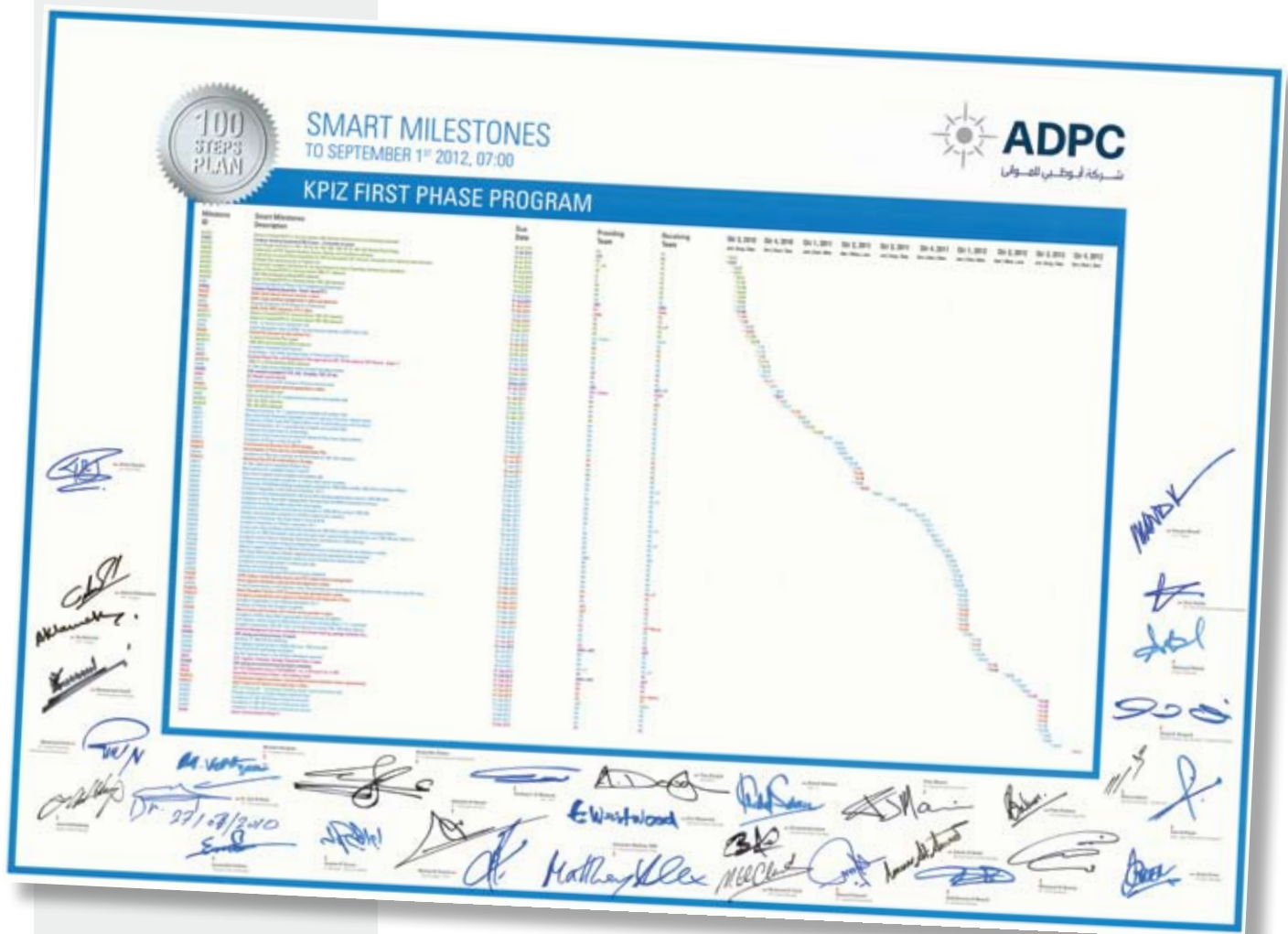
- Deadlines

No-one's missing. They've all signed up to it, from the CEO to major contractors. It's an agreement. It's high-level, it's binding and there's no wriggle room.

- Buy in

MSP gives crystal-clear deadlines.

Plus, we all signed it. This means that we all buy into the agreement.





# 100 Day Sprints

A program of six “100 Day Sprints” was introduced to add extra muscle to the 100 Steps plan. It is flexible, boosts efficiency, reduces risk and costs.

**We gathered our contractors, signed them up and gave firm advice:**

**Sprint 1: Get Started**

Search for the first opportunities to create “float” (slack) and get one step ahead.

**Sprint 2: Recover or Accelerate**

Make sure you’re on track. If not, get on track! Get ahead. Look at our new incentives.

**Sprint 3: Advance**

Push ahead in the tough working hours of summer. Some contractors will be expected to catch up, others will profit from float, and others will re-focus on critical work.

**Sprint 4: Accelerate to the finishing line**

Refocus on what is still needed.

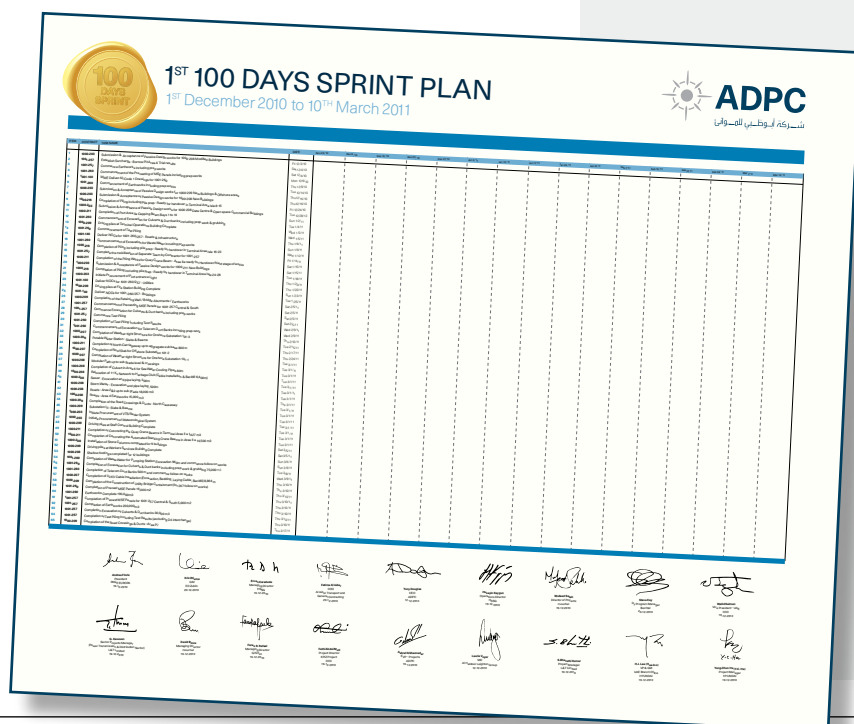
**Sprint 5: Make it easy for customers and stakeholders to move in**

Kit out buildings for customers, provide the services they need to get started.

**Sprint 6: Tie up loose ends**

Contractors will close out their projects and prepare for the launch.

- Creating “float”
- Back on track
- Pushing ahead
- Refocusing on targets
- Closing out



# 100 Day Sprints

- Sign up

- Accountability

- Champions League

Everyone remains in the spotlight, fully accountable and expected to deliver. Every 25 days during the 100 day period, we visit one of the contractors' sites. There the local Project Director talks us through his progress and his targets for the following 25 days.

At the end of each 100 Day Sprint – roughly every three months – everyone who signed up to the MSP flies into Abu Dhabi for a progress report. They come from the USA, Australia, UK, South Korea, Germany, Italy and around the world.

In true sporting spirit, we launched a Champions' League Table, after looking at contractors' results. This is updated after each 100 Day Sprint. Needless to say, there is a lot of competition and jostling to take top spot in the League!

## 100 DAY SPRINT SUMMARY

CONTRACTOR	SPRINT 1 RANK	SPRINT 2 RANK	SPRINT 2 START POINT vs. CONTRACTOR BASELINE	SPRINT 2 FINISH POINT vs. CONTRACTOR BASELINE	PERFORMANCE DELTA AGAINST BASELINE OVER SPRINT 2
1001-260 Infrastructure Area A North (CCC)	2	1	-0.55%	0.00%	0.55% ↑
1000-203 Port Special Systems (Al Jaber - GIS JV)	5	2	-9.30%	-2.12%	7.18% ↑
1000-209 Offshore Civil and Buildings (Ed.Zublin/Al Jaber)	1	3	-5.57%	-1.50%	4.07% ↑
1000-207 MV Power Systems (Larsen & Toubro, Ltd.)	4	4	-0.19%	1.02%	1.21% ↑
1000-211 Offshore Terminal Area (Hyundai Engineering & Construction Co.,Ltd)	3	5	0.52%	1.61%	1.09% ↑
1000-208 Onshore Civil and Buildings (Al Habtoor Leighton Group)	8	6	0.03%	0.55%	0.52% ↑
1001-257 Infrastructure Area A Central and South (Al Habtoor Leighton Group)	7	7	0.15%	12.10%	11.95% ↑
1001-140 Industrial Zone Infrastructure – Area A (Mouchel Middle East)	9	8			

Third 100 Day Sprint (19 June – 26 September 2011)



# How much?

# How much is our budget?

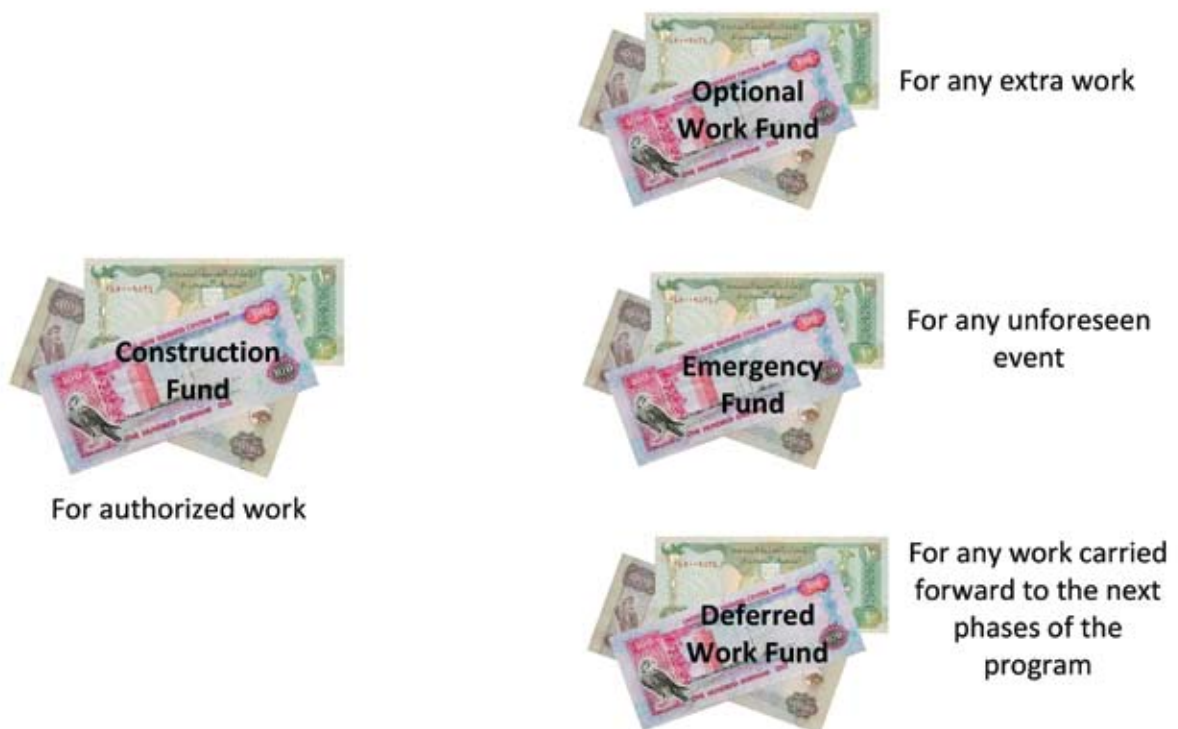
The budget for a megaproject is worked out in a long and detailed process.

Firstly, an initial budget is agreed for the whole program. It's basic.

Then we produce the Master Plan program which leads to a more refined budget.

Later the program is broken down into projects, which get awarded to contractors, who prepare more detailed plans, including detailed budgets.

Our Kizad and Khalifa Port Phase 1 program followed this process as we asked "How much is our budget?":





# Budget Control Mechanism

The budget on many megaprojects fluctuates. This mechanism ensures that ours doesn't go over budget. It's approved. It stays that way.

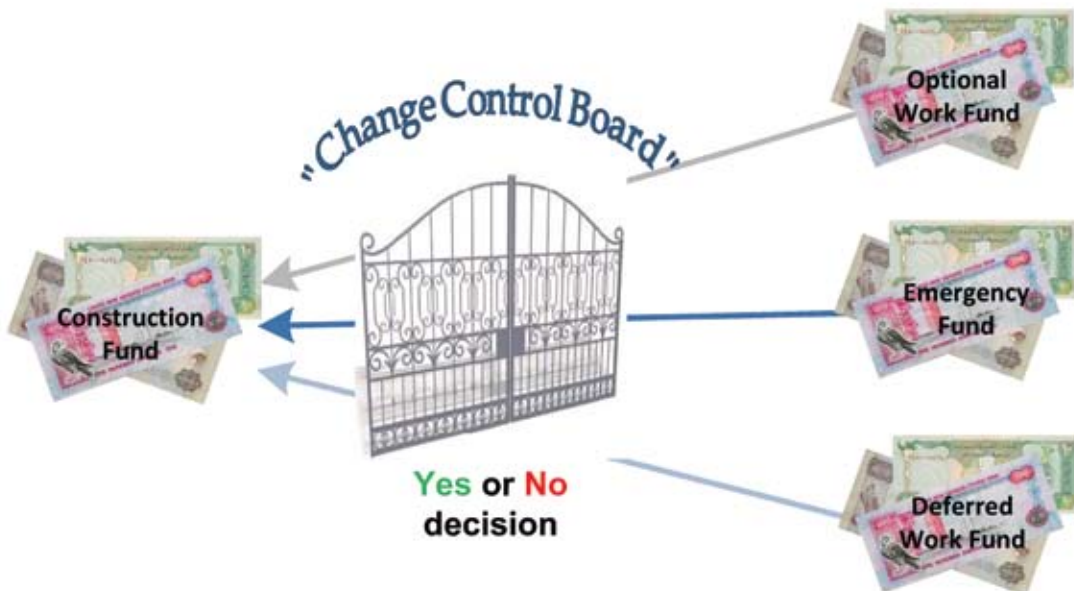
## CONTROLLING THE BUDGET: SPENDING MONEY

- This is a tight, mechanism for control of the megaproject.
- The budget on many megaprojects fluctuates.
- This mechanism ensures that ours doesn't go over budget.
- It's about two things: spending money and saving money.

## SPENDING MONEY

- We have to pay for construction.
- The money for this comes from the Construction Fund.
- Three separate "wallets" may pay additional amounts into this fund. They are the :
  - 1) Optional Works Fund
  - 2) Emergency Fund
  - 3) Deferred Work Fund

But before the money from any of these three sources goes to the Construction Fund, it is assessed by the watchdog Change Control Board (CCB) which says yes or no.



# Budget Control Mechanism

## HOW WE CONTROL THE BUDGET – SAVING MONEY

If you think ADPC likes to save money, you're absolutely right. It's one of our pledges to the Nation.

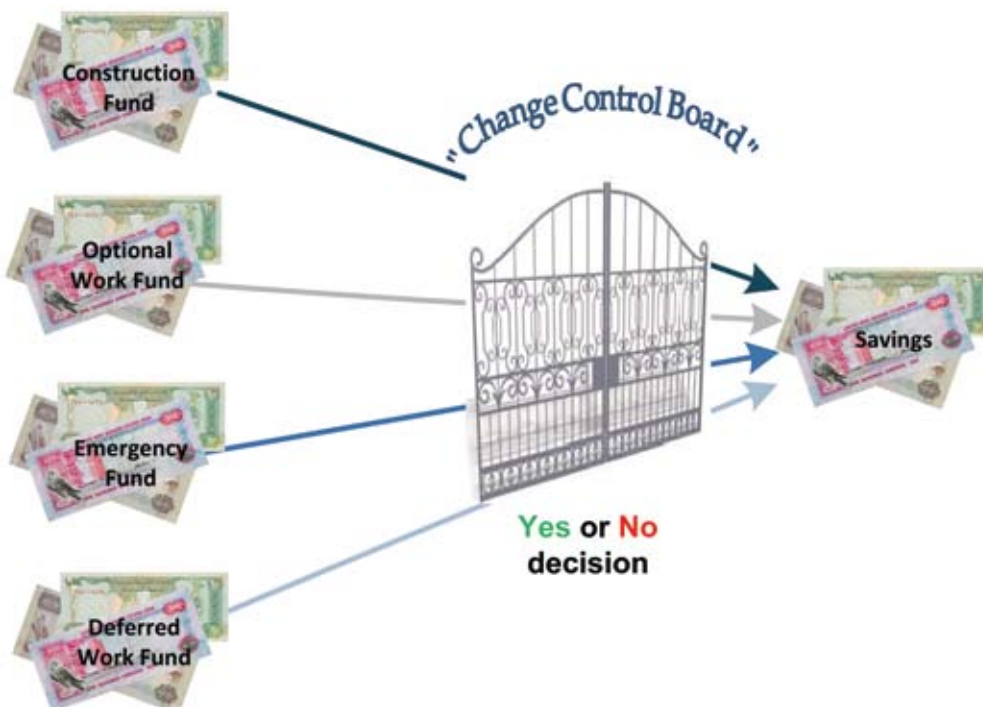
So, what happens when part of or a whole project is completed and we bring it in more cheaply than we originally anticipated ?

We celebrate for one thing, and after that the savings go to the CCB. It rules on whether or not the cash can go to our Savings Account.

## LOOKING AT THE BIG PICTURE, MONEY SAVINGS COME FROM FOUR SOURCES:

- Construction Fund
- Optional Works Fund
- Emergency Fund
- Deferred Work Fund

A simple method is used for dealing with billions of dirhams!





# Who?



**ADPC**

شركة أبوظبي للموانئ

# Infrastructure Program Executive Team

Meet the ADPC team who will deliver Kizad and Khalifa Port.

- CEO



**TONY DOUGLAS**

- Chief Executive Officer (CEO)
- Responsible for the overall management and delivery of Kizad and Khalifa Port.

- Executive Vice President – Ports



**TAWFEEQ AL MUBARAK**

- Executive Vice President – Ports
- Responsible for the master planning, business planning and operations of Khalifa Port

- Executive Vice President – Kizad



**KHALED SALMEEN**

- Executive Vice President – Kizad
- Responsible for the master planning, business planning and operations of Kizad

- Executive Vice President – Projects



**ASHRAF AL KHAZNADAR**

- Executive Vice President – Projects
- Responsible for delivery of all infrastructure and superstructure for Kizad and Khalifa Port



# Business Readiness Program Executive Team

Meet our BR team working hard to get the megaproject up and running



## MOHAMED AL-SHAMISI

- Vice President – Ports Operations
- Accountable for overall success of the Business Readiness Program



## CLIVE STUBBS

- Ports Operations Advisor
- Responsible for Port Operation readiness



## JOOST ACHTERKAMP

- Terminal Area Project Manager
- Responsible for the CHE (container handling equipment) and systems, and coordination with Abu Dhabi Terminals (Mina Zayed and Khalifa Port operators)



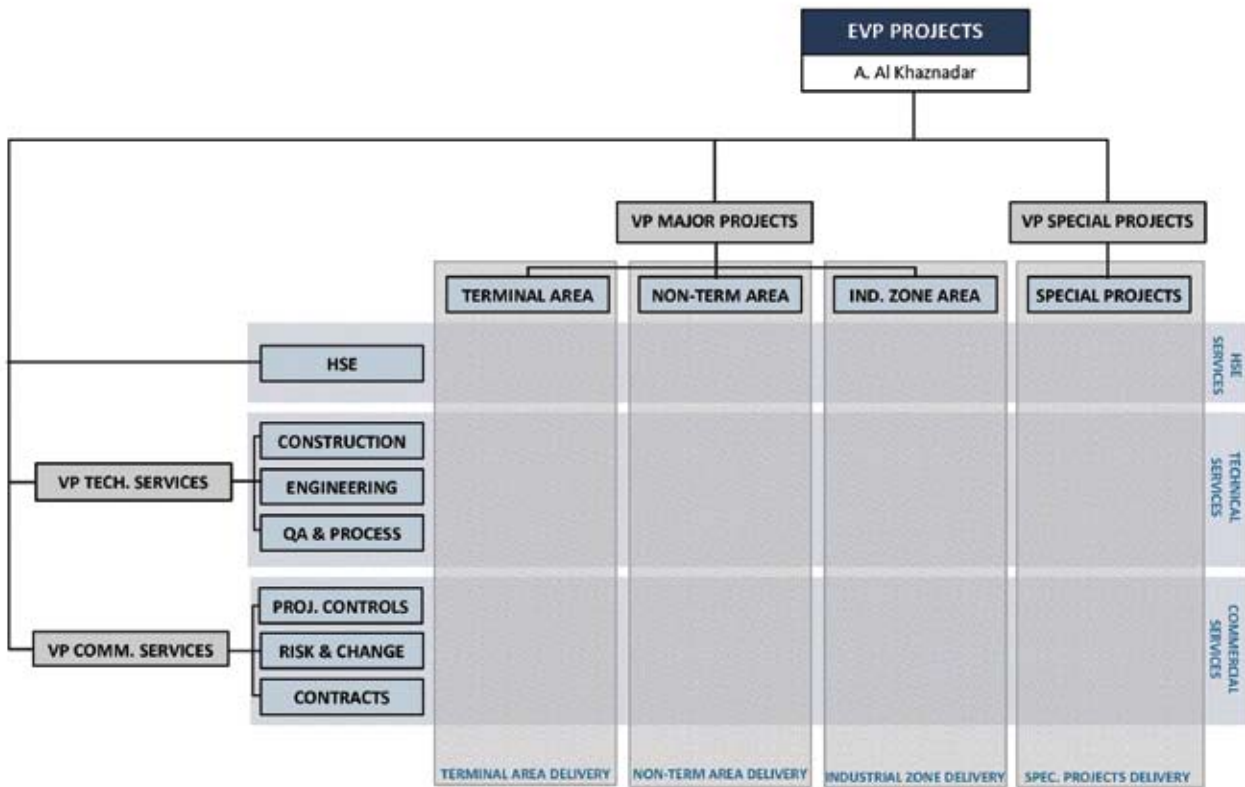
## ALEXANDER MATTHEY

- Vice President - Program Management Office
- Responsible for program planning, projects integration, and corporate level project support activities

- Executive Vice President – Ports Operations
- Ports Operation Advisor
- Terminal Area Project Manager
- Vice President – Program Management Office

# Infrastructure Delivery Team Matrix

The construction team is responsible for building Kizad and Khalifa Port and delivering the megaproject to the Business Readiness Team safely, within budget and on target.



# Infrastructure Delivery: Team Structure, Roles and Accountabilities

The ADPC team of top management knows its role and the tasks ahead

## EXECUTIVE VICE PRESIDENT (EVP) OF PROJECTS

Reporting to the CEO, the EVP of Projects carries overall executive oversight and leadership responsibility for the execution of all infrastructure projects; he delivers them complete to the end-user Business Units, providing in-house turn-key Engineering, Procurement and Construction (EPC) services.

The EVP of Projects manages a matrix organization of delivery -with teams executing the work and functional teams providing independent oversight and management to optimize delivery within time, cost, quality, functional requirements, etc... In addition, he also serves as a member of ADPC's Executive Committee, Change Control Board, Final Account Committee and other ad-hoc executive committees providing executive management of ADPC as a whole.

## VICE PRESIDENT (VP) OF MAJOR PROJECTS

Reporting to the EVP Projects, VP Major Projects carries overall responsibility for the execution of any major Infrastructure projects (those which exceed between AED 250-300 million) and the delivery of projects for the end-user Business Units. This includes taking the master planning studies developed by the Business Units and then executing all engineering, stakeholder consultation, procurement, construction, and commissioning activities to deliver the business units needs in terms of time, cost, quality and functional performance.

Execution is typically performed using third parties including designers, construction contractors, professional service providers and program managers. The VP is responsible for the integrated management of all these parties.

## VICE PRESIDENT (VP) OF SPECIAL PROJECTS

Reporting to the EVP Projects, VP Special Projects carries overall responsibility for the execution of any "Special" Projects (those costing less than AED 300 million, or those of a unique nature) and delivering them for the end-user Business Units. This includes taking the master planning studies developed by the Business Units and then executing all engineering, stakeholder consultation, procurement, construction, and commissioning activities to deliver the Business Unit needs in terms of time, cost, quality and functional performance. Execution is typically performed using third parties including designers, construction contractors and professional service providers. The VP is responsible for the integrated management of all of these parties.

● EVP Projects

● VP Major Projects

● VP Special Projects

# Infrastructure Delivery: Team Structure, Roles and Accountabilities

## ● VP Technical Services

### **VICE PRESIDENT (VP) OF TECHNICAL SERVICES**

Reporting to the EVP Projects, VP Technical Services is responsible for the functional management of the technical disciplines including engineering, construction, and assurance. This role has a dual responsibility. The first is to provide functional oversight to the technical services personnel working in the major projects, and special projects teams; this ensures quality and consistency of work processes and practices, and supports project delivery staffing requirements. The second is to provide independent analysis of technical issues from the project delivery to EVP Major Projects. In addition to the above, VP Technical Services is responsible for ADPC's core engineering team and ADPC's construction secondees; he is also responsible for the handover process from the projects delivery teams to the end-user.

## ● VP Commercial Services

### **VICE PRESIDENT (VP) OF COMMERCIAL SERVICES**

Reporting to the EVP Projects, VP Commercial Services is responsible for the functional management of commercial disciplines including contracts, project controls, and risk and change management. This role has a dual responsibility. The first is to provide functional oversight to the commercial services personnel deployed in the major projects and special projects teams; this ensures quality and consistency of work processes and practices and supports project delivery staffing requirements. The second is to deliver independent analysis of the project to EVP Major Projects.

## ● Terminal Area Project Manager

### **TERMINAL AREA PROJECT MANAGER**

Reporting to the VP Major Projects, the Terminal Area Project Manager is responsible for the delivery of the terminal area of the port including the civil infrastructure, cranes, terminal operating system and interfaces with the port special systems within the terminal area in accordance with the time, cost, quality, functional performance and so on. This involves the management of all engineering, construction, and commissioning activities associated with the delivery of the terminal through the management of third party consultants, contractors and professional service providers.



# Infrastructure Delivery: Team Structure, Roles and Accountabilities

## PORT AREA PROJECT MANAGER

Reporting to the VP Major Projects, the Port Area Project Manager is responsible for the delivery of the onshore and offshore port areas (excluding the Terminal Area) including the roads, utilities, buildings, and port special systems in accordance with the time, cost, quality and functional performance. This involves the management of all engineering, construction, and commissioning activities associated with the delivery of the onshore and offshore port areas through the management of third party consultants, contractors and professional service providers.

## INDUSTRIAL ZONE AREA MANAGER

Reporting to the VP Major Projects, the Industrial Zone Area Project Manager is responsible for the delivery of the Industrial Zone areas including the roads, bridges, utilities, substations, and sewage treatment plan for the Primary and Secondary infrastructure in accordance with the time, cost, quality and functional performance. This involves 100% management of all engineering, construction, and commissioning activities associated with the delivery of the Industrial Zone primary and secondary infrastructure through the management of third party consultants, contractors and professional service providers.

## SPECIAL PROJECTS PROJECT MANAGER

Reporting to the VP Special Projects, the Special Projects Project Manager is responsible for the delivery of special projects assigned by the Business Units in accordance with the time, cost, quality and functional performance. This involves management of all engineering, construction, and commissioning activities associated with the delivery of the Special Project as assigned through the management of third party consultants, contractors and professional service providers.

## HSE MANAGER (HEALTH, SAFETY AND ENVIRONMENT MANAGER)

Reporting directly to the EVP of Projects, the HSE Manager is responsible for the functional management of the Health, Safety and Environmental personnel working on the major projects and special projects teams to ensure quality and consistency of work processes and practices and to support project delivery staffing requirements. In addition, the HSE Manager provides direct oversight of the HSE activities of the major projects and special projects delivery teams and reports directly to EVP Projects to ensure that the appropriate prioritization and high profile is given to Health, Safety and Environmental issues.

- Port Area Project Manager
- Industrial Area Manager
- Special Projects
- HSE Manager

# Infrastructure Delivery: Team Structure, Roles and Accountabilities

## ● Construction Manager

### **CONSTRUCTION MANAGER**

Reporting to the VP Technical Services, the Construction Manager is responsible for the functional management of the construction personnel working in the major projects and special projects teams to ensure quality and consistency of work processes and practices and to support project delivery staffing requirements. In addition, the Construction Manager provides direct oversight of the construction activities of the major projects and special projects delivery teams and provides independent advice to VP Technical Services. The Construction Manager also provides administrative oversight to the ADPC Construction secondees.

## ● Engineering Manager

### **ENGINEERING MANAGER**

Reporting to the VP Technical Services, the Engineering Manager is responsible for the functional management of the engineering personnel working in major projects and special projects teams to ensure quality and consistency of work processes and practices and to support project delivery staffing requirements. In addition, the Engineering Manager provides direct oversight of the engineering activities of the major projects and special projects delivery teams and provides independent advice to VP Technical Services. The manager is responsible for direct management of the ADPC core engineering team, scope development for the government entity reimbursement activities and for managing the handover process of completed work to the end-user from the major and special projects delivery teams.

## ● Quality Assurance

### **QUALITY ASSURANCE MANAGER**

Reporting to the VP Technical Services, the Assurance Manager is responsible for the functional management of the Quality Assurance and Process personnel working in the major projects and special projects teams to ensure quality and consistency of work processes and practices and to support project delivery staffing requirements. In addition, the Assurance Manager acts independently to verify compliance of the Projects Unit departments and divisions with their processes and procedures.

## ● Project Controls Manager

### **PROJECT CONTROLS MANAGER**

Reporting to the VP Commercial Services, the Project Controls Manager is responsible for the functional management of the schedule and cost personnel working in the major projects and special projects teams to ensure quality and consistency of work processes and practices and to support project delivery staffing requirements. In addition, the Project Controls Manager provides direct oversight of the schedule and cost activities of the major projects and special projects delivery teams and provides independent advice to VP Commercial Services.

# Infrastructure Delivery: Team Structure, Roles and Accountabilities

## **RISK AND CHANGE MANAGER**

Reporting to the VP Commercial Services, the Risk and Change Manager is responsible for managing the risk and change processes for all major projects and special projects. He monitors project activities and provides independent risk assessment and advice and also provides oversight of the risk management activities undertaken by the project delivery teams. In addition, he manages the change process and acts as an independent evaluator of the recommendations made by the project delivery team.

## **CONTRACTS MANAGER**

Reporting to the VP Commercial Services, the Contracts Manager is responsible for the functional management of the contracts personnel working in the major projects and special projects teams to ensure quality and consistency of work processes and practices and to support project delivery staffing requirements. In addition, the Contracts Manager provides direct oversight of the contracts activities of the major projects and special projects delivery teams and provides independent advice to the VP Commercial Services. The Contracts Manager also has a reporting role to the VP Procurement to ensure transparency of all procurement activities which are undertaken.

- Risk and Change Management

- Contracts Manager

# Business Readiness Team Matrix

The Business Readiness Program team is responsible for delivering all of the non-construction requirements for a smooth and operational Khalifa Port which opens in Q4, 2012.





# Business Readiness Team: Roles and Accountabilities

The objective of the Business Readiness Program is to ensure that all business elements are in place and functioning effectively when Khalifa Port begins full operations in Q4, 2012. The Program is managed by a team of executives and managers, who often retain their primary functional responsibility.

## SCOPE MANAGEMENT – WORK PACKAGE OWNERS

The key tasks as sub-projects to be completed for BR program are:

### Sub-Project Task

- Abu Dhabi Terminals - Cargo Terminals Readiness
- Port Operations - Marine Services
- Ports Technical Services – Infrastructure Maintenance
- Port Operations – Security Services
- Ports HSE – Fire Service
- Ports HSE – Offshore Clinic
- Ports HSE – Emergency Response
- Ports Commercial – Commercial Readiness
- Ports Commercial – CFS/Empty Depot readiness
- ADPC IT – Systems Availability & Co-ordination
- ADPC Administration - Buildings Administration
- Government Agencies Co-ordination
- Port Opening
- Risk Action Plans- top risks

### Task Owner

- Eryn Dinyovszky (ADT)
- Abdulkareem Al Masabi
- Waleed Al Tamimi
- Harry Harper
- Khalid Al Ali
- Khalid Al Ali
- Khalid Al Ali
- Anthony Gaskell
- Anthony Gaskell
- Dr. Saif Al Ketbi
- Abdullah Al Hameli
- Mousa Sabeel
- Jameela Al Junaibi
- Various

The owners of each Work Package are accountable for the definition of its scope of work, its scheduling and execution. They are responsible for seeking advice and support from corporate entities, namely the Program Management Office for scheduling the Risk Management function for Risk identification, mitigation and tracking.

## TIME MANAGEMENT (SCHEDULING)

Each Work Package owner is accountable for its timely execution. The Manager of the PMO (Program Management Office) provides full support.

## COST MANAGEMENT (BUDGET)

The owner must bring in their work on budget and within the Change Control Board (CCB) guidelines for changes/trends.

## QUALITY MANAGEMENT

Each owner must ensure that the Business Readiness Program is completed in line with ADPC policies, and aligned to Project Management Institute (PMI) standards and ISO 31000 risk management standards.

● Projects and task owners

● Scheduling

● Budget

● Quality Management

# Business Readiness Team: Roles and Accountabilities

## ● Human Resource

### **HUMAN RESOURCE MANAGEMENT – VP HUMAN RESOURCES**

Provides ADPC with staff equipped with the skills specified by Business Readiness Program plans and projections.

## ● Communications Management

### **COMMUNICATIONS MANAGEMENT – VP COMMUNICATIONS**

Publicises our activities externally and internally. Different media are to be used such as the ADPC and Kizad websites, company factsheets, the monthly newsletter “Shawahed” and other communication tools.

## ● Risk Management

### **RISK MANAGEMENT – CHIEF RISK OFFICER**

The CRO is responsible for the program and work package level risk identification, consistent risk response development, risk tracking and management. Risks are highlighted by PMC and from Business Readiness teams.

## ● Procurement Management

### **PROCUREMENT MANAGEMENT – VP PROCUREMENT**

The VP ensures that the Business Readiness Program procurement activities are in compliance with the approved ADPC Procurement policy.

## ● IT Management

### **IT MANAGEMENT – VP IT**

Guarantees IT up-time, availability and maintainance of software tools. Oversees the project in terms of schedule, budget, procurement, risk, storage space and connectivity between different sites. Maintains communication channels, security and access rights of different users. Work must comply with ADPC’s internal policies regarding software, security, hardware, and networking.

## ● Program Management

### **PROGRAM MANAGEMENT OFFICE (PMO) – VP PMO**

Accountable for identifying, recommending and driving the definition, set-up and tracking of projects within the program. Assures consistency and coordination with the Construction Program and supports the Project coordinator and Work Package managers to prepare their Steering Committee meetings; the Business Readiness Progress Review Board Meetings or the Change Control Board. He also coaches Work Package owners on issues related to their projects.



# How?

# Stakeholders

The Emirate of Abu Dhabi has invested heavily in us to help transform the future. It is a big task. Our work will touch the lives of everyone in Abu Dhabi over the next 20 years.

- Leadership
- Government
- People

We are honoured that the Government is steadfast in its enthusiasm and close interest in us. At the same time, we recognize that not only the Government but also other stakeholders are vitally important. The list below gives a flavour of some of the people and organisations who shape our operations.

## LEADERSHIP

- Abu Dhabi Executive Council
- ADPC Board of Directors:
- Chairman of the Board
- CEO ADPC

## GOVERNMENT DEPARTMENTS

- Department of Transport
- Department of Economic Development
- Department of Finance
- Urban Planning Council
- Critical National Infrastructure Authority
- Abu Dhabi Municipality
- Abu Dhabi Water and Electricity Authority
- Environment Agency Abu Dhabi

## PARTNERS/SUBSIDIARIES

- Kizad
- Abu Dhabi Terminals
- Mubadala
- Mubadala Infrastructure Partners

## SOCIETY

- Abu Dhabi residents
- Taweelah residents

## CUSTOMERS

- Trade / Port Users
- Shipping Lines
- Investors (local and International)
- EMAL
- Kizad Anchor Tenants



# Working with Stakeholders

It's about the stakeholder. Without the stakeholder, our company and its astonishing megaproject would not exist. We must meet their needs, manage their expectations, and provide excellent service and constant information.

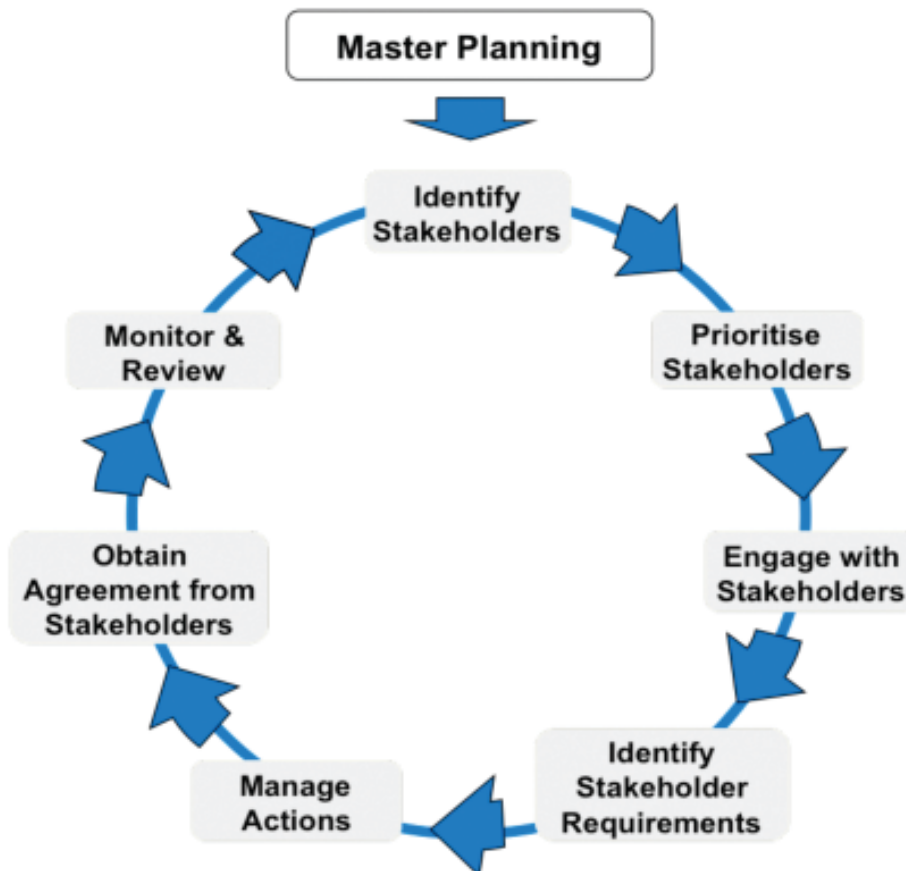
## EXTERNAL STAKEHOLDERS

All stakeholders are important.

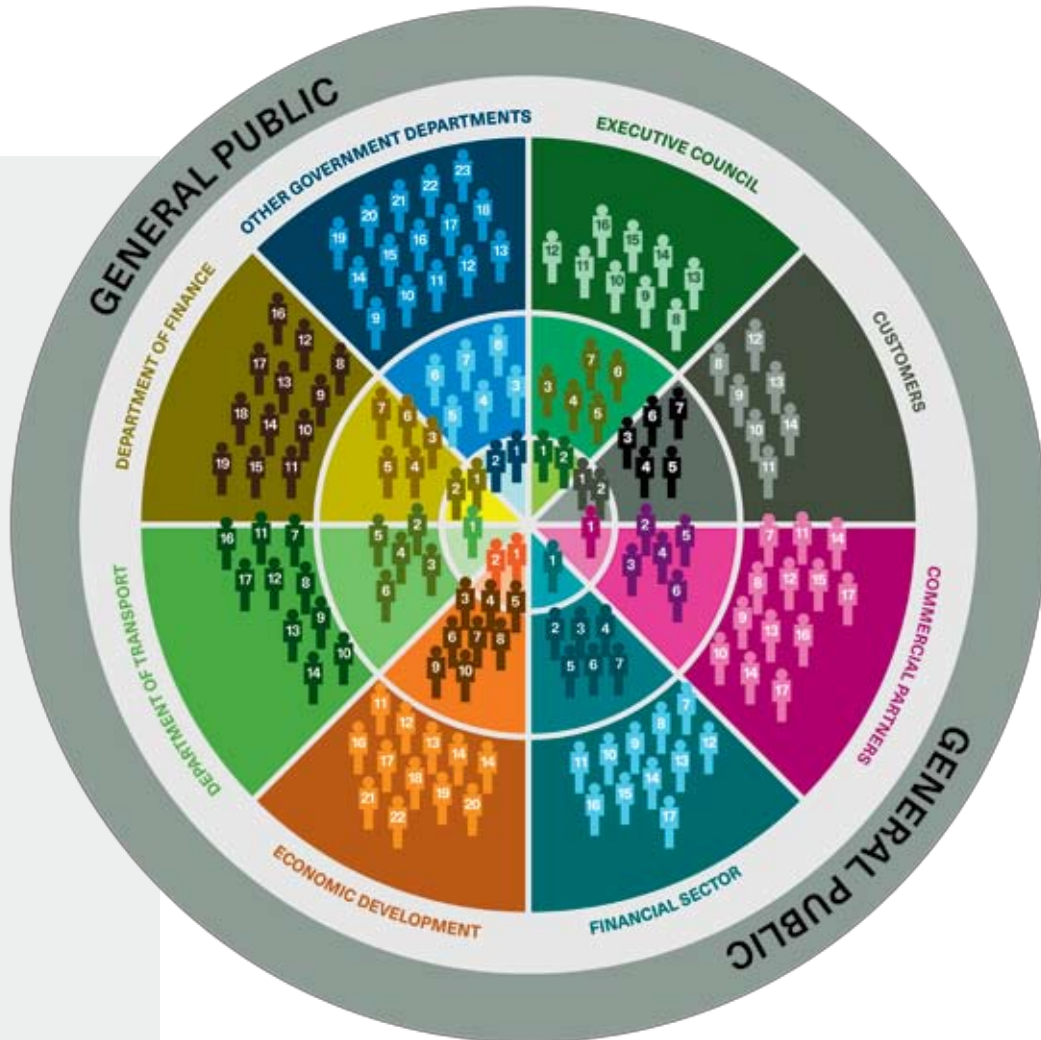
This means everyone from the highest official in the government to shopkeepers in Shahama, teachers in Liwa, gas station attendants in Marfa: they all count. Why? Because our megaproject impacts on everyone in Abu Dhabi. Everyone will share, directly and indirectly, in the wealth we generate.

Remember – by 2030, a up to 15% of the Emirate's non-oil income will be generated by Kizad and from Khalifa Port.

- Everyone Matters
- Excellent Service



# Working with Stakeholders



- Internal
- Strategy
- Communicating

## INTERNAL STAKEHOLDERS

Every ADPC employee is a stakeholder. This means you! The future is in our hands. Our commitment and drive to succeed will directly benefit the nation.

## STRATEGY

Our stakeholder strategy is finely tuned as regards the public and private sectors.

## COMMUNICATING

Our challenge remains to communicate with these individuals and organizations in a planned and coordinated manner. This way, everyone shares in our success.

# Communicating with Stakeholders

The importance of communicating with our stakeholders is key to our success.

Our staff has welcomed the big push made over the last year in Corporate Communications.



## TOWN HALL MEETINGS

“Town Hall” or open meetings for staff are regularly held in Head Office and at 280, the Taweelah Project Office. Leaders provide updates on latest developments and answer questions from the floor.

## TRADE DELEGATIONS AND OVERSEAS VISITS

We take part in international business delegations to introduce potential clients to our megaproject. Many businesspeople have been invited to our Visitor Centre in HQ, followed by a guided tour to Taweelah. A new era begins with the opening of our state-of-the-art showpiece Visitor Centre opens in 280 building on site.



- Spreading Our News
- Powerful Communication

# Communicating with Stakeholders

● World Campaign

● Newsletter

● Publications

● New Media



## EVENTS, CONFERENCES AND EXHIBITIONS

This where we bang the ADPC drum! We spread our message and network with people, making vital face-to-face contact.

## INTERNAL NEWSLETTER: "SHAWAHED"

A lively, informal but informative bilingual newsletter was launched in 2010. It features the latest company news and also focuses on our staff, their stories, questions, suggestions and points of view. It's an open forum, growing tremendously in popularity, especially with innovative features such as "Ask Abdullah"



## PRINTED PUBLICATIONS

The ADPC brochure, the Kizad brochure, the ADPC 2010 annual review and this Handbook have been launched in both Arabic and English. Kizad's brochure was released in several languages, too, for international marketing purposes.

## ADPC AND KIZAD WEBSITES

The new-look ADPC and Kizad websites contain the latest information on the megaproject (helicopter films, blogs, podcasts, Factsheets, Press Releases, etc.)

## OTHER ELECTRONIC TOOLS

We are also developing electronic means of delivering our messages to our staff through the use of emails, intranet and other techniques.



# The ADPC Project Life Cycle

Defining baselines enables us to reach targets. These questions are simple and necessary: What, When, How Much ? We call these the “static goalposts”.

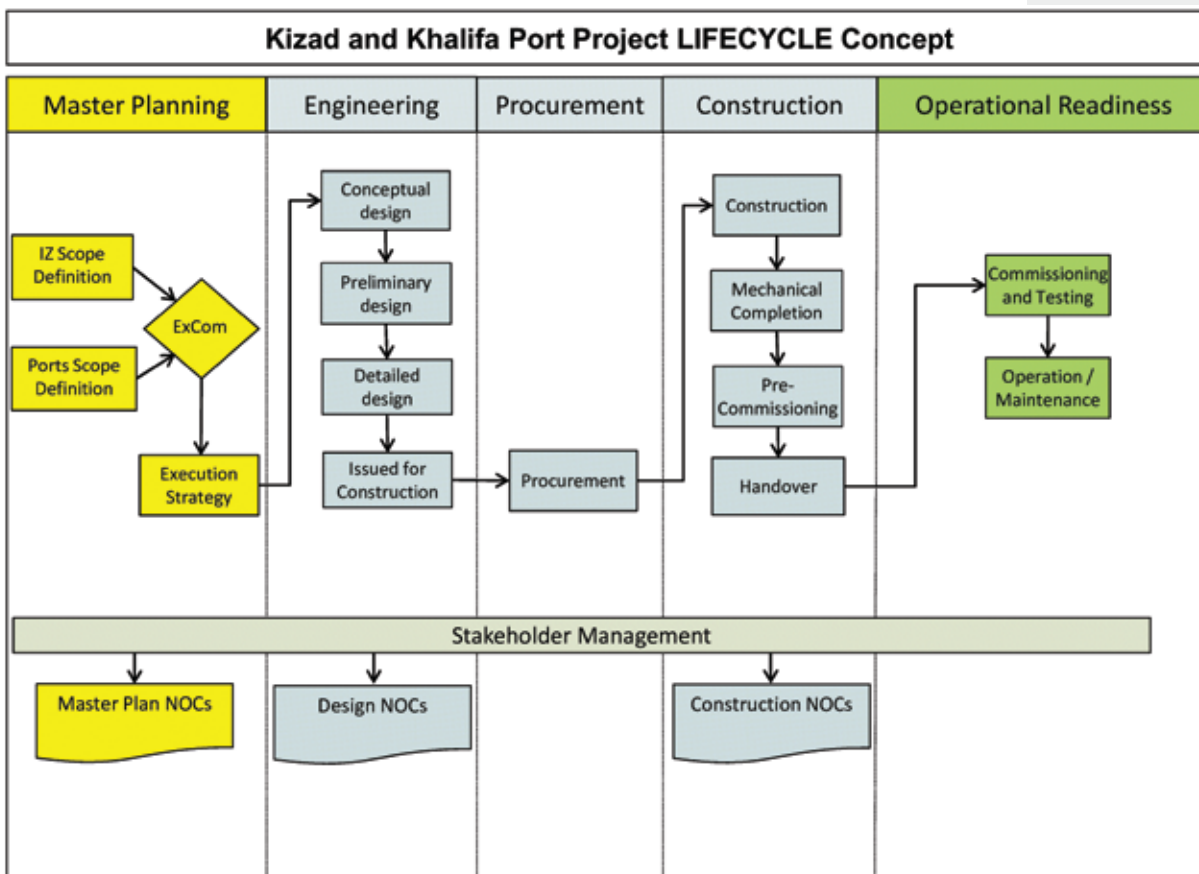
## PROJECT LIFECYCLE

The Project lifecycle represents the activities, techniques, and skills required to deliver the planning, engineering, procurement, construction, and operational readiness of Kizad and Khalifa Port. It refers to the entire development process, from drawing board to delivery and post-delivery. The Projects team looks after the engineering, procurement, and construction phase. Afterwards, final users step in, and liaise with us in the planning and operational readiness phases. Stakeholders, on the other hand, are involved throughout the whole life cycle, with various degrees of interaction with the Projects team at different stages.

- Project Lifecycle

- Succession

A conceptual presentation of our lifecycle is presented below:



# The Bottom Line: Integrated Baseline Reviews

No project can be successful unless its performance is measured against baselines.

- Insight

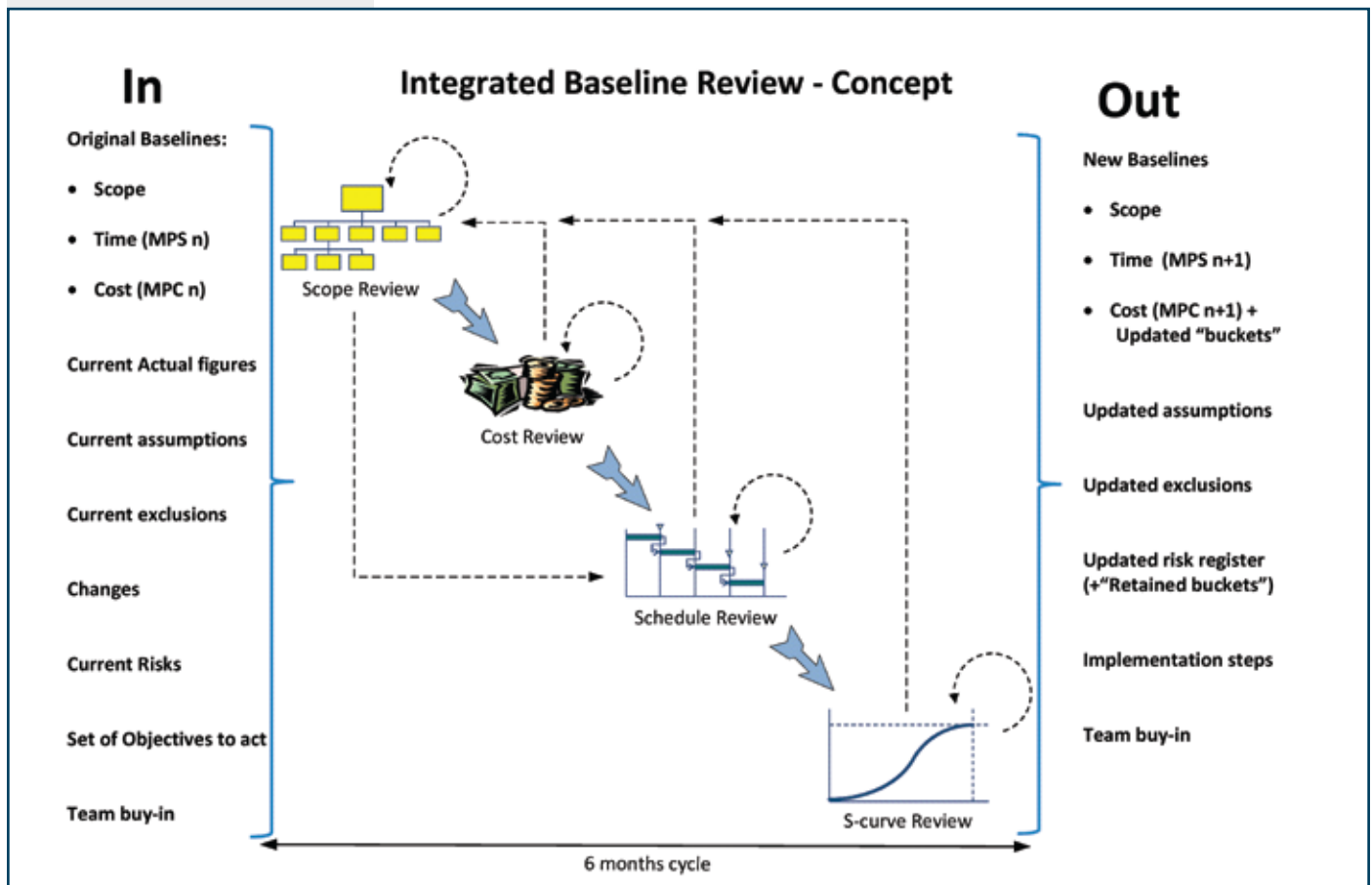
The Integrated Baseline Review (IBR) helps Project Managers (PM) assess their own performance as well as project risks throughout construction.

- IBR

**IBR HELPS US:**

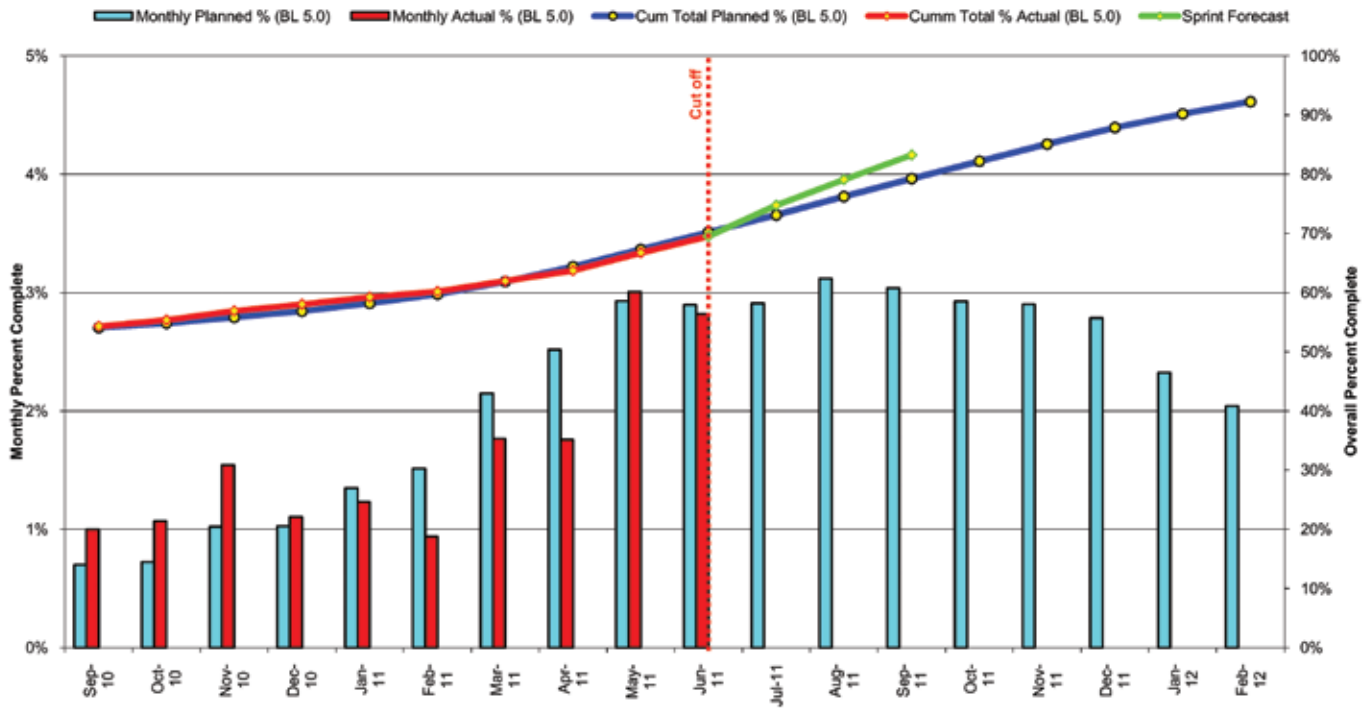
- Flag potential problems
- Demonstrate how scope, time and cost are connected
- Quantify known problems, to measure work performance and to obtain updated estimates of time and cost.

An example of the Cost Review is the Budget Control Mechanism presented in the "How much" section of the present handbook.



# Progress Tracking: S-Curve

The progress of the megaproject is carefully tracked against very clear targets.



## VERTICAL BARS – MONTHLY FIGURES

Looking at the vertical bars, we see the targets in blue; and in red we see the actual progress made. As we explained, Our activity peaks in August 2011, then slows down next year.

The good news is that we're ahead of the targets.

## S CURVE – CUMULATIVE FIGURES

The same story is told if we look at the "S curve" at the top of the diagram. It shows that we are definitely on track. When you look at our progress (in red) compared to the planned target (in blue). This is even more accentuated when the sprint forecast (in green) is compared to the blue planned numbers.

By February, 2012, the megaproject should be about 92% complete (if you follow the blue line). We aim to stay ahead of that !

# Risk Management

Being "RiskSmart" is a means of achieving business success through intelligent risk-taking.

This implies managing the uncertainties ("risks") which may hinder us in achieving our project objectives.

## ● "RiskSmart"

We achieve business success through intelligent risk-taking and through managing uncertainties.

## ● Standards

We operate with the PMI's Risk Management Professional and Enterprise Risk Management (ERM) standards. These give us a common integrated, transparent, proactive and systematic framework in which to manage risk.

The framework is tailor made for ADPC.

## ● Three Procedures

### **WE HAVE THREE PROCEDURES:**

- We plan, identify, qualify, quantify, and plan responses
- We employ AART : Avoid, Accept, Reduce and Transfer
- We monitor and control.

## ● Roles

We are Risk Neutral in that we walk the line between Risk Aversion and Excessive/ Aggressive risk-taking. We measure the risk on a four-point scale for Schedule, Cost and Quality.

Project Managers manage their own risk, tracked by project risk registers. It's up to Risk Owners to co-ordinate individual risk action plans.

The Risk Owners are supported by the Chief Risk Officer, and by Risk Specialists spread across the units - PMO, Projects, Legal, Finance, Health and Safety, Environment, and Security.

We are also advised by external Project Management Consultants.

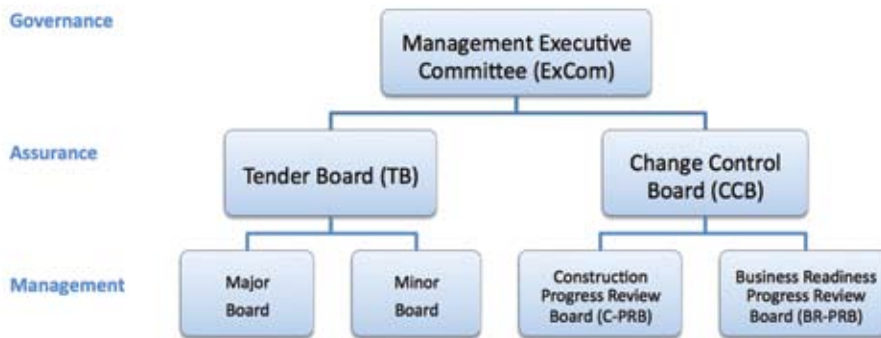


# Governance, Assurance and Decision Making

The Board of Directors of ADPC has entrusted the CEO to manage the activities of ADPC in achieving its vision, mission, goals and objectives.

The CEO constitutes various consultative and operational bodies and prescribes their duties as he deems fit. The following committee and boards have been formed:

- Clear Structure



## MANAGEMENT EXECUTIVE COMMITTEE (EXCOM)

ExCom helps in decision making by:

- Reacting quickly
- Reviewing and endorsing of strategies, business plans, investments, budgets and financial reporting, performance management, organization development, risk management frame work and major systems, policies and procedures.
- Reviewing and endorsing reports/presentations to be submitted to BOD (the Board of Directors) and higher authorities.
- Reviewing and discussing the reports and presentations by the external auditors, consultants, as well as internal bodies/committees.
- Monitoring the operating and financial performance of ADPC business and functional units on a regular basis.
- Leading and facilitating change and learning in the organization.
- Prioritising and allocating resources
- Ensuring active co-operation and communication among all Units and Divisions
- Periodically evaluating ExCom's terms of reference and performance.
- Meeting more than once a week, if needed

- EXCOM

# Governance, Assurance and Decision Making

## ● Tender Board

### **TENDER BOARD**

The role of the Tender Board (Minor and Major) is primarily to review and endorse the submissions presented to it. The main objective of the board is to maintain integrity, transparency, impartiality and competitiveness in the procurement process. The Tender Board exercises its authority and responsibility by ensuring that:

- A reasonable number of qualified contractors, vendors and consultants are invited to tender.
- Contracting and award strategies are formulated and approved prior to the issuance of tenders.
- Technical and commercial evaluation criteria are developed and approved before opening the bids.
- Competitive tenders/quotations are received and objectively and impartially evaluated.
- Contracts and POs (Purchase Orders) are awarded in accordance with the applicable policies and procedures and in the best interest of ADPC.
- The Tender Board may also recommend measures to improve procurement and contracting processes.

## ● CCB

### **CHANGE CONTROL BOARD (CCB)**

The CCB, which meets monthly, has been established to review Change Requests pertaining to construction and business readiness activities; to approve cost and to allocate budgets. This ensures that a structured process is used to control proposed changes. The CCB exercises its authority and responsibility by ensuring:

- Change Requests (CR) are reviewed in an effort to control cost, scope and schedule changes.
- Impact analysis is performed as deemed necessary or requests are made for further impact analysis.
- CRs are endorsed by the co-ordination team or PR-PRB for construction changes and business readiness respectively.
- The allocation of Budget is approved.
- Smooth and harmonious changes to the Program/Project are promoted.
- The interest of all stakeholders who may be affected by the changes are considered.

# Governance, Assurance and Decision Making

## CONSTRUCTION PROGRESS REVIEW BOARD (C-PRB)

The C-PRB has been established to review the progress of the megaproject and to ensure its completion on time. The C-PRB exercises its authority and responsibility as it:

- Reviews the Program/Project Progress Reports and requests further clarification.
- Challenges the Program management assumptions/uncertainties (risks).
- Evaluates the reasons for any slippage of milestones and budget overruns.
- Makes decisions on appropriate preventative/corrective actions to meet set deadlines/budget.
- Evaluates issues, problems and priorities and recommends action.
- Meets on a monthly basis. However, PRB may convene more meetings, if the situation so warrants.

## BUSINESS READINESS PROGRESS REVIEW BOARD (BR-PRB)

The BR-PRB was established to monitor the progress of non-construction aspects of KIZAD and Khalifa Port to ensure the business readiness of this program by the fourth Quarter, 2012. The BR-PRB exercises its authority and responsibilities by:

- Reviewing Business Readiness Progress Reports and requesting further clarification
- Challenging the Business Readiness assumptions/uncertainties (risks)
- Evaluating the reasons for any slippage of milestones and any budget overruns
- Making decisions and taking appropriate preventative or corrective actions to meet set deadlines, or budgets. It will escalate changes to scope, schedule or budget to the Change Control Board for a decision or approval
- Evaluating issues, problems and priorities and assigning them to the correct staff for action
- Meeting on a bi-weekly basis.

● C-PRB

● BR-PRB

# Project Management Information System

The megaproject's alignment with ADPC is underlined by the use of Information Systems.

The PMIS keeps people connected, whether they are on the road, working at Kizad or on Khalifa Port or back at the office in Mina Zayed. As a business tool, it is absolutely essential.

ADPC IT provides the latest technology and tools in order to support the Project Management Information System





# Glossary



# Glossary of terms

## ADPC

Launched in 2006, the parent company of Kizad and Khalifa Port. Owns, develops and operates commercial ports in the Emirate, including Mina Zayed in Abu Dhabi city

## ADT

Abu Dhabi Terminals. Operates Mina Zayed and will operate Khalifa Port on our behalf. ADPC has the controlling stake in ADT. Other partners are Mubadala (Abu Dhabi government-owned) and Mubadala Infrastructure Partners

## EMAL

Emirates Aluminium, the first "anchor" tenant at Kizad. Owned by jointly by Mubadala and Dubai (Dubai Aluminium). The world's largest aluminium smelter of its kind

## Khalifa Port

Under construction at Taweelah, opening in Q4, 2012; the region's first semi-automated port; adjacent to Kizad

## Kizad

Khalifa Industrial Zone Abu Dhabi; under construction, opening in Q4, 2012, destined to become one of the world's largest industrial zones

## GLOSSARY OF FREQUENTLY USED TERMS FOR KIZAD AND KHALIFA PORT

### 280

Our main office building onsite at Taweelah

### 208

Smaller office building onsite at Taweelah  
 Ports Unit: an ADPC division that develops and operates the Emirate's commercial ports

### ADPC Industrial Zone unit

An ADPC division that looks after Kizad

### ADPC Projects

An ADPC division that delivers infrastructure for the megaproject  
 ASC: Automatic Stacking Cranes: they help to stack containers in the stacking yard, with cutting edge logistical technology

### Bechtel

Our main contractor acting as the Program Manager on the Kizad and Khalifa Port Phase 1 program at Taweelah

### Business Readiness Program

The drive to provide facilities and services so that customers and tenants can use the megaproject; it consists of smaller work packages

## Change Control Board (CCB)

It controls how we both save and spend money

## CHE

Container Handling Equipment. This project supplies cranes for Khalifa Port

## Construction Program

The program, consisting of infrastructure construction projects (or contracts)

## Critical Path

A defined sequence of activities in a project where delay to one will affect others and will delay the entire project

## E11

The main Abu Dhabi-Dubai motorway

## EBW

Environmental Breakwater. Our astonishing 8 kms long breakwater curling around the Ras Ghanada coral reef

## EMAL berth

The company's dedicated jetty

## EPC

Engineering Procurement Construction contracts typically pass all design development and construction risks to the contractor. The customer (developer) acquires a turnkey project, at least theoretically, and pays a premium for the assumption of risk by the contractor.

## ExCom

Management Executive Committee: our highest committee which reports to the Board of Directors

## Float/Slack

Spare time slot which is available in a project schedule to complete a non-critical activity.

## Hundred Steps Plan (100 Steps Plan)

The Master Schedule Plan (MSP) on the megaproject: each part of the megaproject is divided into 100 separate stages, with strict targets and deadlines: Construction has 69 milestones and Business Readiness has 31

## Hundred Day Sprints (100 Day Sprints)

Six 100 day-long periods planned sequentially in the last months of the megaproject; they all reinforce the 100 Steps Plan by making the contractors focus on smaller chunks of work

## Khalifa Port phase 1

The first phase of the port, opening Q4, 2012

## Kizad Area A

the area of Kizad enclosed between the E11 highway and Khalifa Port

## Kizad Area B

The area of Kizad situated between the E11 highway and Al Ain municipality's land

## KPIZ

Previously used term, denoting "Khalifa Port and Industrial Zone" Now called Kizad

## Megaproject

Description for both Khalifa Port and Kizad

## Mina Zayed

Main port of Abu Dhabi for the last 40 years; the HQ of ADPC is situated there

## PMA

Program Management Agreement, the name of the contractual agreements with Bechtel

## PMC

Program Management Consultant: Bechtel, our main contractor at Taweelah

## Port island

the term for the main offshore part of Khalifa Port

## Ras Ghanada reef

Unique coral reef next to Khalifa Port and Kizad

## Ship to Shore Cranes

Also referred to as Quay Cranes, or Container Handling Gantry Cranes; these large cranes are used for loading and unloading containers from ships

## Stakeholder

Everybody affected by our activities, from Government to residents

## Straddle Carrier

A vehicle used for stacking and moving containers

## Taweelah

The town where the megaproject is situated, halfway between Abu Dhabi and Dubai

## TEU

Twenty Foot Equivalent Unit: a container  
 Town Hall meetings: open meetings for staff for company updates

## Visitor Centre

there are two: one main one at 280; the other at HQ, Mina Zayed

## WBS

Work Breakdown Structure in project management is a tool used to analyse and group together the elements of a project in order to define its total work scope

## VTS

Vessel Traffic Service is a marine traffic monitoring system established by harbor or port authorities, similar to air traffic control for aircraft



