



# Container Port of Ngqura, South Africa



Aerial View of Port Ngqura

South Africa newest  
Port development

On the mouth of the  
Coega river

Covers an area of  
600m x 1500m



Solution for

- **Neotel (Pty) Ltd**

and The Client

- **Transnet (Pty) Ltd**



Container Port of Ngqura

# Container Port of Ngqura – Business Benefits

## Project Outline

- Improved Port **Efficiency**
- Planned maintenance reduces **costs**
- **Scalable** Solution
- **Secure** Information Management



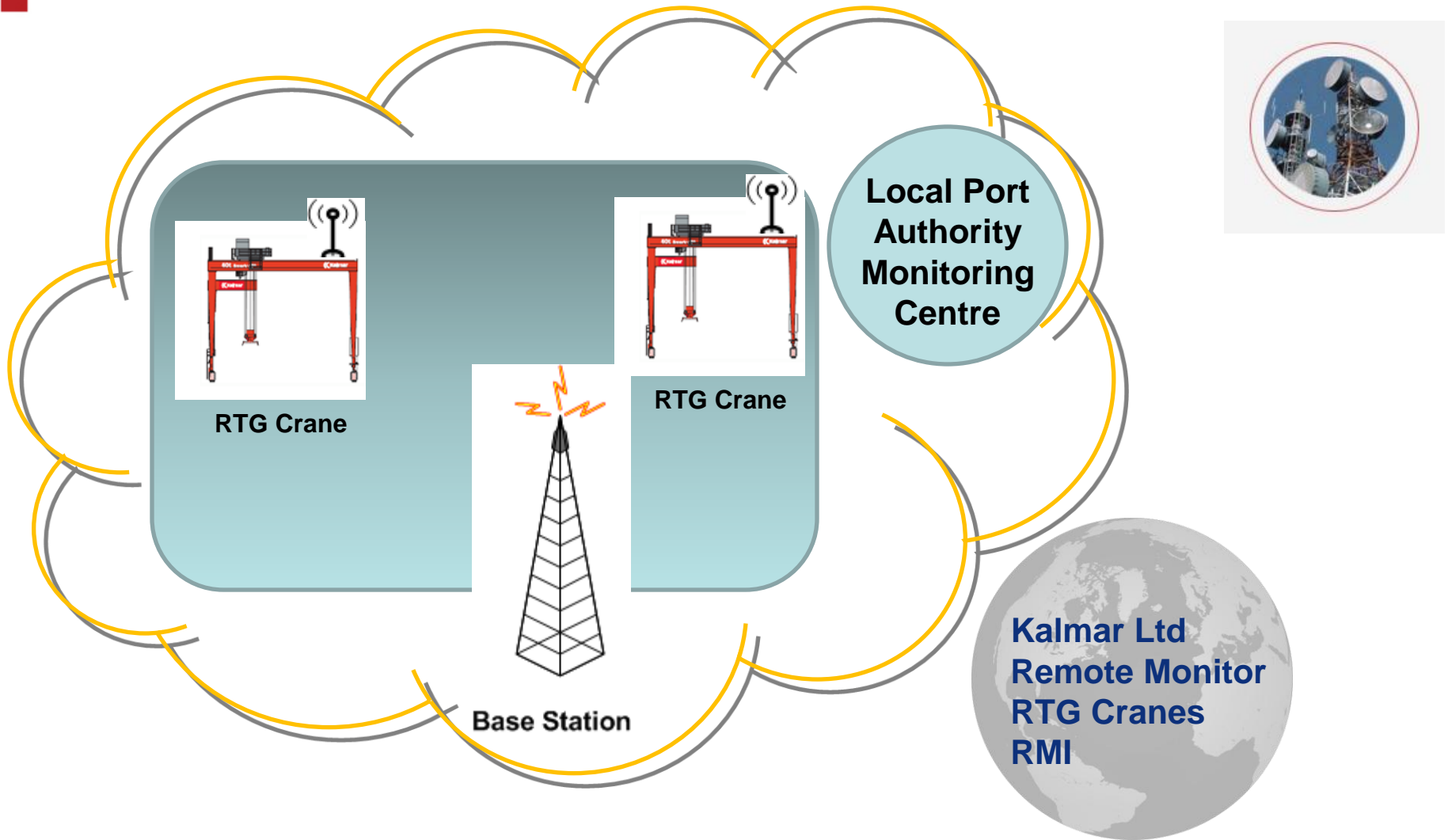
**Managed, Secure & Reliable Communication Solution.**

# Container Port of Ngqura

- Project Requirements.
  - Transnet (End User)
    - Managed Communication Solution.
    - Secure & IP Centric.
    - Quality of Service.
    - Support the following Services.
      - Streaming Video
      - Machine Data
  - Neotel
    - Implement their Preferred & Proven Technology.
    - Allow customization to achieve Customer Requirements
    - Managed Service Level Agreement.



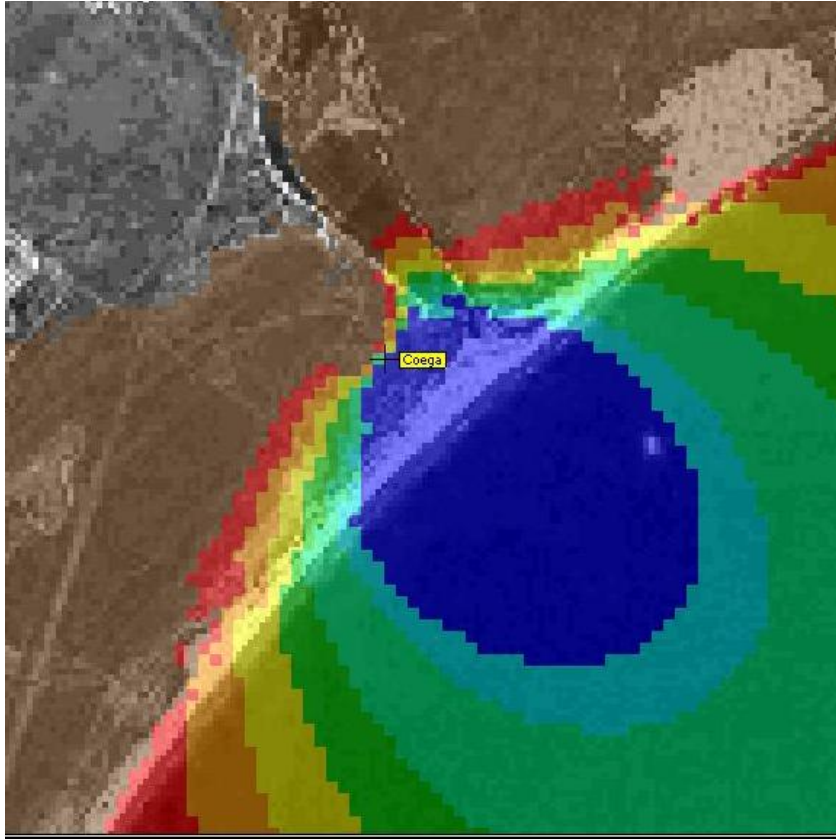
# Container Port of Ngqura - Solution Overview



**Managed, Secure & Reliable Communication Solution.**



# Container Port of Ngqura – WiMAX Solution



**Base Station Signal Coverage**

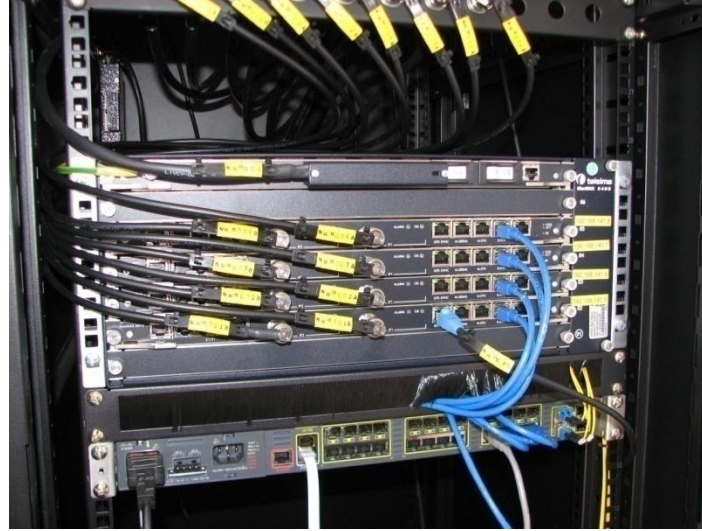


- The Solution implemented was based on [WiMAX 802.16 d.](#) standard.
- This provided for a modulation of 64 QAM [covering](#) the Port.
- The [capacity](#) of the Base station per sector is 16 Mbps.
- This will allow for the provision of the [Data & Video](#) service.

# Container Port of Ngqura – Base Station



**30m Mast with ODU & Antenna**



**WiMAX Indoor Unit**



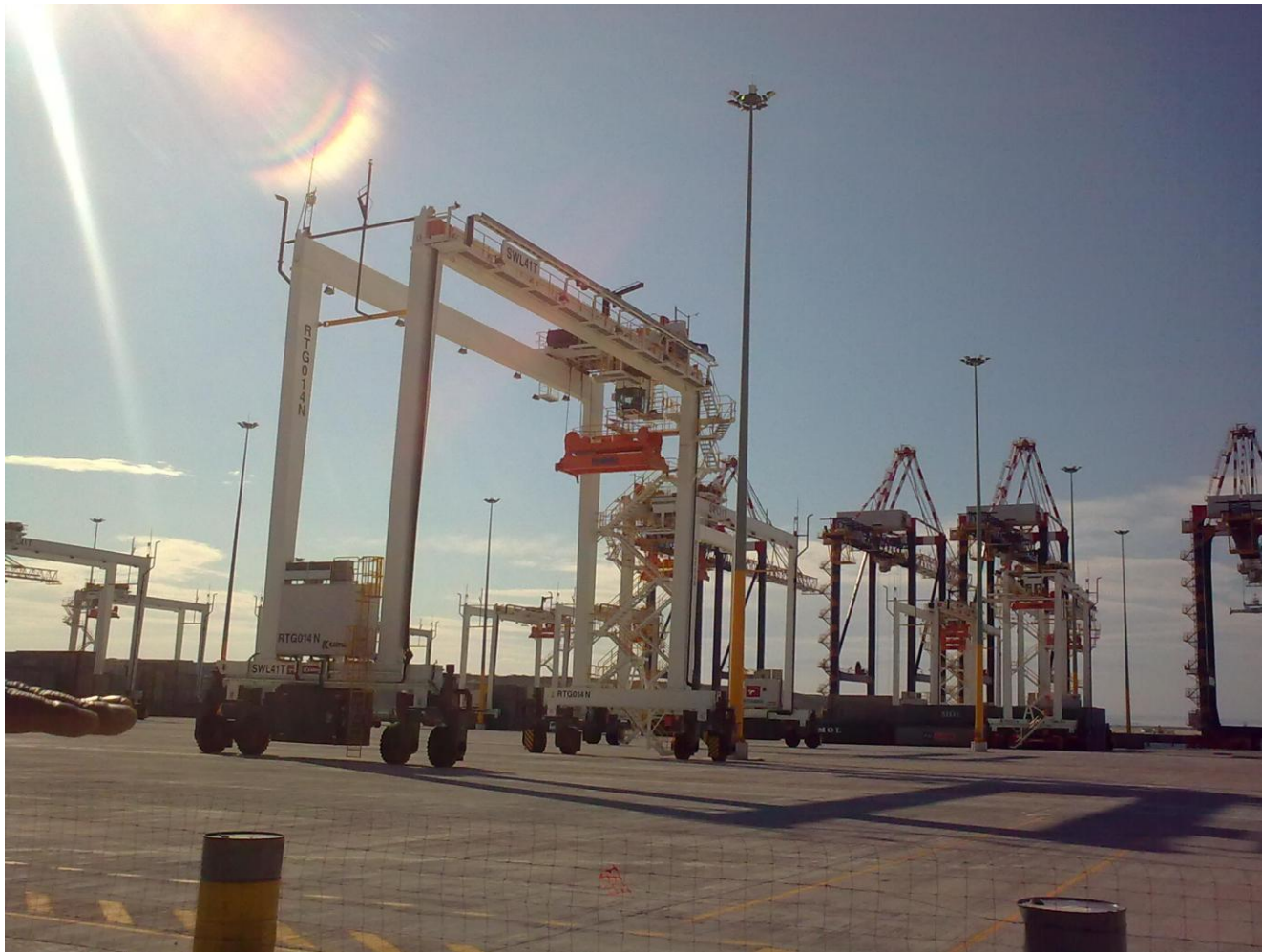
**Base Station Container**

Tellumat Deployed a **4 Sector** WiMAX Base Station at the Port of Ngqura.

Neotel provided **Existing** Fibre Backhaul & Core Network (MPLS)

# Container Port of Ngqura – RTG Crane

## Rubber Tyre Gantry Cranes





# Container Port of Ngqura – Subscriber Station



**Outdoor Subscriber Station**

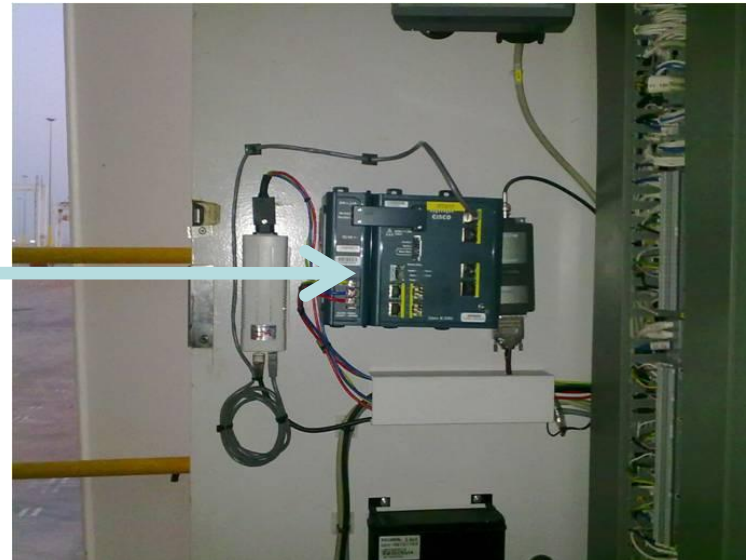
22 Gantry Cranes installed with the Customised Solution.

Subscriber Station customised to accept Omni Directional Antenna



Secure IP Interface  
24/7 Monitoring using,

- Streaming Video
- Machine Data collection



**Subscriber Station POE**

# Container Port of Ngqura – Managed Solution



**World Class NOC**

All Customer Support requirements are managed in accordance with below indicated Service Levels:

- TAC 1 (Customer Help Desk)
- TAC 2 (Customer Remote/On-Site)
- TAC 3 ( Vendor Remote/ On-Site)

Network Operation Centre with WiMAX Network Management System Provides the client with:

- 24/7 Monitoring
- Event Escalation



On Site Field Support Unit **Teljumat**  
Wireless Solutions

# Container Port of Ngqura - High Lights

- Achievements

- Solution deployed within projects stipulated Timeframe.
- Customised Solution.
- RF Coverage objective was achieved.
- Video Monitoring of Cargo Movements.
- Mechanical Equipment Monitoring.
- Single communication device for both services.
- Secure communications platform.
- Eco Friendly, lower power consumption



# Container Port of Ngqura – Professional Services

- Professional Services Rendered
  - Initial Project **Scope**
  - RF **Feasibility** and Site Surveys
  - Proof of Concept development
    - **Customization** of standard WiMAX CPE (SS)
    - **Demonstration** and testing
  - Detailed **RF Planning**
  - **Sourcing** of special materials and equipment for customisation
  - Installation and Commissioning using **local partner**
  - IP Provisioning, **Service Integration** and End-to-end testing
  - Coverage **Optimization**
  - Post-deployment **Maintenance and Support**
  - 24 x 7 **Helpdesk**





# Container Port of Ngqura - Achievements

- Improved Efficiency.
  - Improved container security and efficient **container flow** through the Port.
- Planned maintenance reduces costs.
  - **Pro active Maintenance** on the Ports RTG Crane equipment. (RMI)
- Scalable Solution.
  - Solution can be **expanded** as additional RTG Cranes are brought into service.
- Secure Information Management.
  - WiMAX supports end to end **encryption**.



# Container Port of Ngqura – Solution Integrator

- Tellumat Wireless Division Overview.
  - [Company Credentials & BEE](#)
  - We offer a Complete, reliable and flexible [Suite of Solutions](#)
  - We provide services to [any](#) Wireless Equipment Vendor
- Tellumat in-house Turnkey capabilities include.
  - [Project Management](#)
  - [Network Architecture Design](#)
  - [Radio Frequency planning](#)
  - [Solution Engineering](#)
  - [Implementation](#)
  - [Training](#)
- For further information visit [www.tellumat.com](http://www.tellumat.com)

