

CASE STUDY

Single Radio Access Network Upgrade for Vodafone Ireland

CLIENT: Lightbridge Communications Corporation (LCC)
DATE COMMISSIONED: February 2016



Introduction

GRA Networks were selected by global telecoms and software giant LCC in March 2015, as a result of their compelling offering to provide a fully project managed service, creating a delivery solution for the modification of the existing single radio access network at 80No locations, many of which included an upgrade to 4G technology.

LCC, who were engaged on behalf of Vodafone Ireland, engaged with GRA Networks as a result of their impressive offering, which provided a fully costed, efficient end-to-end hand-back solution and included a meticulous programme of works, incorporating concurrent multi-site working and complete adherence to the challenges of working 'live' in a fully operational network.

The core objective being to modify and renew the single radio access network and upgrade the equipment to provide 4G capability, without impacting the operational running and integrity of the communication network during the works.

This project formed part of Vodafone's DARWIN upgrade project to provide upgraded 4G network capabilities to 26 countries throughout the world.

The Deliverables

GRA Networks planned and prepared a fully managed delivery solution to achieve compliance with all relevant standards, which included:

- ① Early review of the design to capture queries in a timely manner
- ① Preparation of a full bill of materials
- ① A detailed hour by hour programme of activities across multiple live sites, running the new installation in parallel with the existing
- ① Condition survey and reporting
- ① Construction of each site which included all aspects of the build from rigging, maintenance and remedial works, new installations, commissioning and full integration in respect of:
 - 3G and 4G equipment
 - Earthing systems
 - Copper feeder, fibre and remote radio units
 - Cabinet equipment
 - Upgrading equipment rooms and associated electrical works
- ① Technical support throughout the works
- ① Decommissioning of existing life expired Vodafone assets
- ① A QA audit and full project handover documentation

Challenges and Solutions

The scheme provided technical challenges for the scope, activity planning and materials logistics.

GRA Networks efficiently reviewed the drawings to provide the most cost-considerate delivery solution.

This meticulous attention to detail allowed GRA Networks to have full control of the delivery of free-issue materials from the client and on occasions when the wrong materials were sent, GRA Networks were quickly able to resolve the issue and manage the situation with minimal fuss.

The works also proposed significant network impact for users at the 80No sites. GRA Networks provided a solution, which provided negligible impact on the networks by running the new installation in parallel with the existing network and minimising outages to keep customer impact to a minimum.

To deliver and handover 80No sites in a 12 month window also provided GRA Networks with a challenge.

GRA Networks called on the vastly experienced in-house telecoms engineering and delivery workforce to solve this challenge. A plan was drawn up, to work concurrently on more than one site, thus allowing GRA Networks to effectively build to meet the required timeframe.

During the delivery works technical challenges were faced in terms of the installation, which GRA Networks met with a solution-based approach. Simply reporting the issues was not enough for GRA Networks, the business provided a swift solution that allowed the programme to stay on track and any additional costs to be completely negated.

By completing the QA and handover documentation on a site-by-site basis and then uploading this to their own server review system, GRA Networks provided the surety of a fully controlled and completed project within 12 months.

The Benefits

Having to deliver project stages concurrently was easily dealt with by GRA Networks. The businesses vast strength in depth in telecoms enabled an integrated solution to be delivered on time and to budget.

By appointing GRA Networks as a fully managed contractor, LCC were able to comprehensively de-risk their activities by using GRA Networks' in-house engineering staff fully experienced in the impacts of working around existing live assets.

A proactive approach to technical queries and full logistics management allowed GRA Networks to never compromise the programme, even for issues outside of their control.

During the works the interrelated nature of telecoms and electrical engineering allowed GRA Networks to fully plan and co-ordinate activities and where necessary call on their in-house 60 strong M&E competence from their sister company Global Rail Services to provide the most comprehensive solution.

Mentorship is at the very heart of GRA Networks and this project provided an opportunity for the up-skilling of less experienced telecoms workers to gain invaluable proficiency. This was managed efficiently without causing delay to programme.

GRA Networks also have a strong pedigree in training and look to the future with local apprenticeships, with the intention of giving back to the communities in which they serve.

Testimonial

GRA Networks have worked well to the agreed scope. They also excelled at issuing technical queries efficiently and effectively, ensuring that all items raised were fully addressed in a timely manner.

Works have been carried out within the agreed budget and handover documentation was submitted promptly and to a high standard.

GRA Networks have a strong, competent team, which I would recommend for similar works.

John Dowd
Global Director
Lightbridge Communications Corporation (LCC)