



**OFG Group**  
**Who we are**



**Establishment:** year 1998.

**Experience:** more than 22 years.

**Main purpose:** We deliver integrated solutions to satisfy the needs of our customers, mainly network operators and telecom equipment vendors.



**Footprint:** present in Europe, Latam and USA. Located in 19 countries



**Our commitment with the quality:**

- ISO 9001
- ISO 14001
- ISO 45001

Member of CISQ Federation



CERTIFIED MANAGEMENT SYSTEM

**ISO 9001 - ISO 14001**  
**ISO 45001**



## **.Profiles/Skills:**

- Engineers
- Computer and Electrical technicians
- Lawyers
- H&S specialist
- Real state agents



## **Networks:**

- Wireless networks
- Fix networks

## **Technologies:**

- 2G/3G/4G/5G
- Indoor coverage
- Tetra
- FTTx
- Optical networks
- IP networks (Backhaul & Transport)



## **Complete service portfolio for any network development:**

- Acquisition: landlord agreement, rental renegotiations, opex savings, ..
- Engineering: site surveys, design, static calculations. Engineering for Mobile & Fixed Networks.
- Consulting: provide experts in specific areas, project management, ...
- Certification: EMR certification, Noise Emission Measurement, Drive Test.
- Telecom Implementation & Civils Works: mobile network and fixed network.
- First Line Maintenance.
- Training center: technical courses, health & Safety courses, ...

1998

Start activity in South of Spain (Córdoba). Main service was site acquisition for mobile telecom operators.

2011

New service portfolio including engineering & Installation & Civil works  
Increase our footprint to whole Spain  
Work together with our costumers in outsourcing projects / transformations

2013

Start an international business development in LATAM. First contract in Panama -> First Line Maintenance

2014  
2017

Consolidate our business in Panama and increase our footprint in LATAM, mainly in Mexico.

2018

Nexus Iberia (venture capital company) took over OFG. New business development plan 2018-2023.

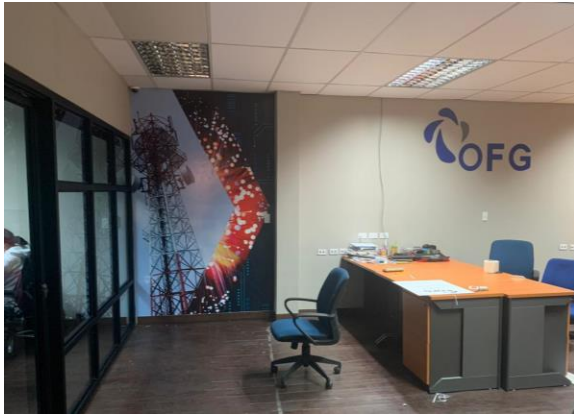
2017  
2020

Start an international business development in Europe: Germany, UK and Portugal

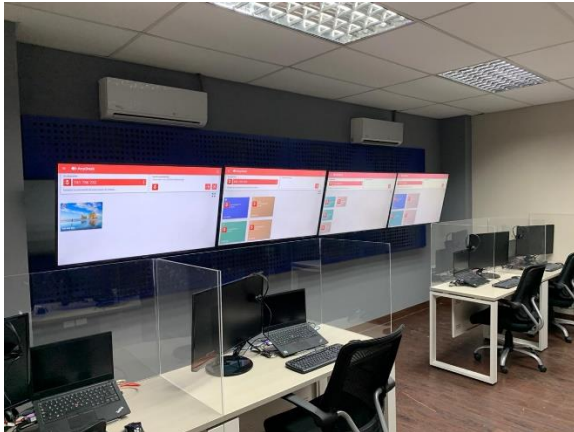
2021  
2023

Process improvement and project management.  
New business areas: training, green energy, systems and cybersecurity  
Consolidate our business in Germany and USA

## Headquarters. LATAM Region - Panama



## Headquarters. European Region – Córdoba (Spain)



## Other offices. Mexico



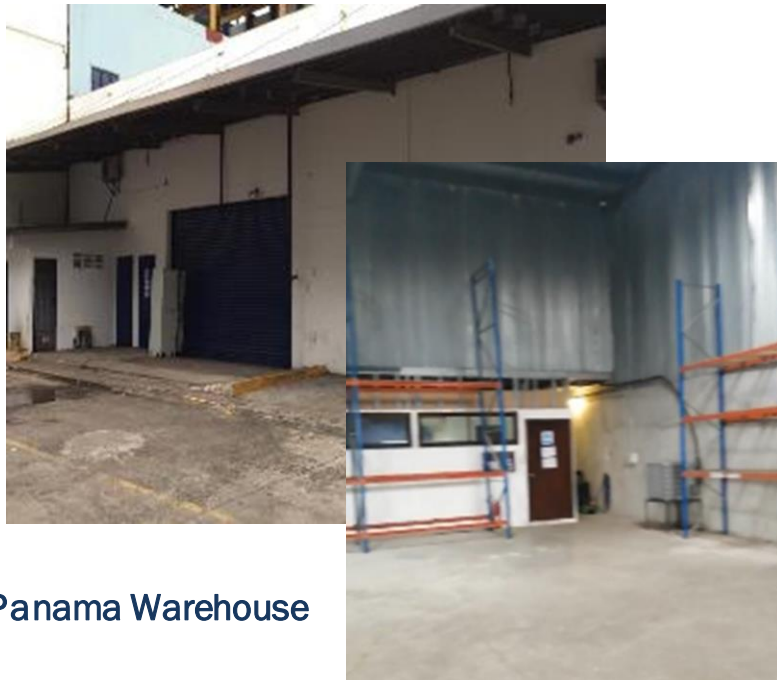
## Other offices. Madrid





OFG have a wide warehouse network in LATAM and European region that allow us to deliver all kind of rollout projects for wireless network and fixed network. All these warehouse are connected with our two main logistic Hubs in Panama and Spain.

All warehouses meet our customer's requirements and guarantee a correct storage of equipment.



Panama Warehouse



Córdoba (Spain)  
Warehouse

## Network Planning & Network Development

### Acquisitions – Mobile Network

- Contract Management:
  - New site acquisition
  - Contract renewal / extension
  - Landlord issues
- Legalization
- Opex Saving:
  - Saving yearly rentals
  - Contract Monetization
  - Power consumption

### Acquisitions – Fix Network

- Private & public permit
- Landlord permits
- Network legalization

### Engineering – Mobile Network

- Site Survey
  - Site Survey report
  - Photographic report
  - 360° photos
- Site Survey report
- Planning & Preparation
- 3D Modeling
- Static calculations

### Engineering – Fix Network

- Site survey
- Planning (HLD / LLD)

### Installation & Civil Work

- Telecom implementation, 2G/3G/4G/5G
- Civil Work activities
- Rigging activities
- Transport network
- IP Core networks



## Network Operations and Maintenance

### Network Operation Center

- Network supervision
- Network monitoring
- Network operation
- Alarm incident management
- Performance monitoring
- Remote integrations

### First Line Maintenance

- Maintenance activities
- Corrective activities 24x7
- Predictive maintenance

### Systems & Communications

- Back office
- Front office
- Help Desk

## Training

### Health & Safety

- Work at height trainings
- Climbing trainings
- Electrical risk activities

### Technical

- Autocad design for mobile networks (2G/3G/4G/5G)
- Site survey activities for mobile networks
- Static calculations for mobile network
- Installation activities for mobile networks



## Project Management & outsourcing

### PMO

- Project management office for network rollout projects
- End to end project
- Turnkey Projects

### Outsourcing

- Technical assistance
- Network inventory
- Administrative support
- Procurement support, logistic activities and provider management
- Technical support (expert level) for RFI and RFQ
- Radio planning



OFG Services

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## Contract Management services

**New site acquisition:** OFG finds / signs new sites. We look for the contract model more efficient for the operator in terms of cost and duration

**Contract renewal:** OFG manages the contract renewal of the existing sites

**Manage issues with landlord:** resolution of issues / conflicts with the landlord

## Legalization

**Site legalization:** Elaborate all documentation and get all public & private permit

**Backhaul network:** get all permit from public administration.

**FTTx network:** elaborate all documentation and get public & private permit to develop the network

## Opex saving services

**Savings in the yearly rentals:** OFG service gets savings in the yearly rentals

**Contract monetization:** OFG service provides savings in the rentals that operator pays to landlord. With up front payment for the amount of 7 years rental, operators gets a contract for a period of 15 years.

**Power consumption savings:** Operators have sites connected to the building power meter -> flat rate for power consumption. OFG service covers:

- Study of real consumption of the sites
- Find the best electrical provider. Get electrical cost savings
- Make the project to install its own power meter for the site
- Turnkey project for power meter installation (contract & installation)



## Site Survey

Our huge experience on site surveys allows us to deliver detailed reports to perform supervision on existing sites and gather all the information needed for upgrades. Site survey includes complete photograph report, including 360° photos

## Planning & Preparation (mobile network) – HLD/LLD FTTx Networks

OFG delivers site design including construction drawings, photomontage, and environmental impact assessments. We deliver site re-engineering and structural analysis on existing locations. Implementation plans and construction completion certificates are carried out by our engineering team

## 3D Modelling

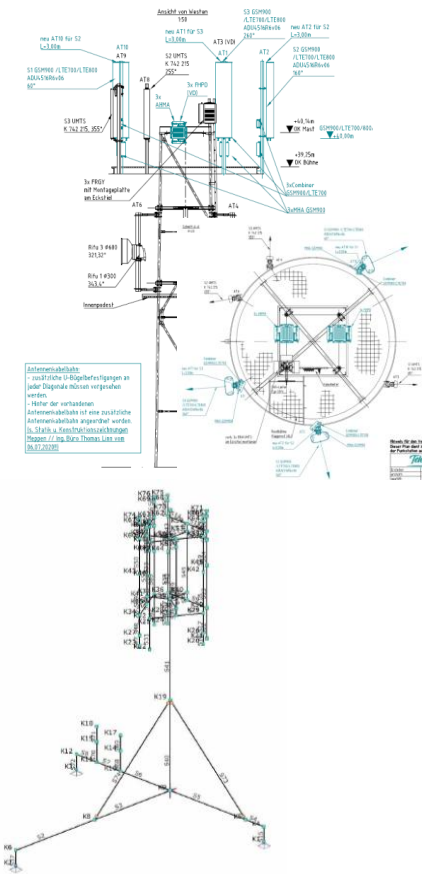
OFG provides 3D Modelling of sites from mobile network

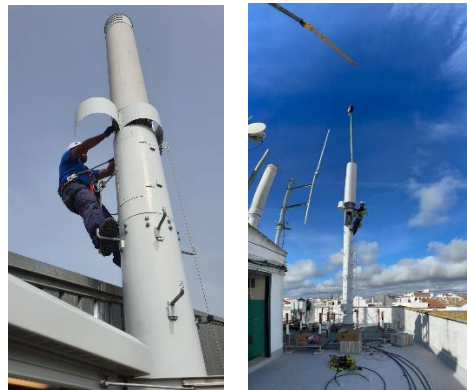
## Static Calculations

Included in our planning & preparation OFG delivers static calculations to certificate the structural feasibility of the design

## Health & Safety

H&S aspects are managed by our specialists, studying the initial requirements to elaborate a H&S plan that will be integrated and supervised in the project





## Mobile Networks

Our huge experience on telecom implementation & commissioning allows us to manage a complete mobile network rollout: installing new radio systems including base band units, RRU, feeders, antennas and microwave links.

We can provide civil works activities (new poles, antenna supports, ..), rigging activities (antenna swaps, ..) and power connections.



## Fix Networks - FTTx Networks

OFG provides all activities needed in a fiber network rollout: OLT, fiber installation, OTBs, splicing and optical power measurements.

We can provide civil work activities: trenches, ducts, street cabinet installation.

End to end measurements like OTDR and synchronization tests

## Transport and Core Network

OFG provides backhaul network development, IP Core network rollout and optical backbone networks.

## Technology experts

OFG field technicians have strong knowledge and certification of the following technologies/vendors: Huawei, Nokia, Ericsson, ZTE and Samsung.



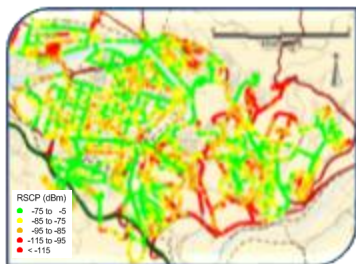


## EMF Certification

OFG has certified thousands of sites to comply with national and European standards for exposure to electromagnetic fields (2004/40/CE, RD 1066/2001, CTE 23/2002). OFG has a complete set of specific equipment for these measurements and a on filed teams with a proved experience in this matter.

## Noise Emission Measurement

Whether an official certification or an internal audit is needed, OFG provides noise emission reports on the required locations



## Drive Test

Our certified teams can assess the coverage, capacity and Quality of Service of a mobile network, 2G/3G/4G/5G. These reports serve to optimize the performance of wireless networks.

## Project Management Office

We help operators that rely on us for document management and administrative procedures within public authorities.





## Network Monitoring and supervision

OFG provides network operations & monitoring service 24x7 for our customers, telecom operators. This network supervision & monitoring covers network technologies (RAN, backhaul network, core network) and services (IP TV services, voice service, ...)

## Alarm incident management

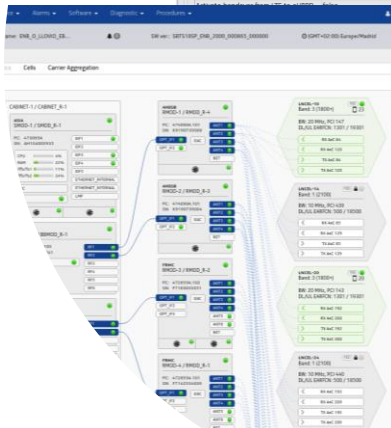
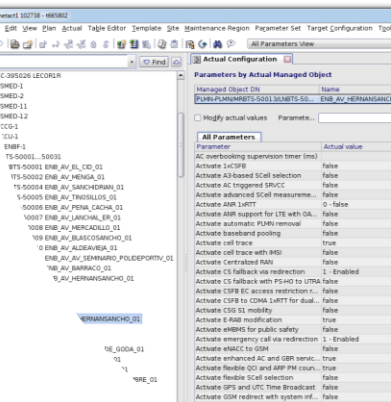
Our NOC technicians detect any network incident and start all process to fix and solve it according to the defined SLA.

## Remote integration

OFG has several years experience in remote integration for 2G/3G/4G/5G technologies. Our expert in the remote competence center in direct contact with the on-field technicians manage and lead the integration process of the new site or technology. Deep knowledge in Huawei, Nokia, Ericsson and ZTE equipment.

## Performance monitoring and KPIs

Our network quality experts check RSSI, alarms and KPIs after the integration. They solve any issue after the integration (alarms, RSSI, ...) and make the fine tuning of the network to get better KPIs (4hours/24 hours/48hours)  
Deep knowledge in specific vendor tools like Nokia NetAct, Huawei M2000





## First Line Maintenance

OFG provides network support and maintenance for telecommunication systems and infrastructures to operators. Maintenance activities include infrastructure (tower, pole, access, power units, rectifiers, batteries, air conditioning, ..) and telecom equipment (radio systems, transmission, alarms, ...).

## Corrective Maintenance

Our FLM teams, distributed in geographical areas, work 24/7 to solve every emergency that may arise in the network.

## Preventive Maintenance

Preventive maintenance on infrastructure and telecom systems is key to the network's performance. OFG delivers scheduled maintenance to prevent future incidences.

## Evoluteve Maintenance

Based on the network incident analysis, OFG defines a maintenance plan to improve network KPIs and performance



### **Network Design**

OFG provides engineering consulting services, with professionals specialized in RF design and planning, radio optimization, transmission design and optimization and FTTx design and planning.

### **Supervision and Technical Assistance**

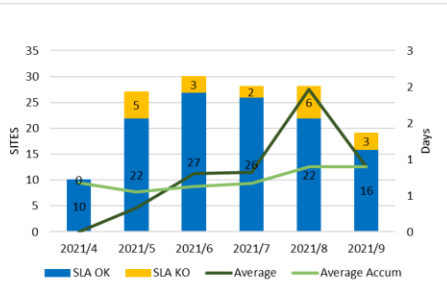
We can also deliver consulting services covering a broad range of activities:

- Civil works supervision.
- Digitalization and data processing.
- Network Inventory and Catalogue.
- Logistics, suppliers and purchasing management

### **Project Management**

OFG's commitment to project management allows us to perform successfully every stage of multidisciplinary projects, providing:

- Bidding Management, study of requirements. (RFIs, RFQs.)
- Negotiation with Customers and Suppliers.
- Outsourcing of Middle Management Positions.



Our experience in the whole chain of services needed in telecom network development and operation provides us the possibility to deal with medium and big size project acting as a Project Management Office.

PMO service includes also the following activities:

- Project administrative support.
- Project communication process definition between all parties.
- Technical expert support for the project
- Complete project follow up reporting

Our complete services portfolio added our project management office give us the capacity to manage a complete end to end project (turnkey project) for mobile network rollout and fixed network rollout.



## Health & Safety matters

OFG has a training center to provide specific trainings in H&S matter for telecommunication activities. Some of this trainings covers:

- Work at height & Rescue
- Electrical Risk
- Best practices in telecommunication activities

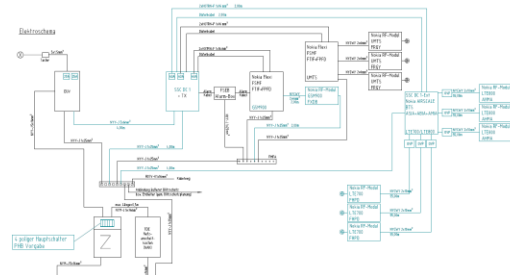
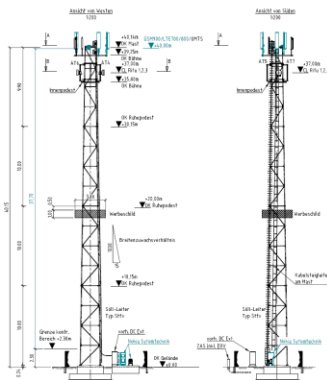
## Technical training for telecommunications

OFG has more than 20 years experience in telecom market. All this experience is collected and used to make specific training course for telecommunication activities like:

- Autocad design for mobile networks
- Static calculations for mobile network
- Installation activities for mobile networks



OFG Training Center  
Córdoba (Spain)





## References

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# Some references



## Telecom Operators



## Vendors / Telecom equipment manufacturers



## Infrastructure Operators



## Engineering companies

