

## Jacobo Arnanz González – Construction Director

- Qualifications:**
- **Industrial Engineer**  
Madrid Polytechnic University Higher Technical
  - **MBA in Sustainable Global Business,**  
EOI
  - **Project Management Professional,**  
Project Management Institute

**Years in industry:** 23 years

**Why I am the best person for the position:** I have been the Site manager on the construction of several stretches for the Spanish high speed line during the last 9 years. I count with experience on the construction of tunnels and viaducts using conventional methods and NATM.

### Summary of Previous Project Experience

Project	Client	Value
Follo Line Rail Tunnels Project	JERNVANEVERKET / Bane Nor	1.028.728.886 €
High Speed Line Leon-Asturias La Robla-Pola de Lena. Section: La Robla – Pajares Tunnel	ADIF (Spanish Railway Infrastructure Administrator)	9.448.660 €
High Speed Line Leon-Asturias La Robla-Pola de Lena. Section Civil Works in Tunnels	ADIF (Spanish Railway Infrastructure Administrator)	148.834.777 €
High Speed Line Leon-Asturias La Robla-Pola de Lena. Section Pajares Tunnel – Sotiello	ADIF (Spanish Railway Infrastructure Administrator)	160.281.668 €
High Speed Line Leon-Asturias La Robla-Pola de Lena. Section Sotiello-Campomanes	ADIF (Spanish Railway Infrastructure Administrator)	79.780.212 €
High Speed Line Leon-Asturias La Robla-Pola de Lena. Section Pajares Tunnels Lot 1	ADIF (Spanish Railway Infrastructure Administrator)	531.707.300 €
Railway penetration tunnel in Gijon Infrastructure and Track	Ministry of Public Works and Transport (D.G.F.)	105.967.644 €
L.A.V. (High Speed Line) Madrid- Barcelona. Lérida-Martorell Section, Subsection VIII b.	ADIF (Spanish Railway Infrastructure Administrator)	35.788.000 €

## Detailed Management Experience

### Regional Director for Europe and South-East Asian Region and Special Businesses

(central machinery park, central workshop, railway affairs division)

Acciona Infraestructura: October 2024 – Present

### Operations Director for the North Atlantic and South-East Asian Region

Acciona Infraestructura: Jan 2023 – October 2024

### Construction Director (ACCIONA Nordics)

Acciona Infraestructura: April 2019 – Dec 2023

- Follo Line Rail Tunnels Project (Oslo-Norway) Value: 1.028.728.886 €
- E6 Ranheim-Vaerner Project (Trondheim-Norway) Value: 456.000.000 €
- Sandbukta-Moss-Sastad (Moss-Norway) Value: 654.000.000 €

## Detailed Project Experience

### Follo Line Project – Oslo (Norway)

Acciona Infraestructura Norway: January 2016 – April 2019. Construction Manager

- 2 twin tunnels of 18 km each being mined by 4 TBMs.
- 3 precast segments factories (160.000 segments)
- XPs by drill and blast methodology.
- Construction of chambers (height of 26m) to assembly/disassembly TBM

### High Speed Line Leon-Asturias La Robla-Pola de Lena. Section: La Robla – Pajares Tunnel. León, Spain. Rail works

Acciona Infraestructuras, July 2014 – Present. Site Manager

**Scope:** The Project consisted in railway track assembling for High Speed Train, including ballast and Rheda railway system and railway rail mounting.

### High Speed Line Leon-Asturias La Robla-Pola de Lena. Section Civil Works in Tunnels

Acciona Infraestructuras, April 2011 – July 2014. Site Manager

**Scope:** The project consisted in concreting platforms in Pajares tunnels, drainage, cable ducts and waterproofing treatments consisting on drilling and injecting microcements, plyurethane resins and grouts.

New product for drainage consist on GRP developed together with R&D Department (Acciona)

## **High Speed Line Leon-Asturias La Robla-Pola de Lena. Section Pajares Tunnel - Sotiello**

Acciona Infraestructuras, December 2006 – April 2013. Project Manager

**Scope:** The project consisted in making two tunnels with a length of 6.127 m and 6.160m each one, using a single shield tunnelling machine (hard rock TBM) for both tunnels and 9 connection galleries have been perforated between the main tunnels following the New Austrian Tunnelling Method (NATM) and with lengths that vary between about 45 meters. San Bras Viaducts, single-track decks (128 and 124 m length)

## **High Speed Line Leon-Asturias La Robla-Pola de Lena. Section Sotiello-Campomanes**

Acciona Infraestructuras, December 2009 – Present. Site Manager

**Scope:** It is approximately 4.32 Km long and is entirely in the municipality of Lena, in the Principality of Asturias, forming part of the railway communications project between the meseta and Asturias called the High Speed Line Leon-Asturias (Pajares Branch). The schedule for execution of the works is 28 months. The layout started at P. 40+521 and finishes at P. 44+840, referring to the right track. The definite layout of the route will be 3 tracks: The initial 2.6 Km are on two single-track platforms: Axis 1 and 2 are two single-track platforms respectively, (the track gauge is variable and does not coincide with the progression of both tracks), and Axis 3 platform is for double-track, where the gauge is normal and stays that way until the end of the section.

The most significant elements of the project include the construction of: 2 tunnels:

- Sotiello (1009-999 m)
- Teso (636-870 m)

2 viaducts (independent single-track decks):

- Sotiello (134-110 m)
- Teso (369-344 m)

1 viaduct (with triple deck for 4 tracks):

P.A.E.T. Viaduct at Campomanes (116-116-82 m) 1

Overhead pass, replacing the LE-6 road

1 Train Parking and Passing Position (PAET), at Campomanes

## **High Speed Line Leon-Asturias La Robla-Pola de Lena. Section Pajares Tunnel Lot 1**

Acciona Infraestructuras, October 2006 – April 2009. Site Manager

**Scope:** The project consisted in making two tunnels with a length of 9,962.65 m for the east tunnel and of 15,088.20 m for the west tunnel, using a single shield tunnelling machine for both tunnels. It has a lead-in gallery (Folledo Gallery) made by conventional methods (perforation and blasting) following the New Austrian Tunnelling Method (NATM), with a length of 2,050 m using the passing of the tunnelling machine cutterheads through the intersection between the gallery and the main tunnels for reviewing the same. 31 connection galleries have been perforated between the main tunnels also following the New Austrian Tunnelling Method (NATM) and with lengths that vary between 43.06 and 52.69 meters.

## **Railway penetration tunnel in Gijon Infrastructure and Track**

Acciona Infraestructuras, February 2004 – September 2006. Tunnel Manager, Structures Manager

**Scope:** The works consisted of making a 3,538 meter long tunnel for a RENFE width double electrified track that links the Humedal station to that of Glorieta de Viesques. This section included three new stations: Begoña, El Bibio and Viesques. The tunnel section has 1 meter wide side-walks on both sides and there are 9 ventilation wells and emergency exits. Tun

## **L.A.V. (High Speed Line) Madrid- Barcelona. Lérida-Martorell Section, Subsection VIII b.**

Acciona Infraestructuras, September 2001 – January 2004. Tunnel Manager Assistant

**Scope:** Two conventional tunnels done by blasting of 1,750 m each one covering of the same.