



RADIO
FREQUENCY
SYSTEMS

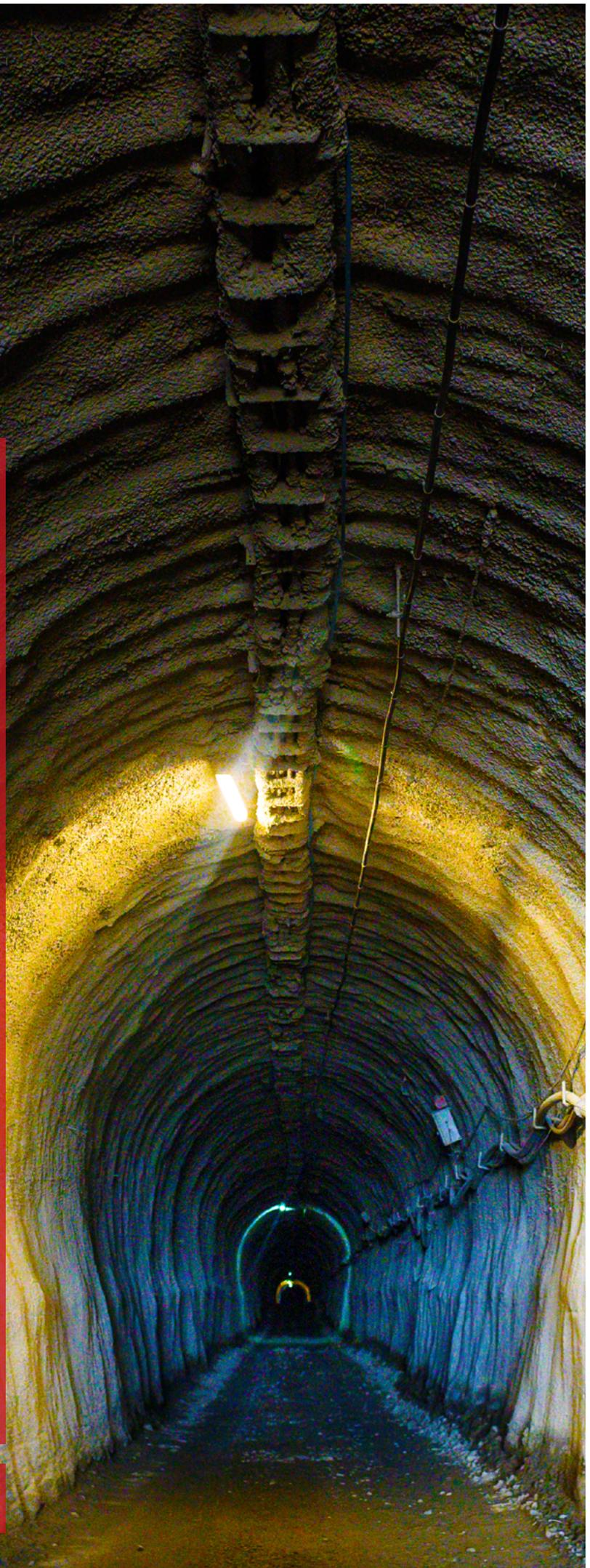
Case Study

Greek Gold Mines: Flexible, Long-Life, Mission-Critical Connectivity

Greece

In the demanding mining industry, robust communication infrastructure is essential for operational efficiency and worker safety. A Greek mining operator, partnering with RFS since 2013, expanded its activities in 2021, requiring additional mission-critical cabling solutions to support its growing needs.

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The challenges

As the latest project builds upon RFS's existing relationship with the mine operator, and RFS has extensive experience deploying communication infrastructure in mining environments, identifying the challenges was a straightforward process:

Challenging Underground Conditions

Mines require durable cabling capable of withstanding harsh conditions while ensuring reliable signal transmission. Traditionally, this would be achieved with antennas and repeaters. However, RFS advocates a cable-based approach as a more streamlined and effective solution.

Mission-Critical Capabilities

The infrastructure needed to support mission-critical frequencies of 400MHz.

Scalability

As the mines expand, cabling solutions must support both current and future operational needs.

Regulatory Considerations

Greece does not mandate specific cable classifications for mining environments. Therefore, RFS needed to advise the mine operator on how to best balance safety, cost, and optimum performance.

The solution

RFS provided over 17km of high-performance cables and the associated accessories to meet the specific needs of the mining sites. This included:

Main Tunnel

RADIAFLEX radiating cables (RLK 158) work like long flexible antennas to deliver reliable connectivity throughout the entire tunnel. This ensured robust communications along the primary excavation routes.

Lateral Tunnels

Specialized flexible radiating feeder cables (RCF 12) that offer durability and reusability in pre-cut 100m and 50m sections for ease of installation, and a modular and scalable solution. These robust and flexible "radiating jumpers" can be moved and redeployed as site needs change.

Supporting Equipment

Passive components such as couplers, combiners, and jumper cables to optimize connectivity across the mining site.

RFS worked with local partners to navigate logistical challenges and ensure a smooth and efficient rollout.

The result

The latest deployments using RFS equipment have run smoothly and meet all the needs of the mine operator when it comes to their Mission-Critical communications infrastructure:

Reliable Mission-Critical

The deployed solutions have enabled seamless underground communication for safety and operational efficiency at mission-critical frequencies.

Cost-effective

The durable cable-based solution which can be reused and redeployed, aligned with the company's cost requirements

Seamless deployment: By working with local distributors and integrators, the customer benefited from efficient logistics and deployment along with localized support.

Continuity

A mine is "alive" – as new tunnels are created, others are abandoned, and changing communication needs might require new frequencies. RFS and its partners are following this project month by month, delivering new cable lengths and accessories to meet the new needs of the mine operator.

The mine operator is already working with RFS on future mining projects as they continue to expand their operations.

“One of the strengths of RFS as a partner is our commitment to building long-lasting solutions and long-term partnerships with our customers, which enable us to support long-term infrastructure projects such as this.”

Nemo Galletti, Regional Sales Manager at RFS





Lifetime Connectivity

At RFS we specialize in the design and manufacture of premium, future-ready cable solutions for customers across the globe. With over 120 years of heritage in the industry, we build reliable and long service life connectivity systems. **Because we care about our collective future.**

- We design innovative cable solutions that deliver best-in-class connectivity while tackling network pain points and offering a lower Total Cost of Ownership.
- We bring passion and expertise at every stage, from R&D to installation, to meet our business partners' expectations.
- We deliver the communications foundation for digital transformation across a range of industries including oil & gas, mining, and rail.
- We are changing the perception that all cable is created equal and demonstrating the potential of premium solutions.
- We offer a dynamic and stimulating working environment that promotes diversity and fosters personal and collective accomplishments.
- We are committed to sustainability with greener manufacturing processes and designing long-life equipment with low-energy consumption to support our customers' climate goals.