



WITTRA™

MINING

The benefits of implementing IoT within the mining sector are clear, however adoption has remained slow hindered by the environmental challenges of deployment. Initial attempts at digitalization saw the deployment of programmable logic controllers (PLCs) and supervisory control and data acquisition (SCADA) systems for monitoring and controlling however, this has proved ineffective due to the lack of interoperability and open standards. Additionally assets move, the environment changes and coupled with limited or unreliable connectivity especially in underground mine sites infrastructure has remained a problem. WITTRA offers the perfect solution in a single technology deployment.

TARGET APPLICATIONS

Asset Tracking
Environmental Monitoring e.g.,
Gases Waste Management /
Cost Optimization Predictive
Maintenance
Equipment Utilization
Workflow Automation

TOP CHALLENGES

Infrastructure Implementation
Underutilized Equipment Misplaced
Assets – Lost Time Multi-level &
Harsh Environment
Remote locations struggle to
pick up Cellular/GPS signals
Ease of Deployment
Site Safety and Security



WITTRA IOT OUT OF THE BOX

WITTRA IOT out of the box is a wireless sensor network kit with a cloud-based API that can be deployed on a site to monitor objects and assets. The ruggedized kit enables users to Connect, Sense and Locate their assets in the toughest environments and areas of weak connectivity. The use of sub-GHz frequency bands provides a long transmission range and enables the signal to penetrate dense building infrastructure. With certified hardware, the kit is secure, easy to deploy and ready for field deployment.

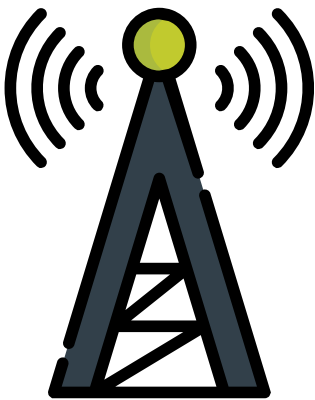
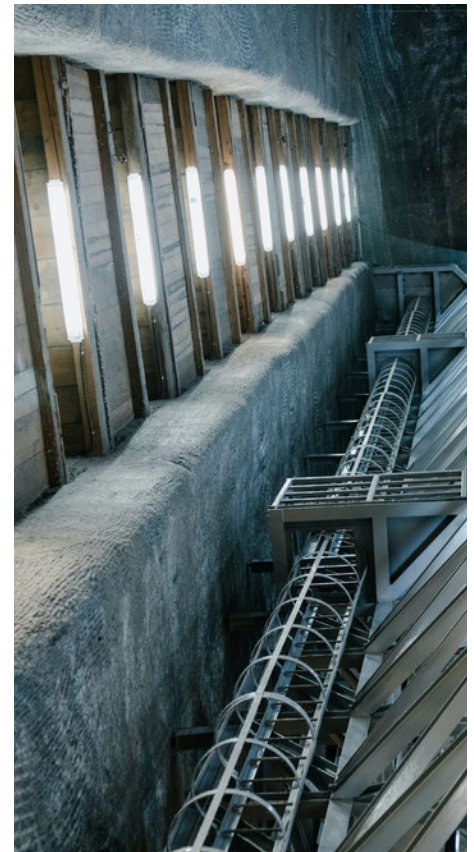
THE WITTRA SOLUTION TO YOUR CHALLENGES?

WITTRA offers the only solution to allow users to Connect, Sense and Locate their assets in the toughest environments or areas of weak connectivity in a single technology deployment. We accelerate and simplify IoT delivering predictable pricing and a predefined ROI.

SOLUTION OVERVIEW

Building an IoT solution with WiTTRA is child's play, simplifying complexity is a key element of the WiTTRA DNA. WiTTRA's Network Kits allow users to collect, communicate with and control their assets on day one. Our web portal simplifies device commissioning, and the network monitoring tools ensure ease of deployment; And together with our cooperation with several world-leading platform providers, WiTTRA offer the simplest way to build end customer solutions, Month becomes days. WiTTRA overcomes connectivity issues, devices run in an IP-based radio network. Using sub-GHz radio bands WiTTRA provides long-range and good penetration of structures with the option of a cellular backhaul.

- Predictive / Preventative maintenance through usage data and analytics
- Data for workflow planning / Automated equipment utilization reporting
- Heat-map generation for resource monitoring
- Reduce carbon footprint. Increased efficiencies generate cost savings
- Rugged for harsh environments
- Strong signal penetration strength
- Less hardware and lower implementation costs of deployment



KEY BENEFITS

WiTTRA will help you reduce development and operational costs.

- Quick and easy application development cycle, weeks become days
- Accurate location and orientation, multi-axis positioning down to 1 meter
- Future proof. Extend with click-on sensors and third-party sensors
- Build comprehensive, cost-efficient, and competitive solutions
- Based on open standards for quick and easy interoperability
- Easy to install, integrate, support, and maintain
- True mesh eliminates radio black spots, giving total asset visibility in all environments
- Highly secure using TPM authentication chips in all devices

- ✔ Certified
- ✔ Ruggedized IP67
- ✔ Cloud API
- ✔ Plug and Play



ABOUT WITTRA

WiTTRA Sweden AB develops innovative technologies and solutions within Internet of Things (IoT). Since its start in 2012, WiTTRA has been able to secure a substantial portfolio of intellectual property and rights linked to its innovations. The unique pre-integrated, pre-tested and pre-secure solutions allow users to collect, communicate and control their assets even in the toughest of environments.