

UNDERGROUND MINING

Communication, identification, and monitoring where not even light reaches.

Underground operation demands a technology infrastructure that withstands humidity, dust, vibration, and kilometers of galleries. We design it and operate it as if it were our own.

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01 · CONTEXT

Communication, identification, and monitoring where not even light reaches.

Underground operation demands a technology infrastructure that withstands humidity, dust, vibration, and kilometers of galleries. We design it and operate it as if it were our own.

At SATIC we integrate the layers that critical projects rarely deliver together. Twenty years deploying technology in sectors where availability and security leave no room to improvise. No shortcuts, no subcontracting what's critical, and a single point of contact.

This catalog lays out how we approach the sector: the layers that sustain the operation, the phases of a project, and the deployments that back the proposal. If something doesn't fit your case, we adapt it.

Six layers that keep underground operation running.

The same six layers as in any critical project, adapted to the real conditions of an active mine.

01

Underground communications

Digital radio, telephony, and data covering entire galleries. Wireless repeaters, control-room fiber, operational priority for evacuation.

02

Real-time personnel counting

Active identification of every worker. Listed by shift, by section, and by gallery. Available at the surface instantly.

03

Environmental Monitoring

Gas, ventilation, temperature, and process variables at every critical point. Technical alarms integrated with frontline communication.

04

Video and monitoring

IP cameras at entrances, technical rooms, and critical points. Unified operation with identification and alarms.

05

Automation and remote control

Pumps, conveyors, fans, and gates operated from the control room and supervised from the field.

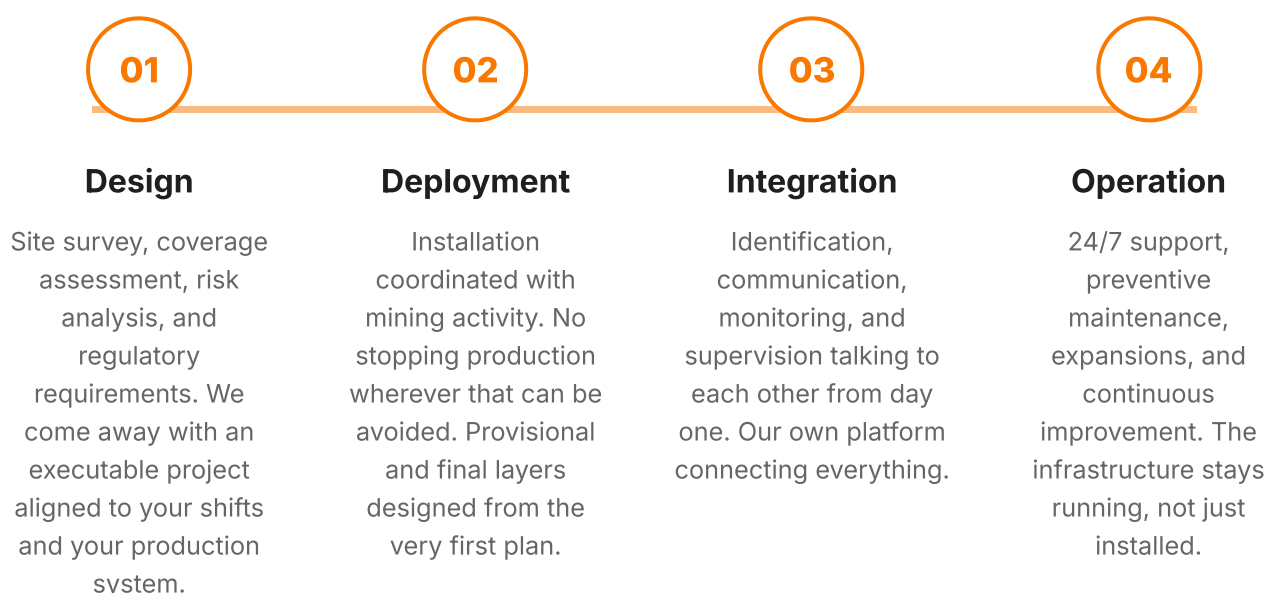
06

24/7 continuous operation

Managed infrastructure service, with measurable SLAs and specialized response. The mine never stops at month-end.

Four phases so the mine runs on technology that doesn't fail.

No surprises midway through the project. No dumping leftover catalog gear on you.



What we've deployed underground.

Three different contexts, one architecture adapted to each operation.

01**Active metal mine**

Full gallery coverage for 24/7 production, personnel counting and integrated monitoring.

02**Mine in closure phase**

Evacuation communication, continuous pumping monitoring, and maintenance identification.

03**Multisite underground mine**

Radio network interconnected with fixed telephony, walkie-to-landline calls, total integration.

05 · NEXT STEP

Underground communication that holds up for a full shift?

Tell us about your gallery: length, access points, existing systems. We design the architecture your operation needs together with you.

06 · CONTACT

Let's talk.

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Sector details online

Where the catalog falls short, we build it.