satic

2026

SOLUTIONS CATALOG

Solutions

The layers that combine to sustain a critical operation.

SATIC · ASTURIAS · SATIC.ES

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Contents.

01 · HOW TO READ IT

Eight solutions. One technical platform.

Critical communications, identification, security, monitoring, infrastructure, managed services, and two vertical systems. Each layer works on its own; integrated, they are one platform. This is the summary. Each solution has its own detailed catalog.

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 from the first conversation to continuous operation.

Each entry in this catalog summarizes **what it includes**, **how we apply it**, and **where it adds real value**. The selection keeps the technical — and operational — language we work with on site. If you want to go deeper into any of them, the individual catalog is downloadable from its URL on satic.es.

The whole operation, a single responsibility: what we design is what we deliver and what we then sustain over time. That technical continuity from the first day to the last is the difference.

CRITICAL OPERATION

Voice, data, and radio where commercial coverage doesn't reach.

Coverage of galleries, tunnels under active construction, and process plants with networks that support voice, data, paging, and radio under a single architecture. Switching between technologies, operational priority, and a gateway to corporate telephony.

WHAT GETS DEPLOYED IN A CRITICAL COMMUNICATION SETUP.

- **Multi-site trunked digital radio**

  Multi-site trunked digital radioProfessional DMR standard. Roaming between cells, group call, priority call, optional geolocation.

- **Corporate IP telephony**

  Corporate IP telephonySIP PBX, CRM integration, local survivability at remote sites.

- **Optical and radio backhaul**

  Optical and radio backhaulOur own backbone fiber, long-range wireless links where the line doesn't reach.

- **Radio-telephony gateways**

  Radio-telephony gatewaysTwo-way calls between radio terminals and external numbers. Operation coordinated with the corporate PBX.

- **Zoned public address and paging**

  Zoned public address and pagingZone announcements, emergency priority, integration with evacuation systems.

- **Robust wireless connectivity**

  Robust wireless connectivityIndustrial Wi-Fi, long-range wireless connectivity, automatic switching.

HOW WE DEPLOY COMMUNICATION THAT HOLDS UP.

- **Coverage study**

  Survey of the plant, tunnel, or gallery with real measurements. We identify blind spots, propagation constraints, and compatibility with existing networks.

- **Deployment and commissioning**

  Installation coordinated with production. Coverage tests, call testing, validation of priorities and roaming between cells.

- **Technical architecture**

  Design of the backbone layer, repeater sites, switching between technologies, gateway to corporate telephony. Executable documentation.

- **Operation and continuous improvement**

  Preventive maintenance, calibrations, capacity expansion. Monthly usage and quality reporting.

> *Does your coverage reach where it needs to?*

Full details at satic.es/comunicaciones-criticas/ Individual catalog: Catalogo_Solucion_Comunicaciones_Criticas_Satic.pdf

CRITICAL OPERATION

Who comes in, who goes out, where every person and vehicle is.

Active personnel identification indoors, automatic license-plate reading outdoors, real-time location, and full traceability. Available instantly in case of an incident or an audit.

WHAT GETS DEPLOYED TO KNOW WHO AND WHERE.

- **Active personnel identification**

  Active personnel identificationCards or tags with multi-year battery life, reads at every entry point and inside critical zones.

- **Indoor location**

  Indoor locationReal-time occupancy, position by zone, immediate evacuation roster.

- **Visitor management**

  Visitor managementPre-registration, document control, full entry-exit traceability.

- **Automatic license-plate reading**

  Automatic license-plate readingLPR cameras at entrances, dynamic whitelist/blacklist, integration with barriers and turnstiles.

- **Geofences and rules**

  Geofences and rulesEvents on entering or leaving restricted zones, alerts configurable by shift.

- **Traceability and auditing**

  Traceability and auditingA queryable history, export to PDF/CSV, integration with our own platform.

HOW WE DEPLOY IDENTIFICATION AND LOCATION.

- **Survey of access points and zones**

  Identification of passage points, restricted zones, occupancy criteria, and compliance and audit requirements.

- **Deployment and onboarding**

  Installation, configuration, onboarding of users and vehicles with integration with HR and visitor-management systems.

- **Technical architecture**

  Technology selection by scenario (indoor vs outdoor, person vs vehicle), design of readers, geofences, and operational rules.

- **Operation and maintenance**

  Tag replacement, coverage expansion, reader maintenance, and periodic review of rules.

> *Do you know who's inside and where they are, right now?*

Full details at **satic.es/identificacion-localizacion/**

Individual catalog: **Catalogo_Solucion_Identificacion_Localizacion_Satic.pdf**

CRITICAL OPERATION

Video, access control, intrusion, and technical alarms from a single console.

VMS, onboard analytics, access control, and technical alarms, all correlated. Operator-guided procedures, full traceability for auditing and investigation, and a single room to decide in.

WHAT SUPPORTS A SERIOUS OPERATIONS CENTER.

- **VMS and CCTV with onboard analytics**
  VMS and CCTV with onboard analyticsIP cameras with detection, classification, and counting. Redundant storage, evidence export.
- **Intrusion and perimeter protection**
  Intrusion and perimeter protectionLayered detection, 24/7 monitoring, integration with video and procedures.
- **Operator-guided procedures**
  Operator-guided proceduresStep-by-step flows for each type of event. The operator doesn't improvise: they execute.
- **Multi-level access control**
  Multi-level access controlZones, schedules, profiles, anti-passback. Integration with identification and HR.
- **Integrated technical alarms**
  Integrated technical alarmsGas, smoke, leaks, overheating, electrical failure. Correlation with camera and operator.
- **Traceability and auditing**
  Traceability and auditingA queryable, exportable, signed history. Ready for inspection and for court if it comes to that.

HOW WE DEPLOY A SERIOUS OPERATIONS CENTER.

- **Risk analysis and zoning**
  Identification of critical assets, exposure points, sector compliance requirements, and the client's internal rules.
- **Technical design**
  Architecture of correlated video, access control, intrusion, and technical alarms. Procedures guided by event type.
- **Deployment and integration**
  Installation, configuration, integration with existing systems, operator training, and validation drills.
- **24/7 operation**
  Our own NOC or control center, maintenance, evolution of rules, review of procedures, and periodic auditing.

> *Does your operations center have a single view or separate screens?*

Full details at satic.es/seguridad-supervision/

Individual catalog: Catalogo_Solucion_Seguridad_Supervision_Satic.pdf

Gas, air quality, ventilation, and process variables monitored as operations require.

Robust industrial sensorization for galleries, tunnels, plants, and technical rooms. Hot-swap cartridges, technical alarms integrated with supervision, and regulatory compliance by design.

WHAT GETS DEPLOYED TO DETECT IN TIME.

- **Gas detection**

  Gas detectionSensors for CO, CH4, O2, H2S, and combustibles depending on the environment. Traceable periodic calibration.

- **Air quality**

  Air qualityParticles, dust, humidity, temperature, differential pressure in critical zones.

- **Monitored ventilation**

  Monitored ventilationProcess variables from fans and collectors. Technical alarm and automatic trigger where appropriate.

- **Hot-swap cartridges**

  Hot-swap cartridgesMaintenance without stopping the operation. Hot replacement with calibration traceability.

- **Integration with control systems**

  Integration with control systemsGateways to SCADA and supervision. The environmental data reaches where the decision is made.

- **Regulatory compliance**

  Regulatory complianceTraceability, records, and documentation ready for mining regulations, the tunnel RD, or sector regulations.

HOW WE DEPLOY ENVIRONMENTAL SENSORIZATION.

- **Regulatory and variable analysis**

  Identification of gases, air quality, ventilation, and process variables that apply depending on sector and regulations.

- **Sensor and communications design**

  Selection by environment (gallery, tunnel, plant, technical room), field network architecture, and gateways to supervision.

- **Deployment and initial calibration**

  Installation, traceable calibration, integration with control systems, and validation of technical alarms.

- **Operation and periodic calibrations**

  Maintenance, hot replacement of cartridges, periodic calibration with signed traceability for auditing.

> *Does detection arrive before the consequence?*

Full details at satic.es/monitorizacion-ambiental/ | Individual catalog: Catalogo_Solucion_Monitorizacion_Ambiental_Satic.pdf

PLATFORM AND INFRASTRUCTURE

The foundation everything else rests on.

Optical networks, industrial Wi-Fi, long-range wireless connectivity, virtualization, and data center. Designed for the real conditions of each site, plant, or building. Unnoticed —until the one next door fails.

WHAT GOES INTO A ROBUST IT INFRASTRUCTURE.

- **Optical networks and certification**
  Optical networks and certificationBackbone design, splicing, OTDR certification. Our own fiber where the operation justifies it.
- **Long-range wireless connectivity**
  Long-range wireless connectivityPoint-to-point and point-to-multipoint links where the line doesn't reach.
- **Perimeter security**
  Perimeter securityFirewalls, segmentation, microsegmentation, and policies aligned with compliance.
- **Industrial and campus Wi-Fi**
  Industrial and campus Wi-FiDesign based on measured coverage, not on a catalog. Roaming, VLAN, robust authentication.
- **Virtualization and data center**
  Virtualization and data centerTechnical rooms, monitored climate control, redundancy, server and desktop virtualization.
- **Backup and disaster recovery**
  Backup and disaster recoveryA verified 3-2-1 strategy, continuity plans that are tested, not just written.

HOW WE DEPLOY THE IT FOUNDATION.

- **Assessment and initial audit**
  Survey of the current infrastructure, identification of bottlenecks, risks, and consolidation opportunities.
- **Phased deployment**
  Without affecting service. Planned windows, provisional redundancy, staged validation, training for the client's team.
- **Architecture design**
  Network, compute, storage, security, and observability layers. Executable documentation and migration plan.
- **Operation and continuous improvement**
  Proactive monitoring, preventive maintenance, evolution in cycles. The foundation is kept alive, not just installed.

> *Will your network support what the operation needs a year from now?*

Full details at **satic.es/infraestructura-tic/** Individual catalog: **Catalogo_Solucion_Infraestructura_TIC_Satic.pdf**

The integration is delivered running, not just installed.

Our own NOC, preventive maintenance, L1-L3 support, incident management, and continuous reporting. A measurable, signed SLA—to respond, not to file away.

WHAT'S INSIDE THE MANAGED SERVICE.

- **Our own NOC with 24/7 coverage**

  Our own NOC with 24/7 coverageOperators with knowledge of the sector and the environment. Not a generalist call center.

- **Proactive monitoring**

  Proactive monitoringAlerts before the incident, degradation detection, preventive intervention.

- **Measurable, reported SLA**

  Measurable, reported SLASigned agreements with real metrics: availability, response time, resolution. Periodic auditable reports.

- **Tiered L1-L3 support**

  Tiered L1-L3 supportFast first-contact resolution, controlled escalation, engineering available for complex incidents.

- **Preventive maintenance**

  Preventive maintenanceSigned schedules, planned interventions, tracked replenishment of consumables.

- **Change management and continuous improvement**

  Change management and continuous improvementITIL-style processes adapted to the sector. Controlled changes, evolution without surprises.

HOW WE START A MANAGED SERVICE.

- **Operation assessment**

  Survey of the current state, identification of processes, tools, equipment, and critical operational knowledge.

- **Onboarding and handover**

  Documentation, training of the operations team, and an orderly handover with the client's current team. Without loss of knowledge.

- **Signed service model**

  Scope, SLA, escalation, windows, metrics, and reporting. No surprises in the invoice or the scope six months in.

- **Continuous operation**

  Proactive monitoring, incident management, preventive maintenance, continuous improvement, and auditable reporting.

> *Is your operation on autopilot or with a qualified human at the controls?*

Full details at **satic.es/servicios-gestionados-soi/**

Individual catalog: **Catalogo_Soluciones_Servicios_Gestionados_Satic.pdf**

Occupancy and vehicle control

SYSTEMS

THREE TECHNOLOGIES THAT WORK TOGETHER

- **Occupancy control**

  Active identification of people with RFID readers at every entrance, reinforced by analytic IP cameras that detect movement.

- **Telemetry and monitoring**

  A unified view by facility, zone, or tunnel with real-time telemetry and a green/red status for each entry point.

- **Vehicle control**

  Automatic license-plate reading via analytic IP cameras placed at the ideal height at every entrance and exit.

THE ENTIRE OPERATION FROM A SINGLE PANEL

- **Company management**

  Adding, removing, and editing companies with all their associated data. Roles and permissions by organization.

- **Historical search**

  Dynamic filtering by date, tunnel, tag number, license plate, company, direction (IN/OUT), or operation ID.

- **Personnel and vehicles**

  Full management of additions, removals, edits, and authorization of people and vehicles (license plates, tags).

- **Reports and export**

  Complete listings exportable to Excel with automated email delivery. Tablet access with username and password.

> *Can we help with your access control?*

Full details at satic.es/sistema-control-aforo/ Individual catalog: Catalogo_Sistema_Control_Aforo_Satic.pdf

Professional digital communication

SYSTEMS

THREE PILLARS OF A RADIO NETWORK THAT PERFORMS

- **Multi-site network**

  An infrastructure of multi-site DMR repeaters deployed across multiple locations interconnected over Ethernet TCP/IP.

- **Call routing**

  A radio-telephony interconnection gateway that connects the radio network with analog telephone lines and enables calls between terminals and external numbers.

- **Terminals and base stations**

  Professional terminals with integrated voice and data, long-lasting battery, and industrial-grade ruggedness.

FOUR WAYS TO TALK ON A SINGLE NETWORK

- **Integrated voice**

  Exceptional voice quality with long-lasting battery. Encrypted two-way communication between all the terminals on the network.

- **Outgoing calls**

  From an advanced DMR portable terminal, you can place a call to any number using a DTMF sequence, with no restrictions from the radio system.

- **Incoming calls**

  The M-30 routes the call to the corresponding repeater and propagates it to the terminals. A conventional phone-style ringtone when receiving.

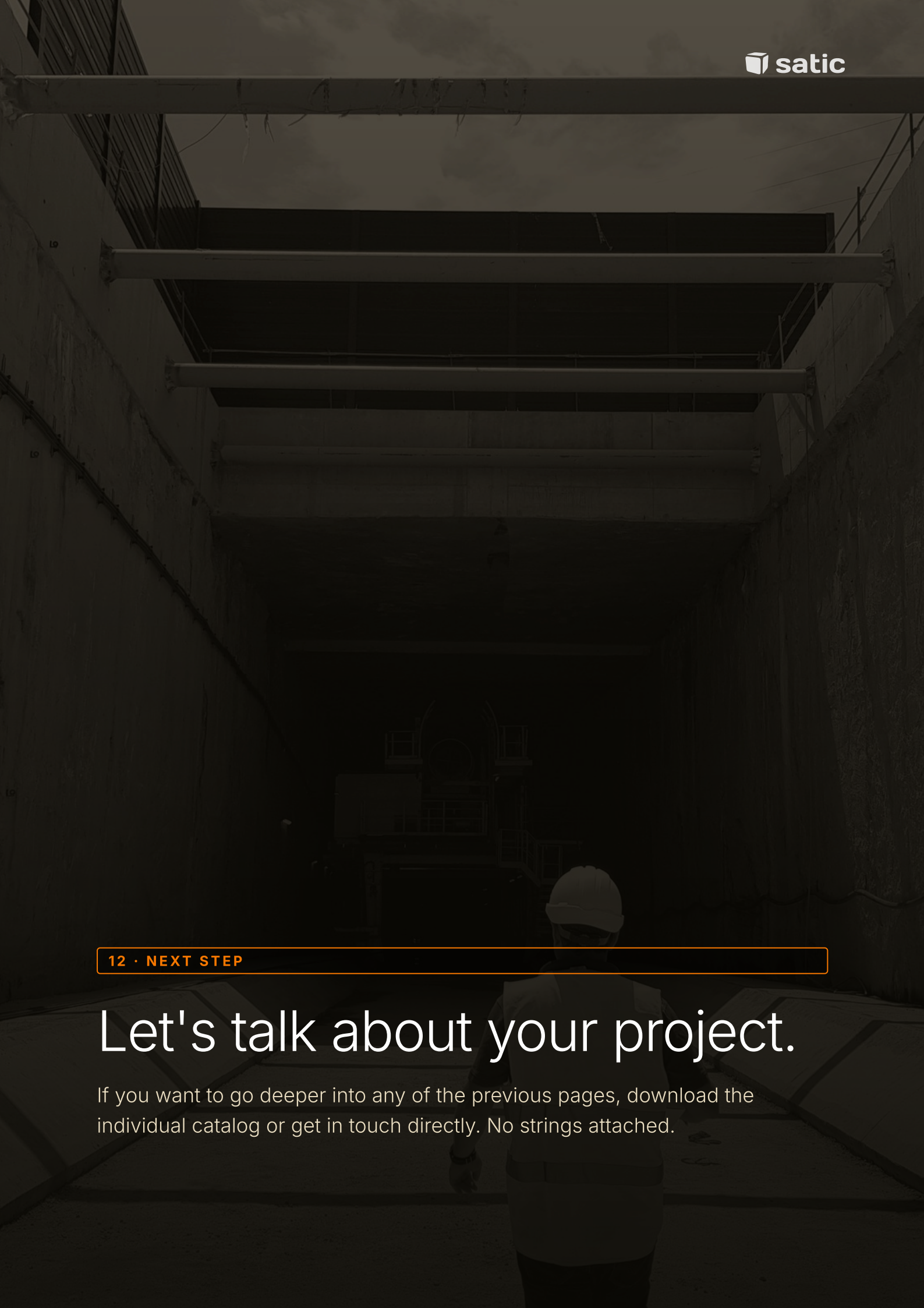
- **Contacts and directory**

  Each user manages contact lists tied to phone numbers, just like on a conventional mobile phone.

> *Can we help with your professional radio network?*

Full details at **satic.es/sistema-sonido-digital/**

Individual catalog: **Catalogo_Sistema_Comunicacion_Digital_Satic.pdf**



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12 · NEXT STEP

Let's talk about your project.

If you want to go deeper into any of the previous pages, download the individual catalog or get in touch directly. No strings attached.

13 · CONTACT

Let's talk.

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Full online catalog

Where the catalog falls short, we build it.