

SevkAi

PRODUCT CATALOGUE · 2026

Bring the field, the network and SAP together on one platform for electricity distribution

Work orders · Dispatch · Field · Outages · Metering · Assets · Network GIS · Digital twin · Safety · Regulation · SAP · AI

EPDK T.C. ENERJİ PİYASASI DÜZENLEME KURUMU

TREDAŞ TRAKYA ELEKTRİK DAĞITIM A.Ş.

fizibil

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WHAT IS SEVKAI?

SevkAI is a workforce management (WFM) platform built in Türkiye to run fault repair, metering, planned maintenance and investment work, field crews and network assets on the same live data. A job opened at the dispatch desk goes to the mobile app in the field, and every step taken in the field flows back to SAP.

9 modules
From the admin console to the field terminal, with one sign-in

5 SAP modules
Two-way integration with PM, IS-U, MM/WM, FI-CA and HR

26 tables
SAP master data synchronised automatically every day

7/24 offline
The field app keeps working without a connection

R&D PROJECT

SevkAI is being developed by Fizibil Mühendislik ve Yazılım under the EPDK domestic software R&D programme, in a project run with Trakya Elektrik Dağıtım A.Ş. (TREDAŞ).

PLATFORM

One platform, five user surfaces

Single sign-on; every user sees only the screens their role requires. Turkish, English and Albanian; light and dark themes.

PORTAL · WEB

SevkAI Operations

Dispatch, outages, LOTO, warehouse, workforce and live tracking.

WORKSPACES · WEB

Unit Workspaces

Faults, metering, planned maintenance, GIS and digital twin.

CONFIGURATION · WEB

Admin Console

Asset registry, work order types, roles, integration and audit.

ANDROID · IOS

SevkAI Field

Accept jobs, execute safely, capture evidence, work offline.

CUSTOMER · WEB

Service Appointments

Request tracking, job status, appointments and satisfaction.

WHY SEVKAI?

Minutes lost between screens end up in SAIDI

At a distribution company, the fault call sits in the call centre, the network in GIS, the work order in SAP, the crew on the phone and meter data in the AMR system. While the operator moves between them, the customer waits without power.



One live picture

Open work orders, crew locations, customers without power and network assets on one screen.

No codes typed by hand

Transformers, feeders and functional locations are picked from selectors fed by GIS and SAP.

Written back to SAP

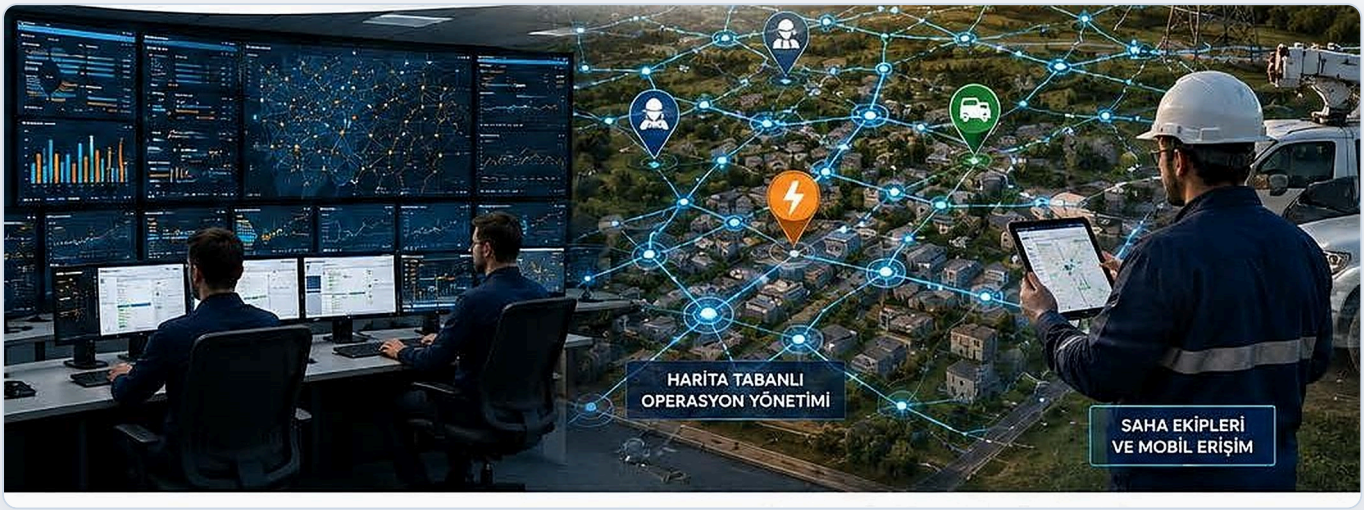
Status changes, damage reports, material use and sealing reach SAP; no command is lost.

Regulation built in

EPDK 24/48-hour deadlines, 48-hour outage notice and SAIDI/SAIFI impact are tracked automatically.

END-TO-END SCENARIO

The journey of a work order: from first call to re-energisation



01 **Report**

A 186 call, an AMR last-gasp signal and a SCADA alarm become one record; the likely fault point is located on the GIS topology.

02 **Dispatch**

AI suggests a crew by proximity, MV/LV competence and workload; the dispatcher approves or picks one.

03 **En route**

The job lands on the technician’s phone; the control centre follows on the map.

04 **Arrival**

A 100-metre geofence records arrival on site automatically.

05 **Safe execution**

No job opens without the safety checklist and LOTO approval; photos, meter index and signature are captured as evidence.

06 **Audit**

The supervisor reviews and approves the photo, GPS and signature evidence.

07 **SAP and customer**

Re-energisation time, damage codes and materials are written to SAP; status, arrival time and satisfaction appear in the portal.

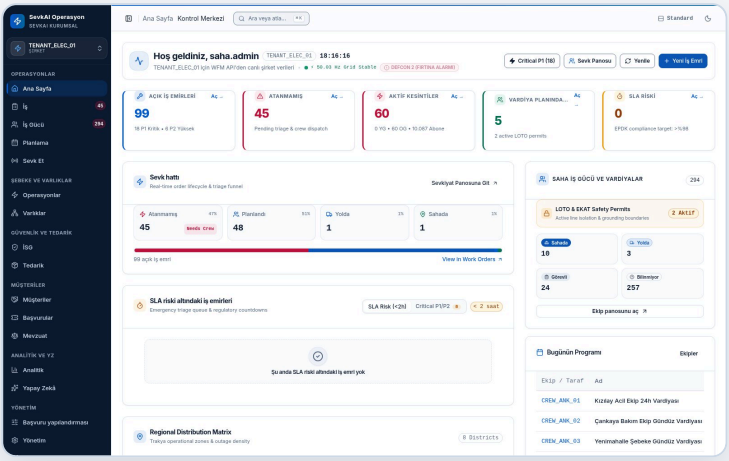
Every step is recorded with a timestamp and location; auditors can trace the history backwards.

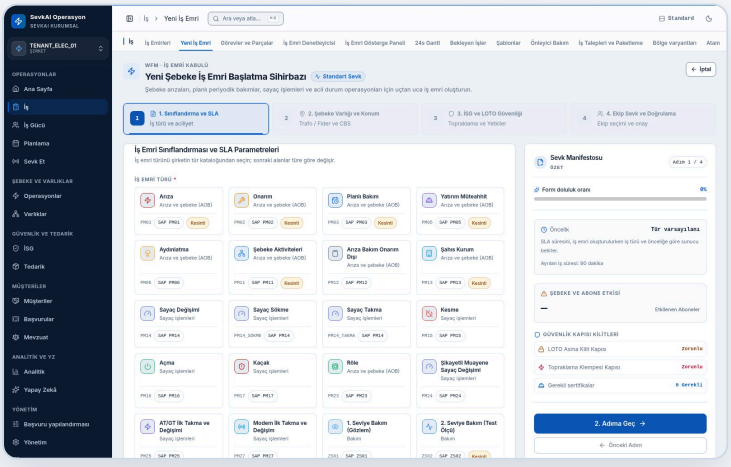
MODULE 01 · HOME

The pulse of operations on one screen

The control centre shows work orders, outages, SLA risk and the field workforce live, side by side.

- **Status cards:** open and unassigned jobs, active outages, SLA risk
- **Dispatch pipeline:** workflow summary from assignment to completion
- **Outage management (OMS):** affected feeders, customer counts and IEEE 1366 SAIDI/SAIFI impact, live
- **Live feed:** assignments, status changes and critical alarms as they happen





MODULE 02 · WORK

Work order management, end to end

Fault, maintenance, metering and investment jobs in one lifecycle; every step recorded from creation to closure.

- **4-step wizard:** SLA, asset and location, safety/LOTO, dispatch
- **Tasks and parts:** subtasks, certification requirements, inspection forms, materials
- **Backlog** in 0–7, 8–30, 31–90 and 90+ day groups with SLA risk
- **Reviewer:** evidence gallery, hold and rejection reasons

MODULE 03 · DISPATCH

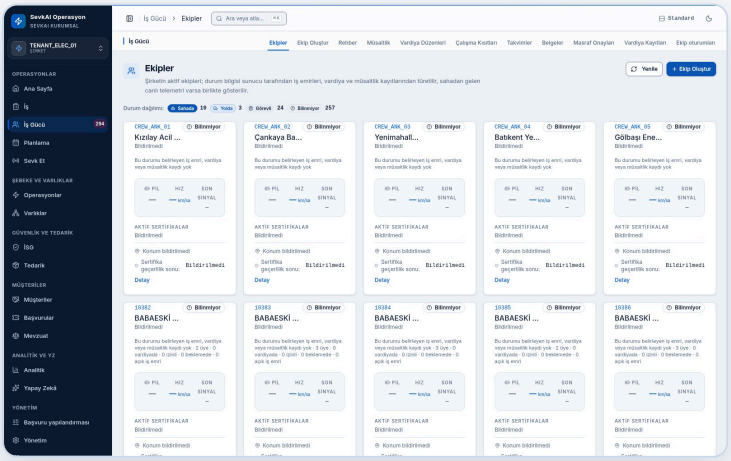
Smart dispatch: the right crew, within the rules

Every assignment runs 13 eligibility checks; each crew is marked **Eligible**, **Warning** or **Not eligible**. An assignment that breaks a rule needs a written justification and is recorded in the audit log.

- Skills
- Certification
- Voltage level
- Licences
- Availability
- Shift
- Rest period
- Daily and weekly hours
- Overtime
- Area authorisation
- Workload
- Travel time
- Contractor qualification

AI suggests, people approve

A model that weighs network and crew relationships together suggests the best crew with a confidence score, supporting data and rationale; nothing becomes an assignment until approved.



MODULE 04 · WORKFORCE

Crews that are live, qualified and compliant

Crews and staff are managed together with shifts, availability, documents and field sessions.

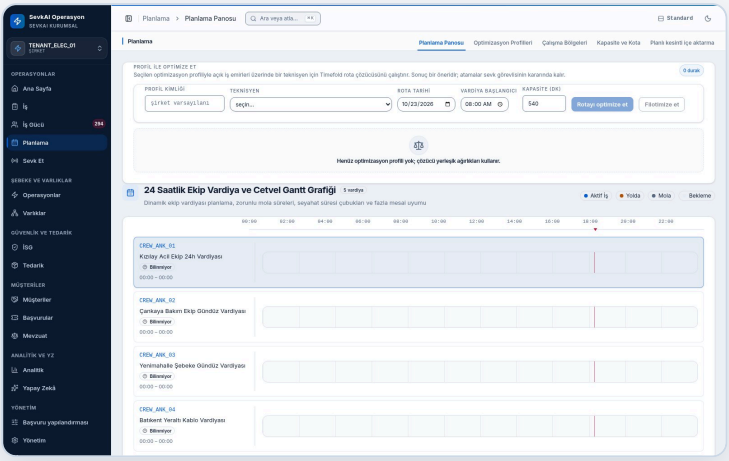
- **Live crew cards:** status, battery, speed, last signal, certificates
- **24-hour shift Gantt:** active work, travel, breaks, waiting; overtime compliance
- **Documents:** certificate validity tracking, crew permission templates
- **Expense approval,** timesheets and crew device sessions

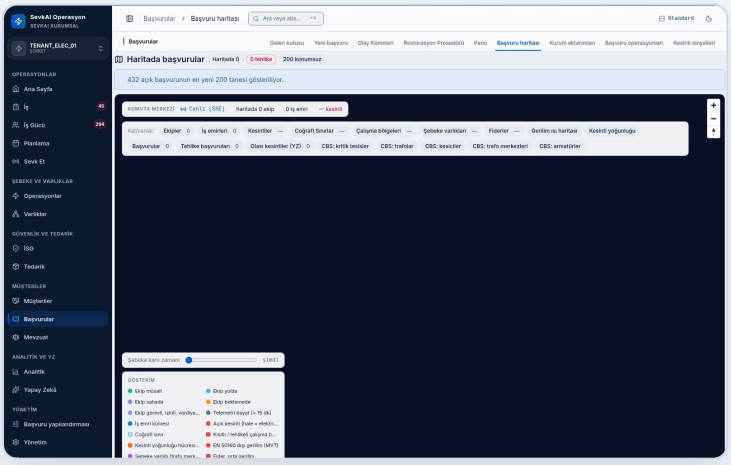
MODULE 05 · PLANNING

Route, capacity and shift planning

The optimisation solver produces routes weighted by your priorities; the final call stays with the dispatcher.

- **Route optimisation:** one technician or the whole fleet
- **Profiles:** travel, overtime, cost and lateness weights
- **Work zones:** urban, industrial, rural, HV corridor
- **Capacity and quotas,** planned outage import





MODULE 06 · COMMAND MAP

Network and field on the same map

Crews, work orders, outages, network assets and feeders on one map, with a live feed.

- **Heat maps:** outage density and EN 50160 out-of-range voltage
- **Outages** with a halo of customers without power; time slider
- **Alerts:** restricted work zones, telemetry older than 15 minutes
- **Esri compatible** geoservices, vector tiles

UNIT WORKSPACES

A workspace for each unit, focused on its own work

Simple work areas focused on each unit’s daily job, alongside the general screens of the operations portal. All share the same data model, sign-in and SAP integration layer.

Fault and Repair
From first call to re-energisation

Metering
Disconnection, reconnection, exchange, theft, calibration

Planned Maintenance
Compliant maintenance and investment calendar

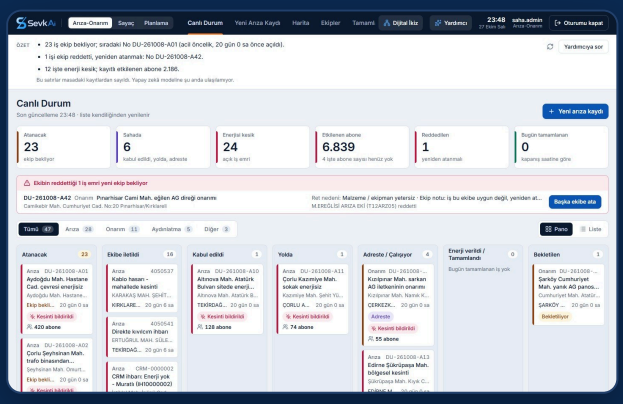
Network GIS
Electrical topology, tracing and design

Digital Twin
Network simulation and decision support

FAULT AND REPAIR

Manage faults from first call to re-energisation

- **Call clustering:** last-gasp signals and 186 calls cluster on the map
- **FLISR suggestions:** isolate the faulty section, restore healthy branches
- **Smart auto-assignment:** proximity, MV/LV competence, workload
- **Life-support customers** first; EPDK outage records and compensation
- **4-stage board:** to assign, en route, on site, done

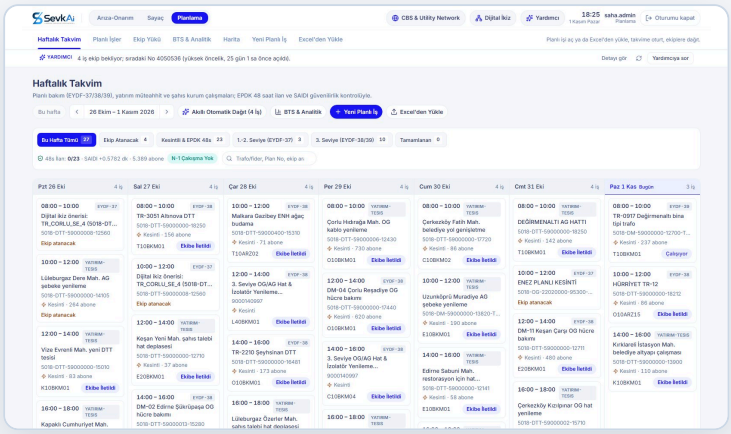


PLANNED MAINTENANCE

Maintenance and investment on a compliant calendar

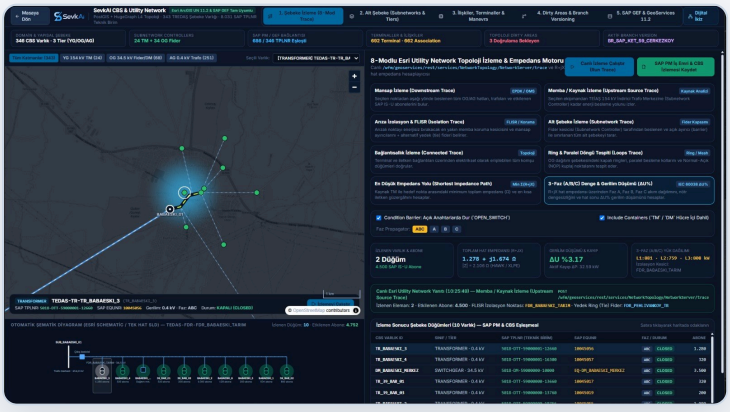
Planned jobs go onto a weekly calendar; outage notices, network conflicts and reliability impact are checked as you plan.

- **EYDF levels:** level 1, 2 and 3 maintenance forms
- **48-hour notice** rule validated automatically for planned outages
- **N-1 conflict** checks and the SAIDI impact of every plan
- **Bulk upload from Excel** and SAP maintenance plans



NETWORK GIS

Electrical topology on one screen



8-mode topology tracing: downstream and upstream, fault isolation, subnetwork, connectivity, ring analysis, impedance path, phase balance and voltage drop.

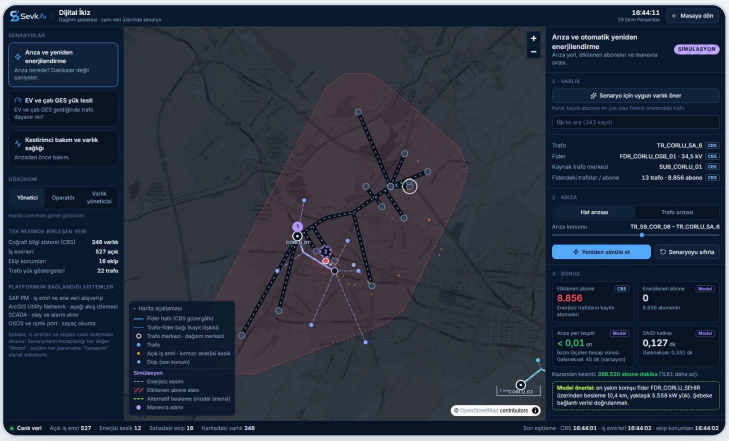
- **Design branches:** design without touching the live network, reconcile, publish
- **Single-line diagram** with each node's SAP functional location
- **From trace to work order:** a work order straight from the result
- **Switching safety:** IEC 62271 interlock under load

DIGITAL TWIN

Simulate the network, then decide

GIS topology, SAP functional locations, SCADA alarms, smart meter load profiles, open work orders and crew locations come together in one model.

- **Fault and restoration:** alternative supply switching, customers restored
- **EV and rooftop solar load test:** transformer overload, voltage rise
- **Predictive maintenance:** age, oil temperature, loading, fault history
- **Live data and model assumptions** are labelled separately



MODULE 07 · OPERATIONS

Outage, storm and emergency management

Outage command room

Customers affected and restored, restoration estimate, calls, switching.

Planned outage notice

48-hour advance notice rule and EPDK notification report.

Storm mode

Forecast, active, recovery, closure; critical customers first.

Demand response

Peak detection from feeder telemetry; execution with operator approval.

Predictive alerts

DGA diagnosis with the Duval triangle (IEC 60599); alerts become work order suggestions.

AMI and telemetry

DLMS/COSEM remote connect/disconnect, ISA-95 UNS streams, crew chat.

SCENARIO LAB AND DRILLS

Test the pilot without touching live systems

Run scenarios from the outage console; crews and operators rehearse what they would do in a real event.

Feeder breaker trip | Automatic FLISR | AMR last-gasp wave | Buchholz / DGA alarm | 186 call storm

Full storm drill

Switching strip

Breaker and disconnector control; blocked at any point with a LOTO lock.

Crisis room

A shared room per outage with crew, customer and switching data.

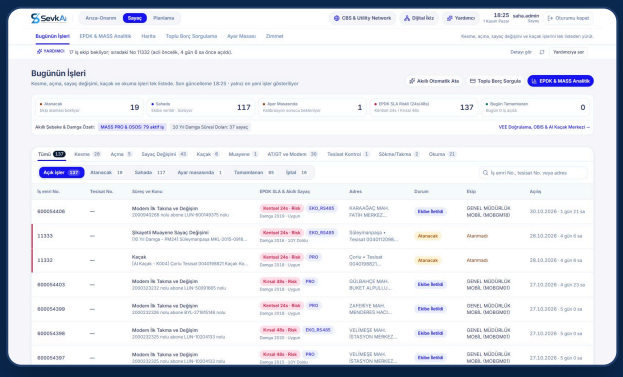
Simulators

SAP PM, GIS and CRM simulators with fault injection, end to end.

MODULE 08 · METERING AND AMI

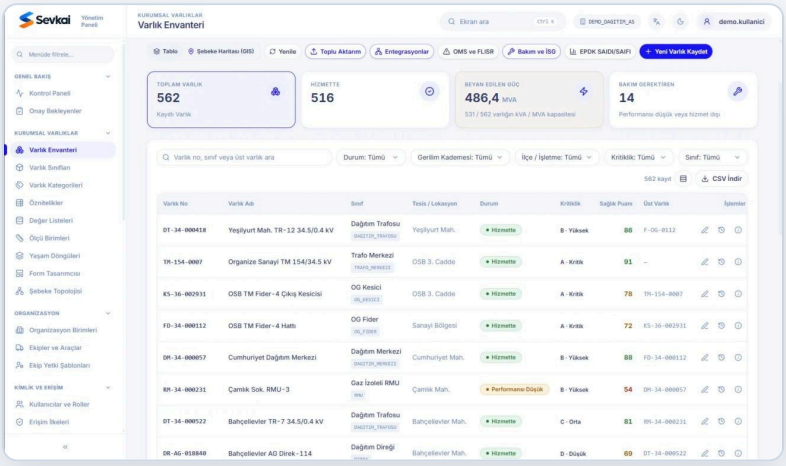
From disconnection to calibration, within legal deadlines

- **EPDK deadlines:** 24 hours urban, 48 hours rural
- **Bulk debt check:** a paid customer’s order closes before the crew leaves
- **Calibration desk:** error percentage and automatic certificates
- **Meter and seal custody;** Bluetooth optical probe (IEC 62056-21)
- **Reading quality:** VEE engine, OCR, suspicious consumption flags

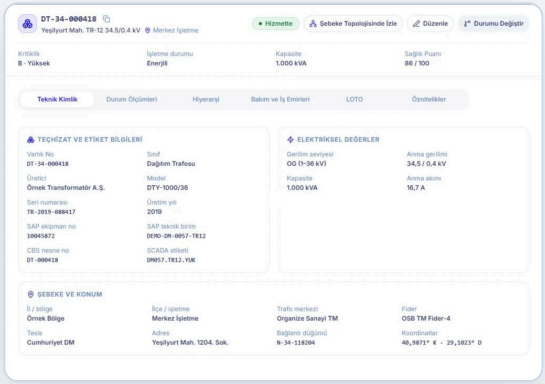


Every transformer, breaker and pole has one identity

The network assets that work orders attach to are managed inside SevkAI. Each asset is matched to its SAP functional location, GIS feature and SCADA tag.



Asset inventory: status, criticality and health score



Asset card: identity, electrical ratings, location

Asset inventory

Operating status, A–D criticality, health score and parent asset; filter by voltage level, district and class; table, map and CSV.

Lifecycle

14 stages from planning to disposal; each change logged with its reason and user. ISO 55001 and IEC 61968 (CIM) approach.

Configurable catalogue

Categories, classes and attributes; point, line and area geometry; organisation-specific classes and nameplate fields.

Engineering vocabulary

Coded value lists: cooling type, insulation medium, conductor type; kV, MVA, kVAr, ppm, µΩ units.

Network topology

Downstream and upstream connectivity and isolation traces; planning changes in a separate branch version.

SAP and GIS matching

Pull from SAP or bulk CSV/JSON import; two-way GIS sync; missing-data report.

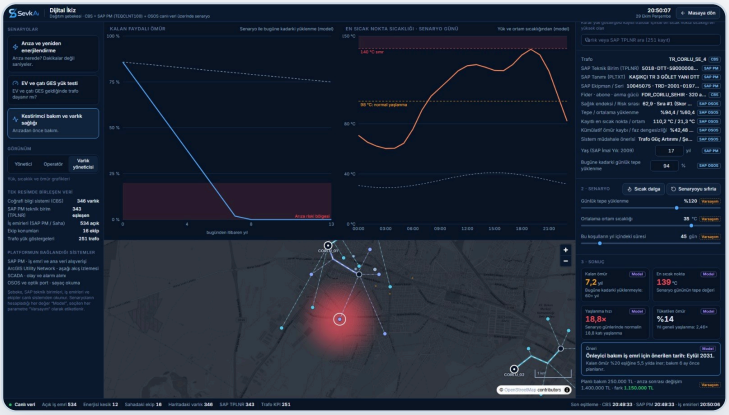
Data in the screenshots is representative.

ASSET PERFORMANCE AND RELIABILITY

See the risk, prioritise investment

Health, risk and failure data turn into maintenance and investment decisions.

- **Risk matrix (APM):** 5×5 heat map (ISO 55000), CIGRE health index, remaining life
- **Predictive alerts:** SF6 pressure loss, overheating, rising DGA hydrogen
- **FMEA:** ISO 14224 taxonomy, root cause Pareto, MTBF and MTTR
- **Device lab:** EN 50470, IEC 61869 calibration, AQL acceptance
- **Investment planning:** 1–5 year budget; candidates ranked by risk cost



MODULE 10 · SAFETY

Permits and LOTO: safety is part of the process

Request | Risk | Isolation | Authorisation | Issue | Work | Closure

Isolation record

LOTO points, lock serials and tags; zero-voltage verification.

Four-eyes rule

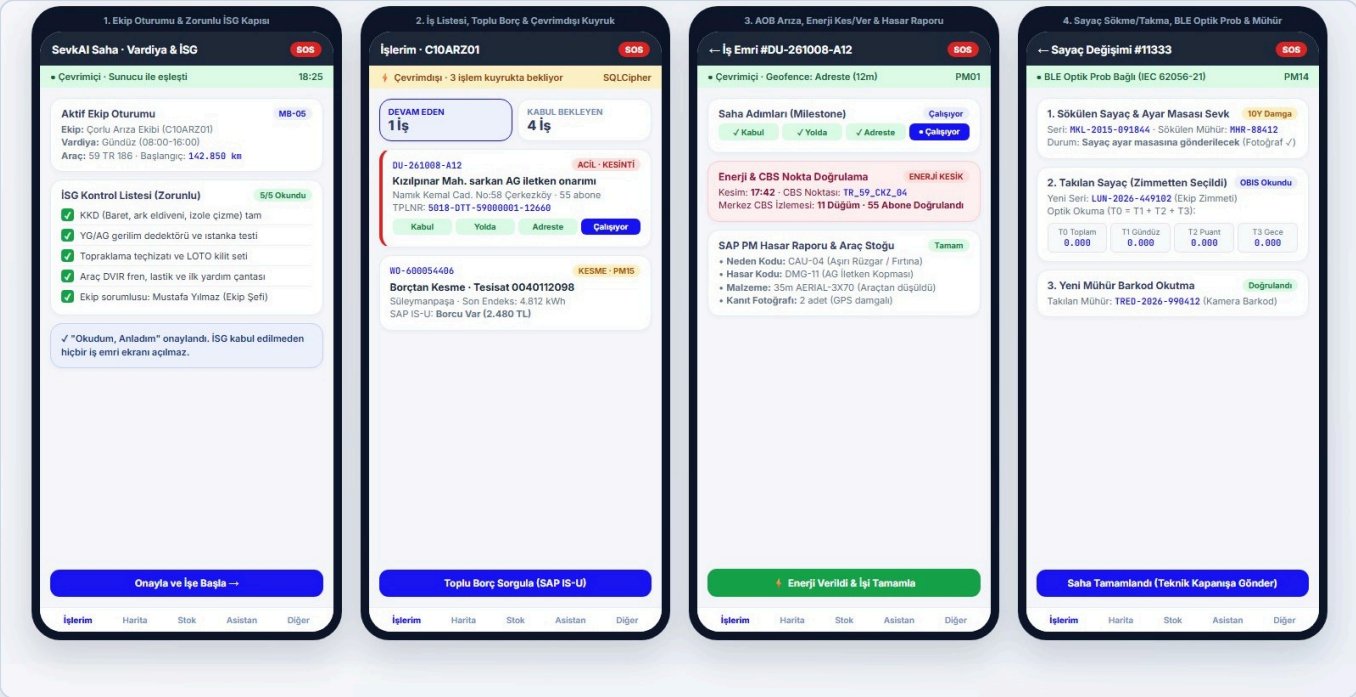
Requester and approver cannot be the same person; role-based approval.

Permit types and PPE

LOTO, hot work, confined space, work at height; PPE by job type, hazard zones on the map.

Work goes on in the field even when the connection drops

The Android and iOS field app runs fault, maintenance and metering work orders.



Mandatory safety gate

No work screen opens until the crew session and safety checklist are confirmed.

Energy lock

“Energised” stays locked without an isolation record; one active job, holds and handovers with reasons.

Offline queue

Without a connection every step is stored in a 256-bit encrypted database and sent in order later, with no duplicates.

Evidenced steps

Accepted, en route, on site (GPS geofence), de-energised/energised; camera-only, location-stamped photos.

Meters and seals

Index by IEC 62056-21 optical probe; seals and materials by barcode; only seals issued to the crew.

Field support

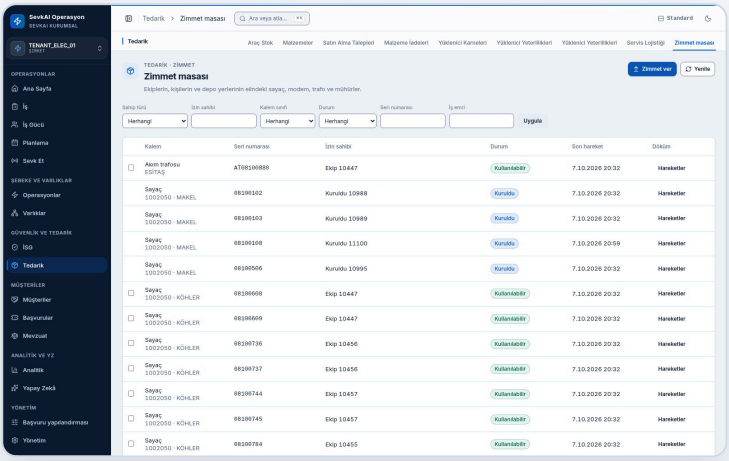
SAP damage codes, SOS, sunlight mode and an AI assistant for technicians.

MODULE 12 · SUPPLY

Traceable materials, warehouses and custody

Every material used in the field is recorded against a work order and a crew.

- **Van stock** and reorder thresholds; purchasing and returns
- **Custody desk:** meters, modems, CTs/VTs and seals by serial number
- **Service logistics:** parts requests, costs, workshop repairs
- **Contractor scorecards** and qualifications

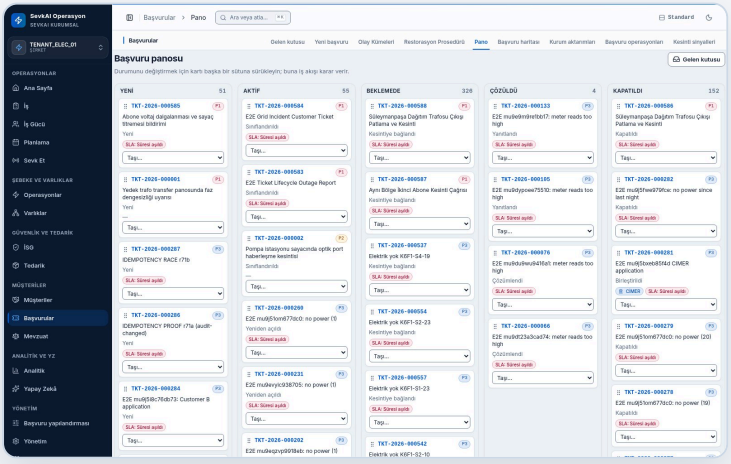


MODULE 13 · CUSTOMERS AND REQUESTS

One record from call to resolution

Requests from every channel land in one inbox; if field work is needed, they become work orders.

- **Types:** fault, complaint, request, information, objection, theft, damage, KVKK
- **Board and map:** drag and drop, SLA status, hazard flag
- **Customer 360:** service points, contact preferences, satisfaction
- **CİMER, EPDK, e-Government** request import



MODULE 14 · REGULATION

Regulation built into the software

EPDK and KVKK obligations run as versioned rules; compliance happens at the moment of work, not at reporting time.

Rule pack

Versioned EPDK/KVKK rules, diff testing, date-based effectivity.

Compensation

Automatic suggestion, four-eyes approval, transfer to CIS.

EPDK reports

Table 7-A / 7-B records, complaints report, annual audit pack.

KVKK

Data subject requests, contact consents, masked personal data.

MODULE 15 · ANALYTICS

Reliability and performance, measurable

IEEE 1366 indices; major event days are separated with the 2.5 beta method and the calculation basis is shown on screen.

SAIDI
Average interruption duration

SAIFI
Average interruption frequency

CAIDI
Duration per customer

MAIFI
Momentary interruption frequency

- **Field KPIs:** first-time fix, SLA compliance, mean time to repair
- **SLA ledger:** SHA-256 hash-chained records; EPDK reporting studio
- **Thematic dashboards:** energy losses, revenue protection, transformer health, meter comms
- **CSV export:** personal data masked, every download audited

MODULE 16 · ARTIFICIAL INTELLIGENCE

AI suggests, the operator decides

AI acts as an adviser; nothing is applied without operator approval. Models can be used from an external service or run on the organisation's own servers where infrastructure is provided.

Dispatch suggestions

Crew suggestions that weigh network and crew relationships; each waits for explicit operator approval.

Operations co-pilot

Answers on work orders, assets, outages and permits, citing its records; a field assistant too.

OCR meter reading

Index drafts read on the device come for approval; accuracy and rejection rate tracked.

Likely outage detection

Likely outages inferred from requests and signals, on a separate map layer.

Knowledge base

Regulations, procedures and manuals are indexed; suggestions come with sources.

Admin drafter

Process, rule and form drafts from a described need; publishing needs approval.

L0–L3 autonomy

Dispatch, process release, de-energising and permits are never automatic.

Emergency stop

Company-wide or for a single agent.

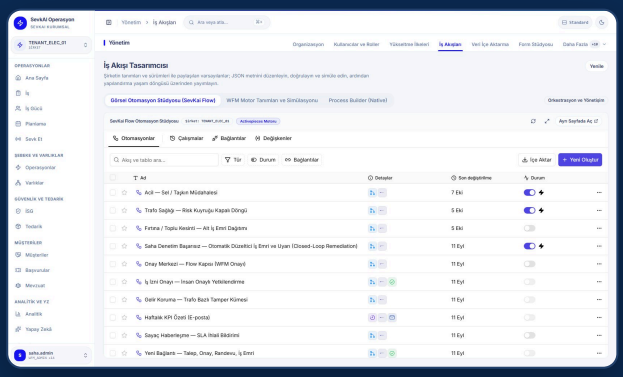
Decision ledger

Suggested, approved, rejected, executed, overridden.

MODULE 17 · ADMINISTRATION

Processes you adapt without code

Draft · Validation · Simulation · Test · Review · Approval · Release · **Monitoring**



- **Workflow engine:** transitions gated by certificates, signatures, permits
- **Rule editor** with dry runs; versioned **form studio**
- **SevkAI Flow:** 18 ready-made automation flows
- **Feature flags,** cross-company configuration packages

INTEGRATION

Two-way, outage-resilient SAP integration

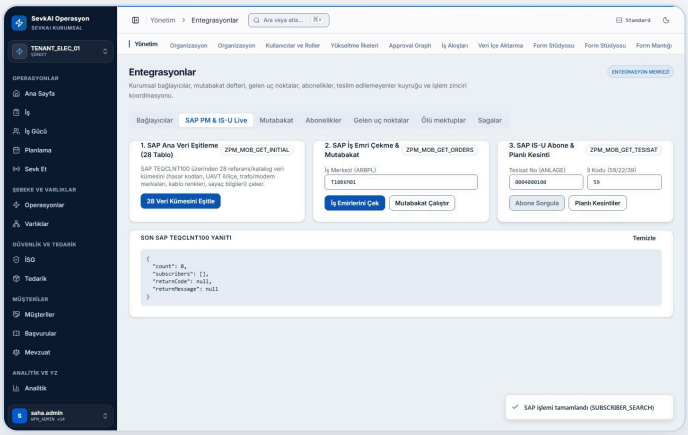
When SAP is unreachable, no command is lost: it is delivered in order, with retries and a record chain. Resending never creates duplicates.

45
SAP services, in five waves

26
master data tables mapped

5
SAP-specific field screens

18
SAP and GIS REST endpoints



- **Modules:** PM, IS-U, MM/WM, FI-CA, HR and GEF
- **Master data:** CSV or SAP XML, dry run first; PM catalogues
- **Work order type designer:** SAP order/notification mapping
- **Other:** Esri Utility Network, AMR, SCADA/OMS, CRM/186

TECHNOLOGY AND SECURITY

Designed for critical infrastructure

Surfaces
Web console, admin panel, customer portal · Android/iOS

Access
API gateway · SSO, Active Directory / LDAP · single REST API

Core
Business services and data model · PostgreSQL

Events and data
Kafka event streaming, webhooks, analytics dashboards, geoservices

On-premises deployment
Row-level tenant separation
Role- and attribute-based access
Tamper-proof audit log (KVKK)
Encrypted mobile database
Developer portal and API keys

TECHNICAL SPECIFICATIONS

SevkAI at a glance

Components	Operations Portal; Fault and Repair, Metering and Planning workspaces; Network GIS; Digital Twin; SevkAI Flow; Admin Console; Field Mobile Terminal (9 modules)
Platform	Web-based workspaces; Android and iOS field app
Deployment	On the organisation's own servers; AI models from an external service or on-premises
SAP integration	Two-way with PM, IS-U, MM/WM, FI-CA, HR; 26 master data tables synced daily; ordered delivery and retries
Other integrations	Esri Utility Network (SAP GEF matching), AMR, SCADA/OMS, CRM/186; SAP PM, GIS and CRM simulators for pilots
API	Scoped, rate-limited API keys, webhooks, CIM schemas, test console
Identity and access	SSO, Active Directory/LDAP; role- and attribute-based access; row-level security per company
Field app	Offline, 256-bit encrypted local queue; GPS geofence and photo verification; IEC 62056-21 BLE optical probe; barcode
Network analysis	8-mode topology tracing; single-line diagram
Asset management	Inventory, class/attribute catalogue, ISO 55001 lifecycle; 5×5 APM, FMEA (ISO 14224), device calibration, investment planning
Customers and regulation	Multi-channel requests, Customer 360, EPDK Table 7-A/7-B, complaints report, annual audit pack, compensation
Regulation	24-hour urban / 48-hour rural SLAs, 48-hour notice, EYDF forms; IEEE 1366 SAIDI, SAIFI, CAIDI, MAIFI
AI	Advisory only; L0–L3 autonomy, emergency stop, decision ledger
Audit and security	Tamper-proof audit log (KVKK Law 6698); two-stage LOTO, mandatory safety checklist, SOS

ROLES AND PERMISSIONS

More than 30 roles, each with its own screens

Field
Technician, crew leader, contractor, meter technician

Operations
Dispatch, supervisor, outage, storm, call centre

Planning
Maintenance planner, scheduler, resource manager

Assets and network
Asset, reliability, GIS and fleet

Supply
Warehouse, materials, warehouse technician

Commercial
Contracts, billing, revenue

External
Customer, corporate customer, contractor

Safety, legal, audit
Permit authority, regulation, KVKK, auditor

Management
Approvals and dashboards

WHY SEVKAI?

Six reasons, one platform

Domestic and industry-specific

Born from real field needs and EPDK regulation.

End to end

From call to closure, warehouse to regulation, on the same data.

AI under human control

AI suggests, the operator decides.

Built for the field

Offline work, SOS, a screen you can read outdoors.

Auditable

Location- and time-stamped evidence, tamper-proof records.

Adaptable

Processes without code; multi-tenant, three languages.



See SevkAI on your own network

Contact us for a live demo, an integration assessment and an on-premises pilot.

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