SevkAi

— OPERATIONAL INTELLIGENCE —

PRODUCT CATALOGUE · 2026

Operational intelligence that runs electricity distribution field operations on one platform

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

EPDK

TREDAŞ
TRAKYA ELEKTRİK DAĞITIM A.Ş.

fizibil



CATALOGUE

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PLATFORM

One platform, five user surfaces

SevkAI Operations

Portal · web

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

Unit Workspaces

Workspaces · web

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

Admin Console

Configuration · web

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

SevkAI Field

Android · iOS

Accept the job, execute safely on site, capture evidence, work offline.

Service Appointments

Customer · web

Request tracking, job status, appointments and satisfaction.

Single sign-on: Keycloak SSO · Screens by role · Türkçe · English · Shqip · Light and dark themes · Ctrl+K command palette

END-TO-END SCENARIO

The journey of a work order

1. **Report.** A 186 call becomes a customer request and a work order.
2. **Dispatch.** AI suggests a crew; the dispatcher approves or picks one.
3. **En route.** The job lands on the technician’s phone; the control centre follows on the map.
4. **Arrival.** A 100-metre geofence records arrival on site automatically.
5. **Safe execution.** Risk assessment, checklist, photos, meter index and signature.
6. **Audit.** The supervisor reviews and approves the photo, GPS and signature evidence.
7. **Customer update.** Status, arrival time, documents and satisfaction in the portal.

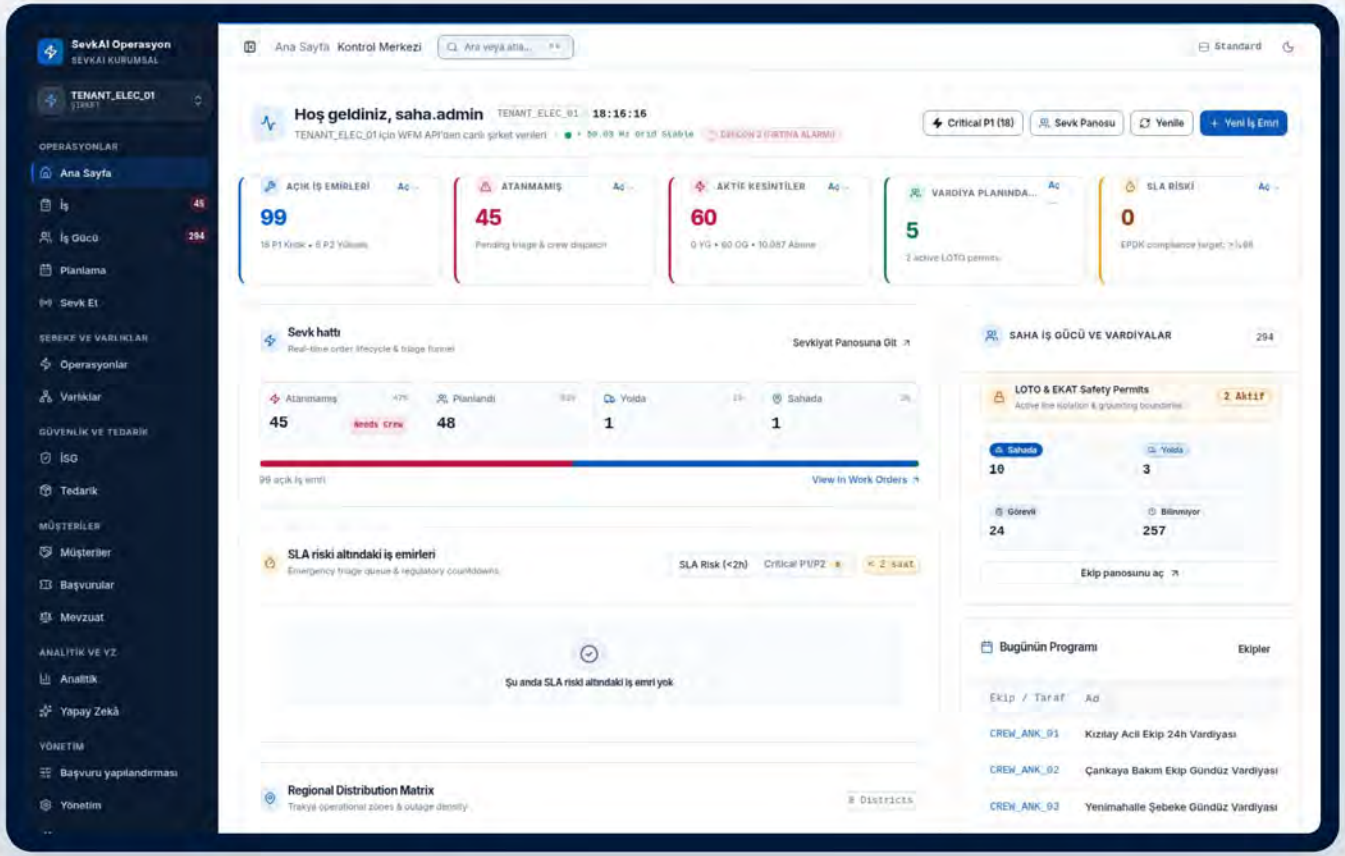


MODULE 01 · HOME

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
- **Regional matrix** and network load curve
- **Live feed:** assignments, status changes and critical alarms as they happen

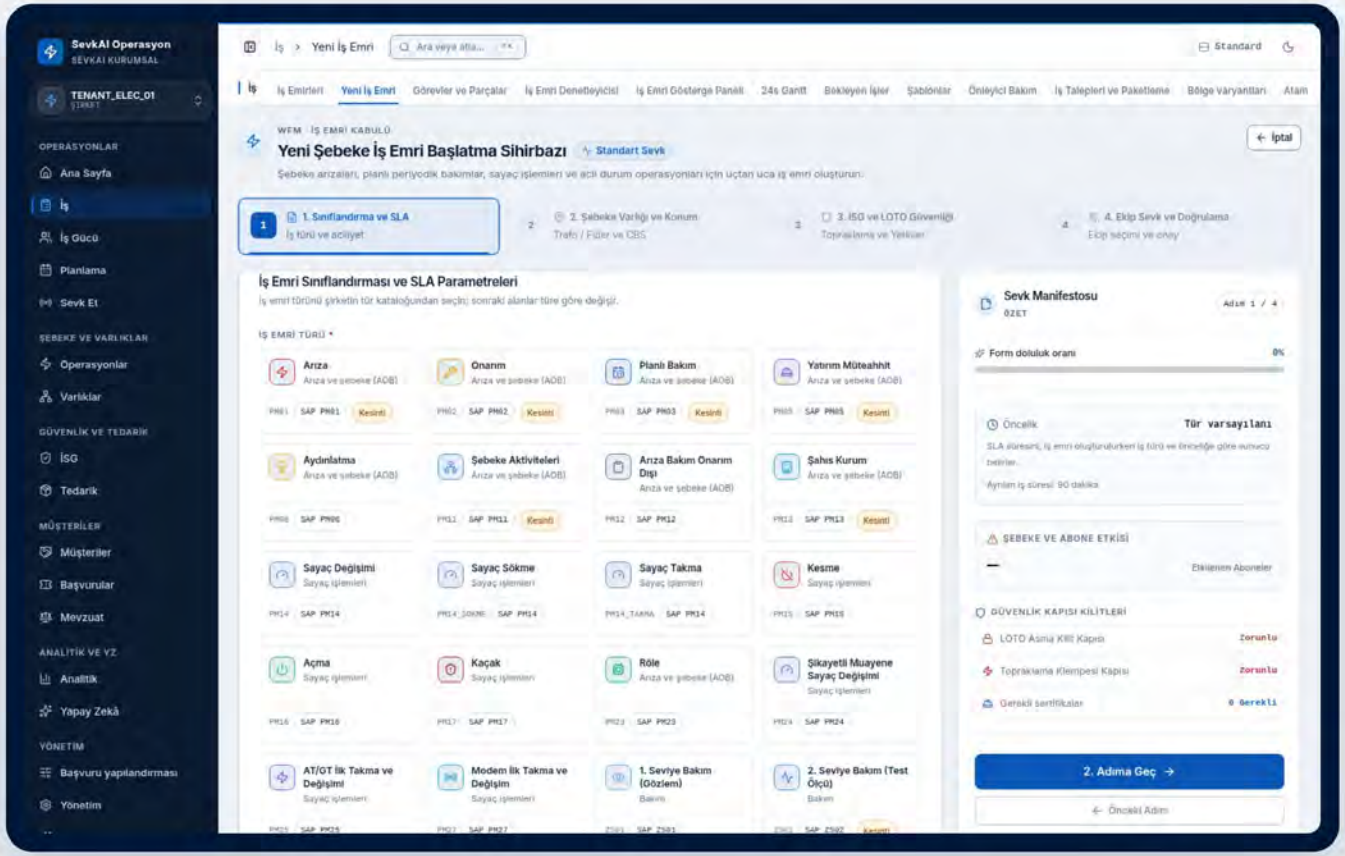


MODULE 02 · WORK

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,** templates, preventive maintenance, work packaging
- **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 gets **Eligible**, **Warning** or **Not eligible** as a result.

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

AI suggests, people approve

Graph-based reasoning suggests the best crew, with a confidence score, supporting data and rationale.

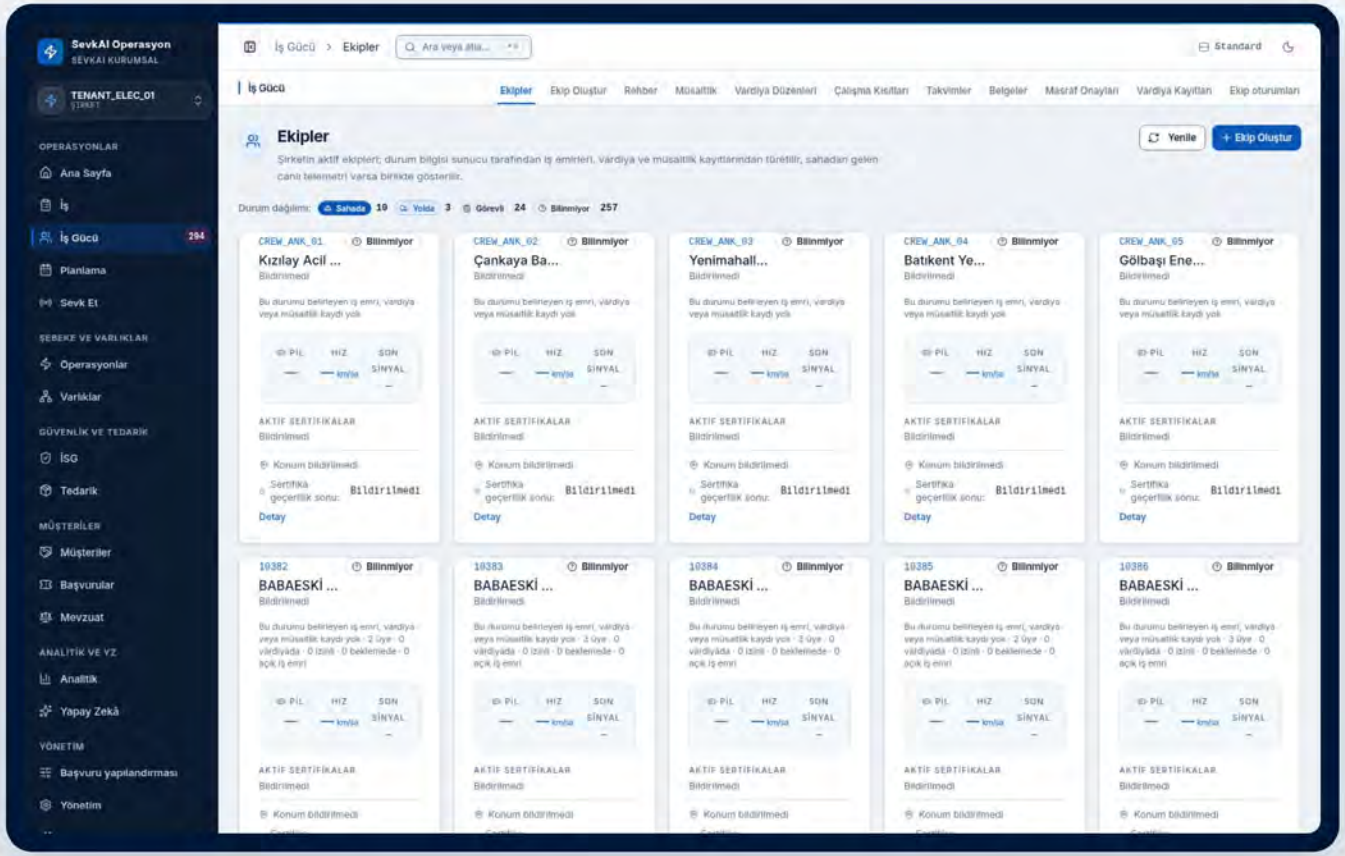
A suggestion becomes an assignment only once approved. An assignment that breaks a rule needs a written justification and is recorded in the audit log.

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
- **Shift patterns,** calendars, availability, working constraints
- **Documents:** licence and certificate expiry alerts
- **Expense approval,** timesheets and crew device sessions

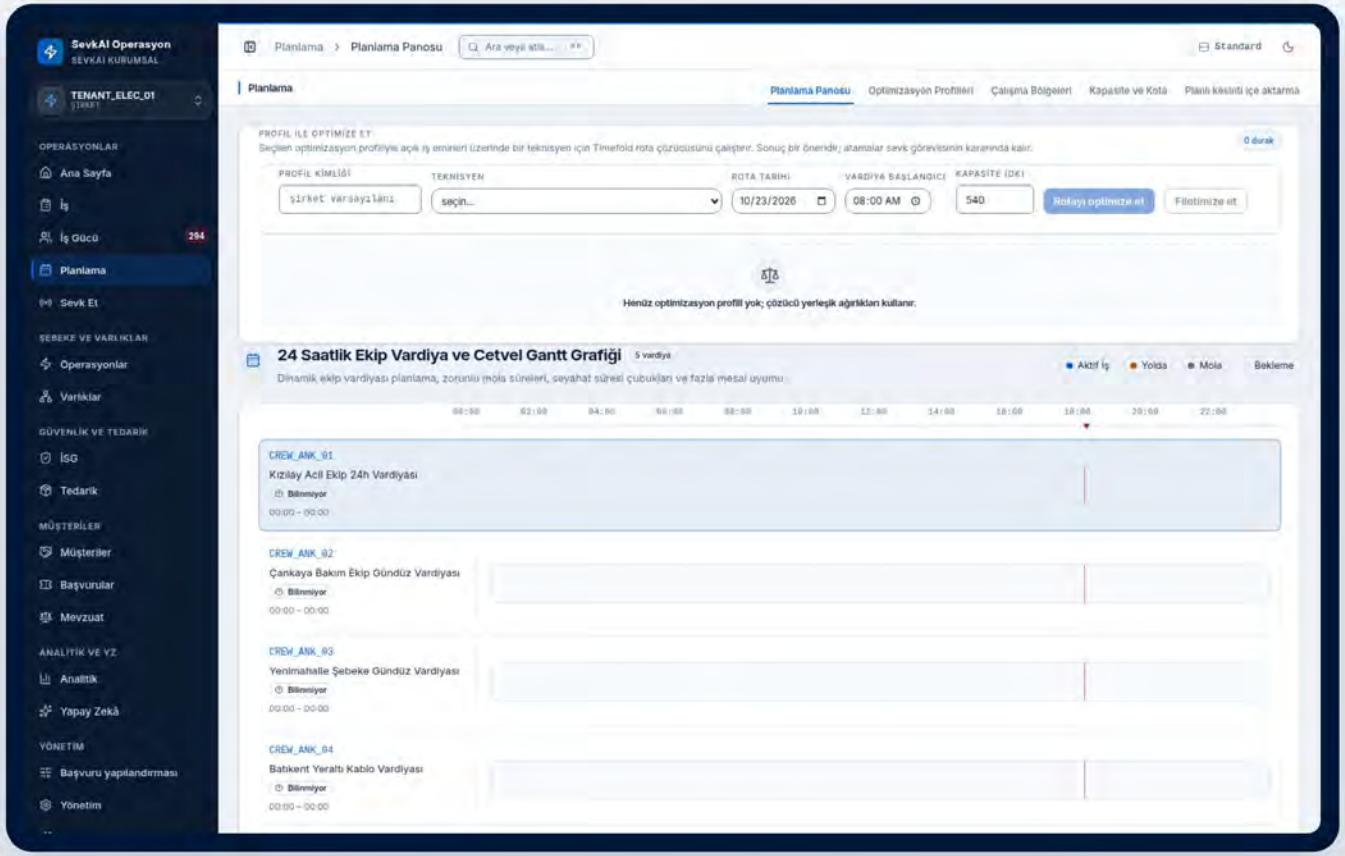


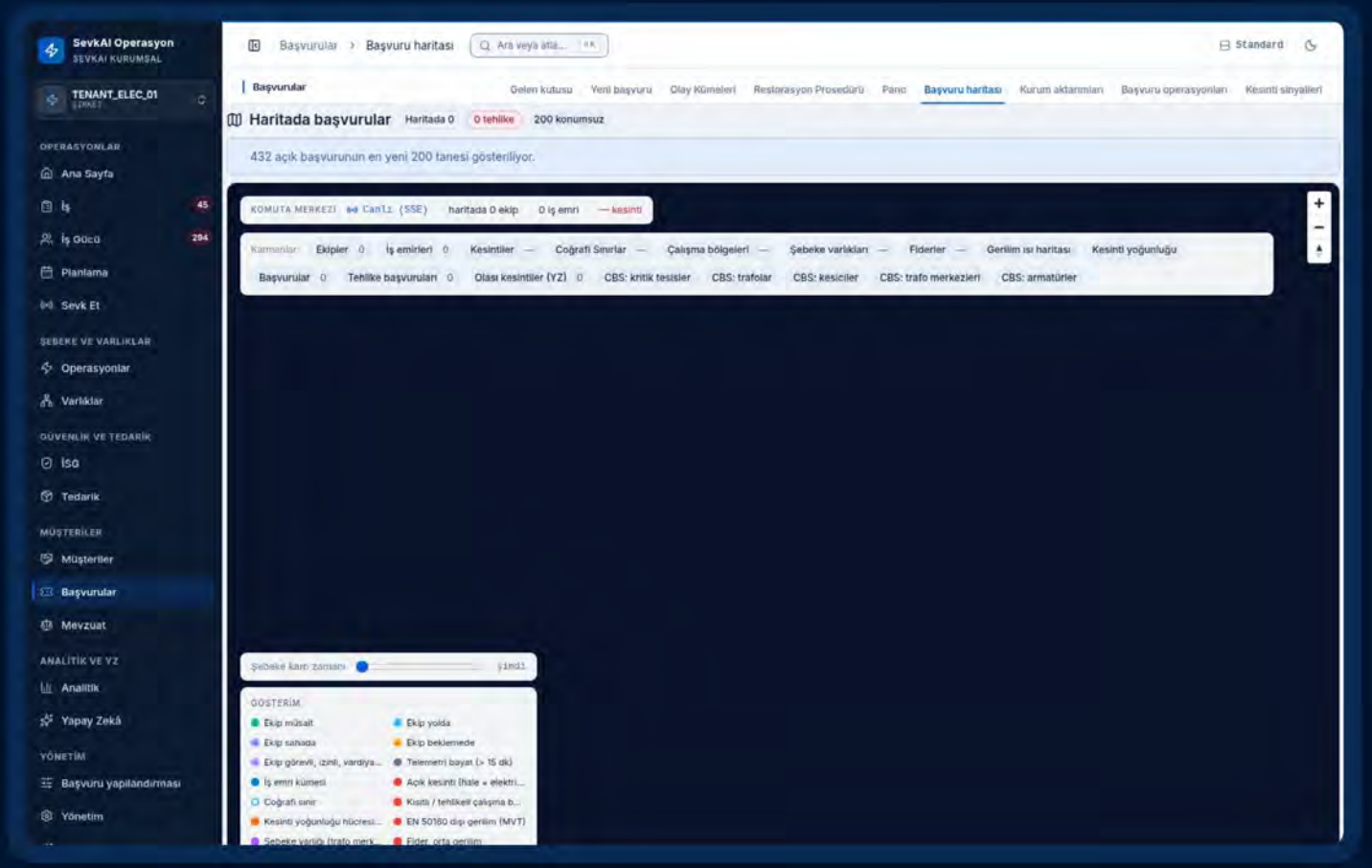
MODULE 05 · PLANNING

Route, capacity and shift planning

The optimisation solver produces routes weighted by your organisation’s priorities.

- **Route optimisation:** a single technician or the whole fleet
- **Profiles:** travel, overtime, cost and lateness weights
- **Work zones:** urban, industrial, rural, HV corridor
- **Capacity and quotas,** 24-hour crew Gantt chart





MODULE 06 · COMMAND MAP

Network and field on the same map

- **Layers:** crews, jobs, outages, assets, feeders, zones
- **Heat map:** voltage and outage density
- **Time slider** for a look back in time
- **Esri compatible** geoservices gateway, vector tiles

UNIT WORKSPACES

A workspace for each unit, focused on its own work

Fault and Repair

Fault management from first call to re-energisation

Metering

Disconnection, reconnection, exchange, theft and calibration desk

Planned Maintenance

A regulation-compliant maintenance and investment calendar

Network GIS

Electrical topology, tracing and design

Digital Twin

Network simulation and decision support

- **Pick, don’t type:** transformers, feeders and functional locations from pickers fed by GIS and SAP
- **Smart auto-assignment:** bulk distribution by proximity, competence and workload
- **EPDK countdowns** and colour-coded tracking of legal deadlines

UNIT WORKSPACE · FAULT AND REPAIR

Manage faults from first call to re-energisation

To assign → En route → On site → Done

Call clustering

Last-gasp signals from smart meters and 186 calls are clustered on the map to locate the likely fault point.

FLISR suggestions

Switching steps that isolate the faulty section and restore healthy feeder branches; life-support customers first.

Smart auto-assignment

Bulk assignment by proximity, MV/LV competence and workload; a rejected job goes to another crew in one click.

EPDK outage records and compensation

Chronic fault detection and renewal jobs

Material use from van stock

Board, detailed board and table views

UNIT WORKSPACE · PLANNED MAINTENANCE

Maintenance and investment on a compliant calendar

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

EYDF levels

EYDF-37 level 1 and 2, EYDF-38/39 level 3 maintenance

48-hour notice

The advance notice rule for planned outages is validated automatically

N-1 conflicts

Overlapping outages in the same network area are caught in advance

SAIDI impact

Each plan's contribution to the reliability index, in minutes

Bulk upload from Excel

Annual and monthly maintenance plans onto the calendar, with a validation summary

SAP maintenance plans

Periodic plans, survey and bill of quantities, material reservation

UNIT WORKSPACE · NETWORK GIS

Electrical topology on one screen

8-MODE TOPOLOGY TRACING

- Downstream (customer impact)
- Upstream (source)
- Fault isolation
- Subnetwork (feeder)
- Connectivity check
- Ring and loop analysis
- Lowest impedance path
- 3-phase balance and voltage drop

Results show affected customers, line impedance, voltage drop percentage and load distribution by phase.

Design branches

Design without touching the live network; validate, reconcile, publish to live.

Single-line diagram

The feeder’s electrical diagram, with each node’s SAP functional location.

From trace to work order

A maintenance or fault work order straight from an asset in the trace result.

Switching safety

IEC 62271 interlock that prevents opening a disconnector under load.

UNIT WORKSPACE · NETWORK DIGITAL TWIN

Simulate the network, then decide

Scenario 1

Fault and restoration

Switching sequence for alternative supply, customers restored and crew suggestion; into a work order in one click.

Scenario 2

EV and rooftop solar load test

Transformer overload and voltage rise under assumed extra chargers and installed capacity.

Scenario 3

Predictive maintenance and asset health

Priority from year of manufacture, oil temperature, loading and fault history; maintenance requests go to planning.

DATA COMBINED IN ONE MODEL

GIS topology · SAP functional locations · SCADA alarms · Smart meter load profiles · Open work orders · Crew locations

MODULE 07 · OPERATIONS

Outage, storm and emergency management

Outage command room

Customers affected and restored, estimated restoration time, calls and switching.

Planned outage notification

48-hour advance notice rule, compliance status and EPDK notification report.

Storm operations

Forecast, active, recovery, closure; critical customers first, support crews deployed.

Demand response

Feeder peak load events; execution only with operator approval.

Predictive alerts

Asset-health alerts; DGA diagnosis with the Duval triangle (IEC 60599).

Announcements and crew chat

Safety announcements as a banner on mobile; job-context chat.

MODULE 07 · SCENARIO LAB

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; switching is blocked at any point with a LOTO lock.

Crisis room

A shared room for each outage, bringing crew, customer and switching data together.

Simulators and fault injection

SAP PM, GIS and CRM simulators let the pilot run end to end.

MODULE 08 · METERING WORKSPACE AND AMI

Meter operations from disconnection to calibration

EPDK deadline tracking

The legal 24-hour urban and 48-hour rural deadlines for reconnection and disconnection are tracked with colour codes.

Bulk debt check

A customer who pays before the crew leaves has their disconnection order closed automatically.

Calibration desk

Error percentage of removed meters and automatic calibration certificates; no technical closure until done.

Meter and seal custody

Issued to crews by serial range; meters and seals used in the field are deducted from the balance.

Reading quality

Estimation, correction and suspicious consumption flags with a VEE engine and OCR.

AMI and theft

Last-gasp and silent meter tracking, transformer connection suggestions, theft reports.

In the field: index reading with a Bluetooth optical probe (IEC 62056-21), seals by barcode and evidence by camera.

MODULE 09 · ASSETS

Asset performance and reliability

- **Risk matrix (APM):** 5×5 heat map from probability and consequence, CIGRE health index, remaining life
- **Predictive alerts:** SF6 pressure loss, overheating, rising DGA hydrogen; approved work order suggestions
- **Failure analysis (FMEA):** ISO 14224 taxonomy, root cause Pareto, MTBF and MTTR
- **Device lab:** meter and CT/VT calibration (EN 50470, IEC 61869), AQL acceptance testing
- **Investment planning:** 1–5 year budget and cap simulation; renewal candidates ranked by risk cost

NETWORK HIERARCHY

Region

Substation

Feeder

Distribution centre

Pole and meter

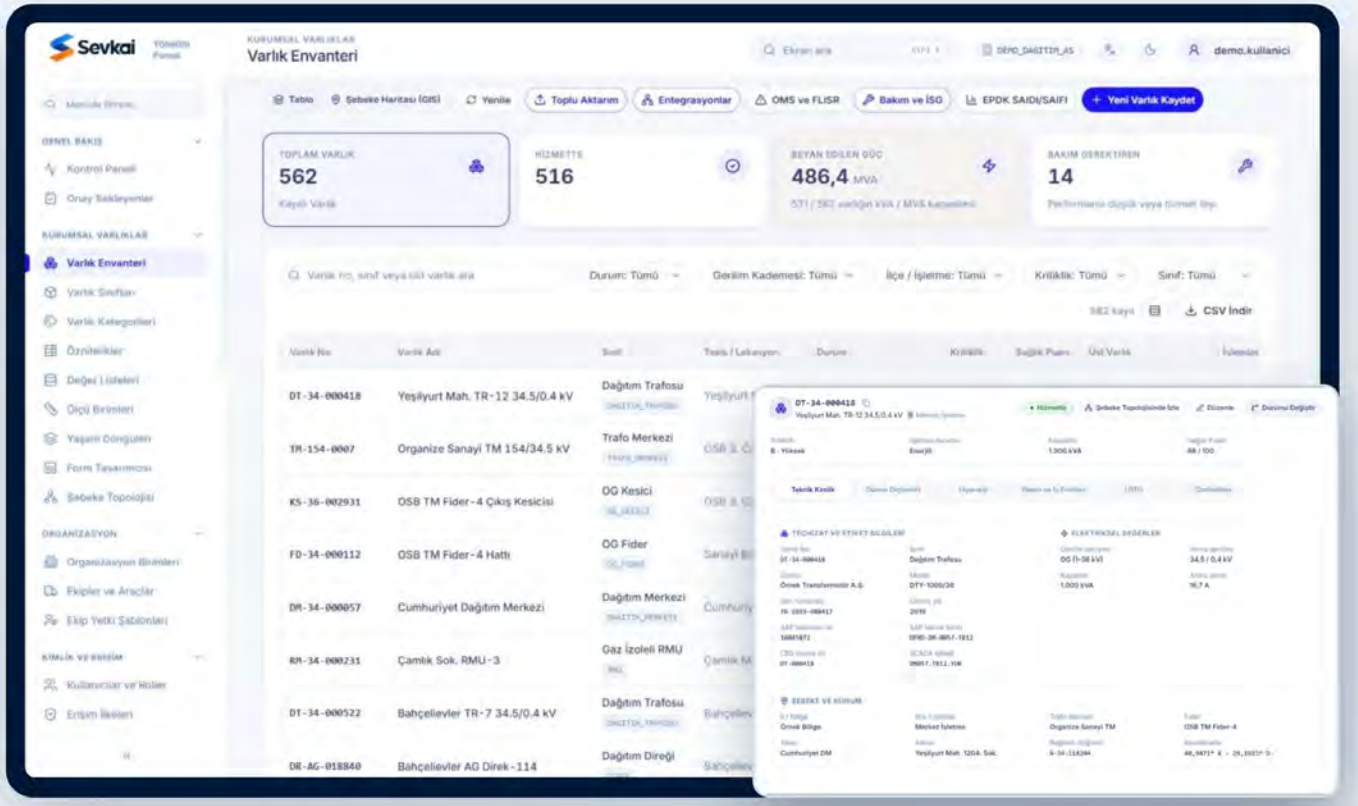
Each asset is recorded with its HV, MV or LV voltage level and GIS coordinates and tracked through its lifecycle states.

MODULE 09 · ASSET MANAGEMENT (EAM)

Every transformer, breaker and pole has one identity

Each asset is matched to its SAP functional location, GIS feature and SCADA tag.

- **Inventory:** status, A–D criticality, health score; table, map, CSV
- **Lifecycle:** 14 stages from planning to disposal; ISO 55001, IEC 61968 (CIM)
- **Catalogue:** categories, classes, attributes; point, line and area geometry
- **Engineering vocabulary:** coded value lists; kV, MVA, ppm units
- **SAP and GIS:** bulk import, two-way sync, missing-data report



MODULE 10 · SAFETY

Permits to work and LOTO: safety is part of the process

PERMIT TO WORK LIFECYCLE



Isolation record

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

Four-eyes rule

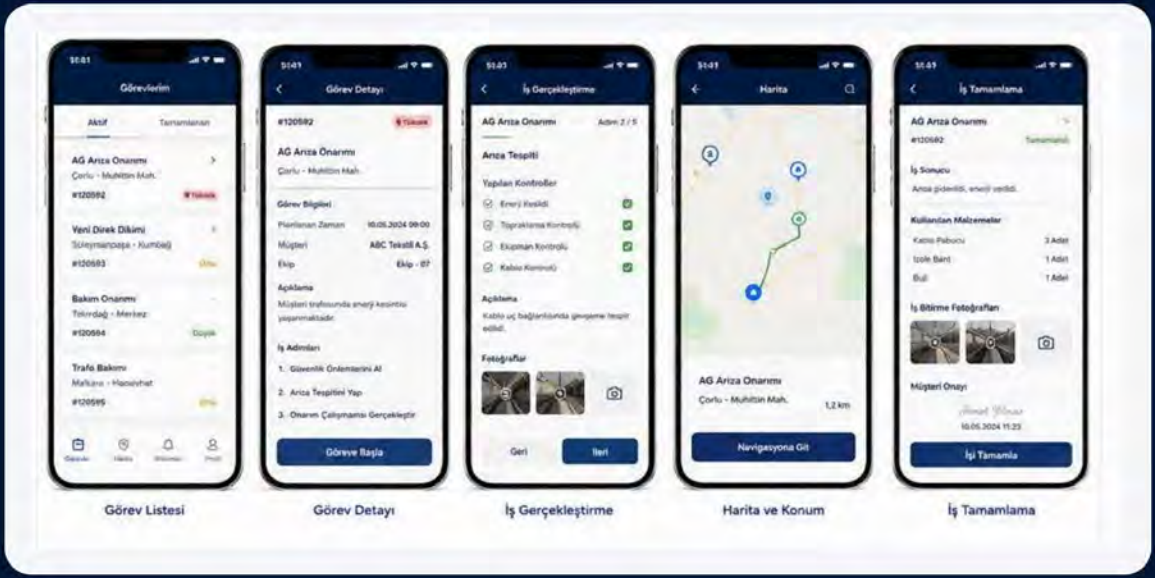
The requester and the approver cannot be the same person; role-based approval and delegation.

Permit types and PPE

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

MODULE 11 · SEVKAI FIELD

Safe, rule-bound and offline-ready in the field



- **Safety gate:** no job opens until the crew session and checklist are confirmed
- **One active job:** with reasons for holds and handovers
- **Energy lock:** “Energised” stays locked without an isolation record
- **Offline first:** encrypted local data, automatic sync

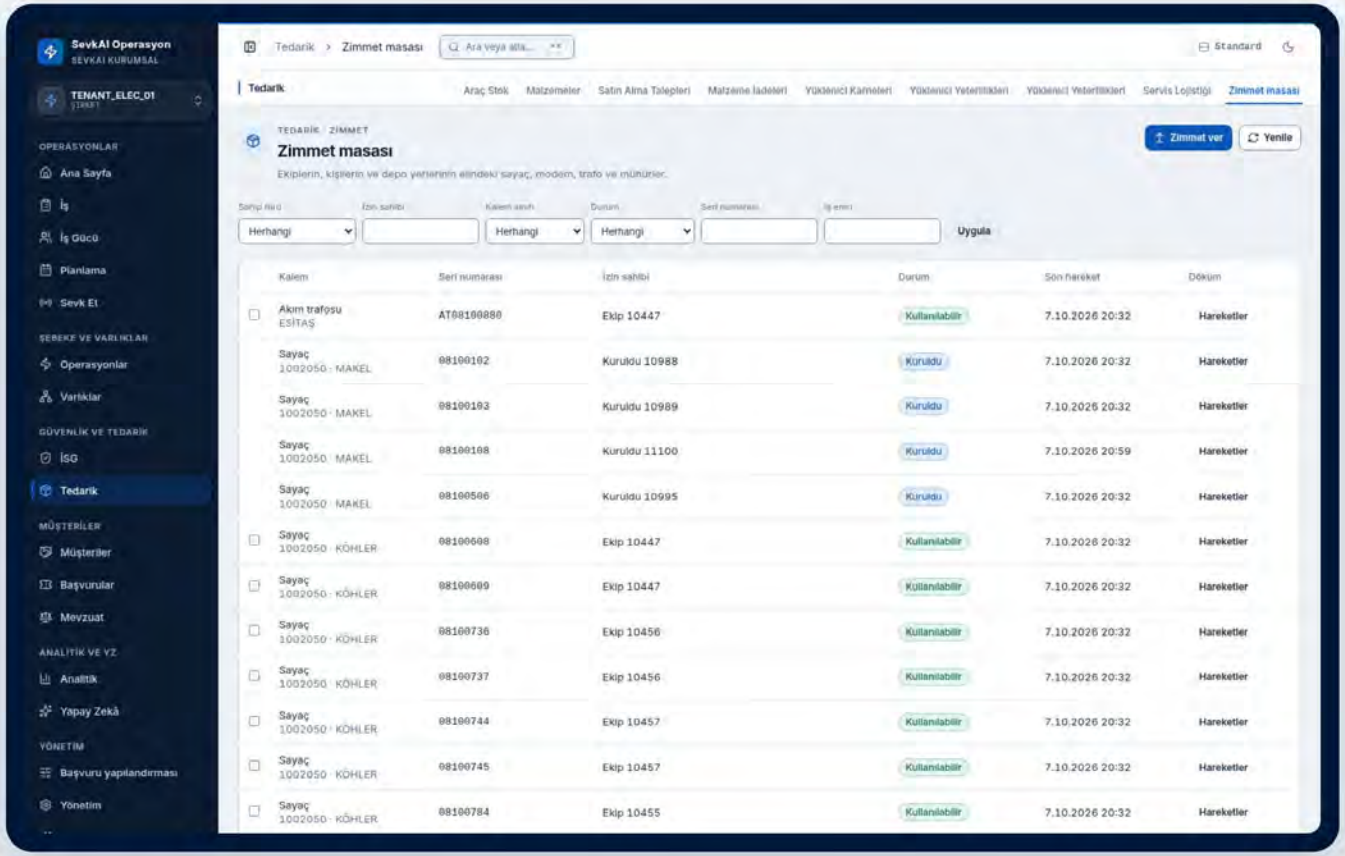
Bluetooth optical probe | Seals and materials by barcode | SAP damage codes | Arrival by geofence | SOS | Sunlight mode

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,** material catalogue, purchasing and returns
- **Custody desk:** serialised issue, return and movement log
- **Service logistics:** parts requests, costs, workshop repairs
- **Contractor scorecard,** qualification and partner marketplace



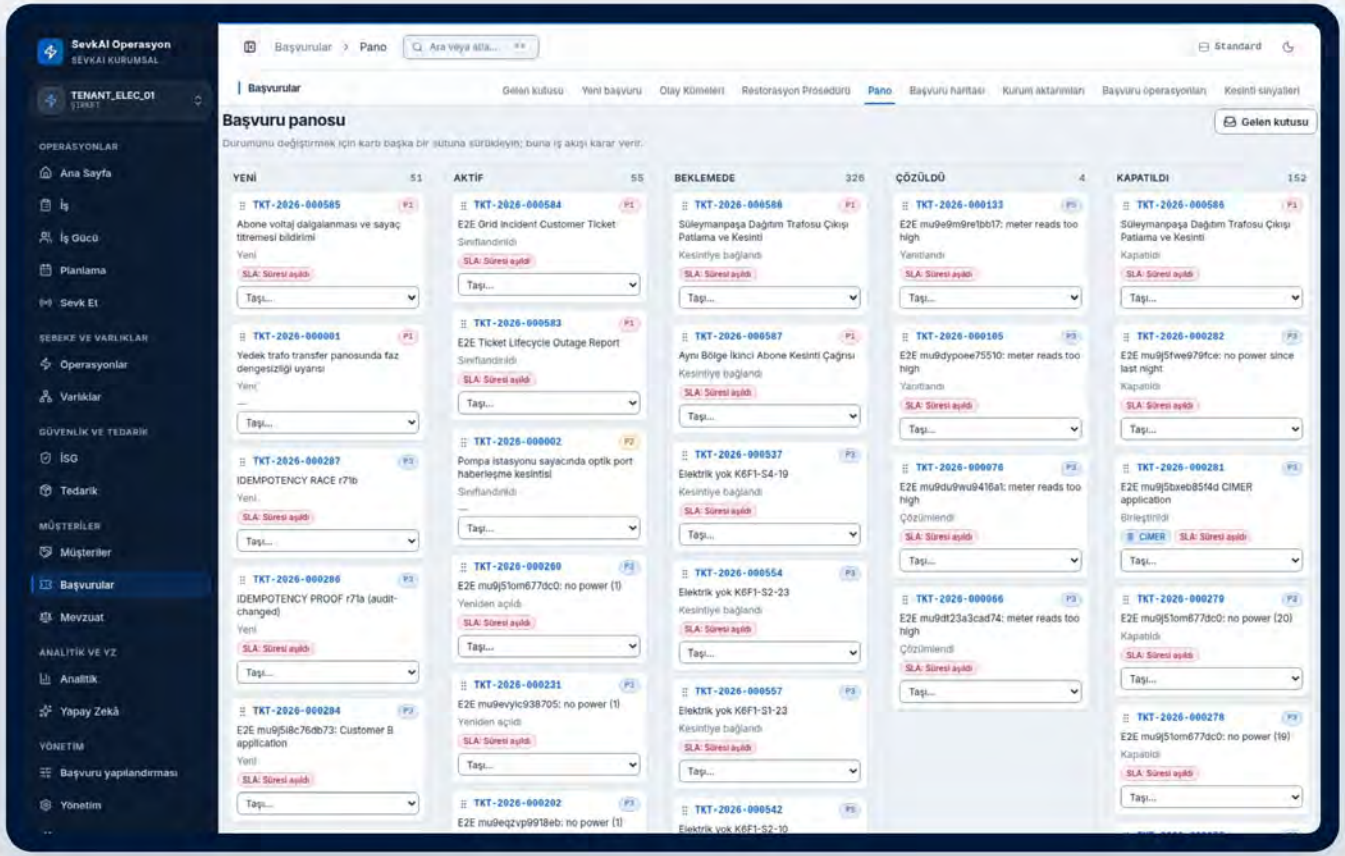
MODULE 13 · CUSTOMERS AND REQUESTS

One record from call to resolution

Requests are tracked against SLA hours; if field work is needed, they become work orders.

- **186 call handling,** outage linking and privacy notice
- **Inbox,** drag-and-drop board, request map
- **CİMER, EPDK, e-Government** request import
- **Customer 360,** e-signed service documents, satisfaction

Service Appointments In the portal, customers follow their job status and appointment themselves.



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
- **KVKK:** data subject requests and contact consents
- **Planned outages:** notice period checks and notification report
- **EPDK reports:** Table 7-A / 7-B records, complaints report, annual audit pack

MODULE 15 · ANALYTICS

Reliability and performance, measurable

SAIDI
Average interruption duration

SAIFI
Average interruption frequency

CAIDI
Interruption duration per customer

MAIFI
Momentary interruption frequency

Reporting and audit

Field KPIs: first-time fix, SLA compliance, mean time to repair

Report studio and CSV export

SLA ledger: SHA-256 hash-chained records

Thematic dashboards

- Energy losses
- Revenue protection
- Transformer health
- Meter communications
- Meter reading
- EPDK compliance
- Map layers
- Request analytics

MODULE 16 · ARTIFICIAL INTELLIGENCE

AI suggests, the operator decides

Dispatch suggestions

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

Operations co-pilot

Answers on work orders, assets, outages and permits, citing the records behind each answer; a field assistant too.

OCR meter reading

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

L0–L3 autonomy
Dispatch, de-energising and permits are never automatic

Emergency stop
Company-wide or for a single agent

Decision ledger
Suggested, approved, rejected, executed

MODULE 17 · ADMINISTRATION

Processes you adapt without code

CONTROLLED RELEASE: ONLY A TESTED VERSION GOES LIVE

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

Workflow engine

State machines; transition conditions such as certificates, signatures and permits.

Rule editor

Visual condition tree; dry runs against recent work orders.

Form designer

Measurement thresholds, photo and signature evidence, conditional fields.

SevkAI Flow

Visual automation; 18 ready-made flows such as the transformer risk queue and storm mass outage.

INTEGRATION

Two-way, outage-resilient integration with SAP

45
SAP services, in five waves

26
master data tables mapped

5
SAP-specific field screens

18
SAP and GIS REST endpoints

SAP modules covered

PM maintenance · IS-U customers and meters · MM/WM stock · FI-CA receivables · HR shifts · GEF geospatial

Custom screens: EPDK outage notification, transformer and modem, meter removal and installation, disconnection, reconnection and seals, theft report.

Reliability layer

- If SAP is unreachable, transactions wait in a queue and are sent once the link returns
- Resending never creates duplicate records
- Status reconciliation between SAP and SevkAI

TECHNOLOGY AND SECURITY

Enterprise scale, with security by design

Surfaces	Web console, admin panel, customer portal · Android/iOS
Access	API gateway · Keycloak SSO · single REST API, ~494 endpoints
Core	~572 data entities, ~1,500 business services · PostgreSQL
Events and data	Kafka event streaming, webhooks, analytics dashboards, geoservices

SECURITY

- Row-level tenant separation
- Role- and attribute-based access
- Hash-chained audit log
- Server-side authorisation checks
- Encrypted mobile database

ROLES AND PERMISSIONS

More than 30 roles, each with its own screens

Field
Technician, crew leader, contractor and meter technician

Operations
Dispatch, supervisor, outage, storm, call centre, requests

Planning
Maintenance planner, scheduler, resource manager

Assets and network
Asset, reliability, GIS and fleet

Supply and warehouse
Warehouse, materials and warehouse technician

Commercial
Contracts, billing and revenue management

External users
Customer, corporate customer and contractor manager

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

Management
Approvals and management dashboards

A user can hold several roles; screens they are not authorised for are hidden, and the restriction is enforced on the server.

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, from warehouse to regulation: the same data and the same team.

AI under human control

Suggestions come from AI; decisions and accountability stay with the operator.

Built for the field

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

Auditable

Location- and time-stamped evidence, hash-chained records.

Adaptable

Processes without code; multi-tenant, three languages.

ECOSYSTEM

Domestic technology, scalable product

EPDK — Developed with R&D support

TREDAŞ TRAKYA ELEKTRİK DAĞITIM A.Ş. — Field needs defined in partnership

fizibil — Productised through domestic engineering

Electricity distribution · Natural gas · Telecoms · Municipalities · Logistics · Field service



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