

The GENESYS logo is displayed in a bold, white, sans-serif font at the top left of the page. The background of the entire advertisement is a dark, stylized illustration of a landscape at night, featuring a winding road, several power line towers, and a cluster of buildings with glowing windows.The JUMPHASH logo, which consists of a stylized 'J' inside a square, is followed by the text 'DEVELOPED BY JUMPHASH' in a smaller, white, sans-serif font.The GENE logo, featuring a stylized 'G' inside a square, is followed by the word 'GENE' in a bold, white, sans-serif font.

FOUR PRODUCTS ON ONE PLATFORM

The future of maintenance and operation.

GENESYS AMS & LES keeps the record of every transformer, breaker and line, scores its health and estimates how long it will last. GENESYS SCADA runs the substations they sit in, and the robotics pilot takes the routine inspection rounds. GENE delivers them and JUMPHASH builds them. Haytham Retail, a JUMPHASH product on the same platform, turns the cameras a store already has into counts and alerts.

GENESYS AMS & LES • GENESYS SCADA • Robotics pilot •
Haytham Retail

GENE and JUMPHASH, Sarajevo

jumhash.com/genesys

THE PROBLEM

Europe's distribution grids are ageing, and they have to become digital.

€584 bn

Investment needed in EU electricity grids this decade.

European Commission •
EU Action Plan for Grids • Nov 2023

40%

Share of Europe's distribution grids that are over 40 years old.

European Commission •
EU Action Plan for Grids •
Nov 2023

€375 to 425 bn

Investment needed in distribution grids by 2030.

Industry estimate •
EU Action Plan for Grids •
Nov 2023

The same plan says distribution grids must become digital, monitored in real time and remotely controllable. Most of that grid is already in the ground: transformers, breakers and lines that have to stay in service while they are monitored, maintained and replaced.

Source: European Commission: European grids and the EU Action Plan for Grids. The €375 to 425 bn figure is an industry estimate quoted in the plan.

IN THE FIELD

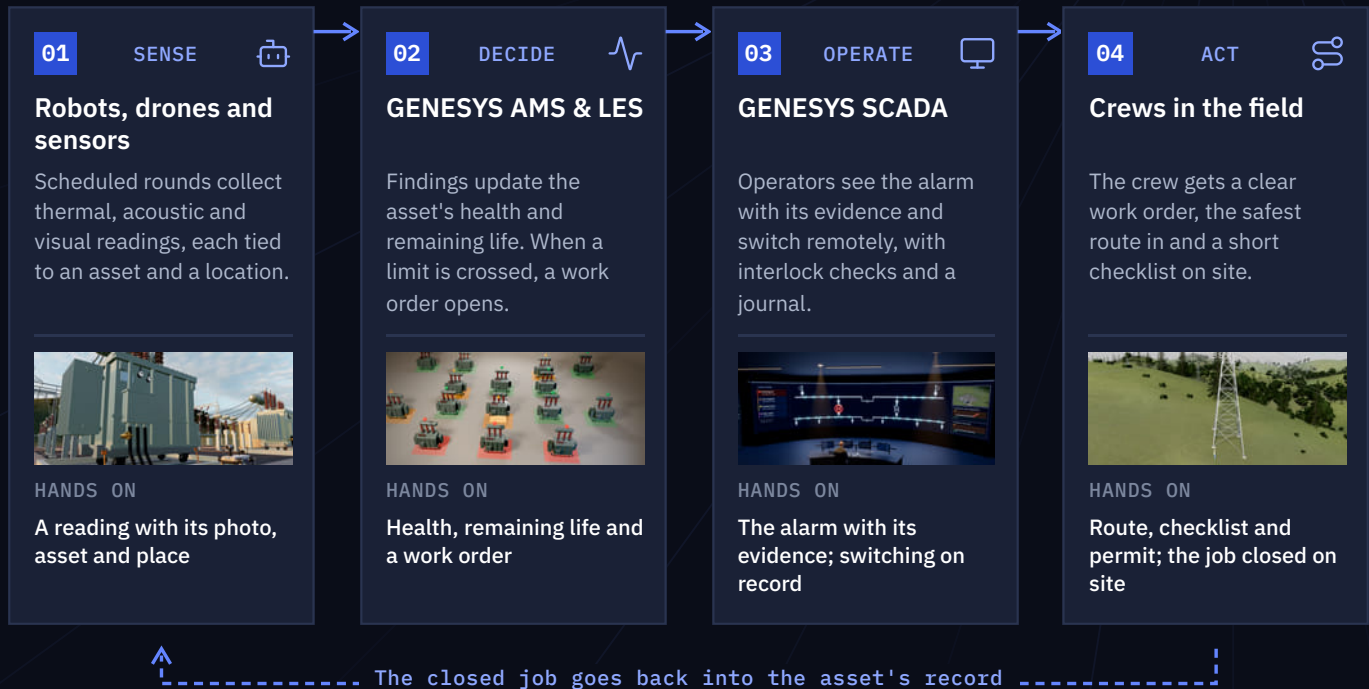
The grid stretches across valleys, forests and hills. Every line and every substation depends on the crews who keep it running, often far from the road, in every kind of weather.



SENSE · DECIDE · OPERATE · ACT

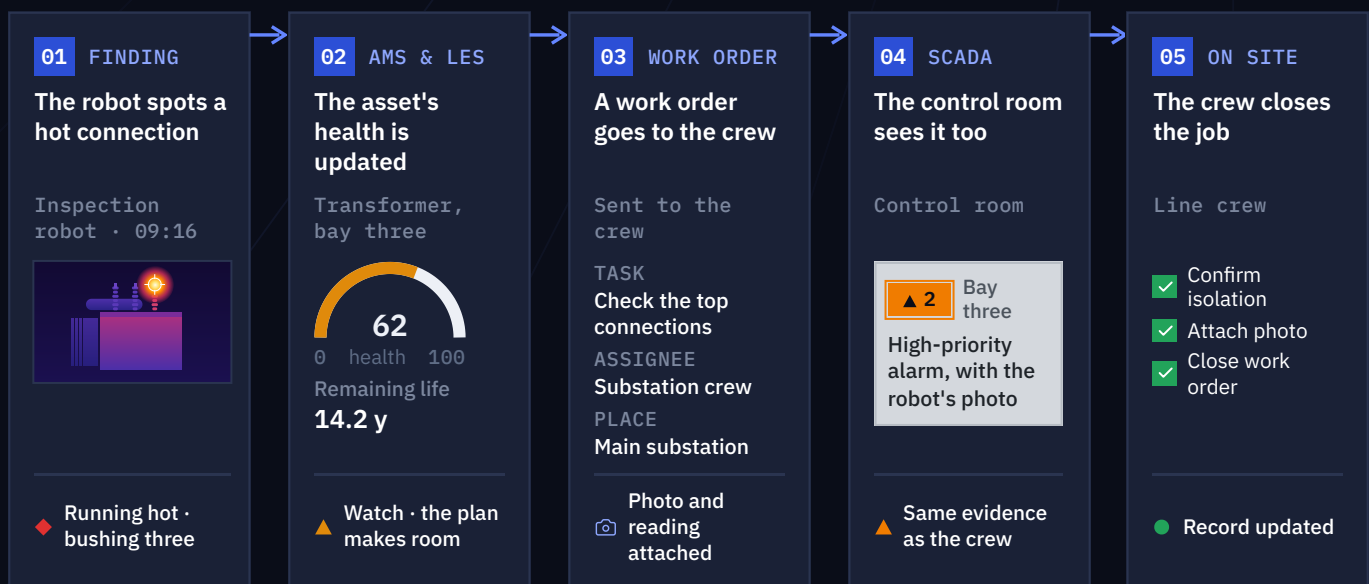
One loop from the field to the control room, and back to the crew.

THE PROBLEM Readings, records, alarms and crews usually live in different places, so findings wait.

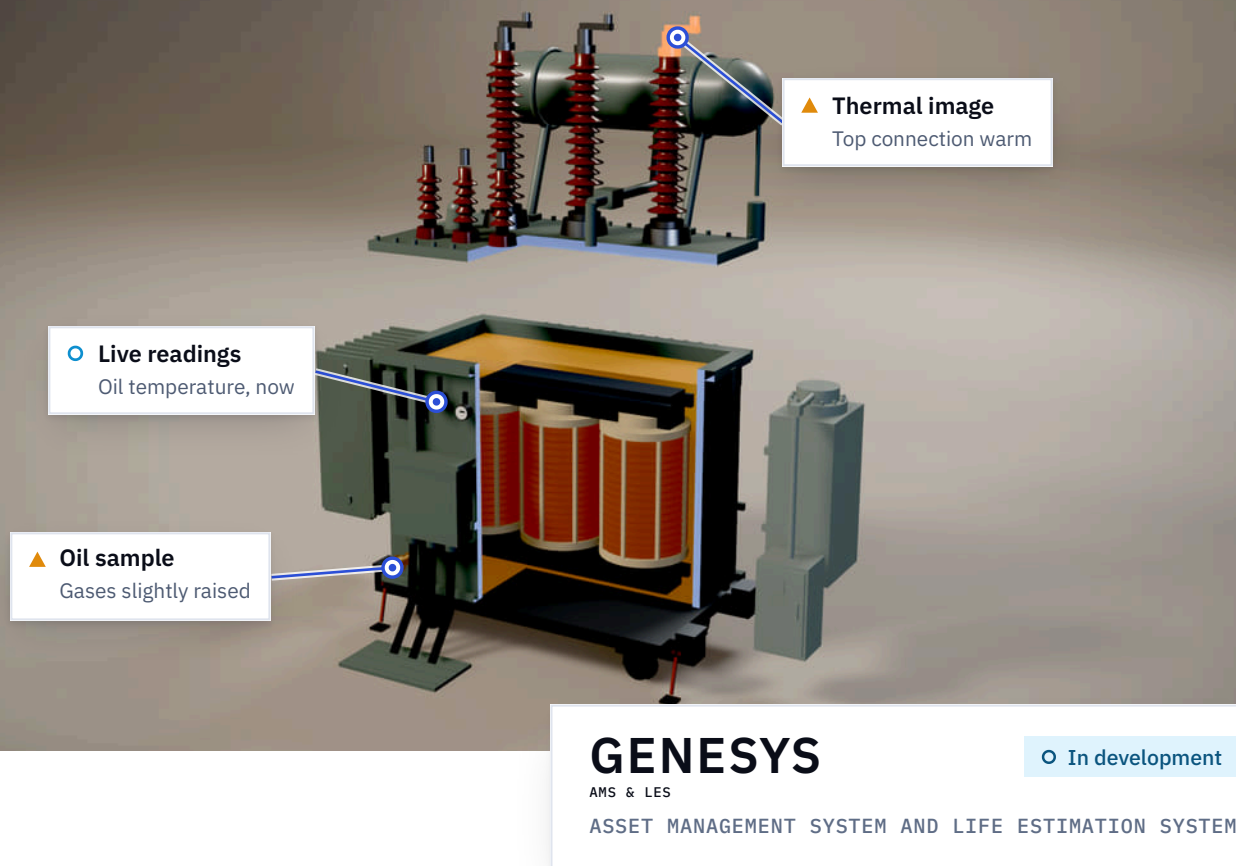


→ From a robot's round to a crew on site, with nothing lost on the way.

ONE FINDING, FOLLOWED THROUGH



→ Found on the round. Fixed on the next visit.



One record per asset. Remaining life with the error bars shown.

THE PROBLEM

Records in many places

Nameplates in one system, oil tests in a lab report, inspection notes on paper. Nobody sees the whole asset at once.

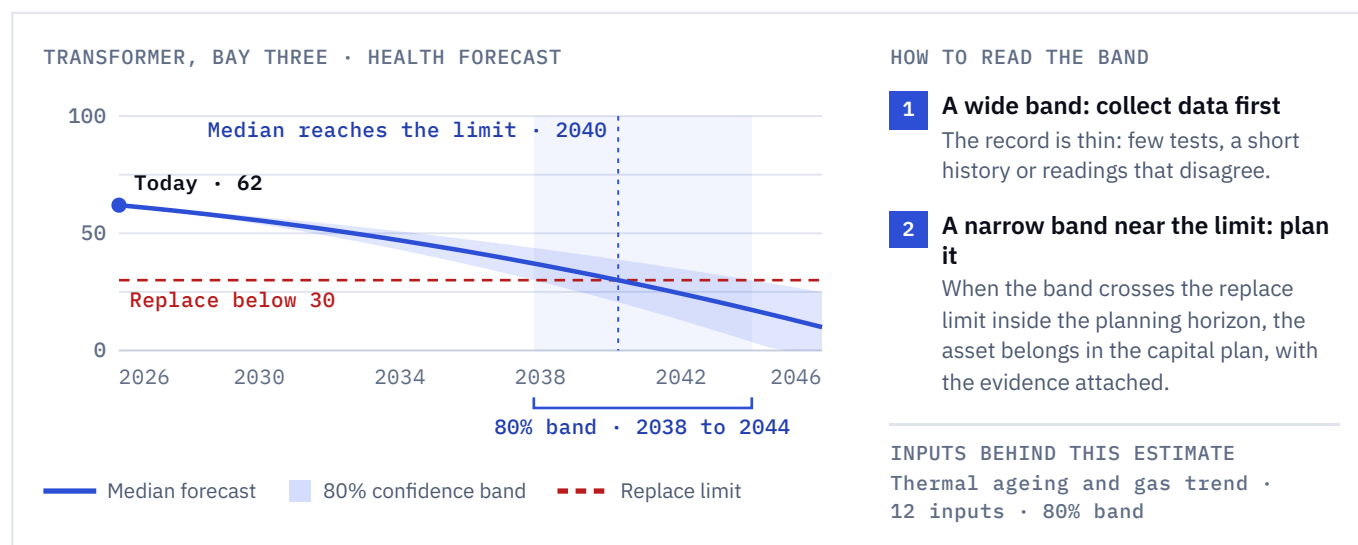
Maintenance by the calendar

Fixed intervals send crews to healthy assets and can miss the ones that are ageing faster than planned.

One number nobody trusts

A single remaining-life figure hides how uncertain it is, so it is either trusted too much or ignored.

GENESYS AMS & LES The register, health and remaining life of every asset, and the maintenance plan that follows from them.



→ Plan the replacement window, not a guess.

FROM RECORD TO PLAN

Every score names what it was built from.

 **Nameplate and history**

Ratings, cooling, year of manufacture

Drawings and test reports

Faults and repairs

 **Tests**

Dissolved gas analysis

Oil quality and moisture

Insulation and winding tests

 **Inspections**

Robot and drone rounds

Thermal and acoustic readings

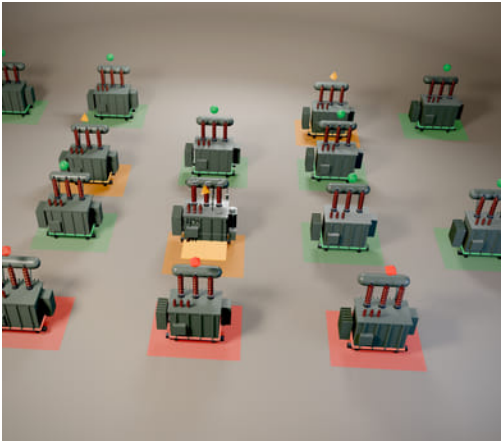
Crew inspection notes

 **Online monitoring**

Load and temperatures

Online gas monitors

Breaker operation counters



FLEET VIEW

Across the whole fleet, what needs attention first, and why.

FLEET BOARD · 152 ASSETS · 5 SITES

SITE	TRANSFORMERS	BREAKERS	LINES	RELAYS
Valley	▲ 4·1·0	◆ 10·3·2	▲ 5·1·0	▲ 12·2·0
Hilltop	▲ 3·1·0	◆ 7·2·1	◆ 4·2·1	▲ 9·2·0
Main substation	▲ 3·2·0	◆ 8·2·1	▲ 5·1·0	◆ 10·3·1
Riverside	◆ 2·1·1	◆ 5·2·1	▲ 3·1·0	▲ 7·2·0
North yard	▲ 1·1·0	▲ 4·1·0	● 3·0·0	◆ 7·1·1

● Good ▲ Watch ◆ Poor 4·1·0 = good · watch · poor; the shape shows the worst

FROM THE BOARD TO THE PLAN

- 1 **See the whole fleet**
Every site and asset class in one matrix, with the worst state in each cell.
- 2 **Attention first**
Valley · breakers: 2 poor. One of them is the hill line breaker: health 38, 4.1 years left.
- 3 **Into the plan**
2026 Q4 · Hill line breaker, Valley substation: replace the gas seals and retest.
- ◆ Poor

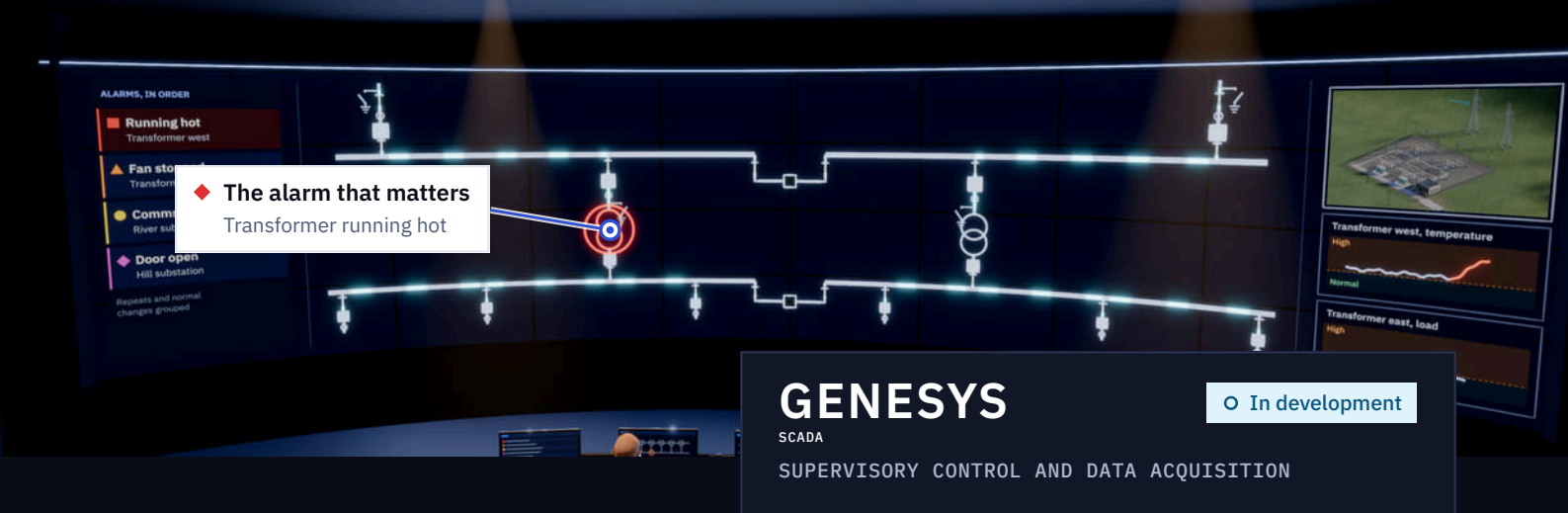
MAINTENANCE PLANNING

Plans, work orders and crew schedules sit on one timeline. When a job is ready, it goes to the right crew, with the right tools, at the right time.

MAINTENANCE PLAN · NEXT FOUR JOBS

2026 Q4	Hill line breaker, Valley substation Replace the gas seals and retest	◆ Poor
2027 Q1	Transformer, bay three Oil test, cooling fans group two	▲ Watch
2027 Q2	Line protection relay, Hilltop Functional test and settings review	● Good
2028 Q3	Transformer, bay three Capital plan review: the replacement window opens	▲ Watch

→ Budgets go where they matter, and work is planned by condition, not by the calendar.



The alarms that matter first, with the evidence beside them.

THE PROBLEM When a feeder trips, a substation can raise dozens of alarms in a minute. Each is true; together they hide the one to act on first.

1 IN PRIORITY ORDER · ISA-18.2 ON AN ISA-101 DISPLAY

GENESYS SCADA · ALARM SUMMARY · 5 ALARMS · 3 ACTIVE				
P1 1 P2 2 P3 1 P4 1				
PRIO	TIME	DESCRIPTION	WHERE	STATE
■ 1	14:02:11	Winding temperature high	Transformer, bay three	Active
▲ 2	13:58:40	Gas pressure low	Hill line breaker	Active
▲ 2	13:52:17	Cooling fans, group two, failed	Transformer, bay three	Active
● 3	13:41:05	Remote unit link degraded	Valley substation	Returned to normal
◆ 4	13:12:50	Station battery voltage low	Battery room	Shelved

2 THE EVIDENCE BESIDE THE TOP ALARM

■ 1 Winding temperature high Transformer, bay three · 14:02:11	
ASSET	Transformer, bay three 110/35 kV transformer · Main substation
HEALTH	62 / 100 ▲ Watch
REMAINING LIFE	14.2 y 80% band 11.8 to 18.0
ROBOT FINDING	Thermal 78.4 °C · photo attached · 09:16

3 EVERY ACTION ON RECORD

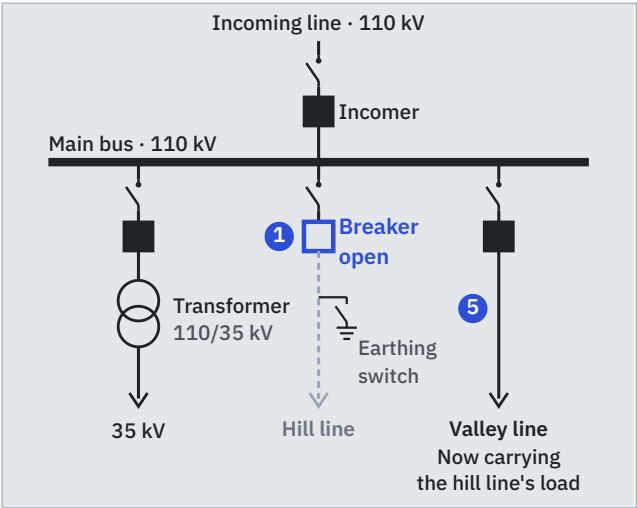
EVENT JOURNAL · IN ORDER, WITH ITS SOURCE	
14:02:11	■ Winding temperature high · urgent alarm raised Transformer, bay three
14:02:40	👤 Alarm acknowledged Operator on shift
14:03:05	⚡ Transformer health 62 → 58 · now on watch AMS & LES
14:05:18	👤 Load transfer prepared for bay three Operator on shift
14:06:02	👤 Breaker opened · confirmed by two operators Transformer breaker
14:11:47	⚡ Temperature back to normal Transformer, bay three

→ One alarm that matters, first.

REMOTE SWITCHING

Checked against the interlocks. Confirmed twice.

VALLEY SUBSTATION • 110 KV



— Busbar ■ Breaker, closed □ Breaker, open ⚡ Disconnecter ⊗ Transformer √ Line out — Energised
- - - De-energised

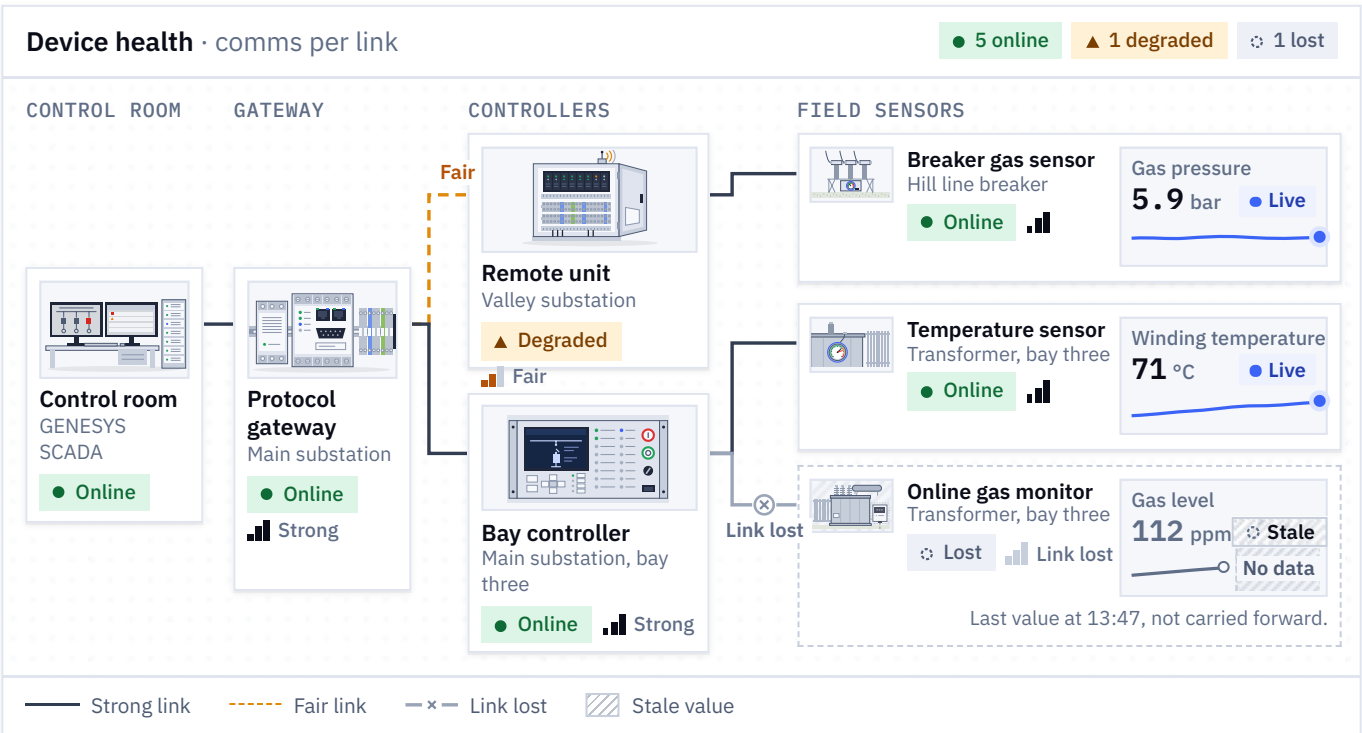
Before anything is switched, the safety interlocks are checked, the action is confirmed by two operators, and it is written to the journal.

SWITCHING ORDER • SIX STEPS

- 1 Select the breaker**
Open the breaker on the hill line.
- 2 Check the interlocks PASS**
Earthing switch is open • No one is working on the hill line • Load can move to the valley line • Operator on shift is authorised
- 3 Confirm: open the breaker**
The operator on shift.
- 4 Second confirmation**
A second operator, before the command is sent.
- 5 The breaker opens**
Position confirmed. The hill line is de-energised; the valley line carries its load.
- 6 On record**
Every step goes to the journal, with the operator and the time.

FIELD DEVICES

Every device, and the link it reports over.



→ A lost feed shows as lost, never as a flat line.



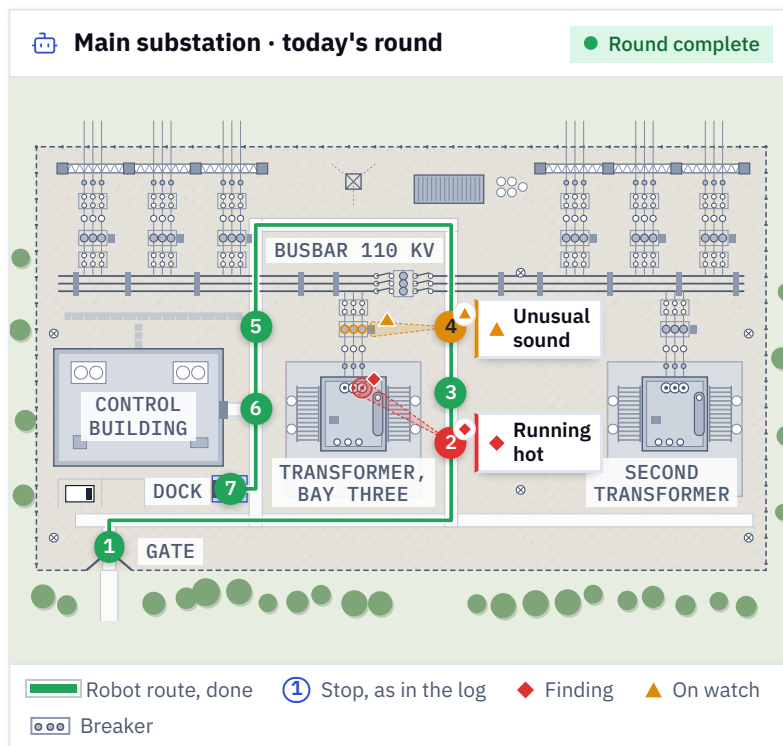
Robotics pilot

ROBOTICS IN ENERGY OPERATIONS

Prototype in pilot

Robots do the rounds. Crews get the findings.

A GENESYS robotics prototype is in pilot. Inspection robots and drones collect readings on a schedule, and every finding reaches AMS & LES with its photo, value and location. The aim is fewer truck rolls and earlier failure detection.



Inspection robot · round log

37 readings · 2 findings · round complete

1	09:12 Gate	ready
Today's round starts		
2	09:16 Transformer, bay three	78.4 °C
	Thermal photo Finding	Thermal photo attached
3	09:19 Transformer, bay three	62%
	Oil level	
4	09:24 Breaker, bay three	41 dB
	Sound recording On watch	Sound recording attached
5	09:29 Breaker, bay three	closed
	Breaker position	
6	09:34 Control building	closed
	Cabinet doors	
7	09:40 Dock	37 readings
	Round ends	

- Fewer truck rolls**

Routine readings come from the robot's round. Crews drive out when a finding needs them.
- Earlier failure detection**

Rounds run more often than manual inspections, so trends show up sooner.
- Distance from live equipment**

Inspection and switching happen without a person in front of energised switchgear.

→ Two findings, one work order, no wasted trip.

FIELD WORK

Out on the line, the crew sees the same picture.

A crew that arrives with the wrong vehicle, or without knowing the ground, loses the day. The work order carries the trip as well as the task: the route, what the ground is like, and a short checklist to close the job on site.

Route on the work order

VALLEY SUBSTATION

HILL LINE

Trees growing close

At the tower on the hill

Steep track

Depart the depot

CULVERT

MAIN SUBSTATION

Access road, gravel

Legend:

- Crew route
- Steep track
- Hill line
- Trees growing close
- Stream
- Forest

WORK ORDER • LINE CREW

Trees growing close to the hill line

- Line crew 1, two people
- Four-wheel-drive vehicle
- Span by the hill tower
- Permit to work active

THE TRIP, STOP BY STOP

- 1 Depart the depot**
Four-wheel drive, saw and permit on board
- 2 Access road**
Gravel, along the valley floor to the track
- 3 Steep track**
Four-wheel drive only, in low gear
- 4 At the tower**
Clear the span, attach a photo, close the job

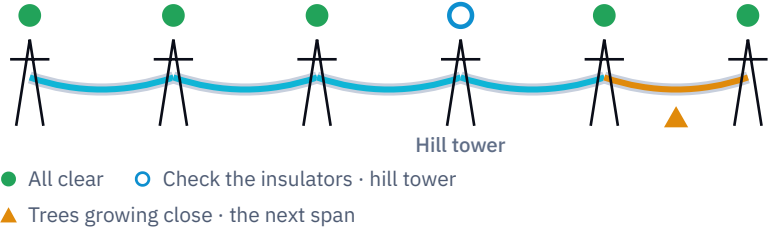
BEFORE WORK STARTS

- Permit to work active**
Signed before work starts
- Safe distance kept**
From live equipment
- Isolation confirmed**
Checked and locked



Span by span, with the location on every image.

Every image knows its line, span and tower, so a finding opens a work order for exactly the right place.



→ The right crew, the right kit, the first time.

COMPANY

Engineering from GENE. Software from JUMPHASH.



■ OWNS AND DELIVERS

General Engineering d.o.o. (GENE), Sarajevo, has worked for more than ten years in Bosnia and Herzegovina and abroad: consulting, engineering, commissioning and maintenance of electrical networks at all voltage levels, control systems and SCADA. GENE owns GENESYS, deploys it on utility sites and supports it in operation.

gene.ba →



■ BUILDS AND CO-INVESTS

JUMPHASH designs and builds GENESYS and co-funds its development. It is open to joint ventures and partnerships. On the same platform it builds Haytham, camera analytics for retail and other sites, and runs the GENESYS robotics pilot.

jumphash.com →

300+

projects

10+

years in power networks and SCADA

Source • GENE • gene.ba



Electrical networks

Consulting, engineering, commissioning and maintenance at all voltage levels.



Control systems and SCADA

Integration for utilities and industrial plants.



Automation and telecommunications

Field automation and the links between sites.



Industrial applications

For utility services and private customers.

WORK GENE DELIVERS

SCADA

SCADA integration for industrial plants

INTEGRATION

Integration of limiter signals into SCADA

SOLAR

Photovoltaic power plants

PROTECTION

Preventive maintenance of protection and control

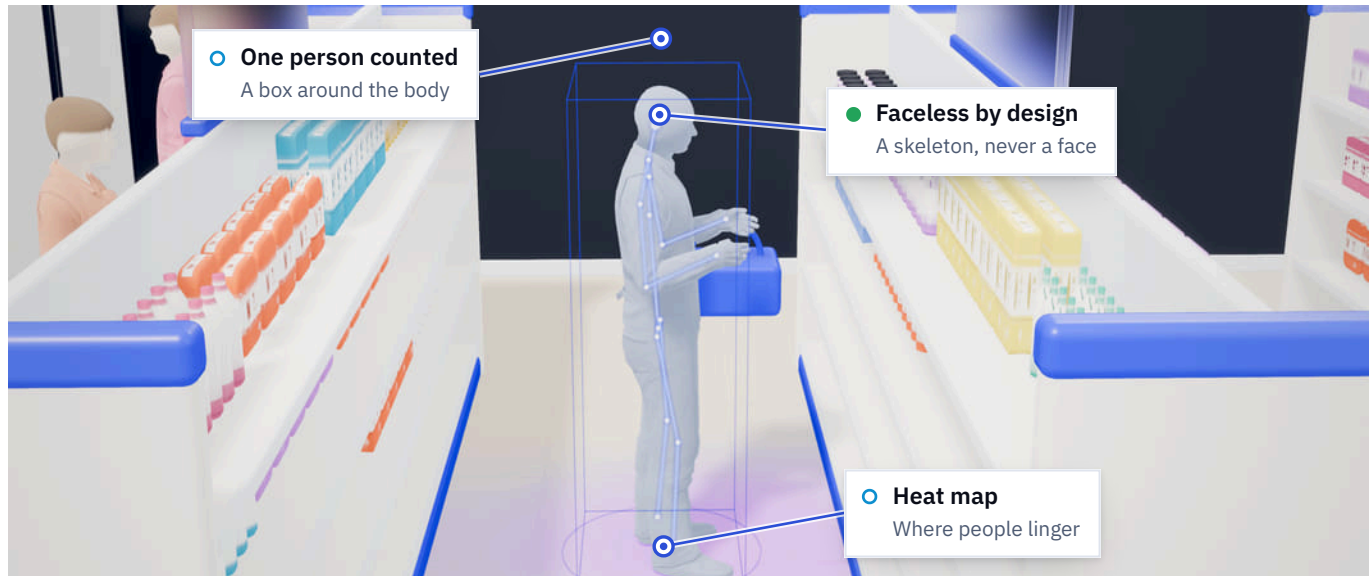
UPGRADE

Electrical control system upgrade

Project types from gene.ba/projekti. Clients are not named; references on request.

Count. Explain. Act.

Haytham Retail turns the cameras a store already has into answers: how many people came in, where they spent their time, and how many left with something in their hands.



Footfall

4,293

↑ +10.25% vs. yesterday

Entrance camera • 08:00 to 15:42 •
4,293 counted

▲ Queue building at the tills

Open a second till

📷 Checkout camera • just now

📢 Sent to the staff member on the floor

PLATFORM

One platform, in the cloud or on site.

JUMPHASH builds Haytham on the same components as GENESYS: one record of sites and assets, evidence beside every number, and alarms and events with a journal. Haytham runs in the cloud, or on site on ForgeOS appliances where video must stay in the store.

📡 INPUTS

Robots and drones
Sensors and online monitors
RTUs, PLCs and gateways
Cameras

📦 SHARED COMPONENTS

Site and asset record
Evidence beside every number
Alarms and events with a journal
One interface system

📦 PRODUCTS

GENESYS AMS & LES
GENESYS SCADA
Robotics pilot
Haytham Retail

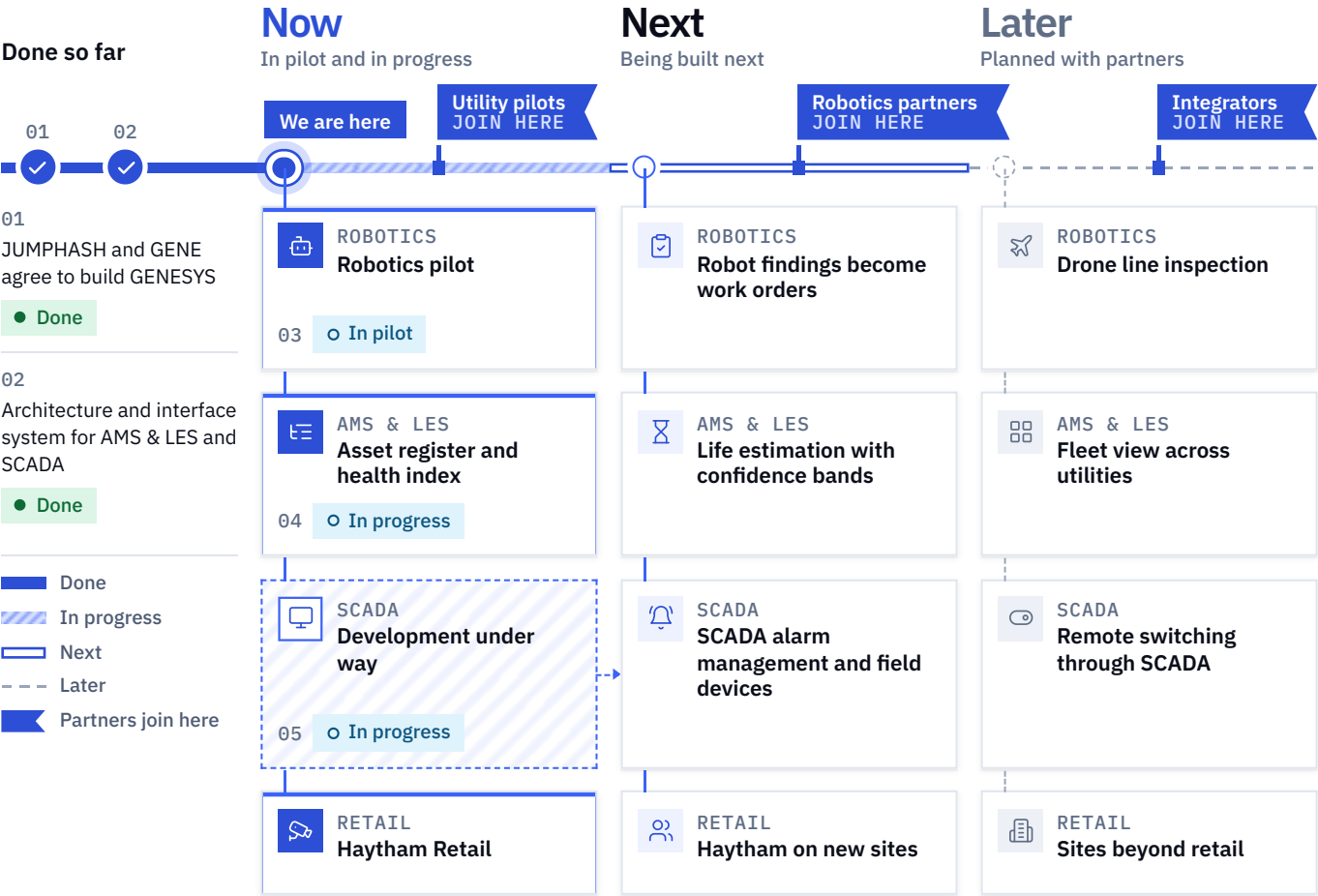
📦 DEPLOYMENT

Cloud
On site on ForgeOS appliances

→ Four products. One record. Nothing typed twice.

Partner in the future of maintenance and operation.

JUMPHASH develops GENESYS for GENE and co-funds the work. It is looking for joint-venture and partnership opportunities for the next stage: utility deployments, robotics beyond pilot, and Haytham on new sites.



→ Partners who join now shape what comes next.

WAYS IN

Utility pilot

Robotics partner

Technology partner

Joint venture

Integration or reseller partner

Other

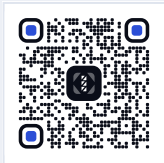
Talk to GENE and JUMPHASH.



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