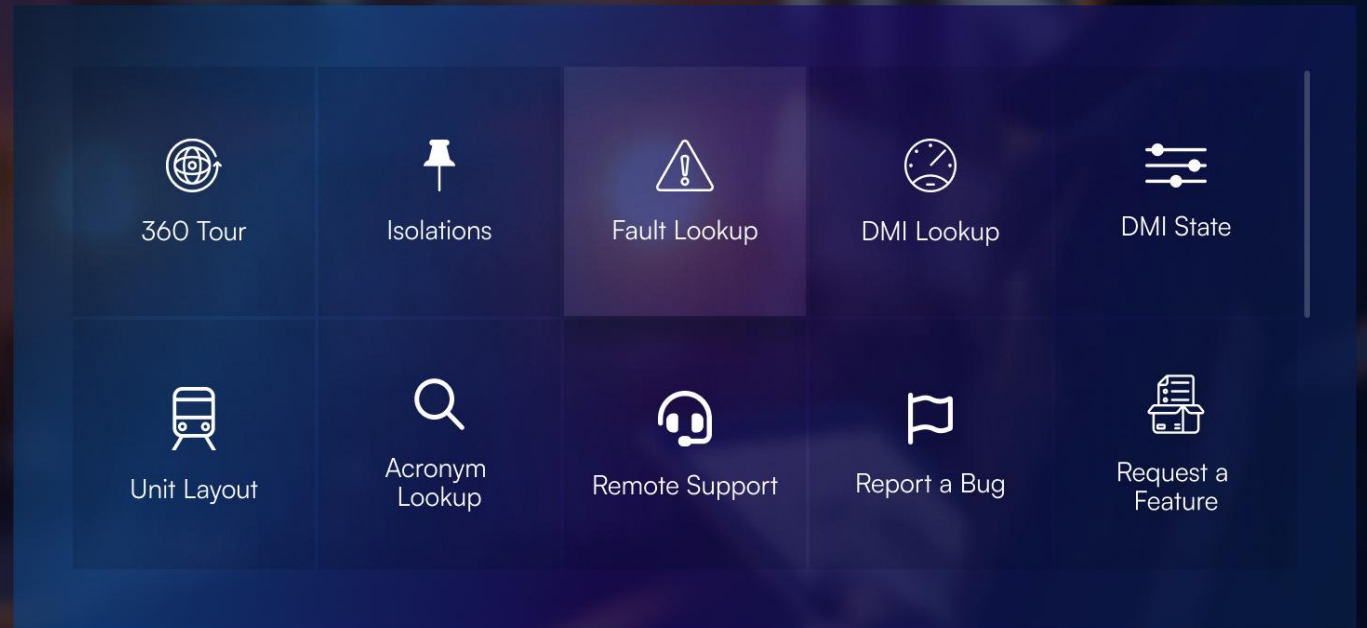


# VDST

VANGUARD SOLUTIONS GROUP

## Decisions at the Speed of Disruption.

*AI-powered decision support that resolves rail incidents at least 40% faster — validated in live operational environments at TRL 7.*



# DISRUPTION IS RAIL'S MOST EXPENSIVE PROBLEM

*Across Europe's networks, every disrupted journey is a vote for the road. Operators run multi-billion-euro railways on email chains, paper procedures, and the head of one experienced controller who happens to be on shift.*



## Minutes Compound Into Millions

£300M+ paid in Schedule 8 delay attribution annually across the GB network. Every minute of disruption is a minute repeated across every train it cascades into.



## Decisions Vary by Shift

Outcomes depend on who is on shift. Two identical incidents handled completely differently, with very different outcomes. Quality drifts shift to shift.



## Knowledge Lives in People

Critical procedural knowledge sits with experienced controllers — and goes home with them. Single points of failure in safety-critical decision making.



## Paper Procedures Under Pressure

Static PDFs and laminated procedure cards in the controller's drawer. Information exists — but not in the form, place or time the incident demands.



## Modal Share Erodes Quietly

Every disrupted journey nudges a passenger toward road. Punctuality is the lever for European modal shift — and the cost of losing it is decarbonisation foregone.

## Our Solution

*A visual decision-making tool, brings together learning and information across maintenance, control and operations teams, ensuring the best decisions are made in both the control room and the depot*

*Minimize delays and improve decision-making. Our control room decision tool provides real-time, accurate information to help users manage incidents effectively, reducing primary and subsequent delay minutes by 30-65%.*

# WHAT VDST DOES THAT NOTHING ELSE DOES



*A connected decision environment for rail disruption — not PDFs replaced by online PDFs. Four pillars, one source of truth, validated at TRL 7.*

## 01

### GUIDANCE

*Real-time decision support*

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Structured, dynamic guidance on every device — not a static PDF in a controller's drawer. Procedures branch live with the incident, surfacing only the next decision the moment it matters.

## 02

### COLLABORATION

*Live multi-role incident space*

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Control room, field staff, suppliers and senior managers in one synchronised environment. Every action time-stamped and attributed. Coordination that used to take phone calls now takes seconds.

## 03

### ASSURANCE

*Embedded competency & control*

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Only qualified people can take qualified actions. Compliance enforced at the point of decision, not retroactively at audit. Auditability without archaeology — traceability as a by-product of doing the work.

## 04

### INTELLIGENCE

*Golden source, auto-reporting*

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Every decision logged in structured data. Auto-generated incident reports, KPI dashboards, regulator-ready narratives. The platform learns from each incident and surfaces patterns across the network.

VDST is not a concept. It is a deployed product, in operational use, with measured impact and an independently verifiable customer reference.

# 40%<sup>+</sup>

## Reduction in incident-response time

*Demonstrated in operational pilot. Like-for-like comparison against legacy disruption-management process.*

## TRL 7

### Operational rail environment

Validated with real users, real incidents, real performance constraints, the ERCI threshold met and exceeded.

## 9,000+

### Guides in use

Active across multiple UK rail clients. Real users, real shifts, real decisions — every day.

## 99.9%

### Platform uptime

Production SLA performance. Decision support that's available the moment it's needed — not a moment after.



## ADDITIONAL BENEFITS

- ▶ 4× ROI within 3 years from operational savings
- ▶ Auditability without archaeology — regulator-ready
- ▶ Schedule 8 delay-cost reductions, evidenced
- ▶ Cross-network replicability across IM/TOC/FOC

*VDST is built for one operator and designed for every European network. The conditions for adoption have never been better.*

## EU - RAIL ALIGNMENT

### Flagship priority area

Decision support, traffic management and resilience are named priorities of the Europe's Rail JU Innovation Pillar. VDST sits squarely inside Horizon Europe's research-to-deployment agenda — exactly where ERCI judges look for impact.

## MODAL SHIFT

### Every prevented disruption keeps a passenger on rail

Punctuality is the lever for European modal shift. Faster incident resolution = retained passengers = the decarbonisation outcome the EU's Sustainable & Smart Mobility Strategy depends on. Climate impact, monetised in delay-minutes saved.

## SCALABILITY

### Cloud-native. Language-agnostic. Days, not years

SaaS architecture. Deployable across IM, TOC and FOC contexts. Translatable across European operator languages. Already proven in multi-tenant production — no bespoke rebuilds, no vendor lock-in to legacy stacks.

***Decisions at the speed of disruption.***

*VDST · Validated. Deployed. Ready for Europe.*