A Function Paper from GRAIL

What does an AI-augmented quality and sustainability function look like?

Quality and sustainability function

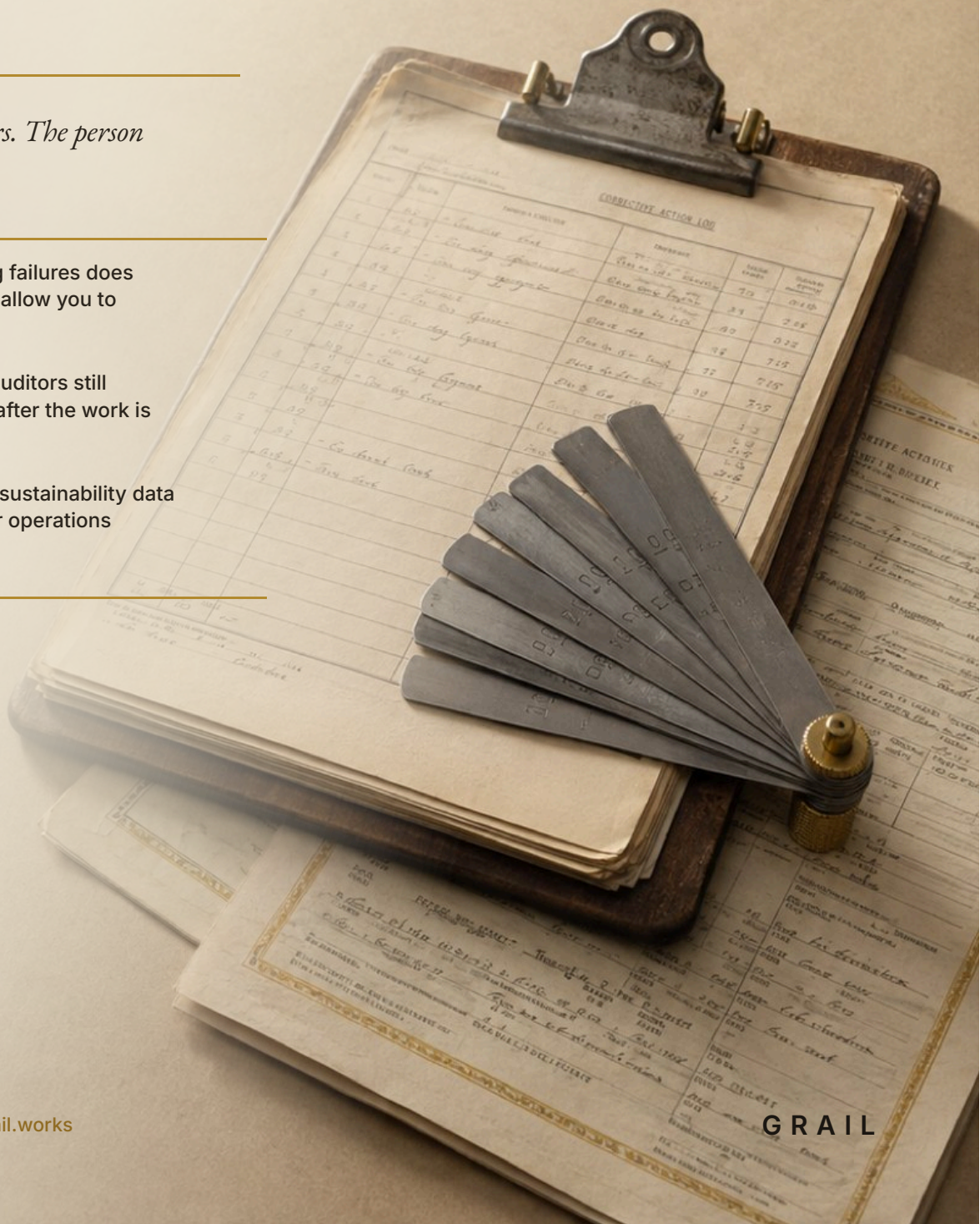
Where the Quality, EHS and Sustainability function is heading in the next two to three years, and what GRAIL believes it takes to get there first.

"The system remembers. The person determines."

01 Which recurring failures does your certificate allow you to miss?

02 What are your auditors still reconstructing after the work is done?

03 Why does your sustainability data arrive after your operations decide?



WHAT DOES AN AI-AUGMENTED QUALITY AND SUSTAINABILITY FUNCTION LOOK LIKE?

Where the Quality, EHS and Sustainability function is heading in the next two to three years, and what GRAIL believes it takes to get there first.

Most management systems describe the company periodically. They do not help it operate daily. **The change that matters is that procedures, findings, incidents, evidence and lessons become an operating memory that improves every investigation, audit and control decision.** Accountability stays with the person. The memory becomes institutional.

THE OPERATING MEMORY AS A LOOP

01
Report

Site events arrive through mobile forms, voice notes and connected systems.

02
Connect

Structures the record, retrieves similar cases and directs urgent items.

03
Investigate

A chronology, comparable cases, missing facts and possible causal factors.

04
Decide

Challenges the suggestions and determines the finding.

05
Learn

Later evidence shows whether recurrence fell or the control remained weak.

The system remembers. The person determines.

GRAIL's view, from working with management systems and the people accountable for them. A position, not a survey.

THE FUNCTION TODAY

A small team carries a company-wide *system*.

A Nordic mid-market EHSQ function usually has one to five people. Common roles are EHSQ manager, quality manager, sustainability lead, quality engineer and coordinator. Site managers, production leaders, HR, procurement and engineering perform much of the work, while the central team owns the system and carries the certification risk.

The function protects revenue and margin. Certifications and customer approvals can be conditions of sale. Weak controls create scrap, warranty claims, injuries, stoppages, environmental liabilities and lost tenders.

Ten processes

01	Management-system maintenance and internal audits	06	Customer complaints and root-cause analysis
02	External audits and certification	07	Incident and near-miss reporting
03	Non-conformance and corrective action management	08	Environmental and sustainability reporting
04	Document and procedure control	09	Training and competence records
05	Supplier quality	10	Regulatory monitoring

The information is spread across a QMS or EHS platform, ERP, SharePoint, Teams, email, spreadsheets, training systems and supplier portals. Local interpretation sits in the heads of one quality manager and a few site veterans. Findings, complaints, incidents and environmental figures are recorded, but rarely connected well enough to reveal whether the same control is weakening across products, suppliers or sites.

The management system is rich in records and poor in memory.

Procedures explain how work should run. Findings show where it did not. Incidents, complaints and supplier defects show what happened next. Yet the function still spends much of its attention retrieving and reconciling these fragments instead of testing whether controls work.

WHAT CHANGES STRUCTURALLY

Assurance becomes *continuous*.

At the heart of the shift, operating memory and operating cadence move together.

The management system becomes an operating memory rather than a document estate. Procedures, findings, incidents, decisions, evidence and lessons can be queried together. A new complaint can be compared with earlier failures. A corrective action can be tested against its stated cause. A procedure change can reveal the roles, products and sites it affects. Certification knowledge stops being one person's biography.

The cadence moves from periodic preparation to continuous assurance. Controls are monitored as work happens. Internal audits begin with exceptions, contradictions and weak signals rather than document collection. Management review begins with recurring causes and weakening controls rather than slide assembly. Sustainability reporting becomes an output of operating data rather than a separate spreadsheet season.

The function's promise changes from keeping certificates to showing where control is weakening, what has recurred and which intervention is most likely to work.

> WHERE IT IS WEAKEST Legal interpretation, safety-critical judgment and final conformity decisions remain accountable human work. The operating memory can retrieve, compare and propose. It cannot own the conclusion.

THE 2028 OPERATING PICTURE

A day, a week, a *month*.

A serious investor still has quality managers, auditors, safety professionals and sustainability leads in 2028. The central team may remain one to five people. Its capacity moves from document administration and chasing data into field assurance, control design, supplier development and prevention. A larger multi-site company may add a data-and-assurance coordinator rather than another document controller.

The day

REPORT

Site events arrive through mobile forms, voice notes, sensors and connected systems. The workflow checks completeness, structures the record, retrieves similar cases and directs urgent items to a named manager. Environmental readings and training expiries update without an email chase.

INVESTIGATE

A new non-conformance, complaint or incident opens with a chronology, comparable cases, missing facts and possible causal factors. The investigator visits the work, interviews people, challenges the suggestions and determines the finding.

ACT

The workflow drafts the record, routes evidence requests and checks whether a proposed action addresses the stated cause. The process owner approves the cause and action. Later evidence shows whether recurrence fell or the control remained weak.

THE WEEK The EHSQ team reviews an exception briefing. It covers recurring causes, overdue actions, actions unlikely to prevent recurrence, suppliers outside tolerance, changed requirements and controls with missing evidence. Specialists spend more time at sites and with process owners.

THE MONTH Management review is assembled from live evidence. Leaders examine the few material deviations instead of rebuilding charts. Procedure owners receive proposed changes supported by cases and audit findings. Sustainability metric owners review traceable figures and approved claims.

BEFORE AN EXTERNAL AUDIT The audit workspace maps each clause to current evidence, flags gaps and preserves the provenance of every item. The quality manager tests the representation and confirms what is presented to the certification body.

Continuous readiness, cross-site recurrence analysis and consistent customer answers used to require attention the team did not have. They become part of the normal operating rhythm.

PROCESS BY PROCESS

What runs, and what stays with the *person*.

PROCESS	WHAT THE AGENT DOES	WHAT STAYS WITH THE PERSON
Management system and internal audits	Maps clauses to controls and evidence, proposes samples and questions, records contradictions and drafts findings	Auditors observe work, test control effectiveness and determine findings
External audit and certification	Maintains a dated clause-to-evidence index, assembles current records and flags gaps	The management representative confirms every formal statement and conformity representation
Non-conformance and corrective action	Builds a chronology, retrieves similar failures, proposes causal hypotheses and tests whether the action addresses the stated cause	The process owner determines the cause, approves the action and judges whether it worked
Document and procedure control	Answers from approved versions, detects conflicts and proposes affected documents when a process changes	Owners approve the content, effective date and operational change
Supplier quality	Combines defects, audit findings, certificates and delivery events, then drafts review packs and highlights systemic failure	Quality and procurement decide the audit response, development plan and commercial treatment
Customer complaints and root cause	Normalises descriptions, links serial numbers and retrieves related complaints, production failures and corrective actions	Quality and engineering decide containment, investigation and root cause
Incidents and near misses	Turns mobile or voice reports into structured drafts and flags severity indicators, similar events and missing facts	A safety professional controls classification, investigation and response
Sustainability data and questionnaires	Maintains approved claims, metrics, methods and evidence, then drafts cited questionnaire responses	Metric owners approve figures, calculation choices and every external claim
Training and competence	Identifies roles affected by a changed procedure, drafts role-specific learning and checks understanding	Managers determine competence and the response to any gap
Regulatory monitoring	Compares changes with controlled registers of products, chemicals, processes and sites, then drafts an impact assessment with source text	Legal and technical owners determine applicability and required action

Read the right-hand column twice. It contains observation, accountability and judgment. The left-hand column exists to bring better evidence to those decisions and give the people making them more time in the work.

DATA AND CONNECTIONS

Four stages on *The Access Ladder*.

The connection sequence follows operational value and reversibility. Each stage is a rung in GRAIL's Access Ladder, and each one earns the next.

01 **Documents only**

Controlled procedures, audits, certificates, approved claims and past cases form a permission-controlled knowledge base. Staff can retrieve an approved answer with a citation, prepare an audit and draft a questionnaire without access to live operating systems.

02 **Read access**

Open corrective actions, incidents, complaints, supplier defects, training status and environmental measures feed exception briefings and trend analysis. The workflow can connect records across the QMS, ERP, maintenance, training and supplier systems without changing them.

03 **Read and act with approval**

Workflows draft records, create audit plans, route actions, request evidence and prepare reports. A named person approves corrective actions, procedure changes, external statements and submissions before anything material is written or sent.

04 **Bounded autonomous action**

Evidence chasing, record classification, audit-sample preparation and approved reminders run within explicit limits. Safety decisions, certification representations, regulatory conclusions and external disclosures stay with a named person.

Integration footing in September 2026

SharePoint	A controlled document and evidence layer that can respect existing permissions and sensitivity labels, subject to tenant configuration.
Intelex	Authenticated REST APIs can retrieve, create, update and delete platform objects under configured user security.
AMCS EHS Management	An authenticated App API covers forms, documents and other application objects. Exact scope needs confirmation.
Octave Reliance	REST APIs and built-in audit trails. API entitlement should be confirmed during procurement.
MasterControl	Paid REST and web-service APIs for reading and modifying Current Qx records. Entitlement and coverage need confirmation.
M-Files	A REST web service with object, version-history and write capability that must be scoped to the deployment.
EcoVadis	An API for bringing ratings and supplier sustainability data into other systems. Commercial and API access need confirmation.
SAP Integration Suite	Governed APIs and HTTP endpoints can be published as MCP tools, subject to service and configuration.

Point connections answer record-level questions. A warehouse or lake becomes necessary when the function must join several years of events across product, supplier, site and customer identifiers.

> The QMS keeps records, permissions, workflows, signatures and audit history. The operating memory retrieves evidence and proposes action through a briefing or conversational layer. Shared master data matters more than model choice, and every material write preserves its source, reviewer, approval and final system response.

GRAIL'S THESIS

Six things we believe, from building *this*.

Quality, EHS and Sustainability have spent years becoming systems of record. The next step is to become systems of attention. Six beliefs define that shift.

01

The certificate is the floor. Control effectiveness is the ceiling.

A function can pass an audit while recurring failures remain hidden across sites and systems. The greater value is knowing which control is weakening before the next complaint, incident or finding proves it.

02

Operating memory is more valuable than document search.

Finding the right procedure is useful. Connecting that procedure to prior findings, complaints, incidents and actions changes the quality of the decision. Every resolved case should improve the next investigation.

03

Continuous assurance changes what auditors do.

When evidence is prepared as work happens, auditors no longer need to spend their attention reconstructing the record. They can observe work, test exceptions and challenge whether the control actually works.

04

A proposed cause is not a finding.

The workflow can build a chronology, retrieve similar cases and suggest causal factors. The investigator still has to test them against the work, speak to the people involved and sign the conclusion. Fluent analysis without field judgment creates false confidence.

05

Sustainability reporting starts in operations.

A separate spreadsheet season is a symptom of disconnected invoices, meters, purchasing records and supplier data. When the evidence arrives with its source attached, the sustainability lead becomes the owner and reviewer of a metric system rather than its collector.

06

The function leader has to redesign the rhythm.

Giving people a drafting tool while leaving audit preparation, management review and action chasing unchanged only adds another layer. Leaders must replace the old collection rituals with exception review, field assurance and control decisions.

These six beliefs do not argue for replacing accountable people. They argue for giving them a complete memory, earlier signals and more time where the work happens.

WHAT IT ASKS OF PEOPLE

Roles, rhythm, and where it *fails*.

The quality manager becomes the architect of evidence and control effectiveness. Quality engineers move from assembling records toward investigating recurrence. Internal auditors move from checklist preparation toward observation, challenge and process testing. Sustainability leads become metric owners and disclosure reviewers. Site managers carry more responsibility because weak controls become visible sooner.

The team needs competence in evidence design, data lineage, structured root-cause analysis, workflow evaluation and permission design. Prompt technique is not enough. People must know how to inspect sources, distinguish a hypothesis from a finding and recognise when an output needs specialist review.

The rhythm

CONTROLLED WORKSPACE	REPEATABLE USE	CONNECTED RHYTHMS	REDESIGNED FUNCTION
Approved procedures, audits and evidence become searchable with citations	Audit, corrective-action and questionnaire workflows enter the team's normal work	Read access and approved writes connect evidence across several systems	Continuous assurance changes management review and the division of work

The sequence begins with controlled evidence, then read access, then approved writes. Responsibility expands only after the workflow has earned trust in real work.

> **WHERE IT FAILS** Uncontrolled documents in the index. No clear process owner. Generated volume measured instead of recurrence, closure quality or control effectiveness. Weak product, supplier and site master data. Unrestricted write access. Proposed causes treated as findings. Review work added on top of the old process instead of replacing it.

Involve process owners, site managers, safety delegates and the people whose records and work will change before the new rhythm is set. Adoption begins when the system helps them prevent failure, not when it produces more text.

HAVE YOU THOUGHT ABOUT THIS?

Twelve questions for the function's *leader*.

1 Your procedures could answer staff questions with a link to the exact approved paragraph. Would that make the management system useful between audits?

2 Every new non-conformance could be compared with earlier cases across all sites. Which repeat failures are hidden today by different wording?

3 Each proposed corrective action could be tested against the stated root cause before approval. How many current actions would fail that test?

4 Internal audit preparation could run every week and show missing evidence by clause. Would you still need an audit-preparation season?

5 Customer sustainability questionnaires could begin with answers from an approved evidence library. Which specialists would regain time for decisions?

6 Environmental figures could arrive directly from invoices, meters and purchasing records with their sources attached. Which spreadsheet collection would disappear first?

7 Each regulatory change could be matched to affected products, chemicals and sites. How quickly can your team make that connection today?

8 A changed procedure could identify affected roles and draft their training. Which important changes currently remain unread?

9 Complaint data could connect to batches, suppliers and process conditions. Which recurring customer issue might become visible?

10 Supplier reviews could combine quality failures, delivery events, certificates and sustainability ratings. How would that change your audit plan?

11 Near misses could be screened for serious-injury potential as soon as they are reported. Which events now wait too long for expert attention?

12 Management review could focus on weakening controls and recurring causes, while routine evidence requests run within approved limits. Where should the boundary between system action and human judgment sit?

These are the questions the programme is built to answer with the people who own the controls, using their procedures, cases and operating evidence rather than a model of the function from outside.