

01 / FROM DATA TO ACTION

Less repetitive work. More operating capacity.

A document agent and operations copilot that connects data, checks discrepancies and supports daily work with an explicit approval step.

DocAgent has an existing demo UI; the role-based workspace/apps and the new assistant are proposed prototypes.

[Case study](#) · [screenshots](#) · [role-based apps](#) ↗

SOLUTION BRIEF / 09.2026

Problem & audience

COOs, logistics and import/export managers, back-office leads.

- Documents arrive through many channels, formats and templates.
- Manual reconciliation misses gaps between invoices, bills of lading and packing lists.
- Process knowledge is scattered; exceptions depend on experienced staff.

Solution modules

MODULE 01

Document Agent

Receives, classifies and extracts data from PDFs, images and spreadsheets; every field points back to its source document.

MODULE 02

Reconciliation & exceptions

Cross-checks quantities, unit prices, item codes and delivery terms; routes anything unverified into a queue.

MODULE 03

Knowledge Copilot

Looks up procedures, contracts and work instructions within access rights; answers cite their sources.

MODULE 04

Workflow & reporting

Assigns work, tracks deadlines, drafts reports and prepares integration data; authorised people approve actions.

Process & data

Receive documents →

Extract with sources →

Rule-based reconciliation →

Owner approves →

Sync & audit trail

Data to prepare

- A sample document set cleared for use, plus the expected reconciliation results.
- Item, supplier and contract catalogues and the checking rules.
- APIs or data-exchange mechanisms with ERP/WMS/TMS; a permission matrix.

Proposed architecture: data sources → connection & permission layer → processing / rules → business UI → logs & measurement. Infrastructure details are fixed after discovery.

Deliverables

- Agreed data dictionary, flow diagram and reconciliation rule set.
- Demo on sample documents, exception screens and approval history.
- Test suite, integration docs, operating guide and handover.
- Case study with screenshots, a workspace and sample apps for three roles; module/permission matrix and handover flow.

Delivery conditions

The customer names a process owner, provides data cleared for use and a systems contact. CTC Smart Tech and the business team agree scope, test set, change handling and operating responsibility.

Infrastructure, equipment, licences, third-party integration and AI running costs are determined separately by discovery. This document is not a quotation or SLA commitment.

Pilot & acceptance criteria

1. Pick one document type, set the baseline and the answer key.
2. Configure extraction, reconciliation rules and access rights.
3. Run in parallel with staff, analyse errors and refine rules.
4. Accept on a document set not used for configuration; hand over.

METRIC	HOW IT IS MEASURED
Processing time	Median minutes per document set, same document type before and after the pilot.
Extraction quality	Share of fields matching the answer key confirmed by the business team.
Reconciliation effectiveness	Share of real errors caught and the false-alert rate.
Action control	Every sensitive send/write has an approver and a history entry.

Fix the pass threshold, sample size and measurement period before the pilot. These metrics are a proposed evaluation frame, not actual results or a performance commitment.

Governance & control

- Suggested HS codes and declaration data are supporting input; specialists verify before use.
- The demo does not prove a live connection to production systems; APIs and access rights are checked during discovery.
- Documents containing unusual instructions must not change agent permissions; actions are limited per account.

Apply least privilege, data separation, action logs, retention/deletion rules and recovery. Test wrong-permission access, missing data and service interruption before handover.

CTC SMART TECH / SOLUTION-DESIGN CASE STUDY

DocAgent & Back-office Copilot

A design case study from the DocAgent demo: intake, extraction, document reconciliation, exception handling and traceable approval.

Evidence status

DocAgent has an existing demo UI; the role-based workspace/apps and the new assistant are proposed prototypes.

Sample UIs use synthetic data. Existing DocAgent screenshots have record/partner/figure data redacted. No real customer or employee results are used for illustration.

Intake

Attach documents to a file code; record source and version.

Extraction

Normalise fields while keeping links to the original document.

Reconciliation

Cross-check and queue discrepancies.

Verification

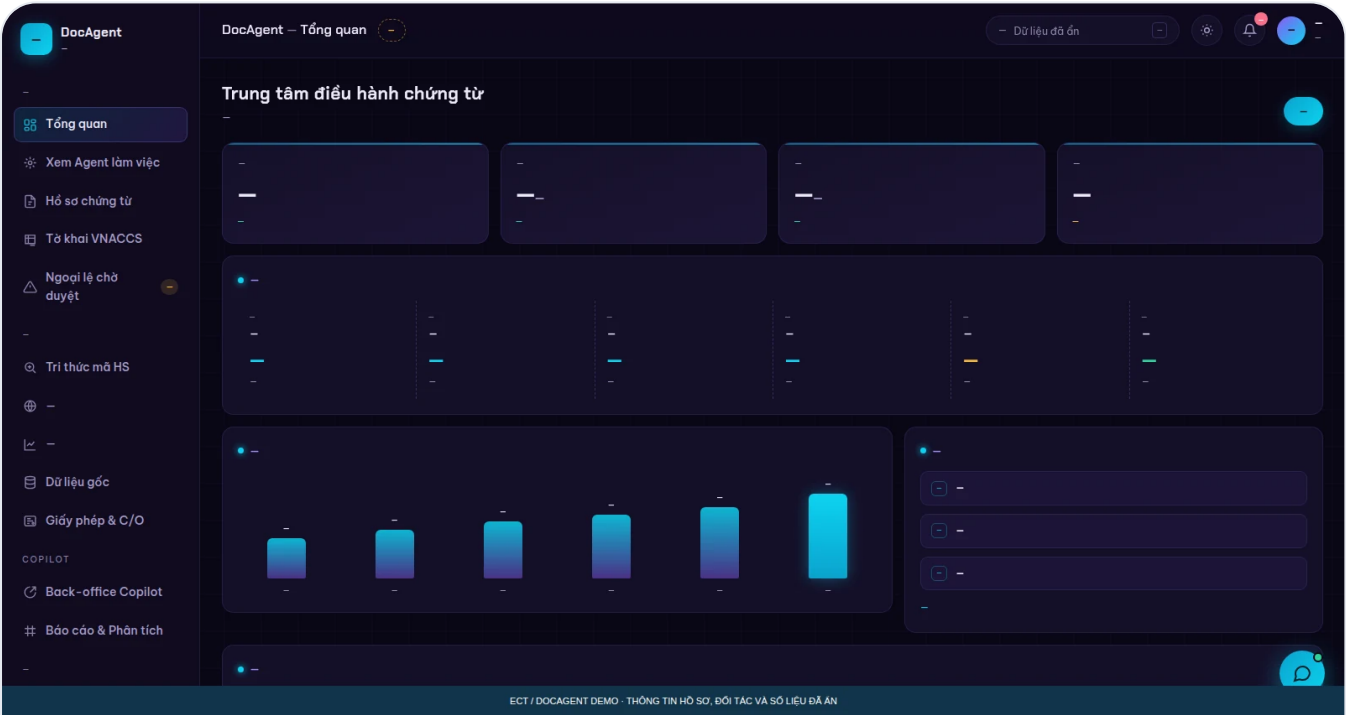
The owner checks the basis, adds documents or explains.

Approval

The manager approves within scope; data becomes eligible for the next step.

01 / UI & DATA SOURCES

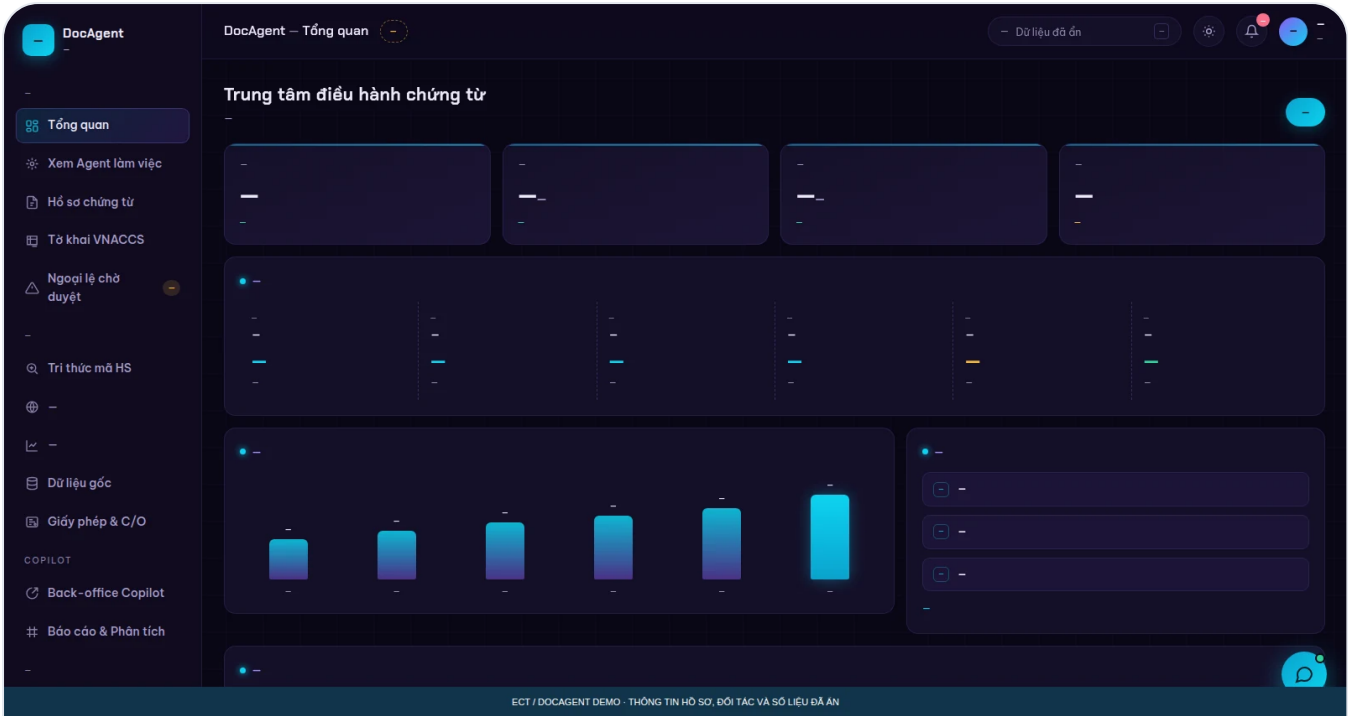
See where the work gets done.



Existing demo · data redacted

DocAgent: operations centre

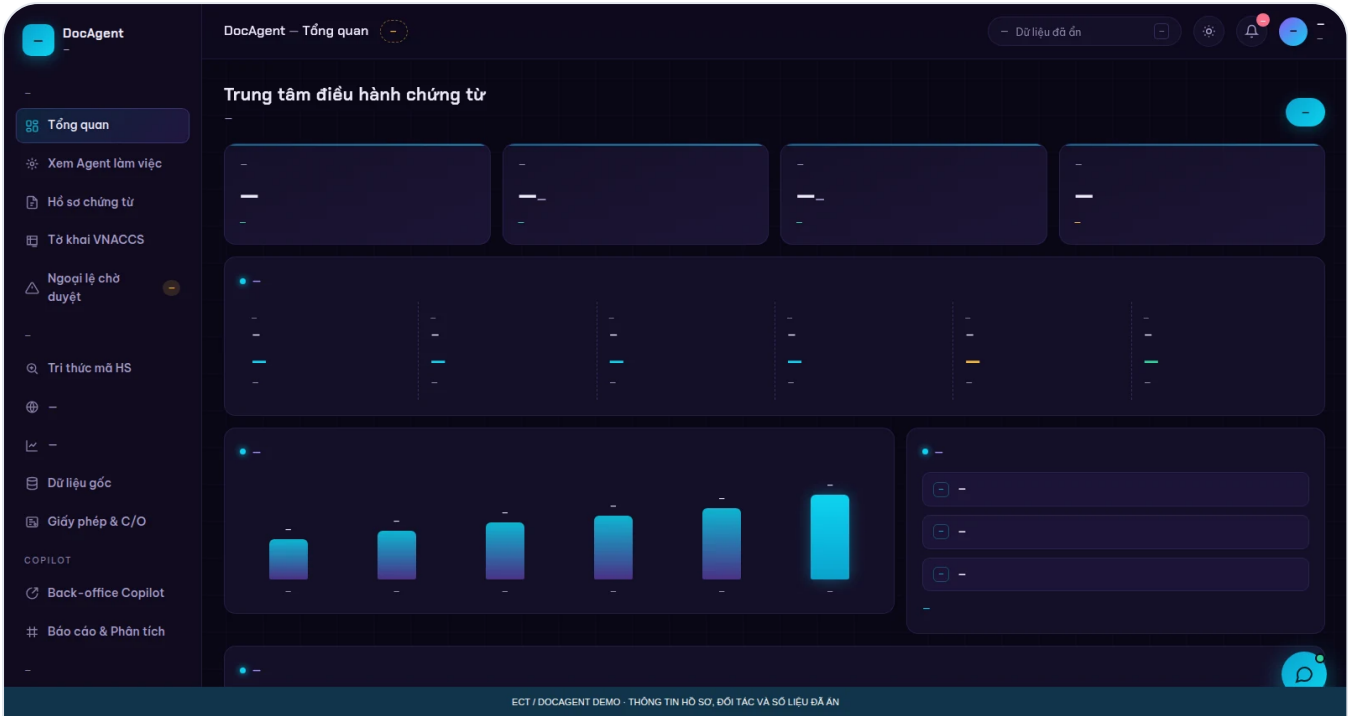
Captured from the existing DocAgent demo. Record and partner data redacted; UI structure and labels kept.



Existing demo · data redacted

DocAgent: Back-office Copilot

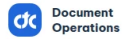
Captured from the existing DocAgent demo. Record and partner data redacted; UI structure and labels kept.



Existing demo · data redacted

DocAgent: audit trail & permissions

Captured from the existing DocAgent demo. Record and partner data redacted; UI structure and labels kept.



Role-based business workspace.

System overview

Document specialist

Reviewer

Operations manager

Business assistant

PROPOSED PROTOTYPE
Synthetic data, no real customer or employee information.
Not connected to production systems.

SOURCED WORK · PEOPLE DECIDE

From scattered documents to an approval-ready file.

DocAgent & Back-office Copilot

03

Sample documents

01

Exception to check

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External submissions

Work queue

Synthetic data

File	Data source	Point to check	Status
DEMO-DOC-01	Invoice / Packing list	Quantity mismatch	Awaiting intake
DEMO-DOC-02	Sample document B	Missing reference document	Awaiting additions
DEMO-DOC-03	Sample document C	Version to verify	Draft

Open sample record ...

Flow by role

- 1 Document specialist**
Confirm input documents belong to the right file.
- 2 Reviewer**
Read data fields and source documents.
- 3 Operations manager**
Read the file and review result before approving.

Decisions have an owner

No digital signing, no declaration transmission, no changes to external business systems.

Sources & versions

INV-DEMO v1

Illustrative quantity: 120 units; not a real invoice.

PACK-DEMO v1

Illustrative quantity: 118 units; the owner must reconcile.

RULE-DEMO-01

Quantity gaps need an explanation before approval.

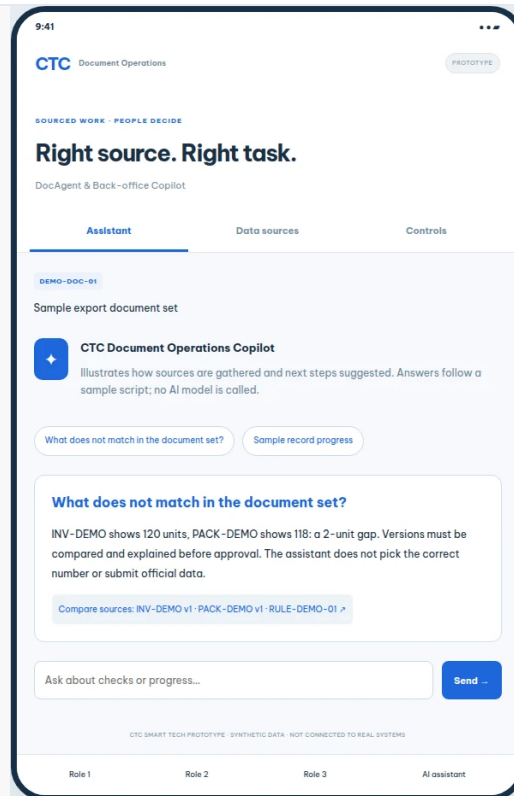
Prototype session log

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Proposed prototype

Document Operations workspace

Prototype dashboard with simulated records; states and process follow the solution design.



Proposed prototype

Document Operations assistant

What does not match in the document set? Sourced simulated scenario; no LLM call.

02 / ROLE-BASED APPS

Every role has a clear workflow.

The apps focus on frequent tasks. In production they share the APIs, file codes, permission policy and history of the business platform.

INTAKE & TRACKING

Document specialist

- Confirm input documents belong to the right file.
- Mark version and readability as checked.
- Forward discrepancies to the reviewer.

[Record-handling screen ↗](#)

RECONCILE & VERIFY

Reviewer

- Read data fields and source documents.
- Record the basis for the quantity gap.
- Send the review result to the manager.

[Record-handling screen ↗](#)

APPROVE & TRACE

Operations manager

- Read the file and review result before approving.
- Approve or return with a request for additions.
- Track history and accountability.

[Record-handling screen ↗](#)

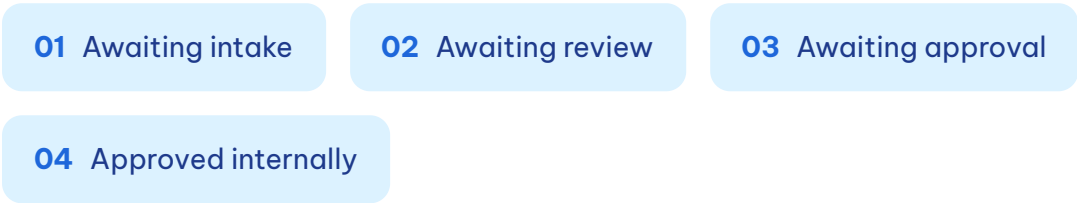
Module mapping & permission limits

ROLE	MODULE	SCOPE
Document specialist	File → Document set → Exceptions	Assigned files only; cannot close discrepancies or transmit declarations.
Reviewer	Reconciliation matrix → Exceptions → Review result	Records verified checks; cannot submit official data.

ROLE	MODULE	SCOPE
Operations manager	Approval queue → Agent permissions → Audit log	Approves within delegated scope. Official signing/submission is a separate step.

03 / A PROTOTYPE FLOW YOU CAN TRY

From input to an evidence-based decision.



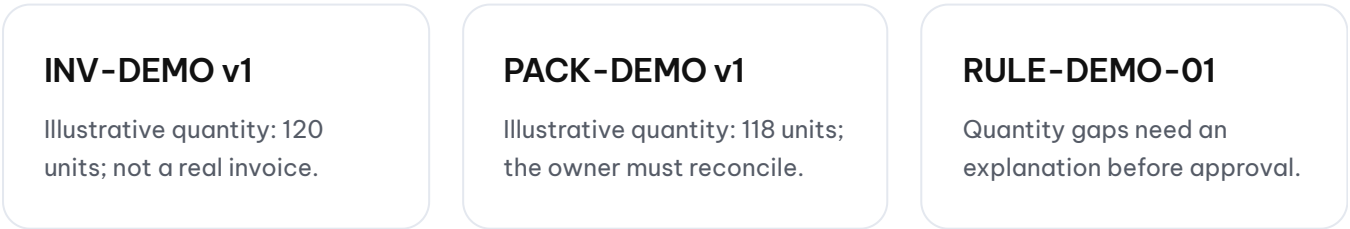
The first role completes the checklist and submits evidence; the next role records an evidence-based result; the approver confirms or returns with a reason. The sample session logs every step.

Prototype boundary

No digital signing, no declaration transmission, no changes to external business systems.

Sample state is stored in the same browser, separated per solution. There is no authentication, multi-user backend, cross-device sync, push or LLM connection. Those must be built and accepted before real operation.

Sources to compare, not automatic conclusions.



INV-DEMO shows 120 units, PACK-DEMO shows 118: a 2-unit gap. Versions must be compared and explained before approval. The assistant does not pick the correct number or submit official data.

DEMO sources are synthetic data for simulation. Real business documents must be collected with usage rights, versioned and quality-checked.

Pilot & acceptance roadmap

- 1. Pick one document type, an answer key and a baseline.

2. Configure extraction, rules and the exception flow.
3. Run reconciliation alongside specialists; check permissions and traces.
4. Accept on new files, then extend integration.

Conditions to verify

- Quantity gaps are blocked before approval.
- Every field has a source or is flagged as unverified.
- No data leaves automatically; every action has a person and a reason.
- Per-file permissions, versioning and duplicate-submission errors are tested.

Agree scope, baseline, sample size, confirming person and operating responsibility before the pilot. Demos do not replace acceptance results or performance commitments.

Reference direction: CTC Smart Tech internal DocAgent demo. Details are compiled from existing documents and source code; new UIs are clearly marked as proposed designs.

Frequently asked questions

Does it replace the ERP?

The solution is designed as a support layer on top of existing processes and systems. Integration scope is fixed after discovery.

Does the AI file declarations by itself?

Not within this proposal. An authorised person checks, signs and performs the official submission.

Basis of this document

Reference: CTC Smart Tech internal DocAgent demo. DocAgent has an existing demo UI; the role-based workspace/apps and the new assistant are proposed prototypes. The process, pilot and acceptance sections in this kit are proposed designs to be confirmed per project.