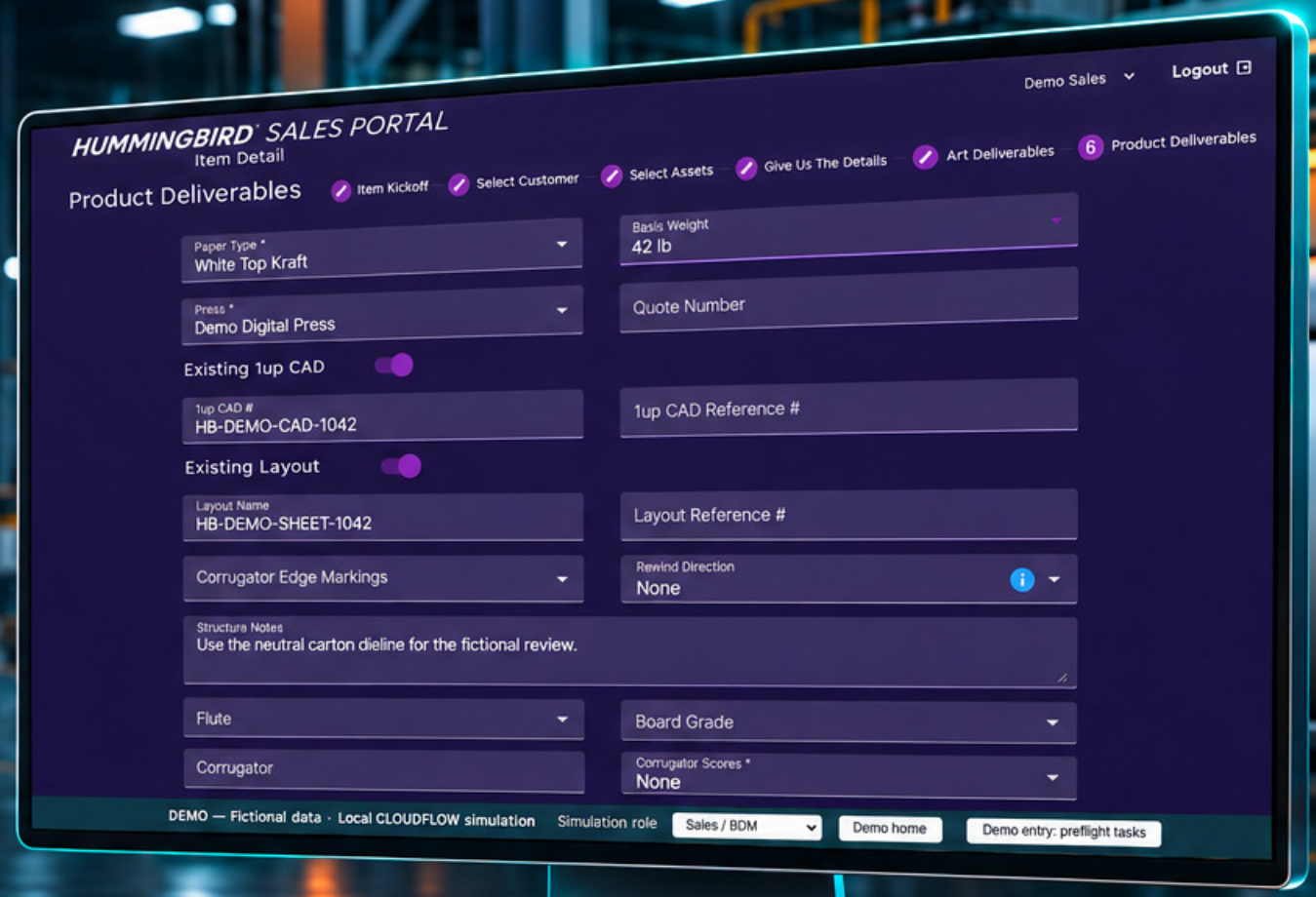
HUMMINGBIRD®

Enterprise packaging portal

COMPLEX ORDERS. STREAMLINED OPERATIONS.

Georgia-Pacific / Koch Industries



Emilian Manolache

Senior Full-Stack Developer

Angular portal engineering / Order entry & packaging spec tools / Cloudflow API integration

2020-2025

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ENTERPRISE PACKAGING / US

COMPLEX PACKAGING WORK. ONE CONNECTED PORTAL.

Georgia-Pacific

Hummingbird® packaging operations

I architected and developed the Angular portal that connects commercial requests, technical specifications and human review.

Sales & operations

Customer requests and detailed packaging specifications.

Management

Individual decisions on proposed specification changes.

Human preflight

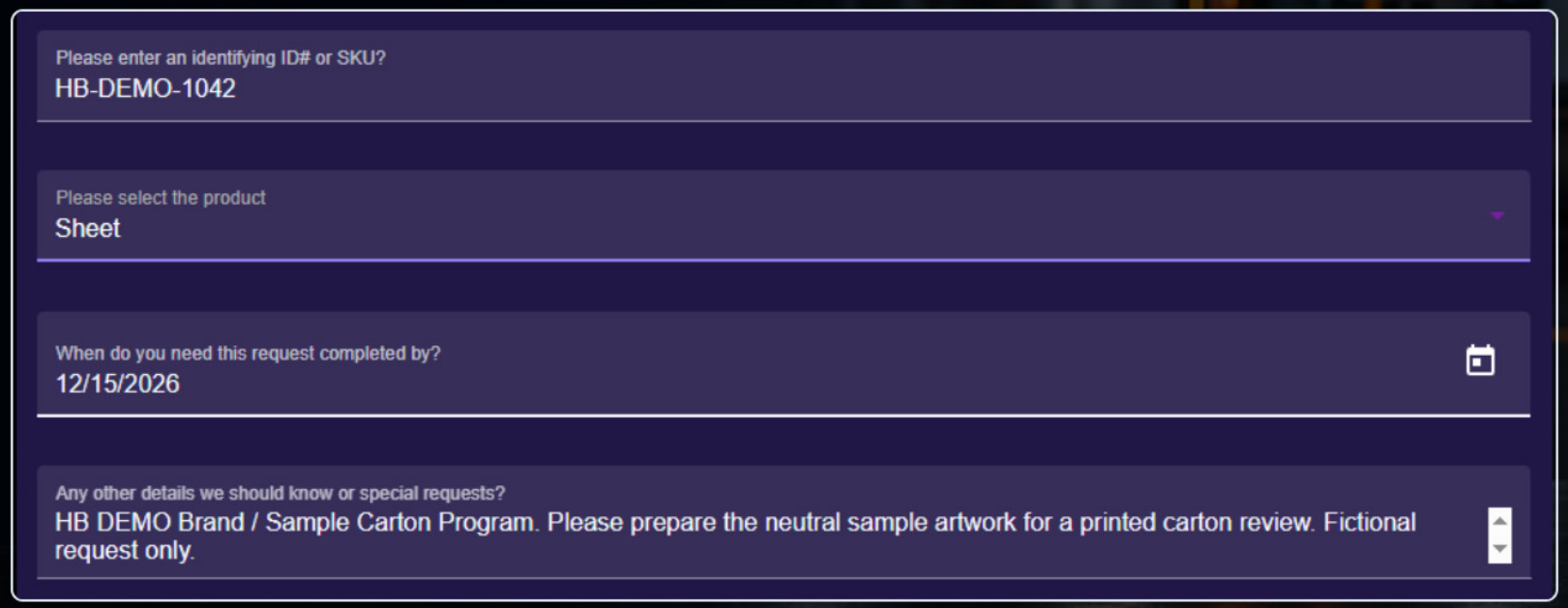
Artwork, reports and grades that govern the next submission.

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COMMERCIAL INTAKE

THE REQUEST STARTS WITH CUSTOMER CONTEXT

Customer SKU, product details and request notes give the operational team its starting point.



COMMERCIAL INFORMATION

SKU and product

Requested deadline

Customer instructions

A person translates the request into a technical specification.

The portal carries customer context into that work.

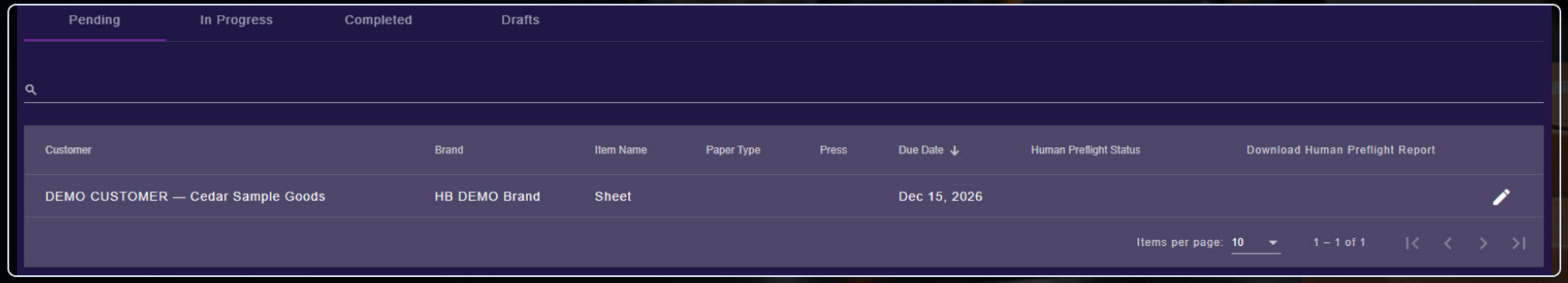
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RESUMABLE ORDER ENTRY

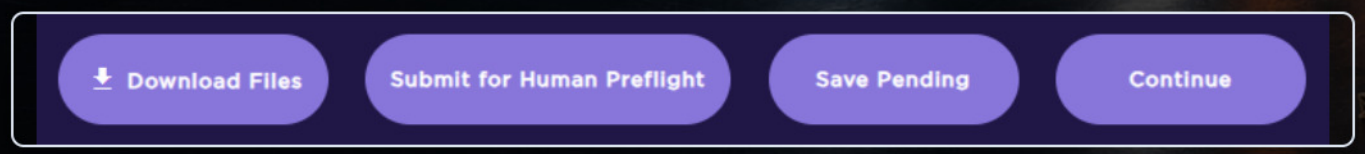
SAVE PENDING WORK.
RESUME THE SPECIFICATION.

Staff can reopen pending requests with the packaging context and retained files available.

SALES REQUEST WORKSPACE



A WORKFLOW THAT CAN PAUSE



Complex order entry continues across working sessions.

Save the current state.

Return to the pending record.
Continue with its customer,
product and asset context.

DETAILED ORDER ENTRY IN SIX CLEAR STAGES

The Angular workflow gives each part of the packaging specification a defined place.

Item Kickoff

Start the item record.

Select Customer

Connect program and item context.

Select Assets

Attach artwork and structural files.

Give Us the Details

Record the technical requirements.

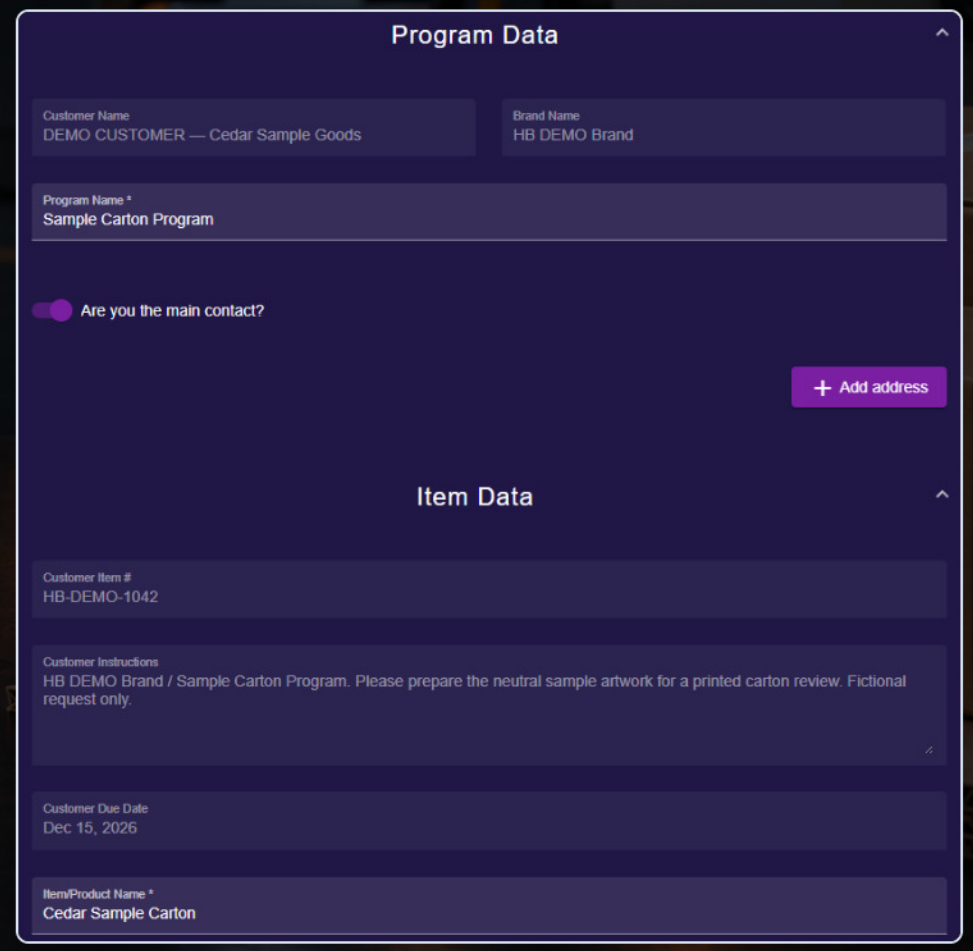
Art Deliverables

Define artwork-related outputs.

Product Deliverables

Specify material, press and structure.

CUSTOMER AND ITEM CONTEXT

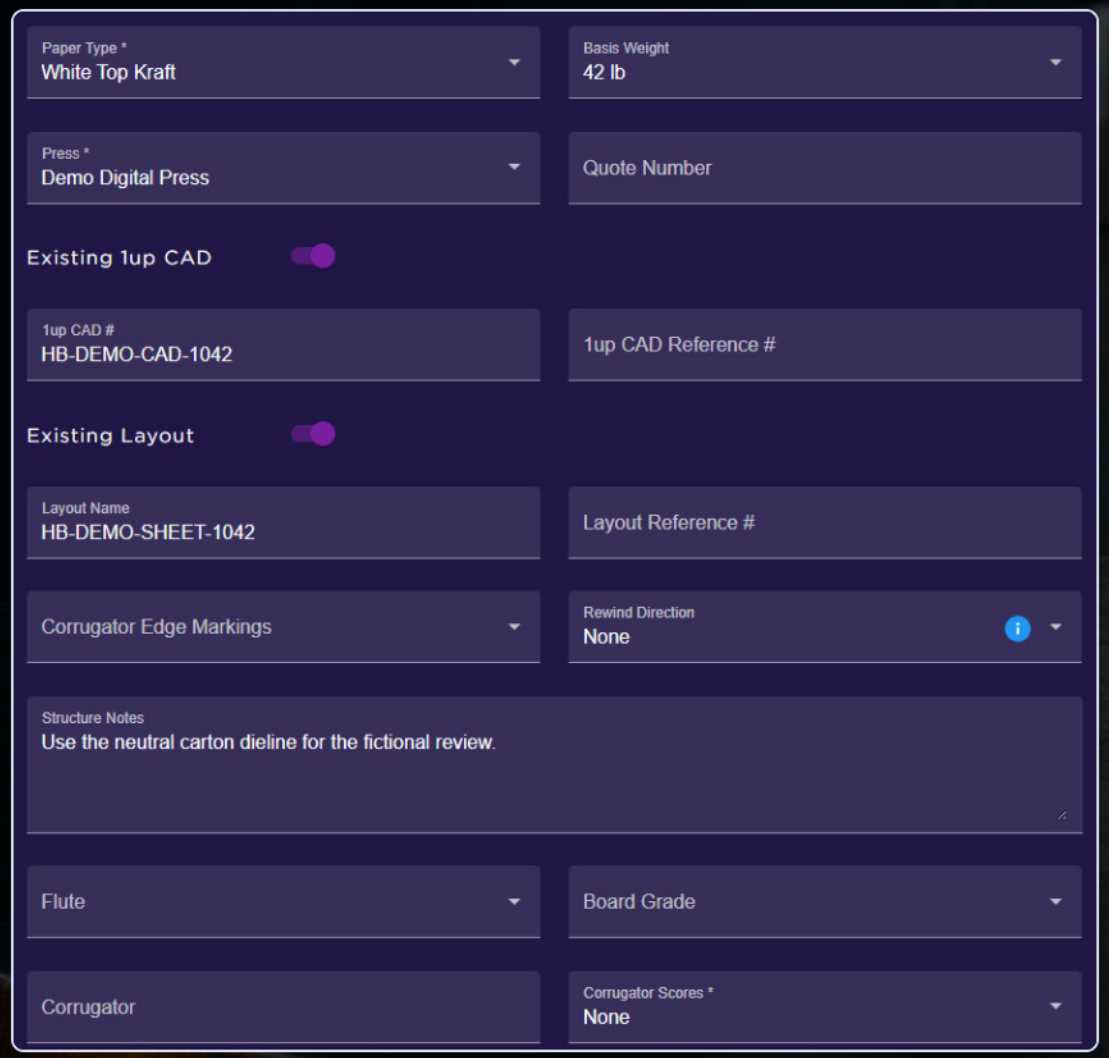


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DOMAIN ENGINEERING

PACKAGING SPECIFICATIONS WITH PRODUCTION DETAIL

Specialized forms connect business terminology to the information required by packaging workflows.



MATERIAL AND PRESS

Paper type, basis weight and press selection.

CAD AND LAYOUT

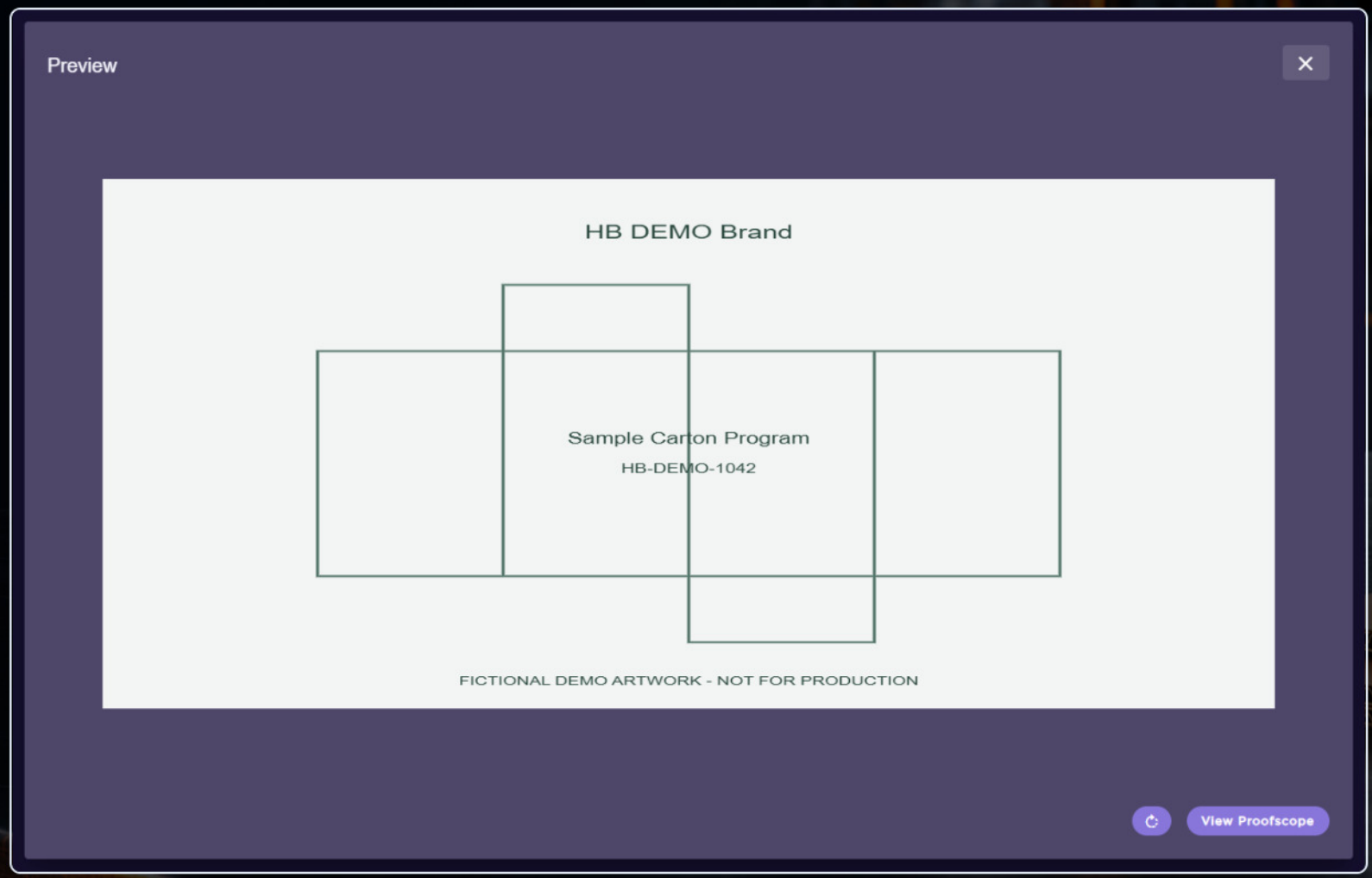
Existing references connect the specification to structural work.

STRUCTURAL REQUIREMENTS

Notes, flute, board grade and corrugator settings.

ARTWORK AND STRUCTURE
STAY WITH THE SPECIFICATION

A native preview keeps file context visible and provides the Proofscope handoff.



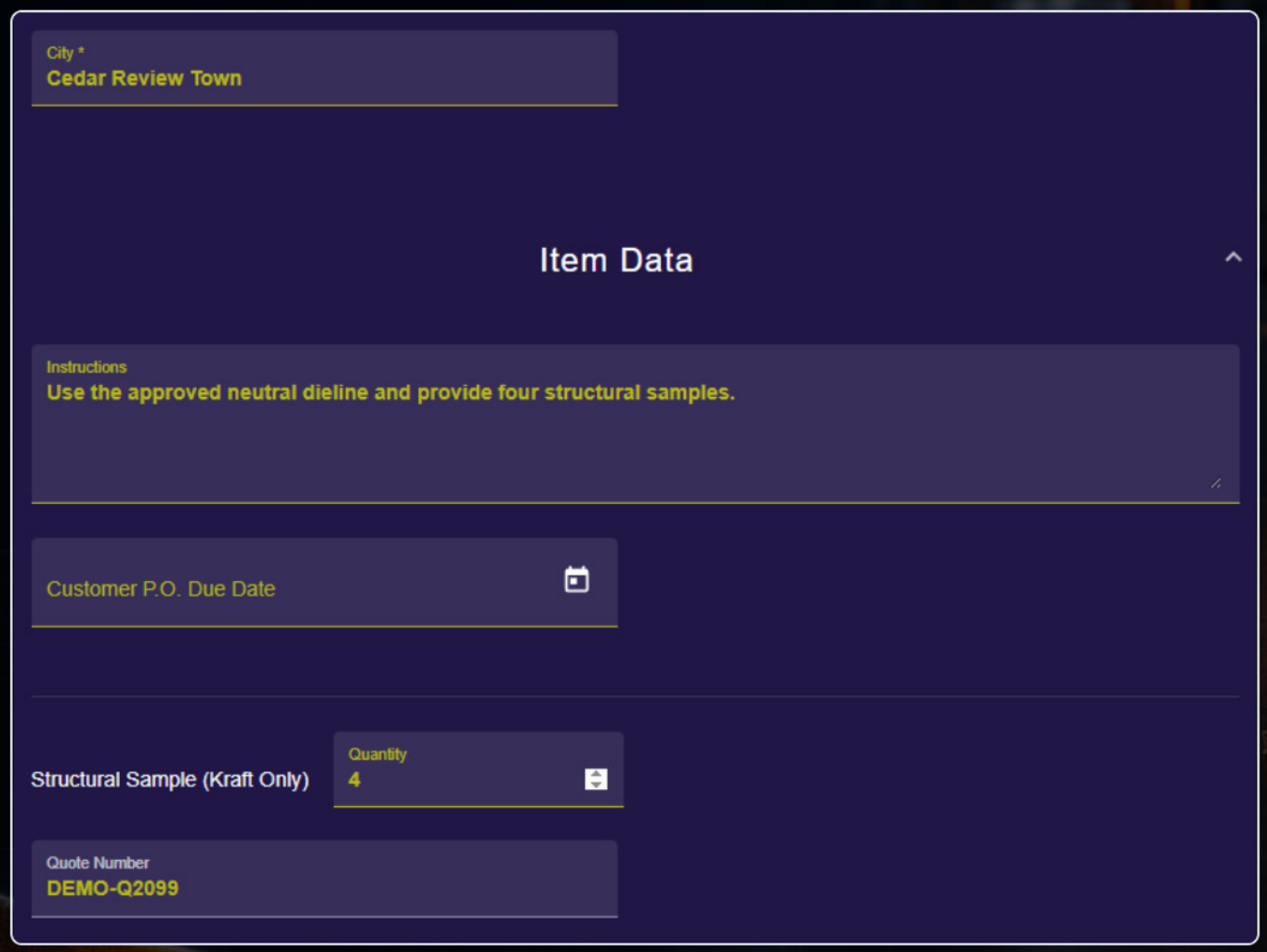
Inspect the file

Preview artwork
and structural content.
Rotate the view.
Open the Proofscope
control.

The file remains part
of the item workflow.

PROPOSED EDITS KEEP CHANGES REVIEWABLE

Changes to an existing specification move into a dedicated management-review workflow.

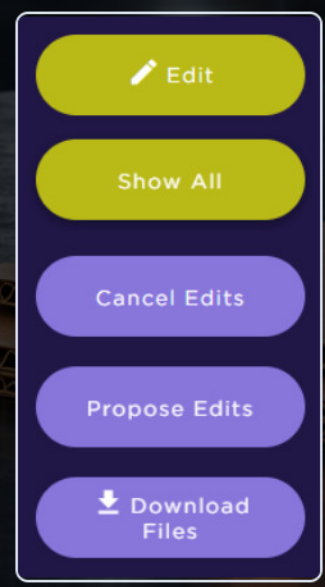


EXISTING SPECIFICATIONS

Edit program and item data.

Propose the changed values.

Pass them to management.



Dedicated edit and proposal actions

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GRANULAR MANAGEMENT DECISIONS

DECISIONS AT THE INDIVIDUAL FIELD

Managers review proposed changes to existing specifications, including nested program values.

SELECTED APPROVALS

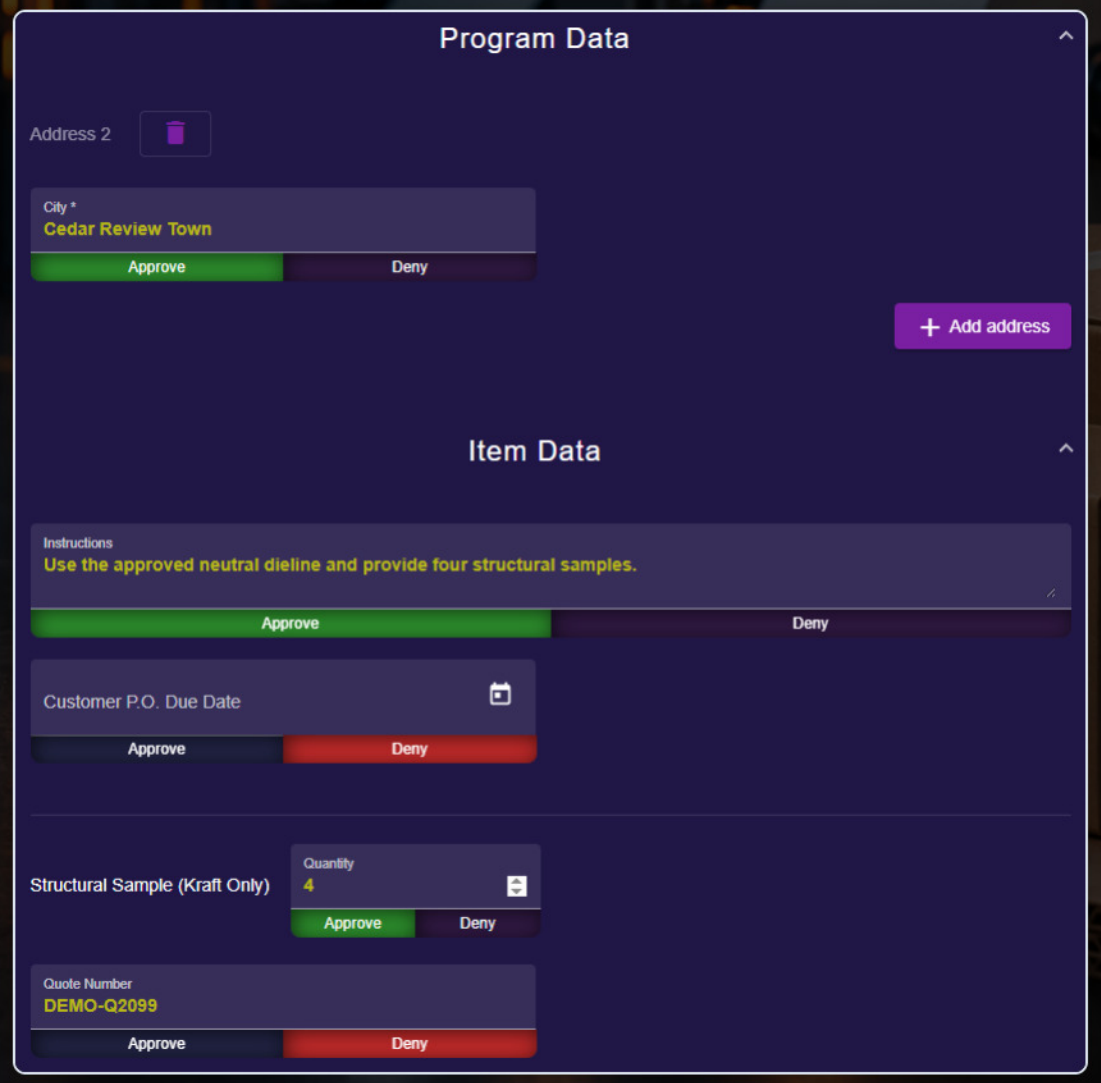
Structural sample quantity

2 → 4

Approved in management review.

A different change can be denied.

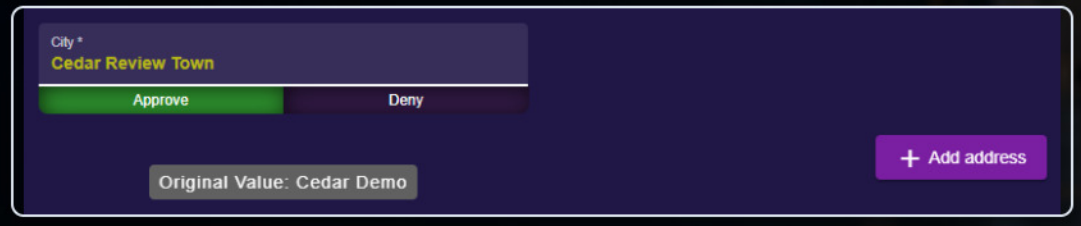
The proposed quote number is rejected while the approved quantity is retained.



NESTED CHANGES WITH THEIR CONTEXT INTACT

Review a shipping-address field, then retain the surrounding address in the saved specification.

REVIEW THE PROPOSED CITY



A decision on one nested value

The review exposes the original city alongside the proposed value and its approval controls.

REOPEN THE ADDRESS

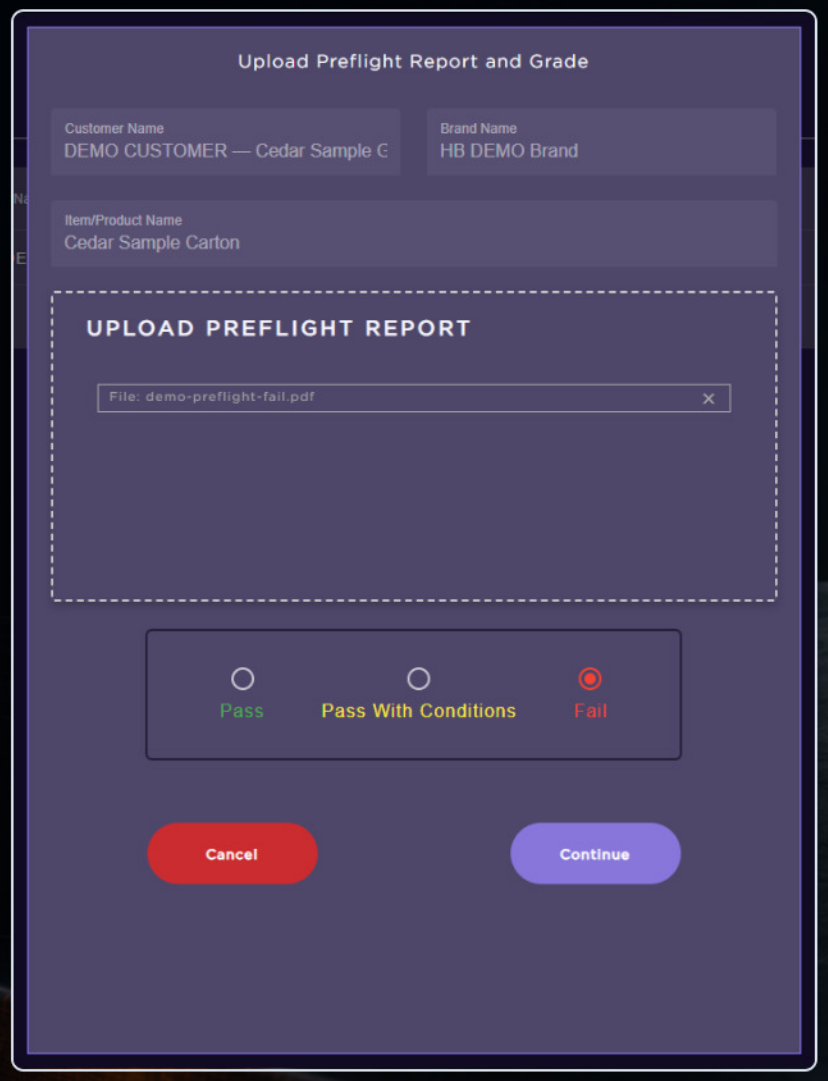


The second shipping address

The approved city appears with the remaining address and contact fields.

HUMAN PREFLIGHT WITH A COMPLETE WORKSPACE

Reviewers inspect job requirements, upload a report and assign the preflight grade.



JOB REQUIREMENTS

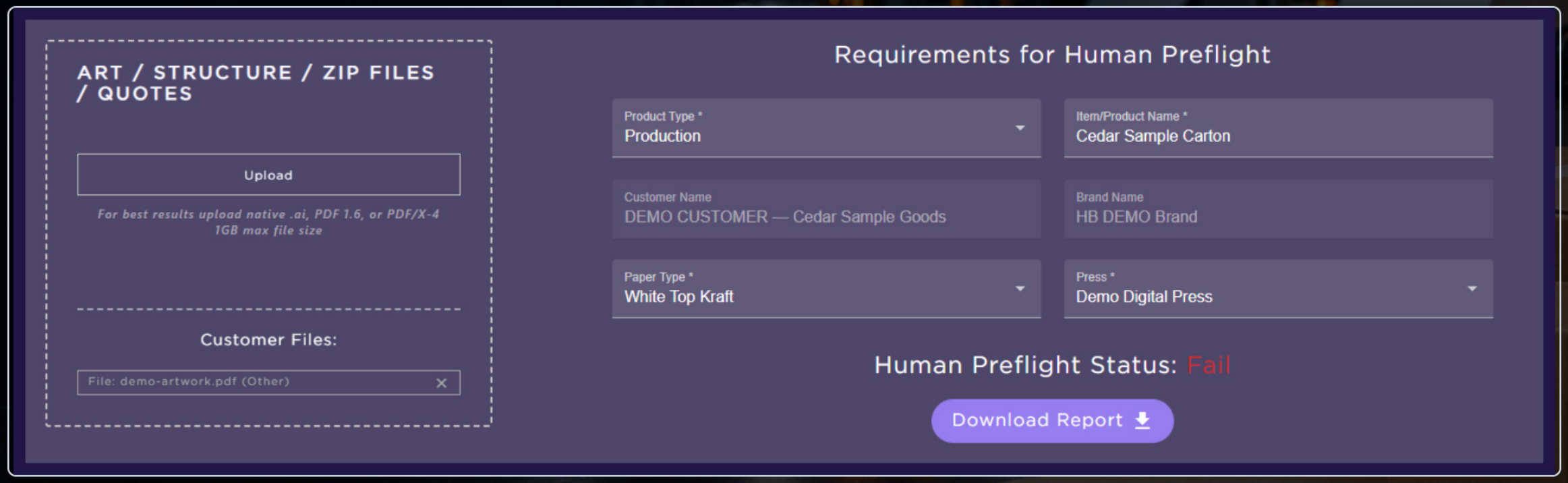


A human decision with a report

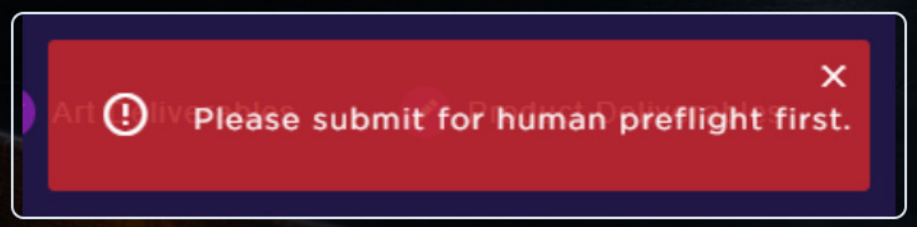
The portal connects task, file upload and grade to the item's next submission step.

A FAILED REVIEW
STOPS THE NEXT SUBMISSION

The item retains its preflight status and downloadable report for follow-up.



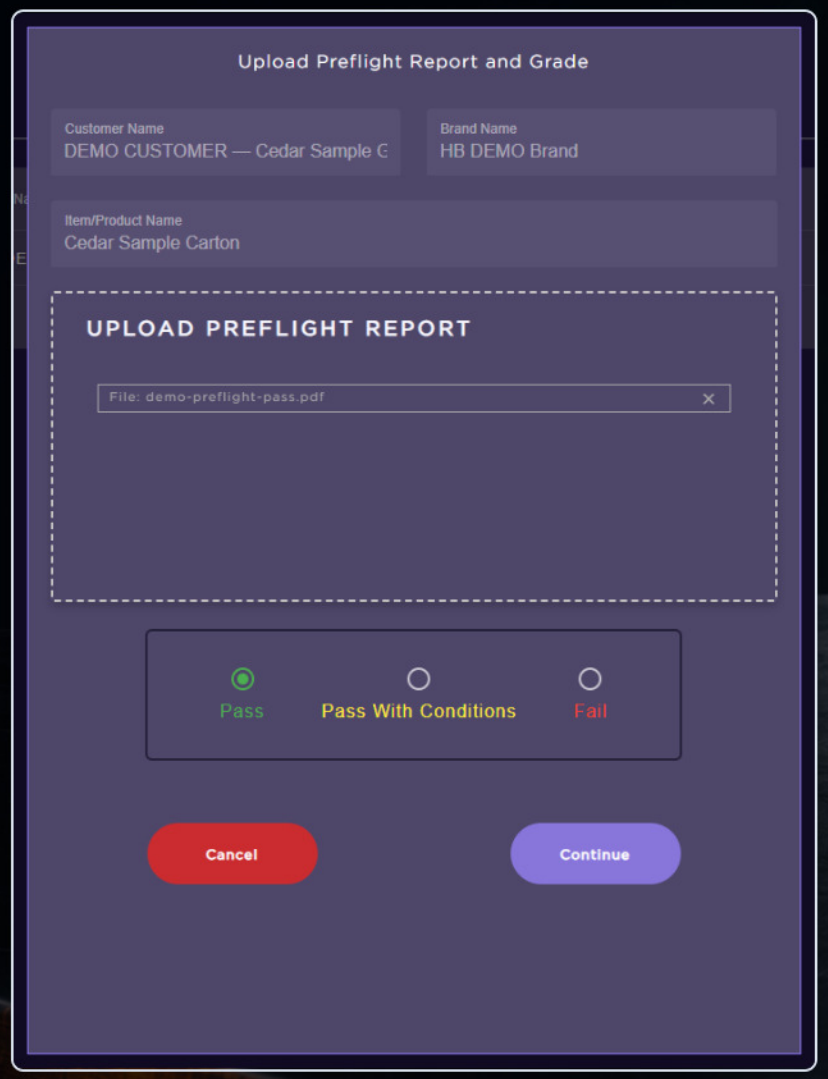
SUBMISSION BLOCKED



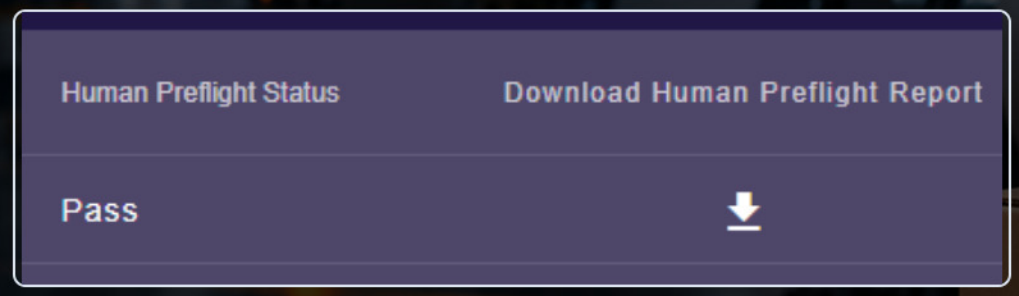
The workflow keeps the review decision connected to what the user can do next.

A PASSING REVIEW PERMITS THE NEXT STEP

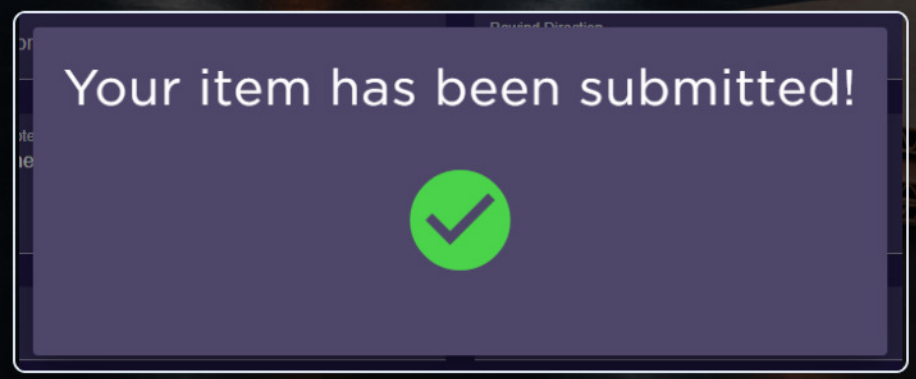
The passing path records the reviewer's grade before the item proceeds to submission.



PASS STATUS IN THE SALES WORKSPACE



SUBMISSION CONFIRMATION



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SYSTEM ARCHITECTURE

AN ANGULAR PORTAL AROUND THE PACKAGING PROCESS

Angular Material · TypeScript · RxJS · HTML / SCSS

PORTAL ARCHITECTURE AND IMPLEMENTATION

Role-specific experiences

Sales and operations / Management / Human preflight

↓

Portal-side integration layer

Field mapping, workflow states and file handling

↓

Cloudflow API

Backend workflow

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INTEGRATION ENGINEERING

COMPLEX PORTAL DATA. EXPLICIT WORKFLOW MAPPING.

I implemented portal-side field mapping and integration states.

PORTAL WORK		CLOUDFLOW API CONTRACTS
Customer and item data SKU, instructions and program context	→	Map to item and program fields
Packaging catalogs Paper, press and CAD/layout references	→	Retrieve and cache catalog lookups
Saved and submitted work Pending records and submission state	→	Map review and submitted states
Human preflight Tasks, report uploads and grades	→	Create tasks and record review outcomes

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ROLE AND DELIVERY

PORTAL ARCHITECT AND DEVELOPER

2020–2025 · Senior Full-Stack Developer

Used across the business workflow

Sales, operational teams and managers within Georgia-Pacific's packaging business.

PORTAL ARCHITECTURE

Angular experiences shaped around the packaging domain.

WORKFLOW DELIVERY

Specifications, granular reviews, files and human preflight.

API DEVELOPMENT

Portal-side integration with the Cloudflow API.

Enterprise workflow ownership, from the request to the next operational handoff.