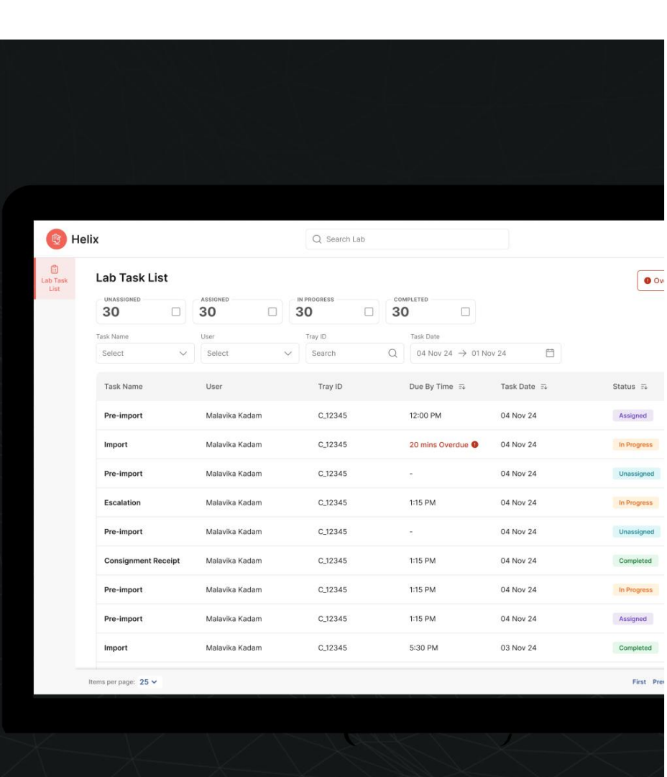
((Live

Helix:
Optimising Lab Operations!

Core Product Designer



Helix

Lab Task List

UNASSIGNED	ASSIGNED	IN PROGRESS	COMPLETED
30	30	30	30

Task Name: Select · User: Select · Tray ID: Search · Task Date: 04 Nov 24 → 01 Nov 24

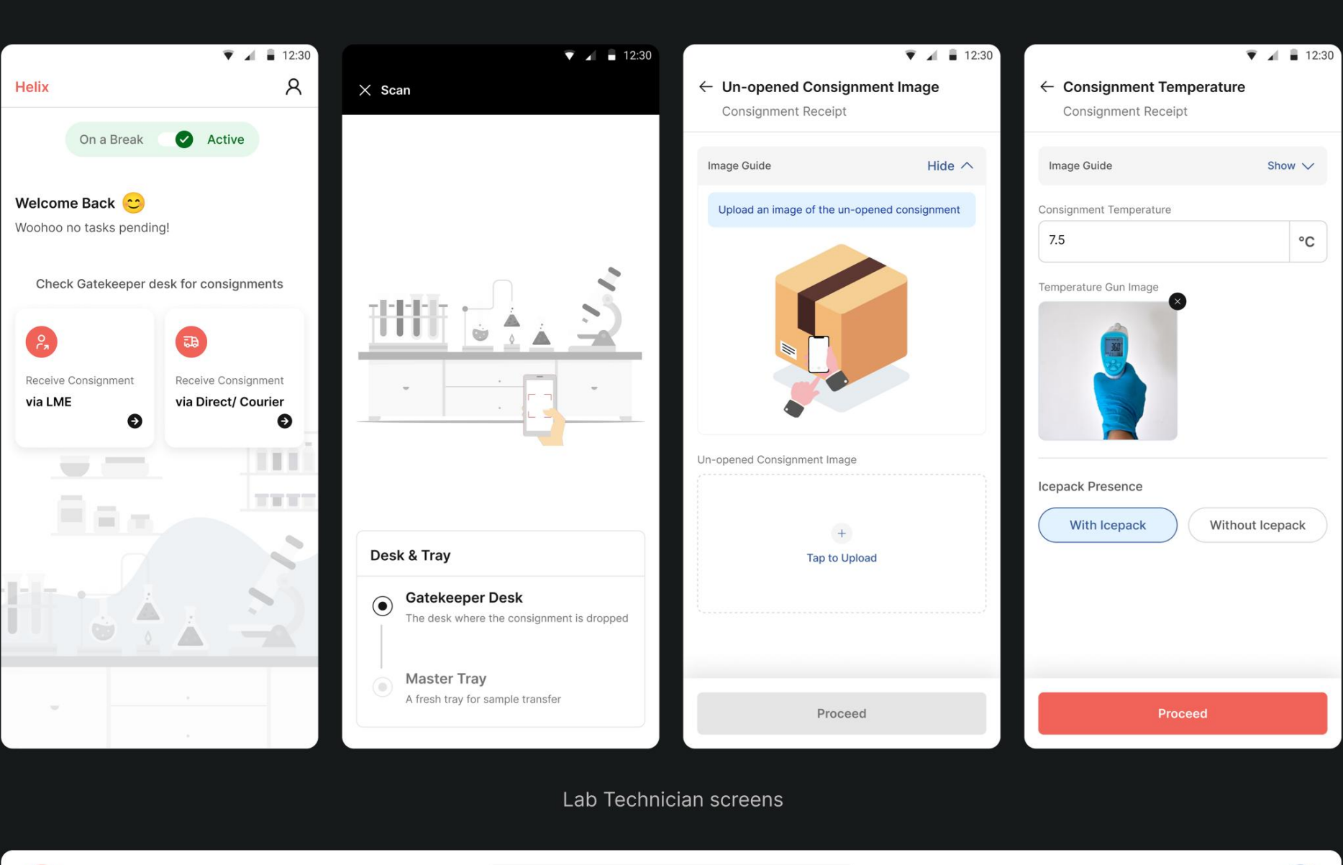
Task Name	User	Tray ID	Due By Time	Task Date	Status
Pre-import	Malavika Kadam	C_12345	12:00 PM	04 Nov 24	Assigned
Import	Malavika Kadam	C_12345	20 mins Overdue	04 Nov 24	In Progress
Pre-import	Malavika Kadam	C_12345	-	04 Nov 24	Unassigned
Escalation	Malavika Kadam	C_12345	1:15 PM	04 Nov 24	In Progress
Pre-import	Malavika Kadam	C_12345	-	04 Nov 24	Unassigned
Consignment Receipt	Malavika Kadam	C_12345	1:15 PM	04 Nov 24	Completed
Pre-import	Malavika Kadam	C_12345	1:15 PM	04 Nov 24	In Progress
Pre-import	Malavika Kadam	C_12345	1:15 PM	04 Nov 24	Assigned
Import	Malavika Kadam	C_12345	5:30 PM	03 Nov 24	Completed

Items per page: 25

Domain	Platform	Region	Timeline
HealthCare	Web + Mob App	India	3 months

ABOUT THE PLATFORM

Helix is a digital platform designed for lab technicians to streamline the entire journey of blood and other test samples.
By digitizing the process, Helix ensures seamless tracking, allowing patients to stay informed about their sample's status without any hassle. Lab managers can oversee operations in real time, ensuring tasks are completed accurately and on schedule, ultimately enhancing efficiency and reliability in diagnostic testing.



Helix · On a Break · Active

Welcome Back 😊

Woohoo no tasks pending!

Check Gatekeeper desk for consignments

Receive Consignment via LME

Receive Consignment via Direct/ Courier

Scan

Desk & Tray

Gatekeeper Desk — The desk where the consignment is dropped

Master Tray — A fresh tray for sample transfer

Un-opened Consignment Image — Consignment Receipt

Image Guide · Hide

Upload an image of the un-opened consignment

Un-opened Consignment Image: Tap to Upload

Proceed

Consignment Temperature — Consignment Receipt

Image Guide · Show

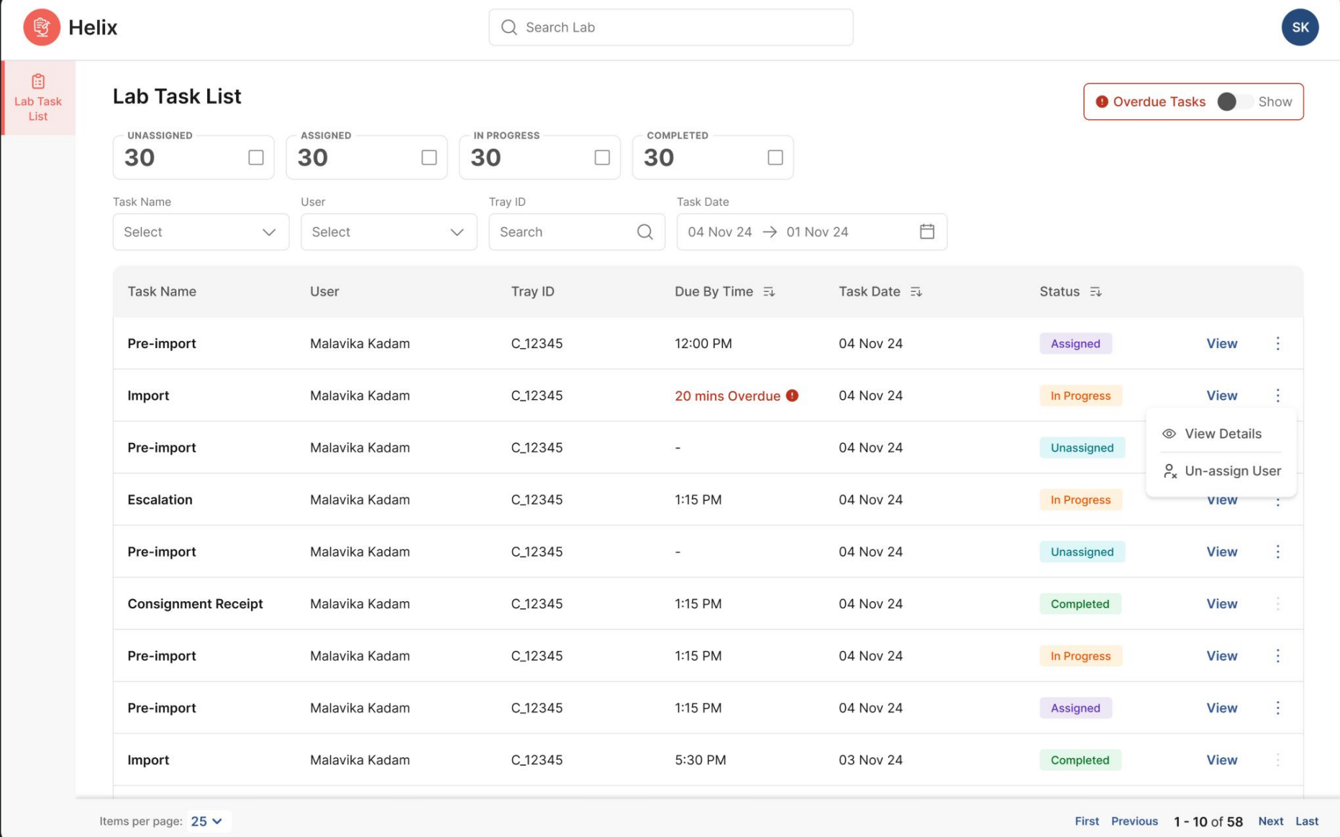
Consignment Temperature: 7.5 °C

Temperature Gun Image

Icepack Presence: With Icepack · Without Icepack

Proceed

Lab Technician screens



Helix · Search Lab · SK

Lab Task List · Overdue Tasks · Show

UNASSIGNED	ASSIGNED	IN PROGRESS	COMPLETED
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Pre-import	Malavika Kadam	C_12345	-	04 Nov 24	Unassigned	View Details Un-assign User
Escalation	Malavika Kadam	C_12345	1:15 PM	04 Nov 24	In Progress	View
Pre-import	Malavika Kadam	C_12345	-	04 Nov 24	Unassigned	View
Consignment Receipt	Malavika Kadam	C_12345	1:15 PM	04 Nov 24	Completed	View
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Items per page: 25 · First · Previous · 1 - 10 of 58 · Next · Last

lab Manager screen

THE PROBLEM STATEMENT

- Lab processes are discretion-based, lacking standardized tracking and optimization.
- Turnaround time (TAT) is monitored at a high level, but individual task inefficiencies remain unidentified.
- No structured breakdown of the total processing time (X hours) into sub-tasks to identify delays.
- Heavy reliance on physical registers and documents leads to inefficiencies and time-consuming workflows.
- Lack of a system to track task ownership, accountability, and efficiency at both task and user levels.
- Need for a digitized task management system with predefined SLAs to improve process visibility and efficiency.

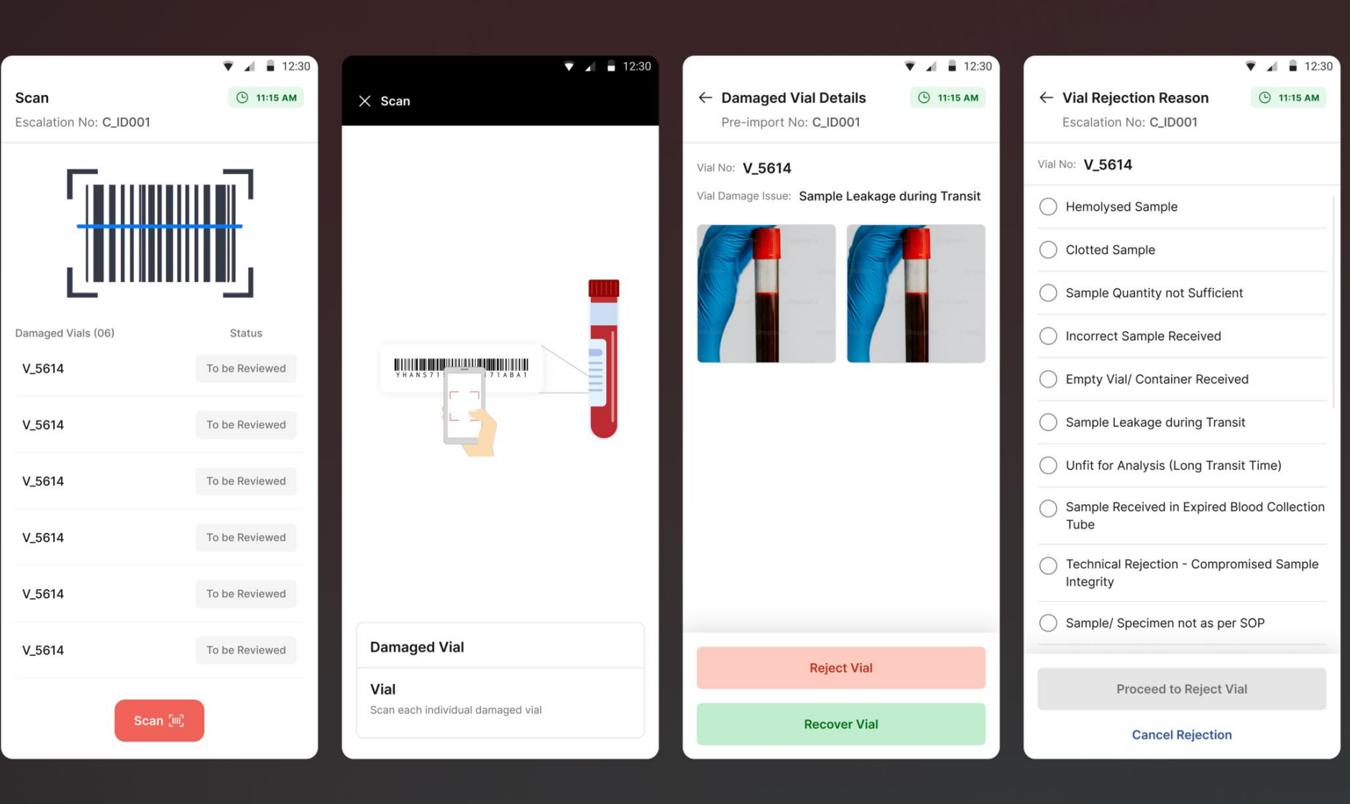
THE TARGET DEMPOGRAPHICS

Target Users

- Lab Technicians
  - Users within the lab who interact with the samples first-hand
- Lab Managers
  - Users who would keep track of the task performance of the lab technicians.

THE PROJECT GOALS

- Transitioning from legacy register entries to a fully digitized lab process.
- Enabling end-to-end tracking of each sample, from collection to report generation.
- Ensuring the solution is not just functionally effective but also designed to create a seamless, engaging experience that encourages users to adopt it effortlessly every day.



Scan · 11:15 AM — Escalation No: C_ID001

Damaged Vials (06)	Status
V_5614	To be Reviewed
V_5614	To be Reviewed
V_5614	To be Reviewed
V_5614	To be Reviewed
V_5614	To be Reviewed
V_5614	To be Reviewed

Scan

Damaged Vial — Vial: Scan each individual damaged vial

Damaged Vial Details · 11:15 AM — Pre-import No: C_ID001

Vial No: V_5614

Vial Damage Issue: Sample Leakage during Transit

Reject Vial · Recover Vial

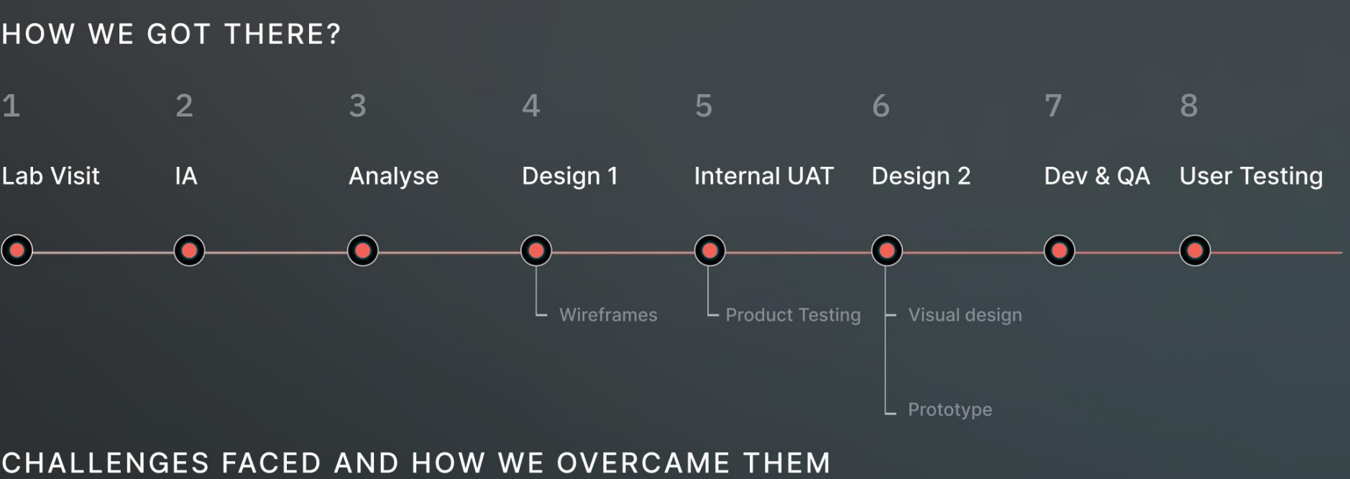
Vial Rejection Reason · 11:15 AM — Escalation No: C_ID001

Vial No: V_5614

- ○ Hemolysed Sample
- ○ Clotted Sample
- ○ Sample Quantity not Sufficient
- ○ Incorrect Sample Received
- ○ Empty Vial/ Container Received
- ○ Sample Leakage during Transit
- ○ Unfit for Analysis (Long Transit Time)
- ○ Sample Received in Expired Blood Collection Tube
- ○ Technical Rejection - Compromised Sample Integrity
- ○ Sample/ Specimen not as per SOP

Proceed to Reject Vial · Cancel Rejection

HOW WE GOT THERE?



CHALLENGES FACED AND HOW WE OVERCAME THEM

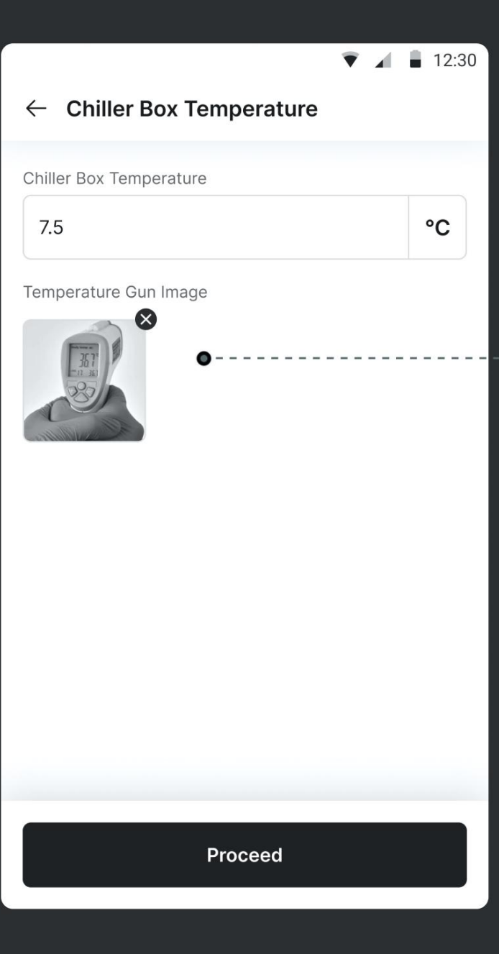
- The platform was built from the ground up, with no existing references to guide development.
- Our primary goal was to enhance efficiency for lab technicians without adding complexity. However, we observed that while certain tasks took a few extra minutes, errors were significantly reduced.
- Some design decisions, initially made to simplify workflows, often didn't work as expected. This led us to prioritize user testing after every new flow, ensuring that keeping the user at the center of our process made design decisions more effective.
- Acknowledging Imperfections: Recognizing the challenges of working in a less-than-ideal world, maintaining a positive outlook despite constraints. 🌟

THE INFORMATION ARCHITECTURE

The user flow and IA was done to understand each individual module end-to-end and to create a product-wide journey flowing through these modules. This IA is mapped from the time the consignment is received at the lab up to it's import into the departments.

THE WIREFRAMES

This approach focuses on simplicity and efficiency, ensuring that each step involves only one clear action. By minimizing complex decision-making and confusion, it helps streamline tasks, ensuring they are completed accurately and in the shortest possible time.



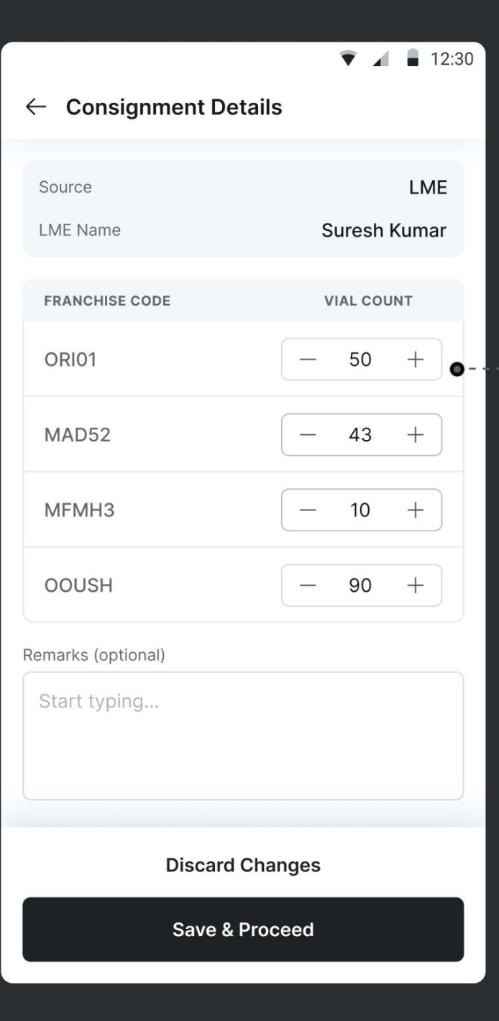
Chiller Box Temperature

Chiller Box Temperature: 7.5 °C

Temperature Gun Image

Proceed

this is the step in the consignment receipt where the lab technician has to upload a proof of the temperature of the consignment as it is ideally supposed to be stored with ice-packs



Consignment Details

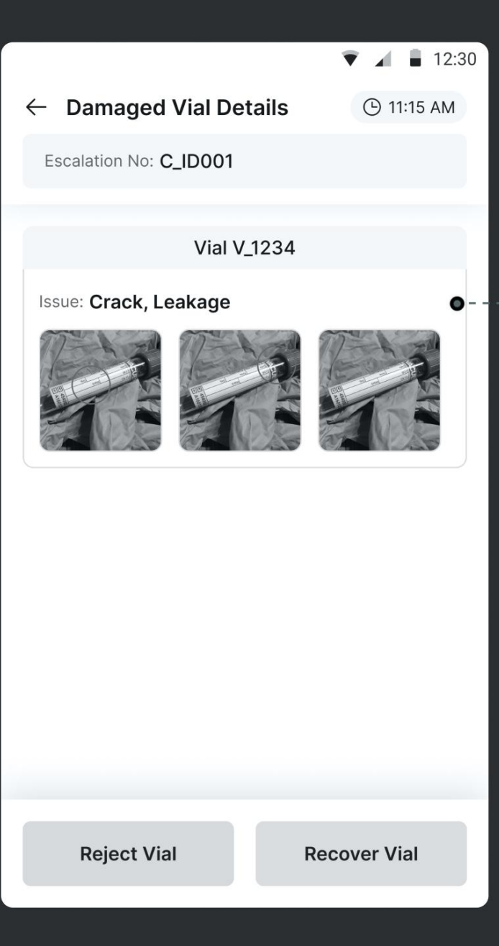
Source	LME
LME Name	Suresh Kumar

FRANCHISE CODE	VIAL COUNT
ORI01	50
MAD52	43
MFMH3	10
OOUSH	90

Remarks (optional): Start typing...

Discard Changes · Save & Proceed

this is the step where the user needs to confirm the number of samples that have arrived in each consignment.
the idea of having single addition and subtraction is because we expect the delta between the original count and recount to be very small.



Damaged Vial Details · 11:15 AM

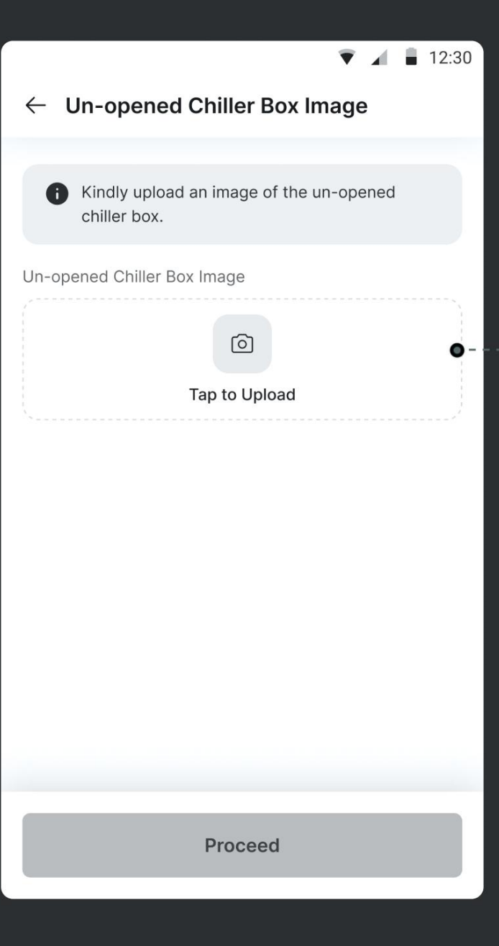
Escalation No: C_ID001

Vial V_1234

Issue: Crack, Leakage

Reject Vial · Recover Vial

this is a screen from a damaged vial rejection or recovery flow.
here, the manager is eligible to review vials that the lab technician would have rejected.

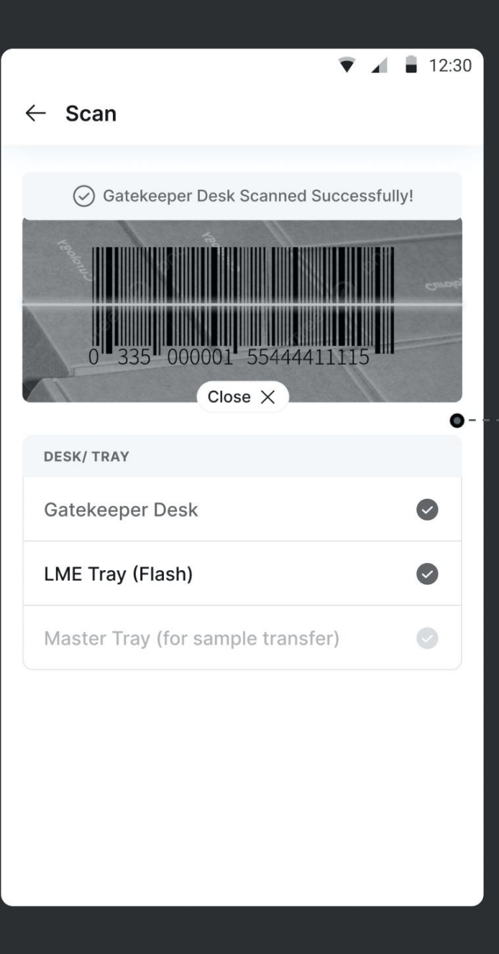


Un-opened Chiller Box Image

Kindly upload an image of the un-opened chiller box.

Un-opened Chiller Box Image: Tap to Upload

this is what an image upload screen in any flow would look like



Scan

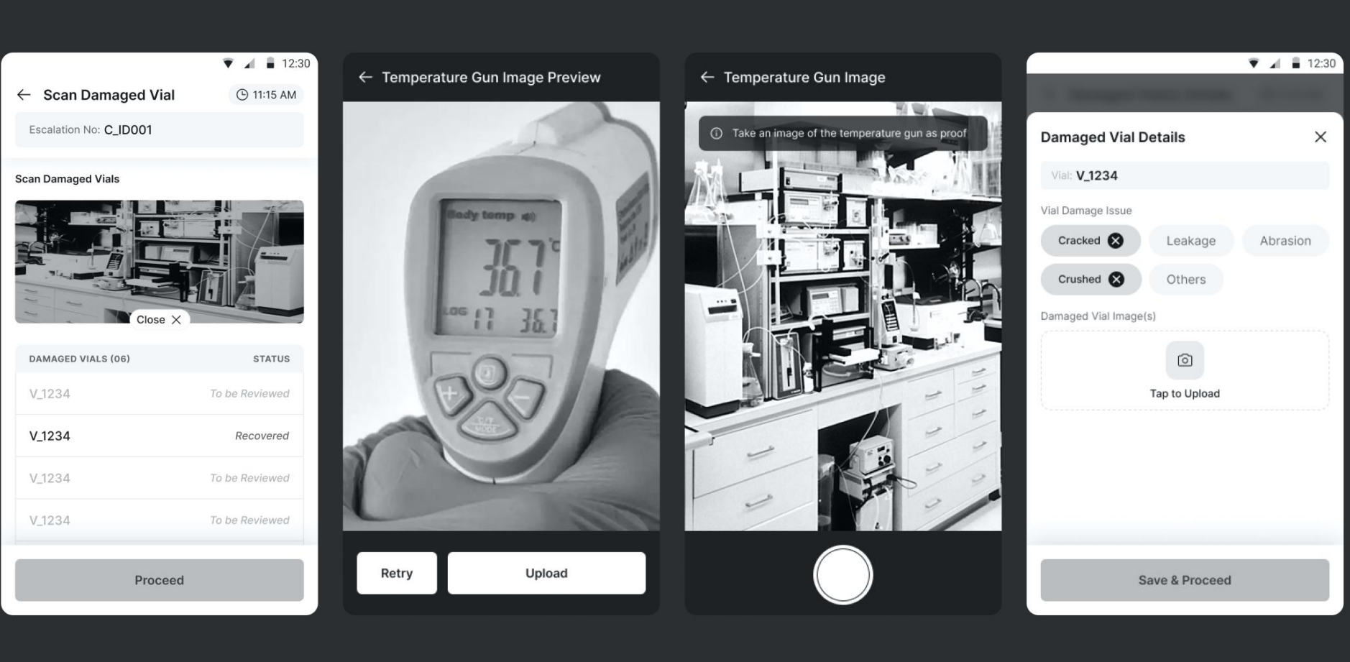
Gatekeeper Desk Scanned Successfully!

Close

DESK/ TRAY

- Gatekeeper Desk ✓
- LME Tray (Flash) ✓
- Master Tray (for sample transfer)

this is what the scanning screen would look like but the device selected for this tool would open up the entire camera



Scan Damaged Vial · 11:15 AM — Escalation No: C_ID001

Scan Damaged Vials · Close

DAMAGED VIALS (06)	STATUS
V_1234	To be Reviewed
V_1234	Recovered
V_1234	To be Reviewed
V_1234	To be Reviewed

Proceed

Temperature Gun Image Preview — Retry · Upload

Temperature Gun Image — Take an image of the temperature gun as proof

Damaged Vial Details — Vial: V_1234

Vial Damage Issue: Cracked ⊗ · Leakage · Abrasion · Crushed ⊗ · Others

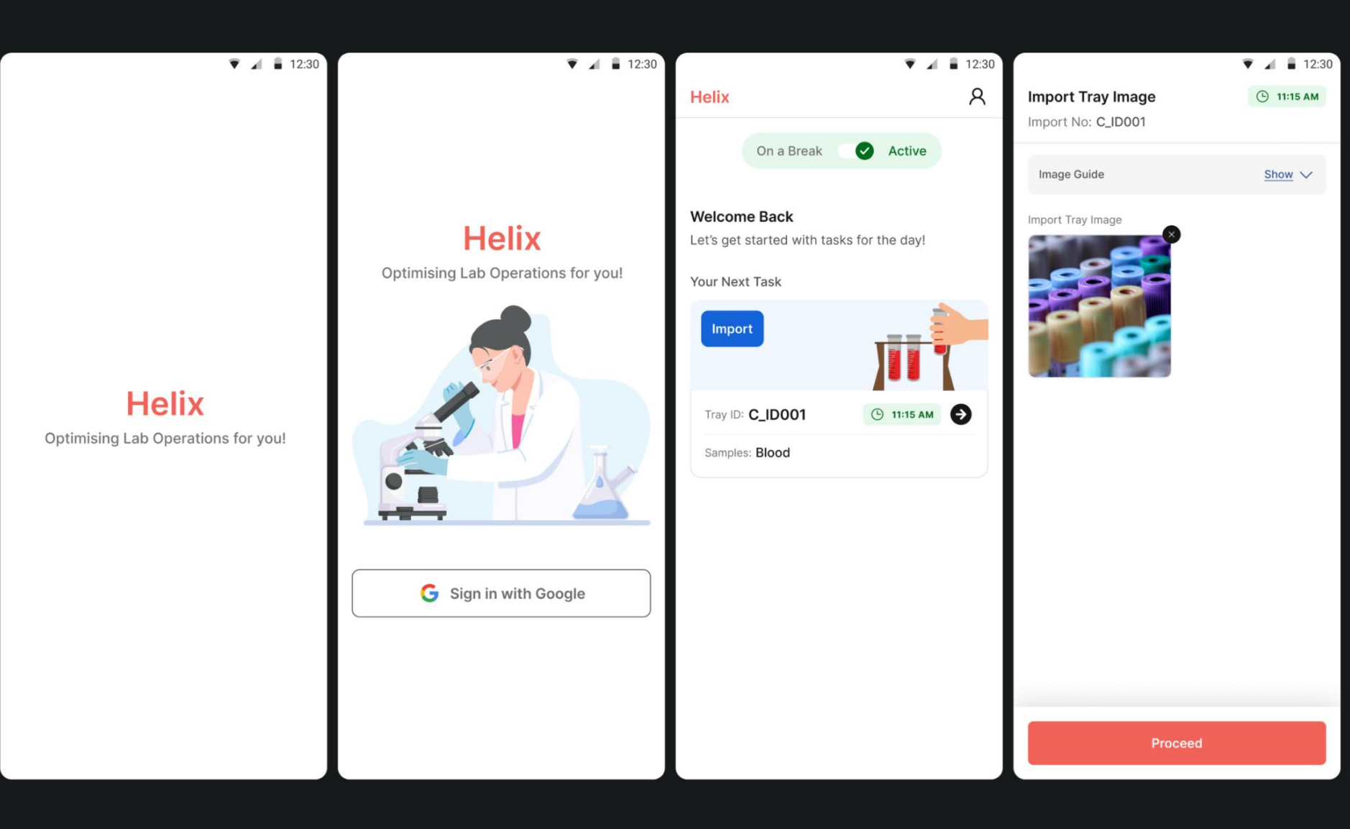
Damaged Vial Image(s): Tap to Upload

Save & Proceed

VISUAL DESIGN

- Mobile + Web

The visual design is clean and minimal, striking a balance between performance and aesthetics. It avoids heavy graphics to ensure the system runs smoothly while maintaining a fresh, engaging look that prevents monotony.



Helix — Optimising Lab Operations for you!

Helix — Optimising Lab Operations for you!

Sign in with Google

Helix · On a Break · Active

Welcome Back — Let's get started with tasks for the day!

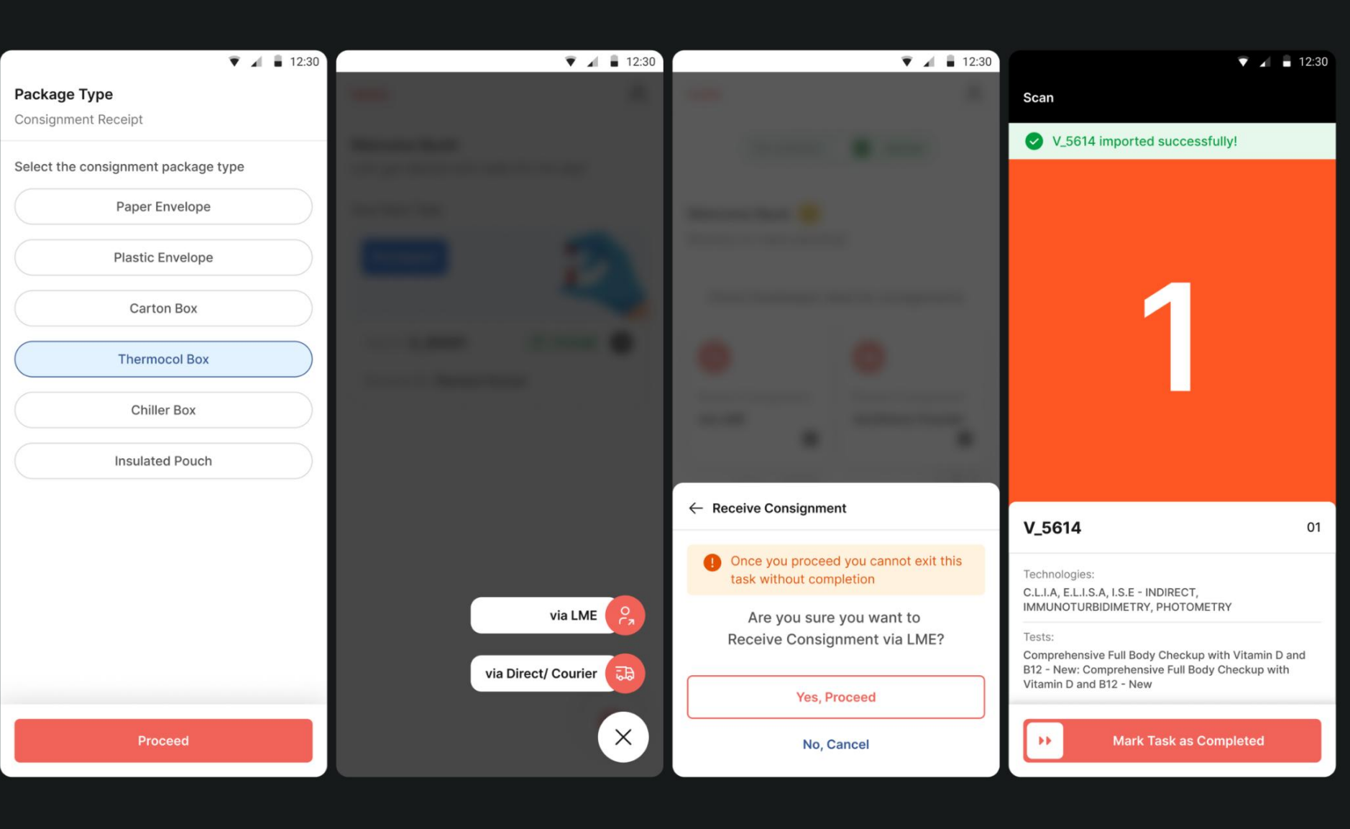
Your Next Task: Import — Tray ID: C_ID001 · 11:15 AM — Samples: Blood

Import Tray Image · 11:15 AM — Import No: C_ID001

Image Guide · Show

Import Tray Image

Proceed



Package Type — Consignment Receipt

Select the consignment package type

- Paper Envelope
- Plastic Envelope
- Carton Box
- Thermocol Box
- Chiller Box
- Insulated Pouch

Proceed

via LME · via Direct/ Courier

Receive Consignment

Once you proceed you cannot exit this task without completion

Are you sure you want to Receive Consignment via LME?

Yes, Proceed · No, Cancel

Scan — V_5614 imported successfully!

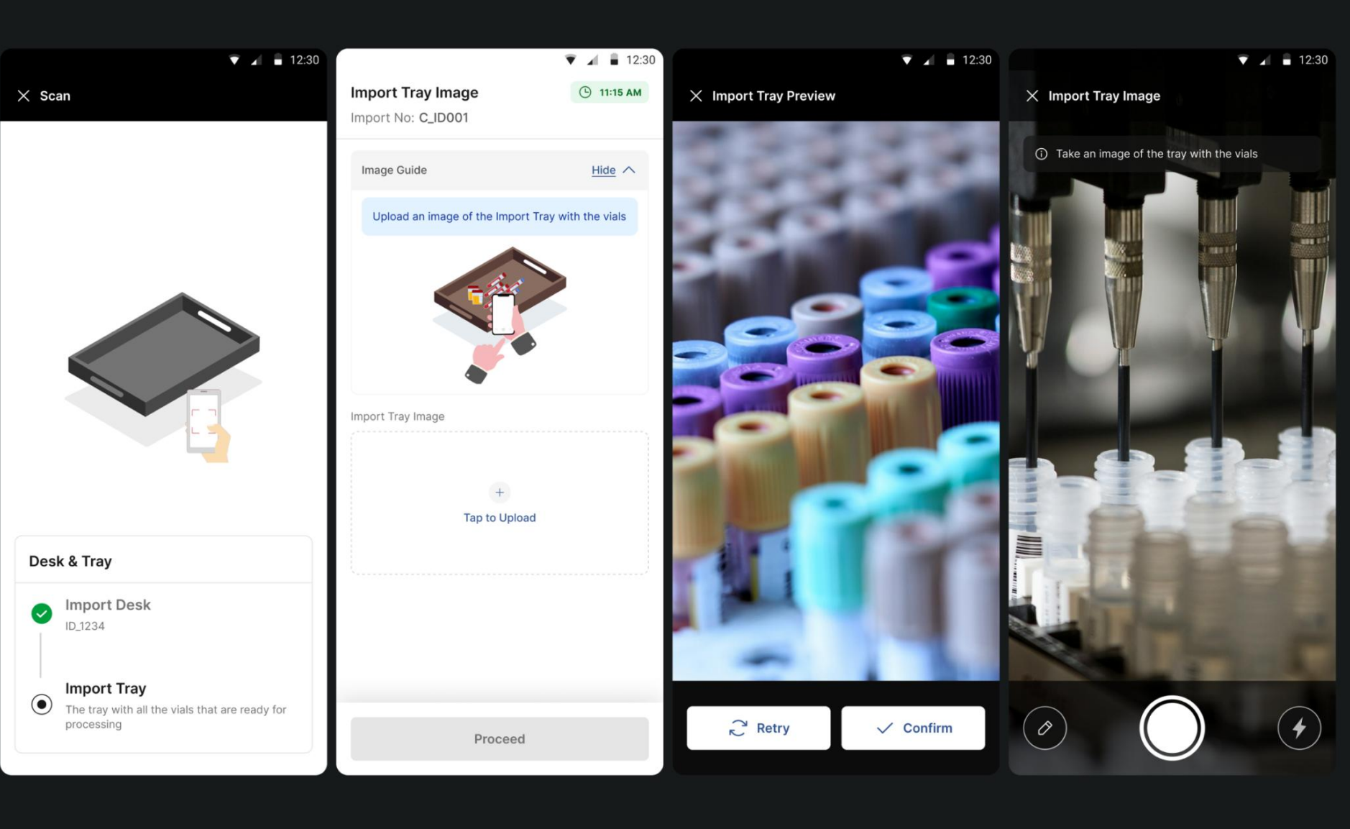
1

V_5614 · 01

Technologies: C.L.I.A, E.L.I.S.A, I.S.E - INDIRECT, IMMUNOTURBIDIMETRY, PHOTOMETRY

Tests: Comprehensive Full Body Checkup with Vitamin D and B12 - New: Comprehensive Full Body Checkup with Vitamin D and B12 - New

Mark Task as Completed



Scan

Desk & Tray

- Import Desk — ID_1234
- Import Tray — The tray with all the vials that are ready for processing

Import Tray Image · 11:15 AM — Import No: C_ID001

Image Guide · Hide

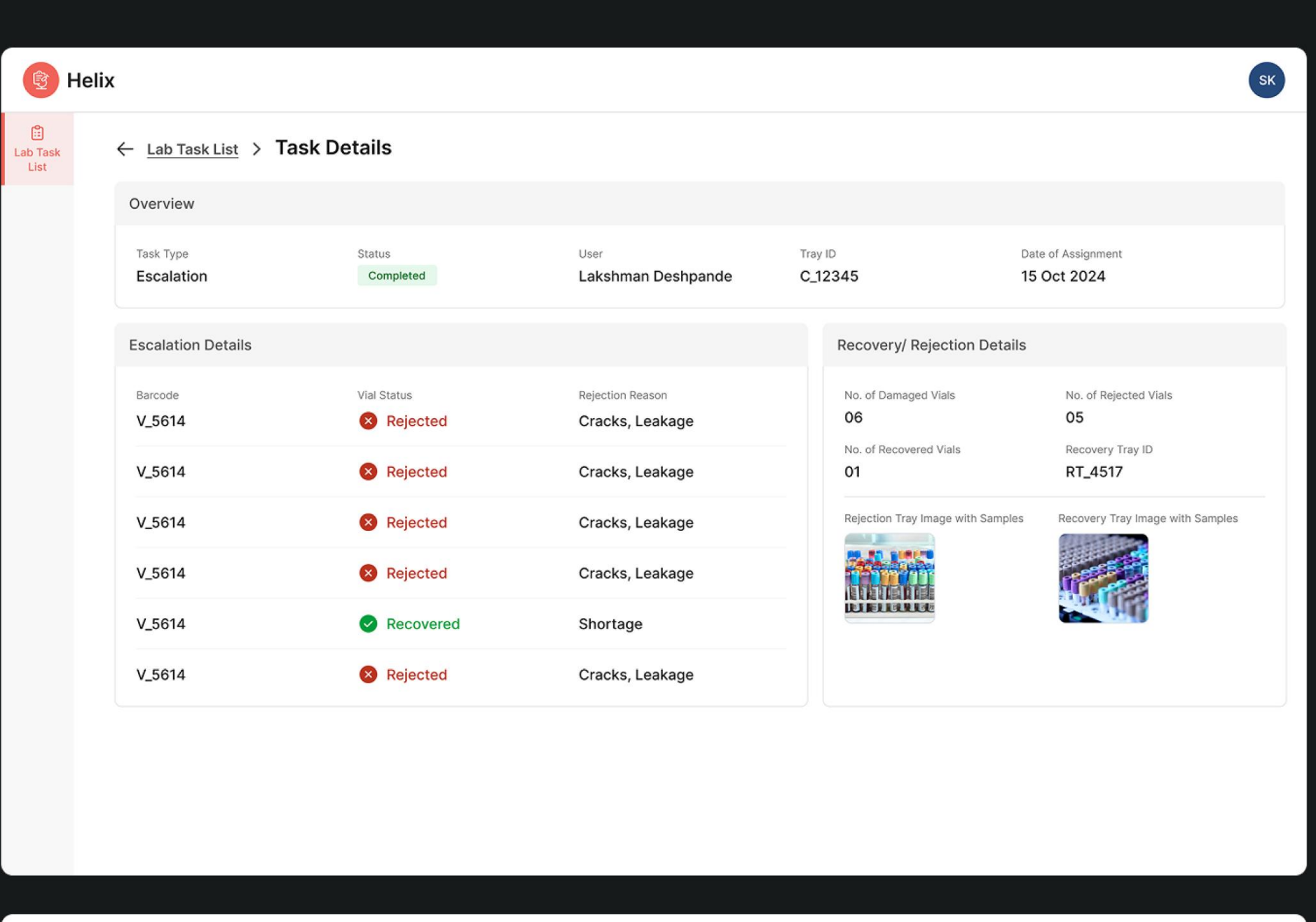
Upload an image of the Import Tray with the vials

Import Tray Image: Tap to Upload

Proceed

Import Tray Preview — Retry · Confirm

Import Tray Image — Take an image of the tray with the vials



Helix · SK

Lab Task List > Task Details

Overview

Task Type	Status	User	Tray ID	Date of Assignment
Escalation	Completed	Lakshman Deshpande	C_12345	15 Oct 2024

Escalation Details

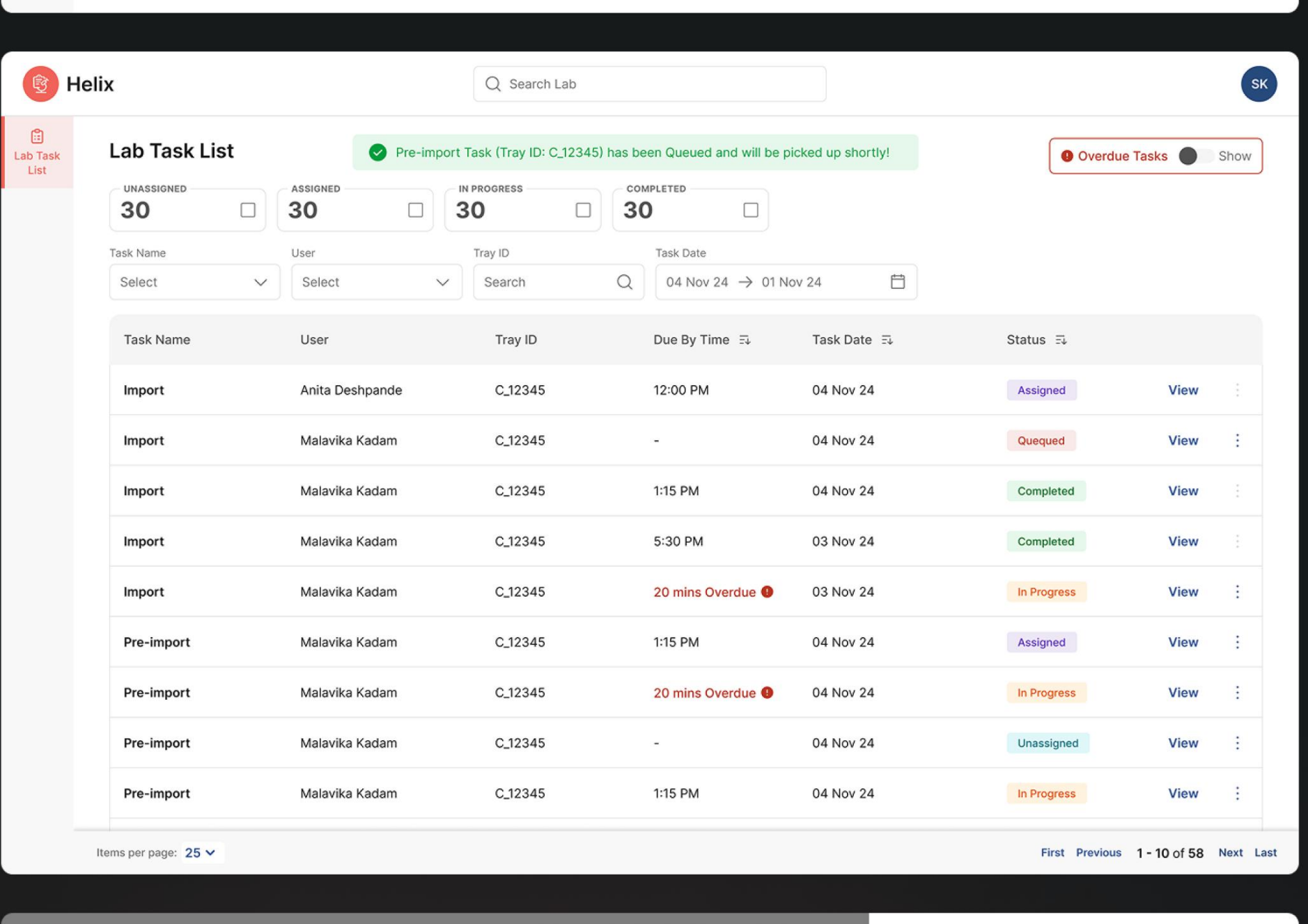
Barcode	Vial Status	Rejection Reason
V_5614	Rejected	Cracks, Leakage
V_5614	Rejected	Cracks, Leakage
V_5614	Rejected	Cracks, Leakage
V_5614	Rejected	Cracks, Leakage
V_5614	Recovered	Shortage
V_5614	Rejected	Cracks, Leakage

Recovery/ Rejection Details

No. of Damaged Vials	No. of Rejected Vials
06	05

No. of Recovered Vials	Recovery Tray ID
01	RT_4517

Rejection Tray Image with Samples · Recovery Tray Image with Samples



Helix · Search Lab · SK

Lab Task List

Pre-import Task (Tray ID: C_12345) has been Queued and will be picked up shortly!

Overdue Tasks · Show

UNASSIGNED	ASSIGNED	IN PROGRESS	COMPLETED
30	30	30	30

Task Name: Select · User: Select · Tray ID: Search · Task Date: 04 Nov 24 → 01 Nov 24

Task Name	User	Tray ID	Due By Time	Task Date	Status	
Import	Anita Deshpande	C_12345	12:00 PM	04 Nov 24	Assigned	View
Import	Malavika Kadam	C_12345	-	04 Nov 24	Queued	View
Import	Malavika Kadam	C_12345	1:15 PM	04 Nov 24	Completed	View
Import	Malavika Kadam	C_12345	5:30 PM	03 Nov 24	Completed	View
Import	Malavika Kadam	C_12345	20 mins Overdue	03 Nov 24	In Progress	View
Pre-import	Malavika Kadam	C_12345	1:15 PM	04 Nov 24	Assigned	View
Pre-import	Malavika Kadam	C_12345	20 mins Overdue	04 Nov 24	In Progress	View
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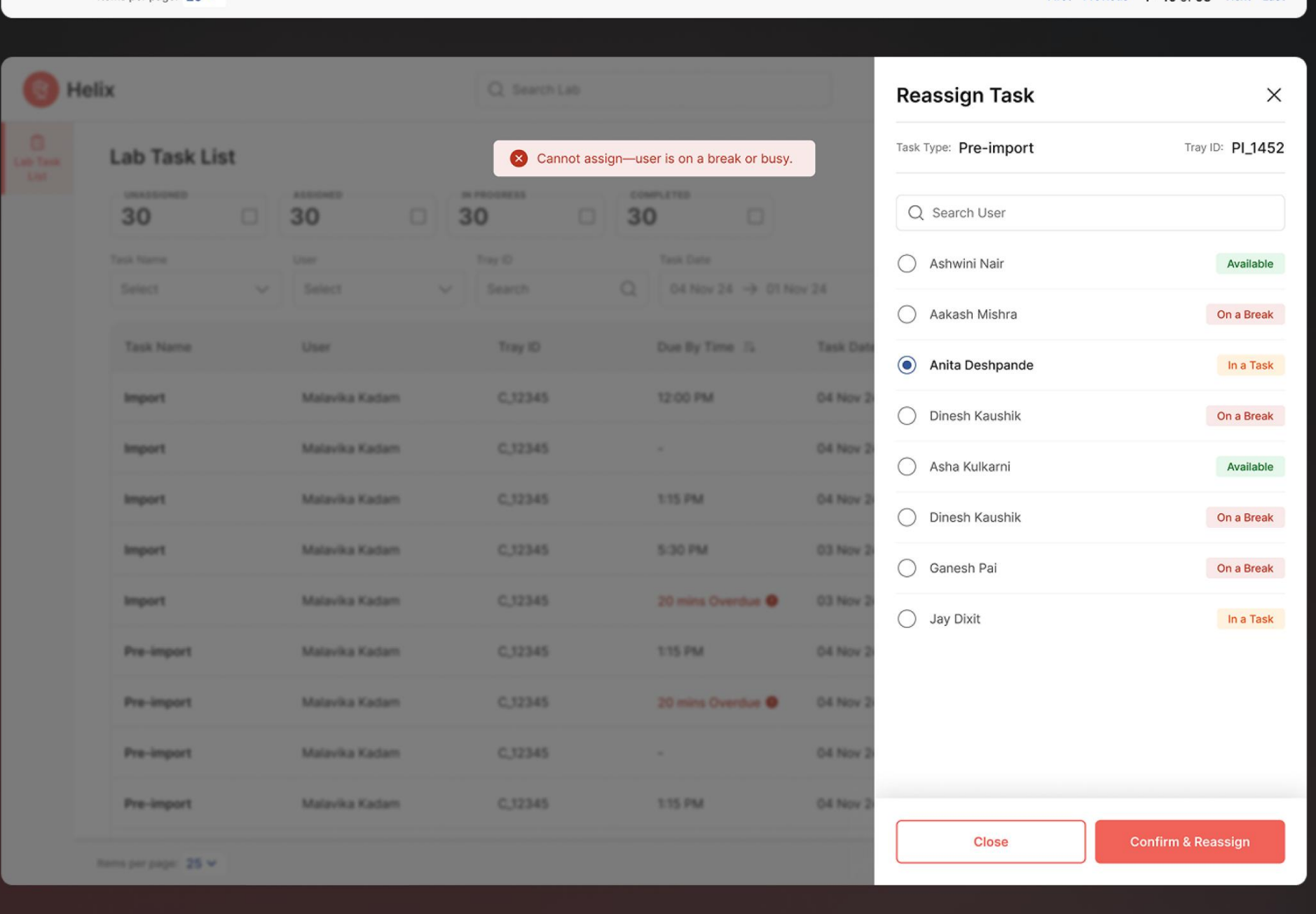

Cannot assign—user is on a break or busy.

Reassign Task

Task Type: Pre-import · Tray ID: PI_1452

Search User

User	Status
○ Ashwini Nair	Available
○ Aakash Mishra	On a Break
● Anita Deshpande	In a Task
○ Dinesh Kaushik	On a Break
○ Asha Kulkarni	Available
○ Dinesh Kaushik	On a Break
○ Ganesh Pai	On a Break
○ Jay Dixit	In a Task

Close · Confirm & Reassign

THE IMPACT

- Increased Efficiency: Reduces errors, optimizes turnaround time, and eliminates manual registers.
- Improved Productivity: Clear task assignments, minimal complexity, and faster task completion.
- Better Monitoring: Real-time tracking, performance insights, and early issue detection.
- Enhanced Patient Experience: Transparent sample tracking, faster reports, and automated updates.
- Scalability & Growth: Digitized workflows, data-driven improvements, and future AI integration.

That's a wrap!