

UX Case Studies 2022 — 2023

João Gomes

Introduction

Hello!

My name is **João Gomes**. I am a **Designer**, **Web Developer** and **Musician** based in **Berlin, Germany**.

I am currently a **Senior UX Designer** at London-based diamonds e-commerce platform **Nivoda**, where I design B2B and B2B2C digital experiences, create and manage design systems, and educate stakeholders and leadership about design ops, design processes and design systems.

This is a selection of a few projects I delivered to Nivoda during 2022 and 2023. I am particularly proud of the work I have done for their Express program — it was a great challenge, and it has been very interesting to see the results come to fruition.

I love digital experiences, design systems and where design and engineering meet. I hope you enjoy this small sample of my work, and I am curious to hear your feedback.

Thank you for reading!

Nivoda Express

An IoT-enabled shipping and
inventory management system for
premium delivery timelines

Introduction

Nivoda Express is an innovation by Nivoda for premium diamond shipping. The goal of the project is to obtain a competitive advantage in the diamonds e-commerce space by offering industry-leading shipping times for end customers in North America and Europe, while also opening up business opportunities for diamond suppliers in India. Nivoda Express was launched in early 2023 the United Kingdom as a pilot, and is currently live with a sell-through rate of around 20%.

My roles

Research, low & high-fidelity prototyping, user testing, handover.

The problem

Delivering diamonds for end customers in Europe and North America currently means dealing with long shipping times. End customers — local diamond dealers — in these regions usually have to wait between **7 to 10 business days** for their purchases in traditional marketplaces to reach them — sometimes more.

Proposed solution

Use data mining, advanced algorithms and industry knowledge to predict sales in these regions, and ship stones to local Nivoda fulfilment centres in advance. With this approach, Nivoda can drastically cut down delivery times to end customers. The initial proposed goal is **1 to 2 business days**, but even same-day shipping is possible.

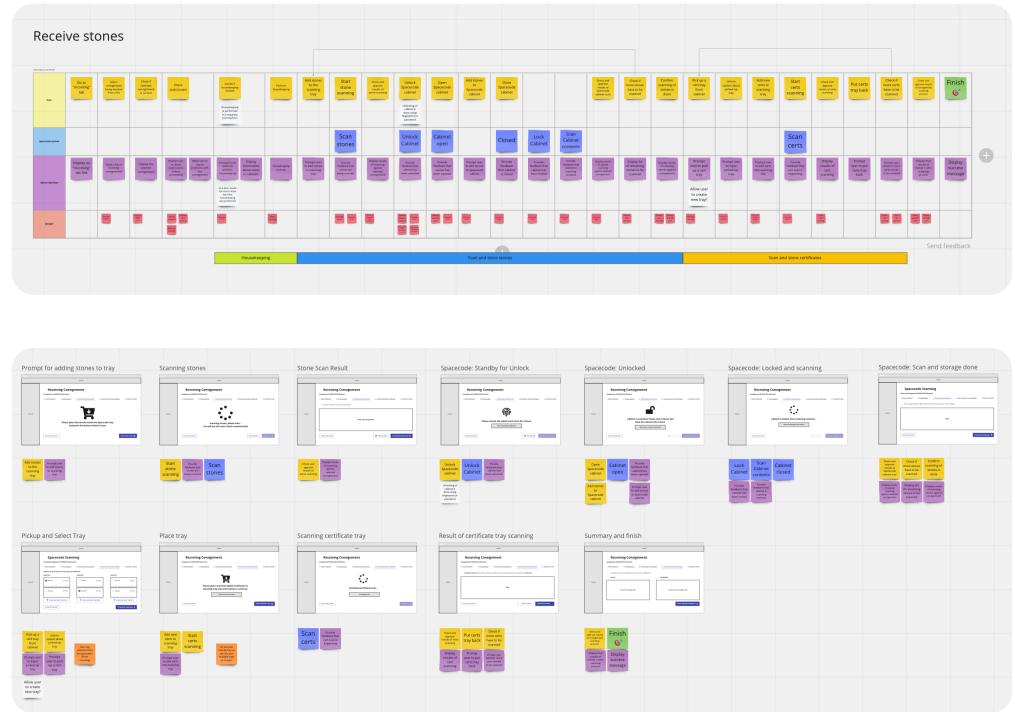
The challenge

Currently, there is no off-the-shelf inventory and shipment management solution that supports the idiosyncrasies of the diamond industry. Suppliers have a traditional way of working, so there is a trust barrier that needs to be overcome. Also, shipping high-value items like diamonds in bulk means dealing with customs clearance, insurance and shipping companies, etc. Therefore, the solution was to build such a system in-house.

It was decided early on that, in order to automate as much as possible, RFID-scanning boards developed by a company called SpaceCode would be used, so the system would have to be built with the SpaceCode board's technical constraints in mind. The boards read RFID tags in bulk and are IoT-enabled so that they can send scanning data to the cloud, so the plan was to use the boards for shipment creation and integrity checking, as well as on-site inventory control.

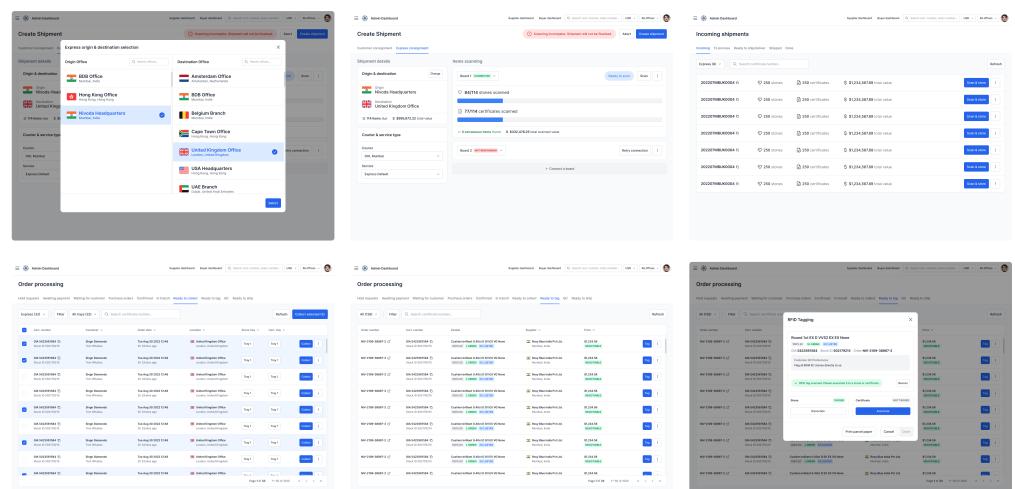
Research

Initially, **expert interviews** were conducted to construct the context of use. After that, **task analysis** and **customer journey maps** were employed to properly model the user journeys and system responses. **Low-fidelity wireframes** were used to sketch the general flows.



Prototyping & testing

Figma was used to construct all screens, flows and prototypes. The prototypes were then tested with **internal experts** and eventual **internal users** for feedback and iteration. Close collaboration with engineers was necessary in order to fulfil SpaceCode boards' technical limitations. For summative evaluation, **user surveys** and **interviews** were conducted with users in London during Q2 2023.



Samples of the final design on the next pages.

Express stones come into the Mumbai office first, and have to be collected.

After collection, stones need to be tagged in order to be read by SpaceCode boards. This creates the shipments.

Admin Dashboard Supplier dashboard Buyer dashboard Search cert. number, order number... USD All offices User icon

Order processing

Hold requests Awaiting payment Waiting for customer Purchase orders Confirmed In transit Ready to collect **Ready to tag** QC Ready to ship

All (126) Filter Search certificate num...

RFID Tagging

Round 1ct EX D VVS2 EX EX None
100% EC VL GREEN EX LUSTER
GIA 5423561584 Stock ID 502179215 Order NIV-2109-38867-2

Customer QC Preferences
Flag all BGM EC stones directly to us.

✓ RFID tag scanned. Please associate it to a stone or certificate. Rescan

Stone	TAGGED	Certificate	NOT TAGGED
Dissociate		Associate	

Print parcel paper Cancel Done

Price \$1,234.56 NEGOTIABLE Tag ...

Mumbai, India

Page 1 of 33 1—30 of 1000 << < > >>

RFID tags must be associated with each stone-certificate pair in preparation for SpaceCode scanning.

Admin Dashboard Supplier dashboard Buyer dashboard Search cert. number, order number... USD All offices User icon

Create Shipment

Customer consignment Express consignment

Scanning incomplete. Shipment will not be finalised. Abort Create shipment

Shipment details

Origin & destination Change

Origin: Nivoda Headquarters Destination: United Kingdom Office

114 items due \$ 995,872.22 total value

Courier & service type

Courier: DHL Mumbai Service: Express Default

Items scanning

Board 1 CONNECTED Ready to scan Scan ...

84/114 stones scanned

77/114 certificates scanned

0 extraneous items found \$ 332,478.25 total scanned value

Board 2 NOT RESPONDING Retry connection ...

+ Connect a board

Shipments to fulfilment centres are created automatically. The users only have to scan the stones-certificate pairs and separate them appropriately.

Customer consignment Express

Shipment details

Origin & destination

Origin Nivoda Headquarters Mumbai, India

Destination United Kingdom Office London, United Kingdom

114 items due \$ \$

Courier & service type

Courier DHL Mumbai

Service Express Default

Express origin & destination selection

Origin Office Search offices... Destination Office Search offices...

BDB Office Mumbai, India	Amsterdam Office Amsterdam, Netherlands
Hong Kong Office Hong Kong, Hong Kong	BDB Office Mumbai, India
Nivoda Headquarters Mumbai, India	Belgium Branch Mumbai, India
	Cape Town Office Hong Kong, Hong Kong
	United Kingdom Office London, United Kingdom
	USA Headquarters Hong Kong, Hong Kong
	UAE Branch Dubai, United Arab Emirates

Select

When creating shipments to fulfilment offices, the user must select origin and destination.

Incoming To process Ready to ship/deliver Shipped Done

Express (8) Refresh

Tracking Number	Quantity	Certificates	Total Value	Action	More Options
202207MBUK0004	250 stones	250 certificates	\$ 1,234,567.89 total value	<input type="button"/> Scan & store	<input type="button"/>
202207MBUK0004	250 stones	250 certificates	\$ 1,234,567.89 total value	<input type="button"/> Scan & store	<input type="button"/>
202207MBUK0004	250 stones	250 certificates	\$ 1,234,567.89 total value	<input type="button"/> Scan & store	<input type="button"/>
202207MBUK0004	250 stones	250 certificates	\$ 1,234,567.89 total value	<input type="button"/> Scan & store	<input type="button"/>
202207MBUK0004	250 stones	250 certificates	\$ 1,234,567.89 total value	<input type="button"/> Scan & store	<input type="button"/>
202207MBUK0004	250 stones	250 certificates	\$ 1,234,567.89 total value	<input type="button"/> Scan & store	<input type="button"/>
202207MBUK0004	250 stones	250 certificates	\$ 1,234,567.89 total value	<input type="button"/> Scan & store	<input type="button"/>

In the fulfilment centres, users can track, receive, check, store and return consignments from the main India office.



Testing in India

During late 2022, I went to **Mumbai, India** to oversee the system's testing in person, and to conduct user testing of my own. Here are a few pictures of the SpaceCode board, along with a prototype of the boxes that were eventually used to ship the first consignments from India to the UK Office in London.

In the detail view, you can see a **SpaceCode RFID tag**. These have a small LED light that light up when scanned. This allows us to quickly provide feedback to the users when creating and checking shipments, as well as when they are performing inventory management tasks.

Results & Next Steps

Nivoda Express has been launched as a pilot program for select customers in the London area on **January 2023**.

As of this writing (May 2023), **5 consignments** have been successfully shipped out from Mumbai to London. This means successful processing on both ends while fulfilling all technical, legal and human factors.

Over **1000 high-value and high-quality stones** have already been sold through the Express program — a total of around **\$300,000 in sales**.

The results of our summative evaluation show that users enjoy having the convenience of Express available to them, but **do not believe it is absolutely necessary for their businesses to succeed**. They are used to much slower delivery times since most stones are usually sourced from India, so they have already built their businesses' processes around that. We believe there's an opportunity for disruption here.

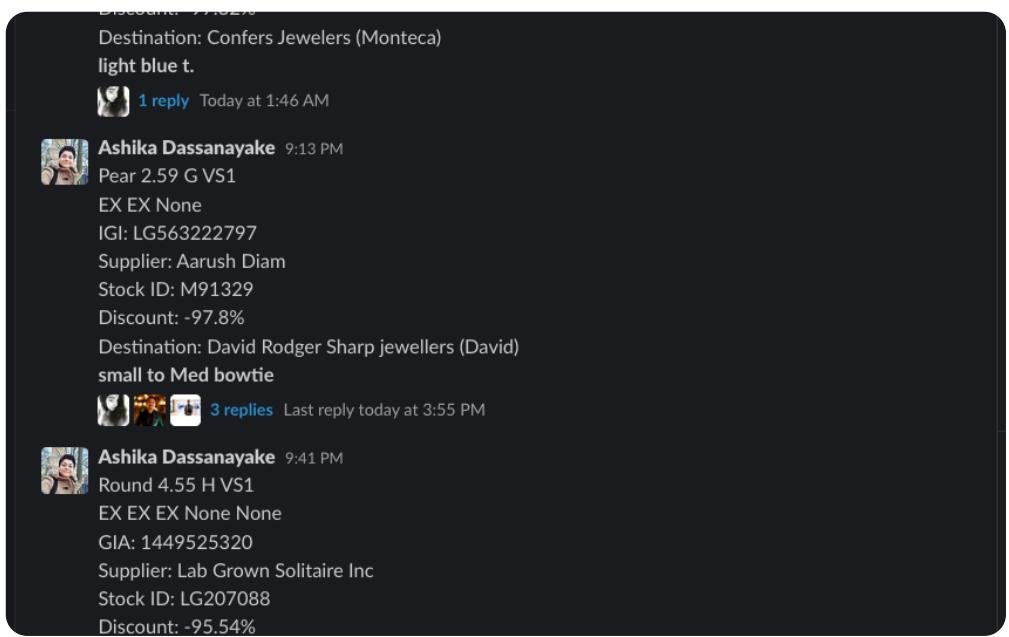
Also, collected feedback suggests that **users think that the Express service costs a premium, which is not the case**. This tells us that **communication about the service's pricing needs to be improved**. Two users mentioned that they would be willing to pay more for stones to arrive faster, which could indicate an opportunity for the business to indeed charge a premium (a la Amazon Prime) for the service.

As of May 2023, **suggestions for tweaking the product's interfaces** have already been suggested to address some of the points mentioned above. Furthermore, we have suggested a simple **survey** to investigate whether users would be willing to pay a premium for Express, and if so, how much.

Diamonds QC

An internal quality control tool for diamonds designed for speed and flexibility

Introduction	Quality control when selling diamonds online is of paramount importance. The issue of trust, combined with traditional ways of working and the need for precision, culminate in the need for hand-performed quality control , which is done in-house by Nivoda experts when requested by end customers. To speed up this essential task, an internal tool was developed to aid our experts in their day-to-day work.
My roles	Research , low & high-fidelity prototyping , user testing , handover .
The problem	Performing quality control on diamonds is a very precise skill, and the sheer volume of stones coming through Nivoda every day presents a challenge to our small team of diamond experts. Nivoda grew very quickly in the last two years, which means that an old, ad-hoc quality control process that was created before I joined (completely based on Slack!) was starting to show its issues.
Proposed solution	Eliminate Slack, and replace it with an internal tool specifically designed for this task, in order to speed up our experts' work.
The challenge	Our experts like Slack for quality control mainly because of communication . They can discuss issues and ask for help on a per-stone basis using threads, and Slack is also fast for them, so whatever solution that we decided to use would have to be faster than Slack, while also providing them with the liberty to account for edge cases and give them a way to properly communicate within the constraints of the company's processes.



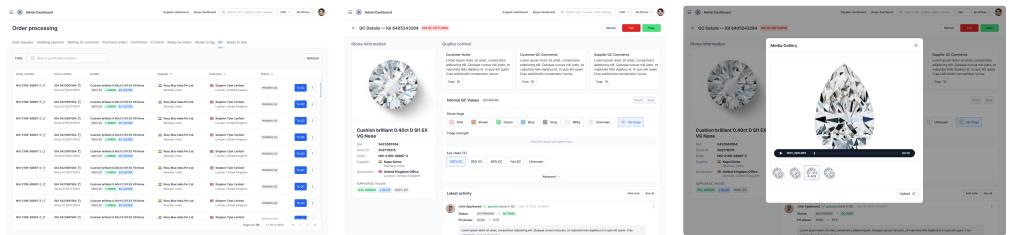
Nivoda diamond experts at work performing their daily tasks on Slack.

Research

Expert interviews were conducted with Nivoda's diamond experts in order to find out what are the usual problems that presented themselves when performing quality control on diamonds. A basic **ethnographic study** was conducted during my stay in India in Q4 2022, where I watched the experts perform quality control on-site during a typical afternoon of work. Internal data from before and after implementation was collected to measure an eventual increase or decrease in experts' output — namely, how many stones they can perform QC on at any given day.

Prototyping & testing

Figma was used to construct all screens, flows and prototypes. The prototypes were then tested with **internal experts** and eventual **internal users** for feedback and iteration.



Samples of final design on the next pages.

Users start their QC tasks by selecting a stone from the list, or searching for their certificate numbers.

Admin Dashboard

Supplier dashboard Buyer dashboard Q. Search cert. number, order number... USD All offices

← QC Details — IGI 6405243284 NO QC RETURNS Refresh Fail Pass

Stone information



Cushion brilliant 0.40ct D SI1 EX
VG None

GIA 5423561584
Stock ID 502179215
Order NIV-2109-38867-2
Supplier Kapu Gems Mumbai, India
Destination United Kingdom Office London, United Kingdom

SUPPLIER QC VALUES

VVL GREEN L BLUE 100% EC

Quality control

Customer Notes

Customer Notes

Customer QC Comments

Supplier QC Comments

Internal QC Values QC PENDING

Reset Save

Stone tinge

Pink Brown Green Blue Gray Milky Unknown No tinge

Tinge strength

Selected tinges will appear here

Eye clean (%)

100% EC 95% EC 90% EC Not EC Unknown Advanced

Latest activity

Add note See all

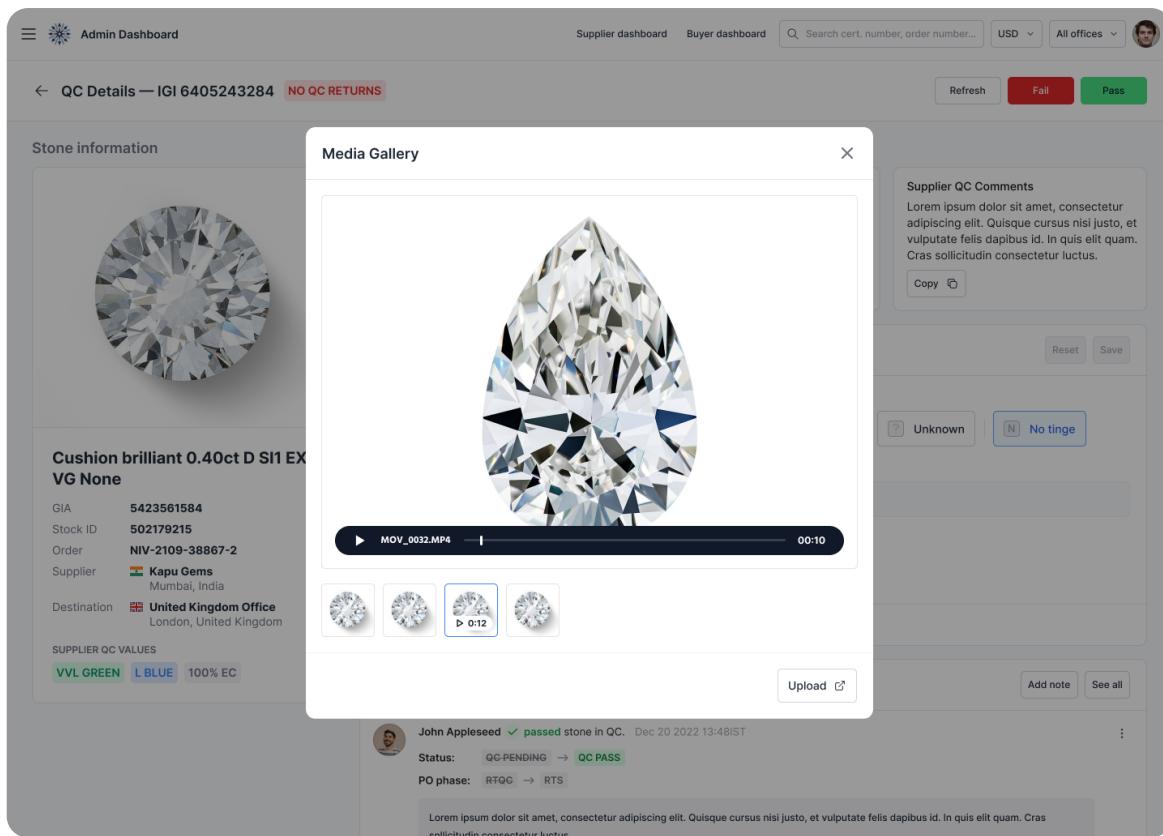
John Appleseed passed stone in QC. Dec 20 2022 13:48IST

Status: QC-PENDING → QC PASS

PO phase: RTQG → RTS

LOREM IPSUM DOLOR SIT AMET, CONSECTETUR ADIPISCING ELIT. QUISQUE CURSUS NISI JUSTO, ET VULPUTATE FELIS DAPIBUS ID. IN QUIS ELIT QUAM. CRAS SOLlicitUDIN CONSECTETUR LUCTUS.

Sensible defaults are populated based on the supplier's provided information. Notes and communication about the stone are available as well.



Users can see magnified photos and videos of the stone they are working on. They can perform a "soft QC" without even touching the stone.

Results

As of Q1 2023, **all 15 quality control experts** are using the internal tool to perform QC on dozens of stones coming through the Mumbai office every day.

The **#nivoda-qc** channel on Slack is now used for emergencies only. The channel is set to be deprecated at the beginning of Q4 2023, when all communication should happen in-platform.

From internal data, we have so far been able to detect an **average increase of ~200%** in the number of stones the average diamond expert is able to process on any given day. This is likely not only due to the new interface they have available to them, but also optimisations in internal processes that happened as a result of this initiative — further investigation is needed.

App Shell Redesign

A complete revamp of Nivoda's storefront user interface and experience

Introduction

Nivoda was founded in 2017 and has been using the same storefront since. Over the years, new features were added, and the platform diversified their offerings, causing the interface to grow bloated and busy. Before 2022, Nivoda had no design team. It was established that year, and the first task assigned to it was to **completely revamp the look & feel of the platform's core shopping experience** — effectively what was eventually dubbed **Nivoda 2.0**.

My roles

Interface design, high-fidelity prototyping, design system management

The problem

Over the years, features were added to the main Nivoda shopping experience without much consideration for design, since **there was no Design department**. This caused the interface to grow bloated with excessive views and controls.

Proposed solution

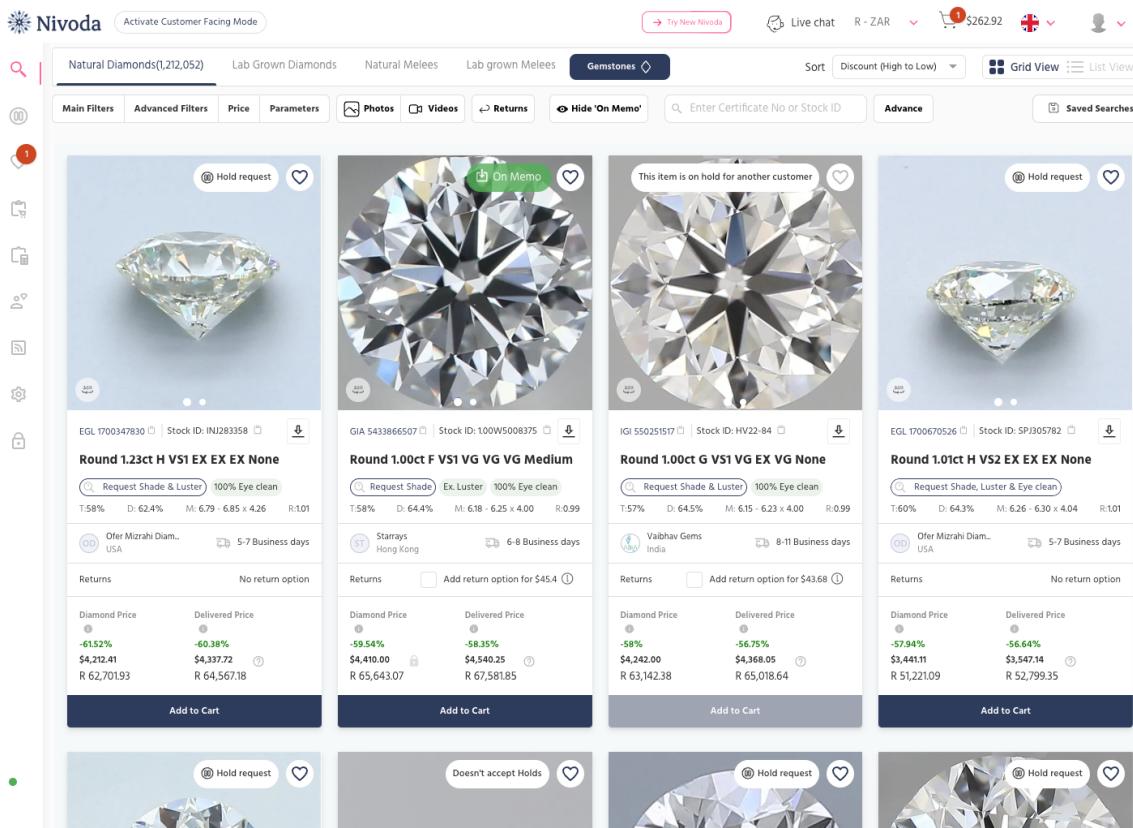
Completely **rebuild the core shopping and navigation experience** from the ground up, while introducing an in-house design system.

The challenge

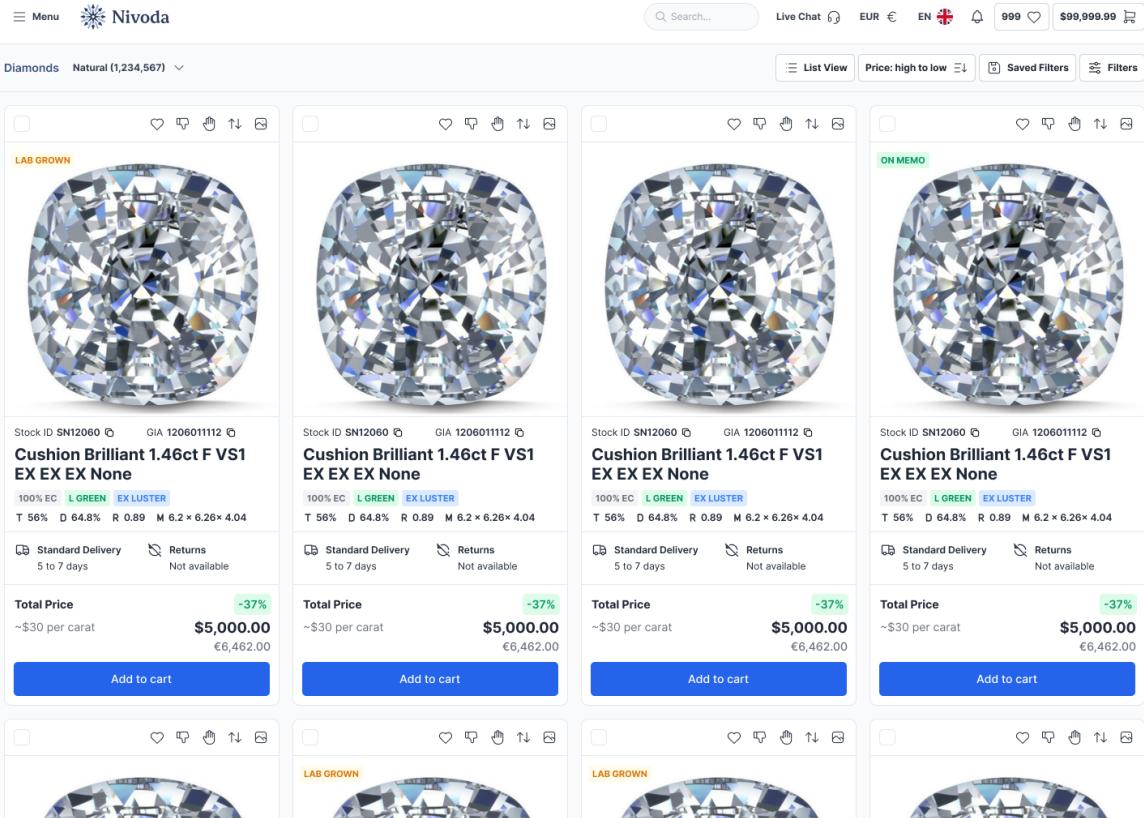
Limited resources in engineering and design meant that we had to be as quick and as efficient as possible when redesigning the core shopping and navigation experience.

Prototyping & testing

Figma was used to construct all screens, flows and prototypes. A custom design system is being maintained in order to facilitate consistency and handoff. The prototypes were then tested with **11 end customers** for feedback and iteration.



"Old" Nivoda.



Nivoda 2.0's new grid view. The focus is on browsing, sorting and filtering, while giving the images prime real estate.

The new filtering experience. Fragmented menus were replaced with a one-stop-shop drawer — preferred by 10 out of our 11 testers.

The screenshot displays the Nivoda mobile application interface. On the left side, there is a pinned navigation bar containing the following sections:

- Diamonds**
 - Natural Diamonds (1,234,567)
 - Lab Grown Diamonds (1,234,567)
- Gemstones**
 - Gemstones (1,234,567)
- Melee**
 - Natural Melee (1,234,567)
 - Lab Grown Melee (1,234,567)
- My List**
 - My Orders (12)
 - Invoices (7%)
 - Shortlist (33)
 - Requests (8)
 - Holds (4)
- User Profile: John Appleseed (j.appleseed@nivoda.net)
- Logout button

The main content area on the right shows a search results page for diamonds. It features three large diamond images in a grid. Each diamond listing includes the following details:

Stock ID	GIA	Cut	Carat Weight	Color	Clarity	Dimensions
SN12060	1206011112	Cushion Brilliant	1.46ct	F	VS1	EX EX None
SN12060	1206011112	Cushion Brilliant	1.46ct	F	VS1	EX EX None
SN12060	1206011112	Cushion Brilliant	1.46ct	F	VS1	EX EX None

Each listing also includes delivery information (Standard Delivery, 5 to 7 days), return policies, total price (\$5,000.00), and a blue "Add to cart" button.

Old pinned navigation makes way for a modern transient navigation experience, which frees up space for the diamonds.

Thanks!

Please visit my website for a little bit more of my work.