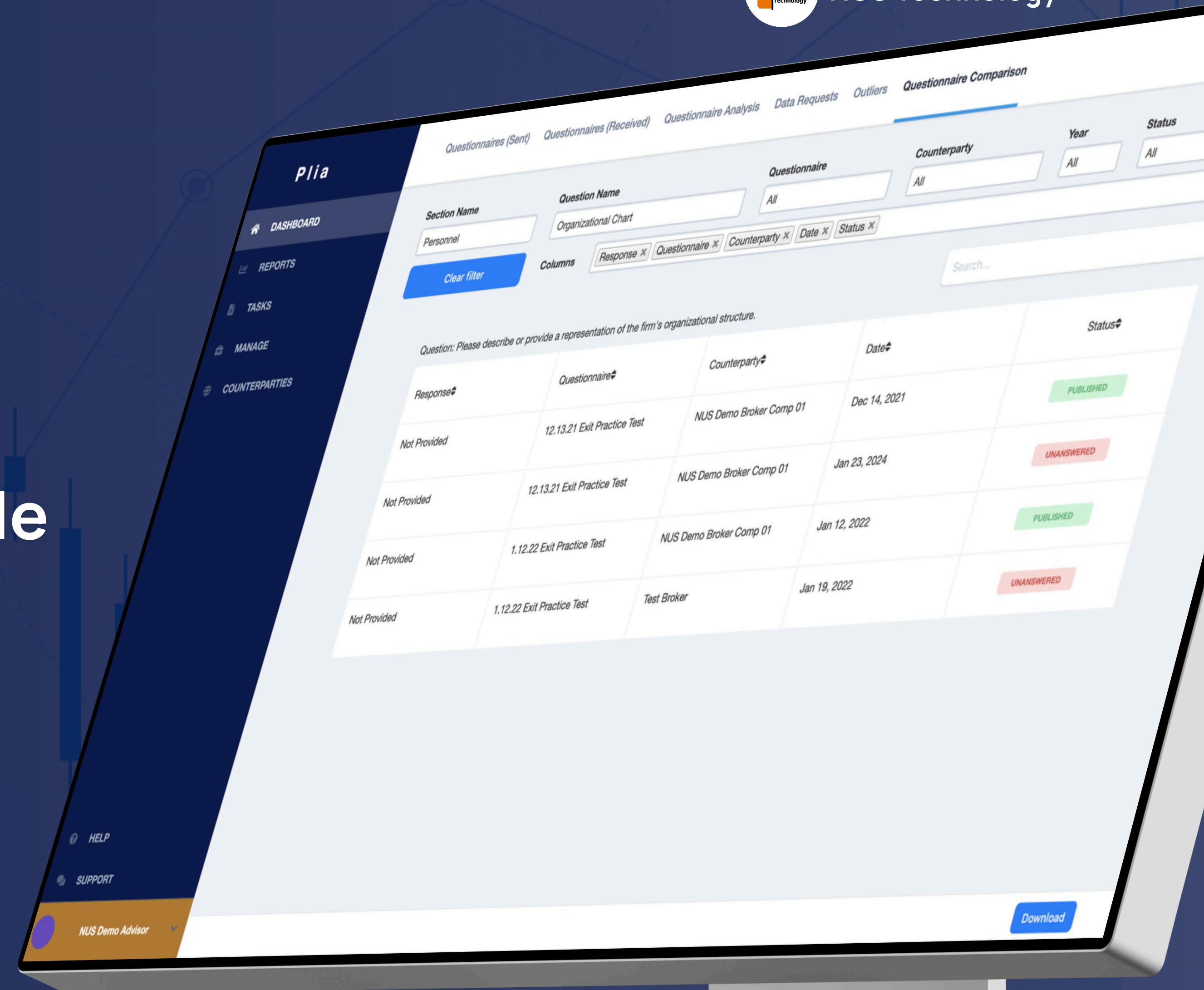


CASE STUDY

Plia by BestEx Research: Inheriting a Complex FinTech Platform – and Making It Reliable

Client: BestEx Research / Plia



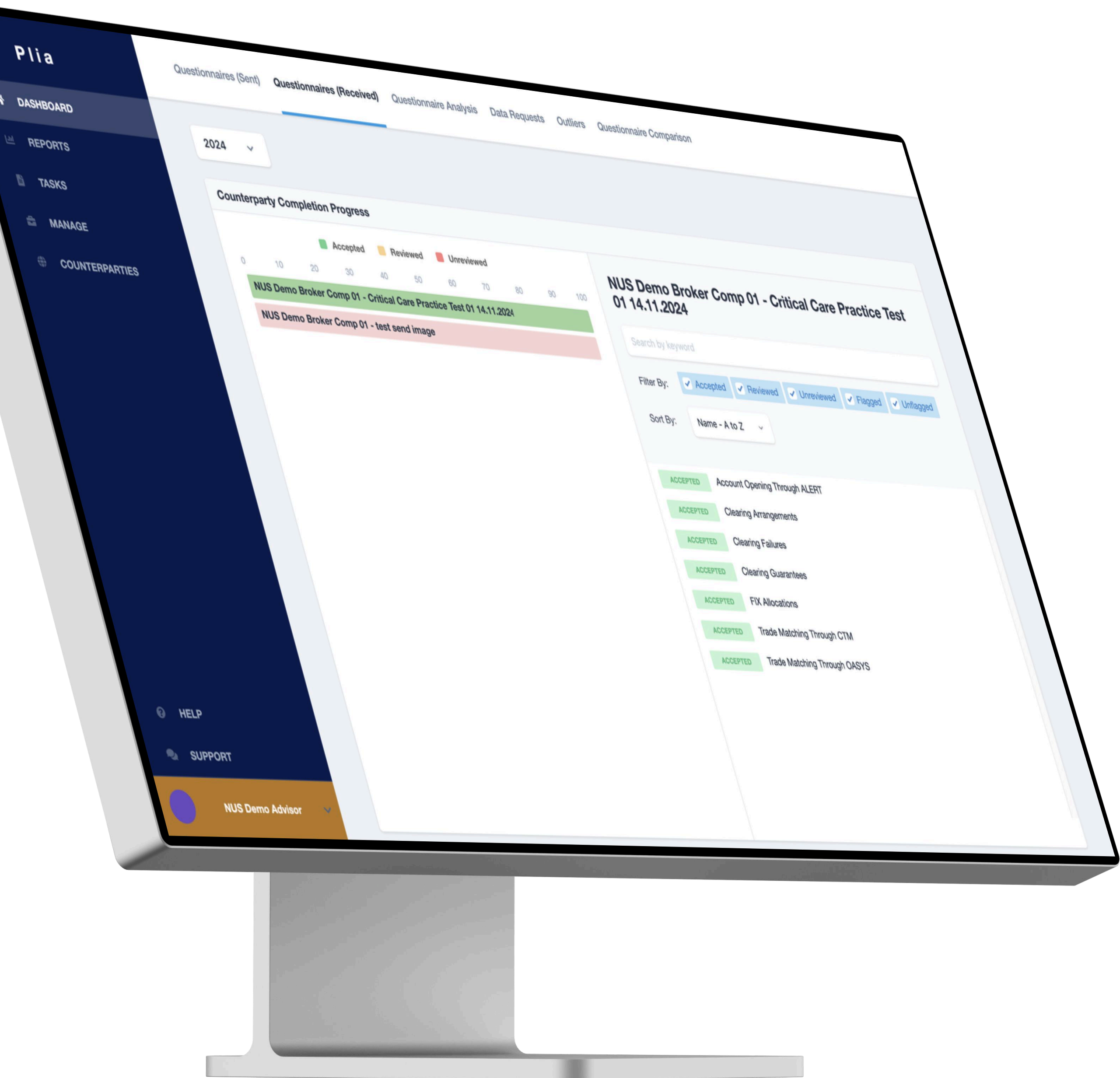
Taking Ownership of a Business-Critical Platform

Plia, developed by BestEx Research, operates at the intersection of two worlds that have little tolerance for ambiguity: financial compliance and institutional relationships. The platform serves as the primary information-sharing channel between financial Advisors and Brokers – a workflow where data accuracy, audit trails, and access control are not features, they are regulatory obligations.

When BestEx Research engaged NUS Technology, the ask was not to build something new. It was harder than that: take over a live, production codebase and keep it running while continuing to grow it.

- Industry
FinTech / Financial Information Management
- Market
Global
- Frontend
Node.js + Grunt + CoffeeScript/Sass (Legacy),
Nuxt 2 (Vue.js) + TailwindCSS
- Backend
Ruby on Rails (API-only)
- Database
PostgreSQL
- Infrastructure
AWS (Elastic Beanstalk, ECR, RDS, S3)
- Integrations
Stripe, SendGrid,
SAML SSO (Okta / PingFederate / ADFS),
New Relic, Honeybadger, Scout APM





THE CHALLENGE

Owning a System Built on Yesterday's Tools

The Plia codebase was functional, but it carried the weight of its origins. The frontend had been built using an older Node.js + Grunt + CoffeeScript/Sass stack – a combination that predated the modern JavaScript ecosystem by nearly a decade. Meanwhile, a newer billing module had been added using Nuxt 2 (Vue.js), creating a split frontend architecture that required the team to context-switch between two completely different paradigms.



For a platform carrying sensitive financial and compliance data, this fragmentation created real operational risk:

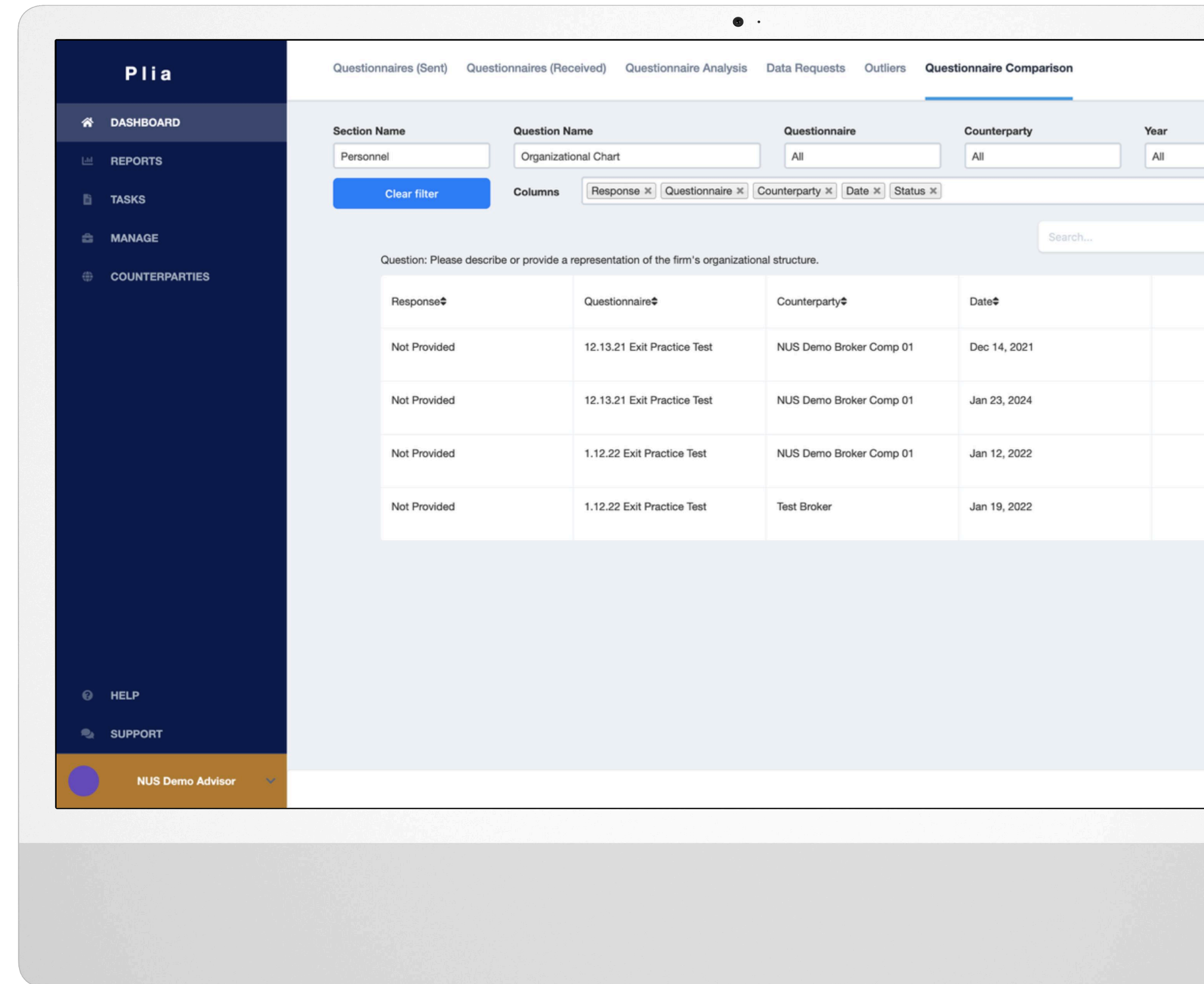
- Debugging and extending the legacy frontend was slow – documentation for the older libraries was sparse or deprecated, and syntax patterns were unfamiliar to engineers trained on modern frameworks.
- The split architecture made consistent UI and behavior difficult to guarantee across different parts of the product.
- The backend, while built on the mature Ruby on Rails framework, had performance bottlenecks that needed to be resolved without interrupting service for active users.
- The enterprise SSO integrations – spanning Okta, PingFederate, and ADFS via SAML – required a deep understanding of identity protocols that most development teams never encounter.

BestEx Research didn't need engineers who would ask to rewrite everything. They needed a team that could understand a complex, inherited system quickly and improve it without breaking what was working.

THE SOLUTION

Engineering Stability Into a Living System

NUS Technology’s approach to inheriting the Plia codebase was methodical. Rather than treating the legacy architecture as a liability, we treated it as a domain to master. The team invested significant time in understanding not just what the code did, but why it was structured that way – a prerequisite for making safe changes in a compliance-sensitive environment.

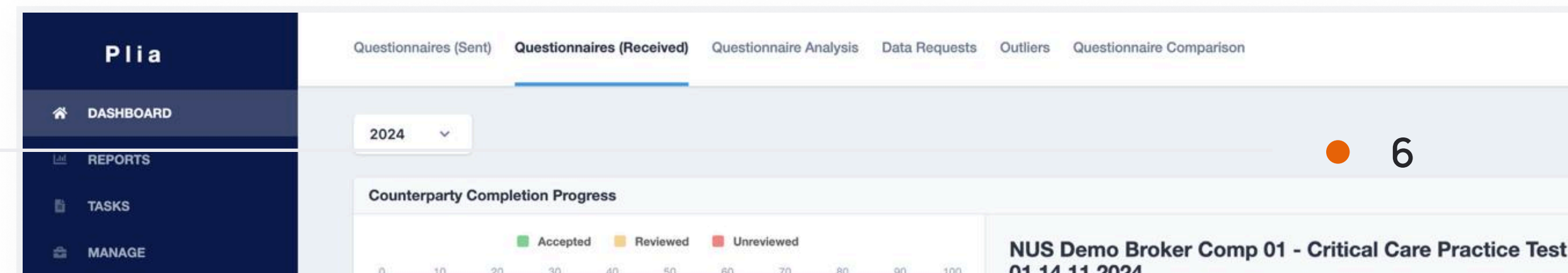
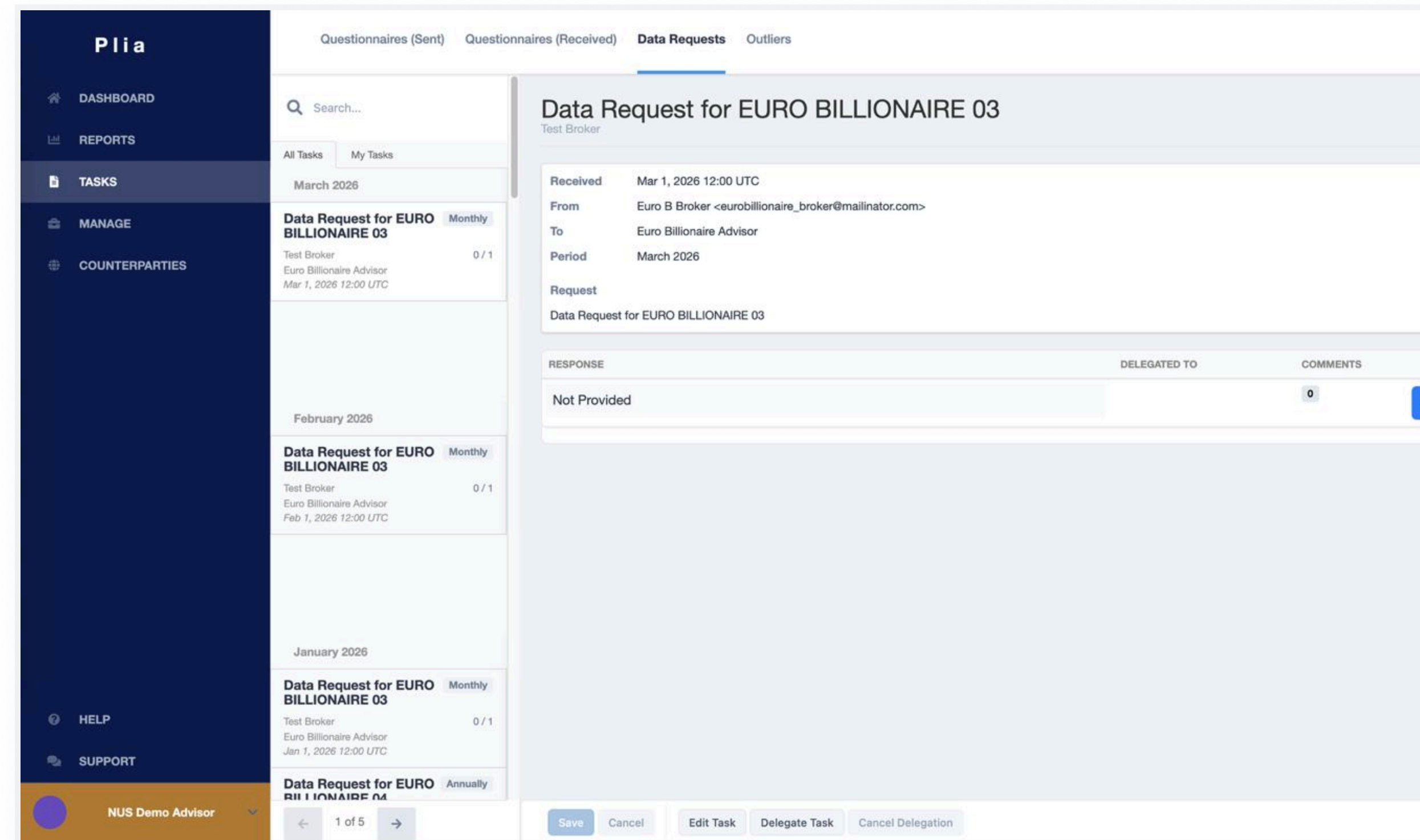
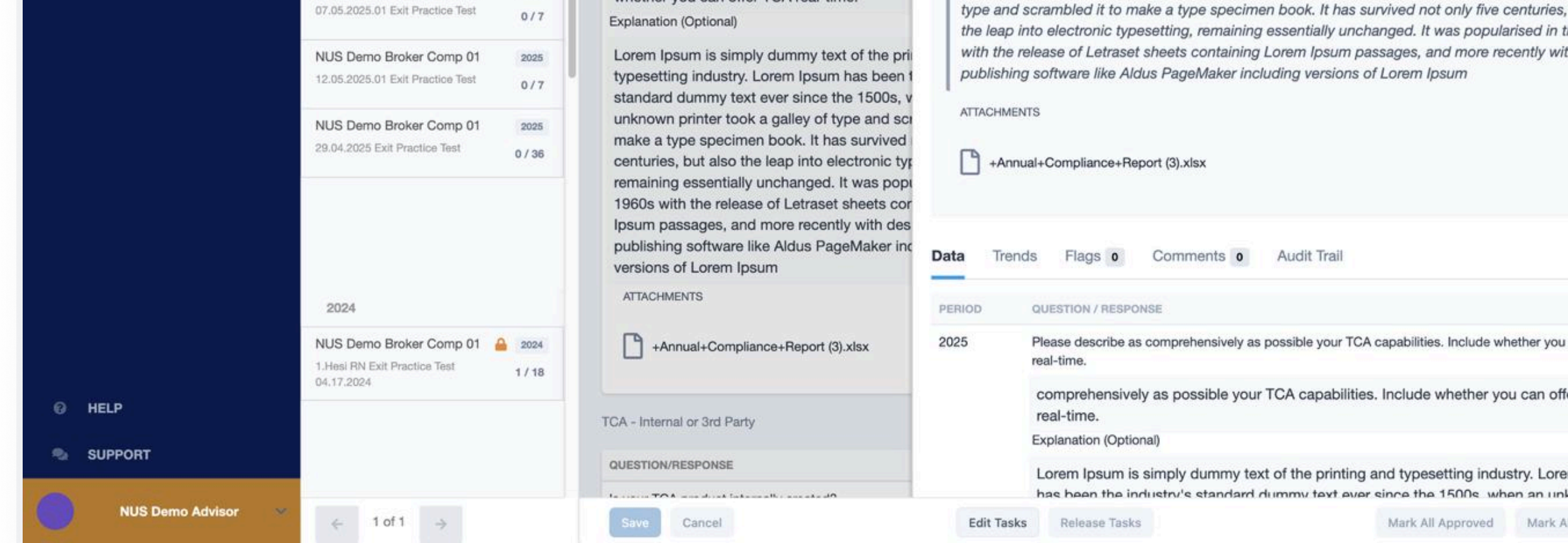


Taming the Legacy Frontend

The older CoffeeScript/Sass/Grunt build system required NUS engineers to build internal knowledge from first principles. With limited modern documentation available, the team developed their own working references, enabling them to extend and debug the frontend without the risk of regressions. This wasn't a one-time exercise – it became an operational capability that now sits inside NUS's ongoing partnership with BestEx Research.

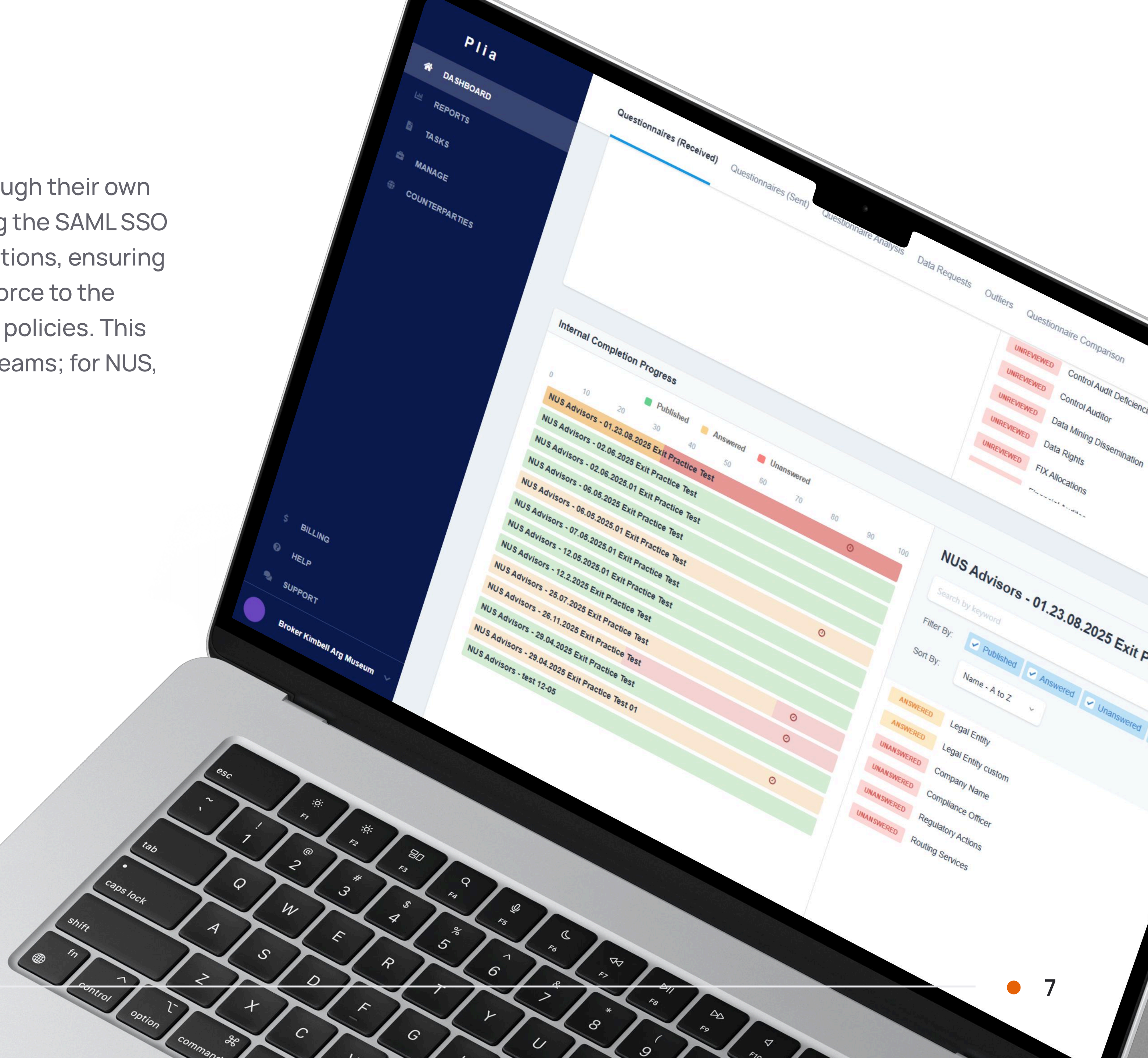
Backend Performance Refactoring

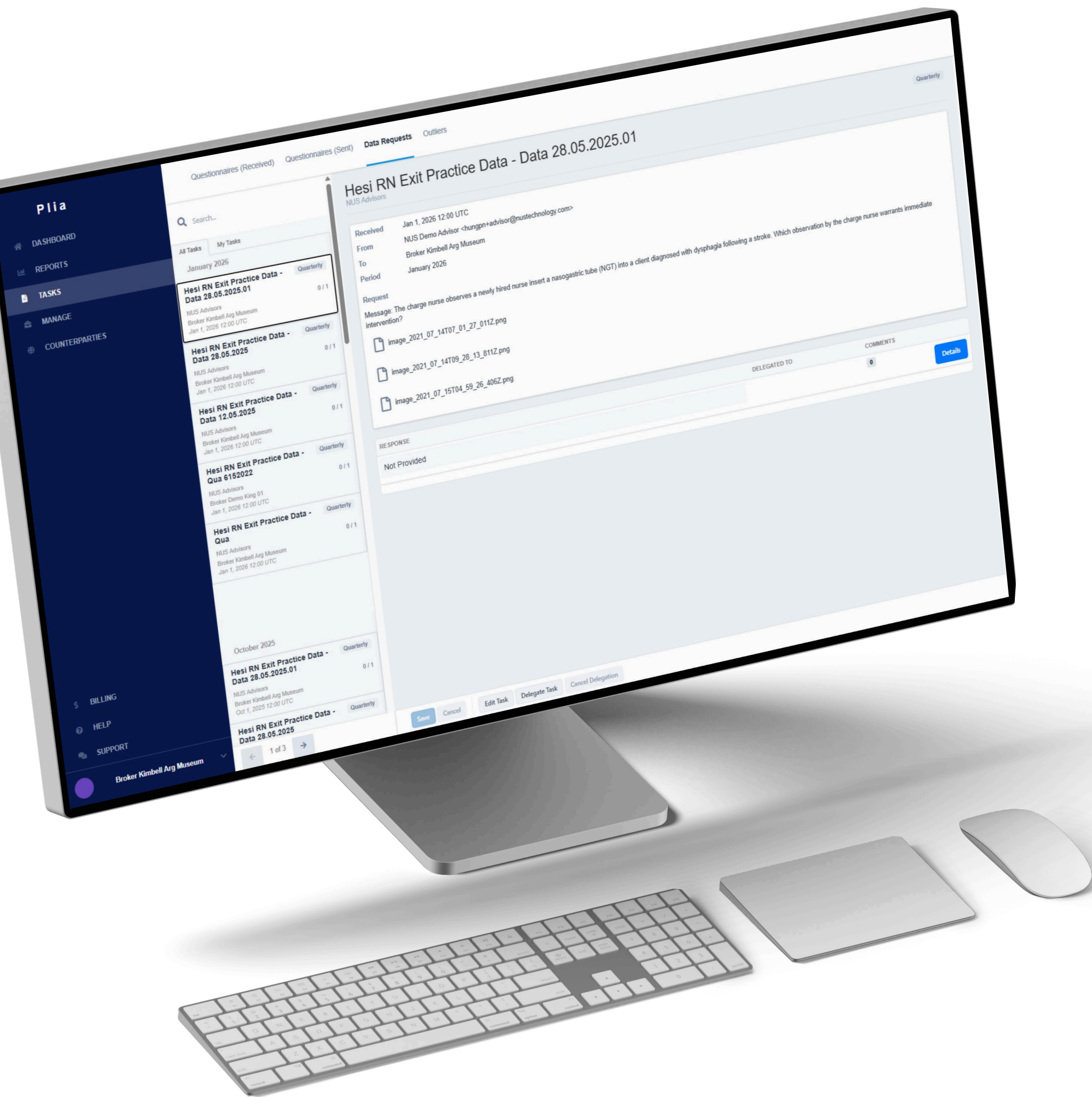
NUS conducted a systematic audit of the Ruby on Rails API backend, identifying the architectural patterns responsible for slow response times. Through targeted refactoring – not a wholesale rewrite – the team reduced backend response times by 30%. In a platform where Advisors and Brokers are acting on time-sensitive financial information, this improvement directly translates to a better experience and more reliable data delivery.



Enterprise-Grade Identity and Access

Plia's enterprise customers required authentication through their own identity providers – Okta, PingFederate, and ADFS – using the SAML SSO standard. NUS engineered and maintained these integrations, ensuring that large institutional clients could connect their workforce to the platform without deviating from their internal IT security policies. This capability is rarely handled well by typical development teams; for NUS, it became a reliable part of the Plia infrastructure.





A Compliance Workflow Built to Match Real Operations

The core of Plia is not its UI – it is its workflow logic. Questionnaires and data requests pass through multiple review stages, with different user roles required to approve, annotate, or reject submissions at each step. NUS built and extended this multi-step review engine to model exactly how Advisors and Brokers actually work, including:

- Configurable questionnaire creation with question-level and category-level weighting, giving Advisors control over how responses are scored and compared.
- A task management layer allowing Advisors to assign specific review tasks to Brokers and track completion and reported outcomes.
- Role-based access controls including an admin impersonation capability – allowing administrators to view and test the platform exactly as any user role would experience it, without requiring separate test accounts.
- A per-user and per-counterparty dashboard giving both sides of the Advisor-Broker relationship a consolidated view of outstanding requests, task statuses, and data history.

Received Jan 1, 2026 12:00 UTC
 From NUS Demo Advisor <hungpn+advisor@nustechnology.com>
 To Broker Kimbell Arg Museum
 Period January 2026

Request
 Message: The charge nurse observes a newly hired nurse insert a nasogastric tube (NGT) into a client diagnosed with dysphagia following a stroke. Which observation by the charge nurse warrants immediate intervention?

image_2021_07_14T07_01_27_011Z.png
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 image_2021_07_15T04_59_26_406Z.png

Pia

Questionnaires (Received) Questionnaires (Sent) Questionnaire Analysis Data Requests Outliers Questionnaire Comparison

UNREVIEWED Control Audit Deficiencies
 UNREVIEWED Control Auditor
 UNREVIEWED Data Mining Dissemination
 UNREVIEWED Data Rights
 UNREVIEWED FIX Allocations
 UNREVIEWED Placeholder

Internal Completion Progress

Published Answered Unanswered

NUS Advisors - 01.23.08.2025 Exit Practice Test
 NUS Advisors - 02.06.2025 Exit Practice Test
 NUS Advisors - 02.06.2025.01 Exit Practice Test
 NUS Advisors - 06.05.2025 Exit Practice Test
 NUS Advisors - 06.05.2025.01 Exit Practice Test
 NUS Advisors - 07.05.2025.01 Exit Practice Test
 NUS Advisors - 12.05.2025.01 Exit Practice Test
 NUS Advisors - 12.2.2025 Exit Practice Test
 NUS Advisors - 25.07.2025 Exit Practice Test
 NUS Advisors - 26.11.2025 Exit Practice Test
 NUS Advisors - 29.04.2025 Exit Practice Test
 NUS Advisors - 29.04.2025 Exit Practice Test 01
 NUS Advisors - test 12-05

NUS Advisors - 01.23.08.2025 Exit Practice Test

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ANSWERED Legal Entity
 ANSWERED Legal Entity custom
 UNANSWERED Company Name
 UNANSWERED Compliance Officer
 UNANSWERED Regulatory Actions
 UNANSWERED Routing Services

Integrated Infrastructure for a Global Operation

The platform's supporting integrations were built to operate without interruption:

- **Stripe:** Subscription billing and global payment processing, including webhook-based event handling for billing lifecycle events.
- **SendGrid:** Transactional email delivery across the platform, including bounce management to maintain deliverability health for institutional users.
- **New Relic, Honeybadger & Scout APM:** A three-layer observability stack providing performance monitoring, error alerting, and application profiling – ensuring that issues are detected and addressed before they affect users.

The production environment runs on AWS Elastic Beanstalk with Docker containers, with images stored in Amazon ECR, database on Amazon RDS PostgreSQL, and file storage on S3. NUS manages this infrastructure as part of the ongoing partnership, not as a separate engagement.

■ THE RESULT

Measurable Gains on an Inherited Platform

The transition from a stalled, difficult-to-maintain codebase to a stable, actively evolving platform delivered measurable results across performance, reliability, and operational efficiency:

30%

Faster API response times
after targeted backend refactoring.

~40%

Reduction in average bug resolution time
within the first six months.

99.9%

Platform uptime maintained
across production deployments.

Zero

Data incidents or compliance breaches
under NUS operational ownership.



API Performance

Backend response times improved by 30% after targeted refactoring of the Rails API layer, helping Advisors and Brokers work with time-sensitive data more smoothly.



Issue Resolution

Average bug resolution time dropped by roughly 40% within the first six months, as the team's growing familiarity with the codebase reduced diagnostic overhead.



Platform Stability

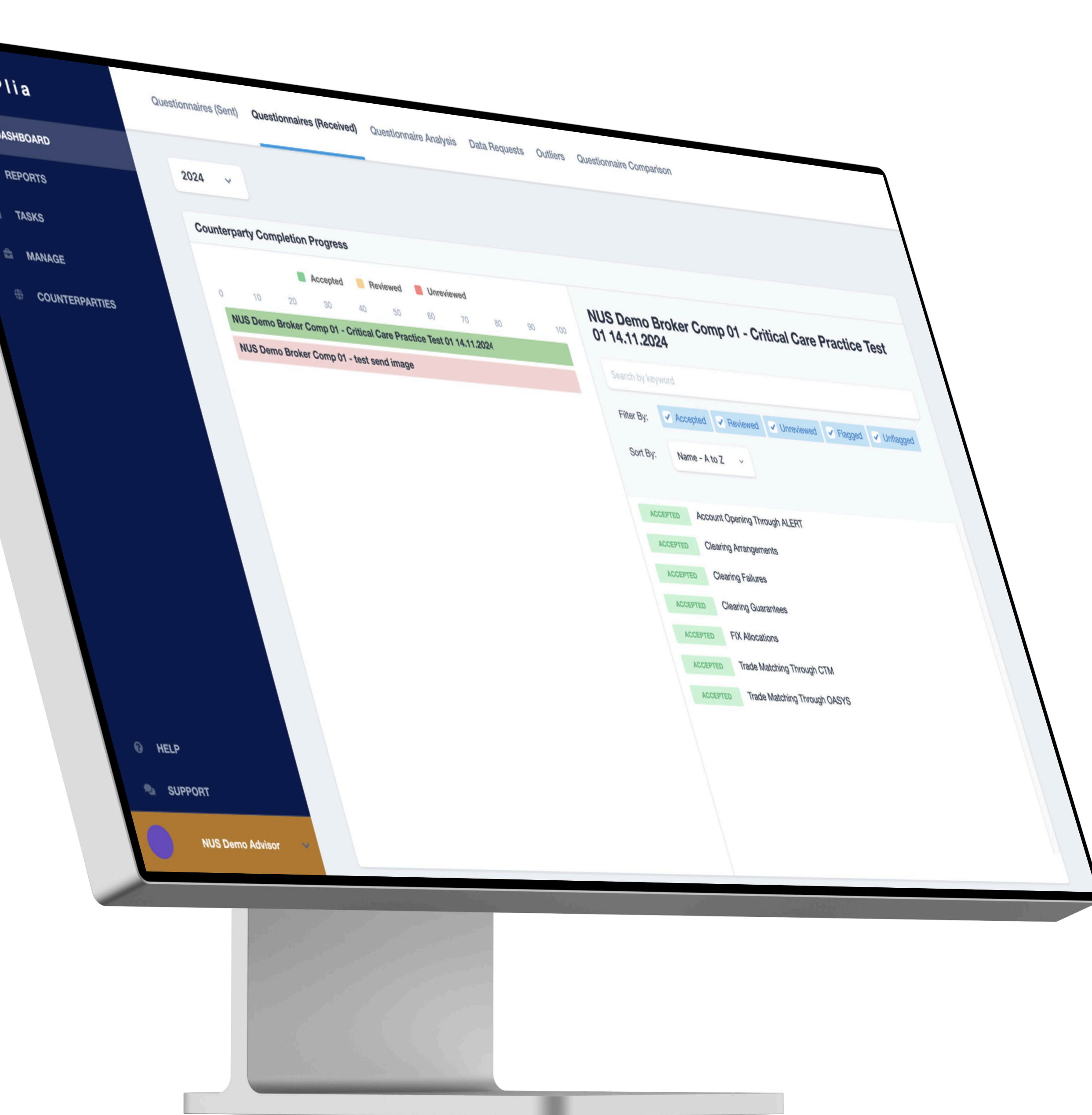
99.9% uptime maintained across production deployments – a baseline expectation for a compliance-grade platform, and one that required disciplined release practices to sustain.



Compliance Track Record

No data incidents or compliance breaches since NUS assumed operational ownership of the platform.

Beyond the numbers, the more significant outcome is operational confidence. BestEx Research can develop and release new features on a platform they trust – one where the team managing the codebase understands its history, its edge cases, and the compliance requirements that shape every decision.



The NUS Difference: We Build It, We Run It

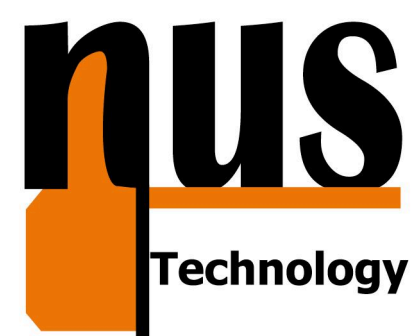
Most development teams, when handed an aging codebase, will push for a rewrite. NUS Technology took a different approach with Plia: learn the system, stabilize it, and extend it – on the client’s timeline, not ours.

The Plia engagement reflects how NUS operates as a long-term operations partner. We didn’t deliver a project and move on. We took ownership of a complex, business-critical platform and became the team that BestEx Research depends on to keep it running, growing, and compliant. The legacy stack, the enterprise SSO integrations, the multi-role review workflows – these are not obstacles we worked around. They are systems we now know as well as the clients who built them.

For BestEx Research, that depth of operational knowledge is the product.

THANK YOU

For Reading Our Case Study



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