



CASE STUDY

MindTRX

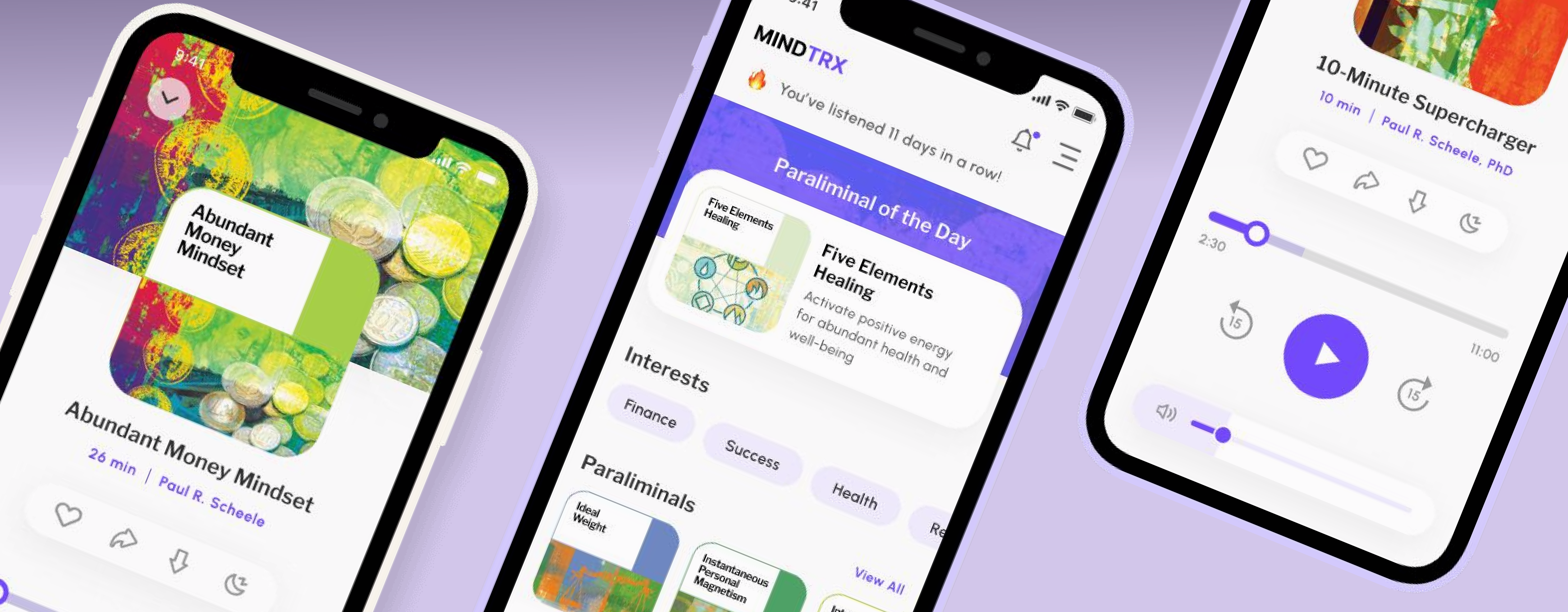
Mobile Application Development & Admin Portal Solution





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Project Overview

MINDTRX set out to revolutionize the way individuals engage with personal development by accessing their other than conscious mind. Designed as a cutting-edge mobile application, the platform provides users with science-backed audio tools to foster growth, relaxation, and self-improvement. Whether focusing on abundance, health, relationships, or overall well-being, MINDTRX offers a seamless and immersive experience to guide users on their transformational journey.

To achieve this vision, the app was built with the following core objectives:

- **Intuitive and Engaging Mobile Experience** – Ensuring a smooth and user-friendly interface on both Android and iOS, making content easily accessible to users of all backgrounds.
- **Premium Content Access via Subscription** – Implementing a robust subscription-based model, powered by **Stripe**, to offer secure and hassle-free payments.
- **Frictionless In-App Purchases** – Seamlessly integrating with **Google Play and Apple App Store subscriptions** to maximize accessibility, streamline transactions, and enhance user retention.
- **Immediate Impact for Users** – Delivering a powerful experience where listeners can achieve a **noticeable sense of relaxation and confidence boost** after just one session.

MINDTRX wasn't just about providing content—it aimed to create an effortless and transformative experience where users could unlock their full potential, anytime and anywhere.



Challenges & Pain Points

As MINDTRX continued to evolve, the team faced important business and technical considerations that needed to be addressed to ensure a smooth transition and improved user experience. Careful planning was required to maintain seamless service for existing users while optimizing the app's infrastructure for future growth.

Business Constraints

One of the biggest challenges was the migration of the MINDTRX app to a new App Store and Play Store account while preserving its established user base and ongoing subscriptions. This transition was intricate due to several critical factors:

- **Existing User Base & Active Subscriptions** – A simple re-upload under a new account wasn't an option, as it would have forced users to repurchase or resubscribe, leading to frustration and churn. The migration had to be executed in a way that ensured users retained seamless access to their accounts.
- **App Store & Play Store Policy Compliance** – Apple and Google enforce strict policies regarding app transfers between developer accounts, particularly for apps with in-app subscriptions. Since direct transfers weren't permitted, the team had to navigate these regulations carefully to avoid potential violations that could lead to app removal or launch delays.
- **Avoiding Business Disruptions** – With revenue directly tied to in-app subscriptions, even a minor disruption in service could have led to significant revenue loss and customer complaints. The transition had to be carefully managed to keep the app fully operational while the migration took place.

Technical Constraints

The business challenges directly translated into complex technical hurdles that needed to be addressed:

- **User Migration Without Data Loss** – Ensuring that all existing users were migrated without requiring them to re-register was critical. This meant preserving user history, preferences, and subscription status across different app store accounts.



- **Subscription Transfer & Continuity** – Since Google Play and Apple App Store subscriptions were tied to the old developer accounts, they had to be successfully transferred without users losing their premium access or facing disruptions in renewals and payments.
- **Reintegration of Third-Party Services** – Several critical third-party services had to be reconfigured and validated after the migration:
 - Stripe for payment processing.
 - Branch.io for deep linking.
 - Braze for push notifications.
 - Smartlook for analytics.The challenge was ensuring these integrations worked seamlessly in the new app environment without breaking existing workflows.
- **DRM-Protected Content Access** – Since MINDTRX’s audio content was DRM-protected (Axinom DRM), authentication had to remain intact after the migration to prevent any playback issues for users.
- **App Update & Store Guidelines Compliance** – The migration process had to comply with the latest Google Play and Apple App Store guidelines, ensuring security updates and technical requirements were met.
- **User Authentication & Login Issues** – Transitioning the app meant handling potential login issues for users with stored session data or cached credentials. It was crucial to ensure that magic link login and email-based authentication continued to function smoothly post-migration.



Solution & Approach

The CanWill Athenaworks team tackled MINDTRX's challenges with a structured strategy centered on deep requirement analysis, technical expertise, and seamless collaboration. By prioritizing scalability, customization, and performance, the team ensured a smooth transition and long-term success for the platform.

Understanding Business Needs & Technical Constraints

To deliver a solution that aligned with MINDTRX's vision, the team conducted a thorough requirement analysis. This process involved close collaboration with the MINDTRX team to prioritize key challenges and establish clear milestones. By maintaining meticulous documentation and adhering to best practices for third-party integrations—including Stripe, Branch.io, OneSignal, Smartlook, Facebook SDK, and Google Ads—the team ensured data integrity, security, and scalability. Regular client communication through meetings, email updates, and sprint reviews allowed for transparency and efficient iteration based on feedback.

A Unique Approach to Mobile App & Admin Portal Development

Athenaworks' approach to the MINDTRX platform stood out due to its scalability, customization, and technical excellence. The team designed a **SaaS-ready architecture** that supported future growth, enabling each client to personalize branding, colors, fonts, and content dynamically. The **admin portal**, built with Django, provided the MINDTRX team with full control over content, subscriptions, and user engagement metrics. Advanced **performance optimization** strategies, such as AWS Auto Scaling, Redis caching, and database query tuning, ensured high responsiveness even during peak usage periods.

Technology Stack

The technology stack was carefully chosen to balance performance, security, and scalability:

- **Frontend:** React Native with Redux, Redux Saga, and Hooks for an interactive and responsive UI.
- **Backend:** Python and Node.js, supported by AWS Aurora PostgreSQL for reliable data storage.
- **Infrastructure:** AWS Lambda and ECS/Fargate for efficient process execution, AWS CloudFront for content delivery, and S3 for secure data storage.
- **Authentication & Notifications:** AWS Cognito for login and Firebase for real-time chat and push notifications.



Seamless Integration with Key Services

The team ensured that MINDTRX's core integrations with Stripe, Branch.io, and CRM systems (Braze/OneSignal) were strategically aligned to enhance user engagement, payment reliability, and long-term customer retention.

- **Stripe:** Minimized transactional failures, ensuring a frictionless payment experience. This directly contributed to increased user trust and retention.
- **Branch.io:** Drives seamless user engagement, reducing drop-offs and maximizing conversion rates from external marketing campaigns.
- **Braze & OneSignal:** Fine-tuned notification delivery to maximize engagement, improving message open rates and conversion from in-app promotions.

Securing Premium Content: Protecting MINDTRX's Core Business Asset

MINDTRX's exclusive audio content is a primary revenue driver, making content security paramount. Athenaworks integrated Axinom DRM to enable encrypted streaming, ensuring robust protection against piracy while maintaining a frictionless listening experience for legitimate users. This balance of security and accessibility optimized content delivery, minimizing buffering and latency.

The result? A fully secured digital asset strategy that preserved MINDTRX's brand value, enhanced user trust, and enabled safe content monetization at scale.

Transforming MINDTRX into a Scalable SaaS Platform

The team spearheaded MINDTRX's evolution from a single-tenant mobile app to a multi-tenant SaaS platform, allowing the company to expand its business model and onboard new enterprise clients. This transformation required:

- **Backend Architecture Modifications** → Ensuring data isolation, compliance, and flexible role-based access control for multiple organizations.
- **Frontend Customization Capabilities** → Enabling dynamic branding, subscription models, and user experiences tailored per client.
- **AWS Infrastructure Enhancements** → Supporting effortless scalability to accommodate growing demand without service interruptions.
- **Stripe Billing Adjustments** → Implementing multi-client pricing structures for seamless revenue management.

This strategic shift enabled MINDTRX to launch MyHolosync on the App Store and Google Play, marking its first successful SaaS offering and opening doors to new B2B opportunities.



Performance Optimization for a Seamless User Experience

To ensure a fast, reliable experience, CanWill Athenaworks implemented several key optimizations:

- **Faster Load Times & Seamless Performance** – API performance tuning with Redis caching and database indexing significantly reduced response times, ensuring users could instantly access their content without delays.
- **Scalability Without Downtime** – AWS Auto Scaling dynamically adjusted server capacity based on real-time demand, preventing slowdowns and ensuring a consistently smooth experience—even during peak usage periods.
- **Reliable Platform for Business Growth** – Proactive high-traffic management, including Amazon RDS scaling and continuous performance monitoring, provided a stable, high-performing foundation that allowed MINDTRX to expand its user base and introduce new offerings with confidence.

Through these strategic enhancements, MINDTRX achieved a scalable, high-performing platform capable of supporting its growing user base with confidence.

Key Deliverables & Features

The development of MINDTRX followed a structured, phased approach to ensure smooth implementation, seamless integrations, and scalability. Each phase addressed a critical aspect of the platform's evolution, from initial setup to SaaS expansion.

Phased Development Approach

Phase 1: Initial Setup & Infrastructure

To establish a solid foundation, we focused on setting up the necessary cloud infrastructure and frontend framework:

- **AWS Services Deployment** – Configured EC2, RDS, S3, Auto Scaling, and Redis caching.
- **Frontend Setup** – Established the app's frontend architecture and integrated it with backend APIs.



Phase 2: App Design & Core Development

With the infrastructure in place, we transitioned to building the core application features:

- **UI/UX Implementation** – Translated Figma designs into a fully functional mobile app interface.
- **Django Admin Panel Creation** – Developed a custom admin panel aligned with the client's data flow.
- **API Development** – Built backend APIs to support user management, content streaming, and subscriptions.

Phase 3: Payment & Subscription Integration, Native Player & Offline Functionality

To enhance the user experience, we integrated payment systems and improved content accessibility:

- **Stripe Integration** – Enabled secure payment processing and subscription management.
- **Android & iOS Subscription Handling** – Implemented Google Play and App Store subscription workflows.
- **Native Player Integration** – Used platform-specific players to deliver optimized content playback.
- **Offline Availability** – Developed a feature using Axinom to make downloaded content accessible offline.

Phase 4: Deep Linking & User Engagement Features

Enhancing navigation and user engagement was a priority:

- **Branch.io Integration** – Enabled deep linking for seamless navigation to episodes and program pages.
- **Braze Integration** – Implemented CRM and push notification capabilities for user engagement.

Phase 5: App Transfer & Marketing Integrations

To ensure a smooth transition and support marketing efforts:

- **App Store & Play Store Migration** – Transferred the live app to new developer accounts while maintaining user subscriptions.
- **Facebook SDK & Google Ads Integration** – Integrated marketing tools for user acquisition tracking.



Phase 6: SaaS Expansion & CRM Migration

To scale MINDTRX into a SaaS platform and enhance analytics:

- **Multi-Tenant SaaS Development** – Adapted MINDTRX to support multiple clients.
- **CRM Migration** – Replaced Braze with OneSignal for better anonymous user tracking.
- **Smartlook Integration** – Added user behavior analytics for UX improvements.

Each of these milestones played a crucial role in scaling MINDTRX while optimizing performance and user engagement.

Ensuring a Smooth Onboarding Experience

To deliver a seamless and engaging onboarding process, we implemented comprehensive testing and usability improvements before launch:

Comprehensive Testing in Dev & Test Environments

- **Feature & Functionality Testing** – Ensured smooth execution of core features such as signup, login, and content access.
- **Integration Testing** – Verified seamless interaction between third-party services like Stripe, Branch.io, and OneSignal.
- **Cross-Platform Testing** – Assured a consistent onboarding experience across Android and iOS.

Performance & Load Testing

- Ensured backend stability under high user traffic, particularly during peak usage times.
- Optimized API response times to minimize delays during the signup and login process.

User Testing & Early Feedback

- Conducted beta testing with internal and external users to identify pain points.
- Implemented usability enhancements before final production release.

By adopting these strategies, we significantly reduced friction in the onboarding process, leading to higher user retention and engagement.



Boosting User Engagement Through Push Notifications & Calendar Features

Push Notifications for Re-Engagement

Push notifications played a pivotal role in maintaining user engagement by delivering timely updates and personalized content:

- **New Content Alerts** – Used Braze/OneSignal to notify users about new programs and episodes.
- **Deep Linking for Seamless Navigation** – Enabled users to jump directly to relevant content via Branch.io-powered links.
- **Personalized Re-Engagement Strategy** – Sent customized notifications to inactive users, prompting them to return.

Calendar Module for Content Scheduling

The calendar feature enabled a structured and interactive content experience:

- **Scheduled Content Updates** – Allowed admins to plan and update programs for specific timeframes.
- **Structured Learning Experience** – Provided daily content recommendations to encourage a consistent engagement routine.

By integrating push notifications and a structured calendar, we enhanced user engagement, retention, and content discovery.

Live Streaming Implementation

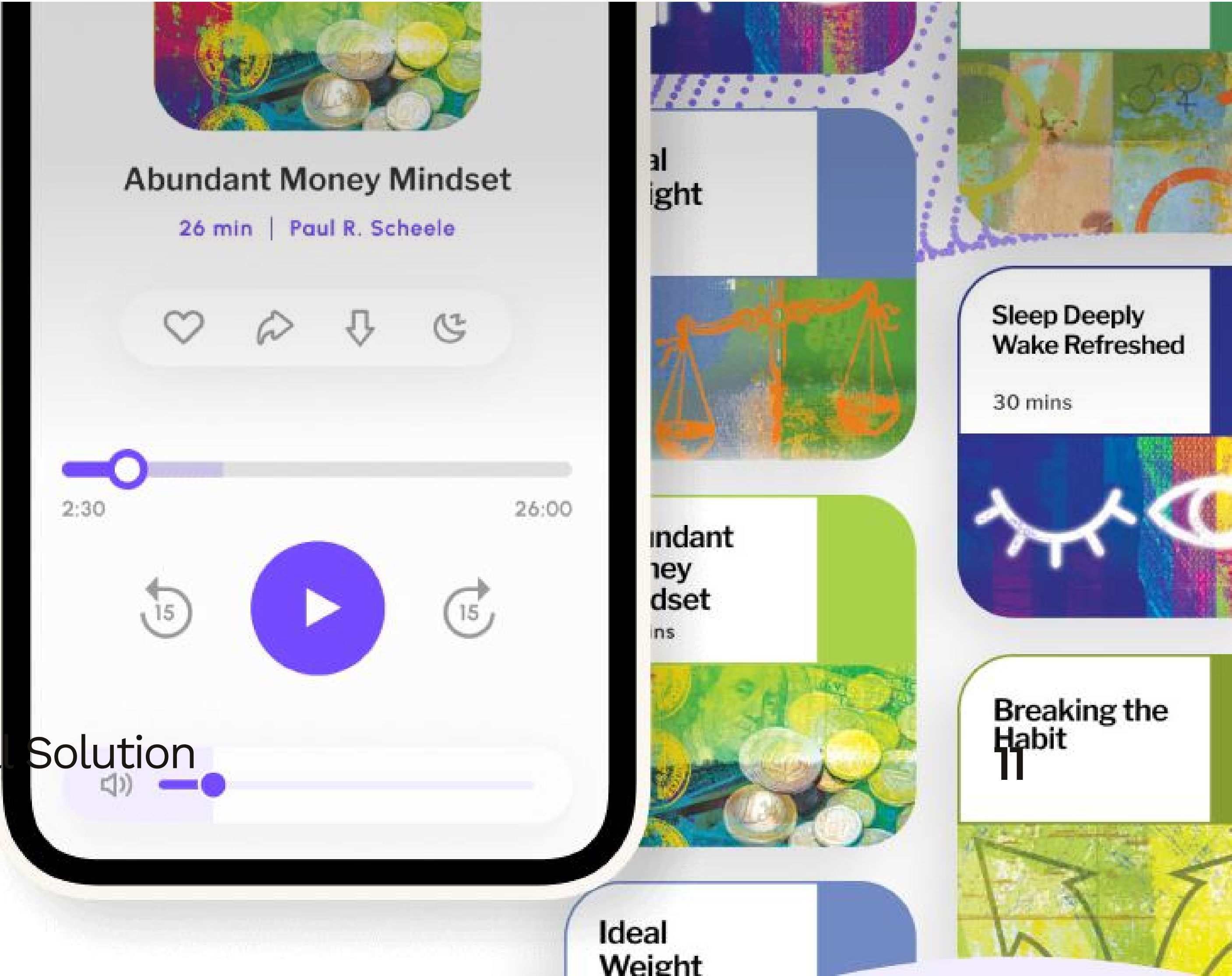
MINDTRX does not feature live streaming. However, to meet client requirements, we implemented an in-app browser-based solution to display pre-uploaded YouTube content, ensuring a seamless user experience.

Nothing to memorize. No homework. No exercises.
Just kick back, listen, and enjoy the results.

Try the App for Free →

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"They helped me write a screenplay in three months."
Sheri Smith





Empowering the MINDTRX Team with a Robust Backend Web Portal

The backend web portal, built using Django Admin Panel, provided the MINDTRX team with comprehensive tools for content, subscription, and user management, reducing operational dependencies on developers.

Content Management & Control

- Episode & Program Organization – Allowed admins to create, edit, and categorize content.
- Pre-Publish Content Review – Provided a preview feature to review content before publishing.

Subscription & User Management

- Subscription Syncing – Tracked user subscriptions across Android, iOS, and Stripe.
- User Profile Access – Allowed admins to view subscription status and user history.

Operational Efficiency & Scalability

- App Configuration Management – Enabled admins to update app data without requiring development changes.
- Multi-Admin Access – Allowed multiple team members to manage the app, improving operational oversight.

By implementing this centralized web portal, we empowered the MINDTRX team with efficient tools to manage their platform independently, enhancing operational efficiency and scalability.



Outcomes & Impact

The final MINDTRX platform successfully aligned with the company's original vision while incorporating enhanced flexibility for future scalability, particularly through its transition into a SaaS model.

Faithful Implementation with Added Scalability

MINDTRX's app pages were developed exactly as envisioned in the original Figma designs, ensuring a seamless and consistent UI/UX experience. Additionally, the SaaS iteration introduced dynamic branding capabilities, allowing businesses to customize their app's colors, fonts, and content through an admin panel. This flexibility enables seamless updates, including logo changes across the platform, without requiring code modifications.

The addition of these SaaS features made the platform more adaptable, allowing multiple clients to leverage MINDTRX with their unique branding while maintaining a high-quality user experience.

Measurable Growth & Engagement Improvements

Since its launch, MINDTRX has experienced notable growth in user adoption, engagement, and revenue. Strategic enhancements streamlined the onboarding process, improving conversion rates. The implementation of Magic Link authentication simplified login and signup, eliminating unnecessary steps and reducing friction for new users. This directly contributed to higher registration and engagement rates.

Retention strategies, such as email marketing campaigns and the introduction of a 7-day Free Challenge, further encouraged users to explore the platform. Additionally, MINDTRX leveraged paid advertising across Facebook, Google, and Apple, integrating Branch.io tracking to measure acquisition and conversion success. These efforts resulted in increased signups, better user retention, and optimized ad performance for revenue growth.



Long-Term Business Benefits

Beyond immediate improvements, the new solution provides MINDTRX with a scalable, cost-efficient foundation for future expansion. The multi-tenant SaaS infrastructure enables rapid onboarding of new clients with minimal backend modifications, significantly reducing development efforts. Optimized AWS services, including auto-scaling and caching, ensure the platform remains cost-efficient while supporting a growing user base.

Customization remains a key driver of business growth, with the white-labeling capabilities making the platform attractive to diverse business clients. By transitioning to a subscription-based SaaS model, MINDTRX is now positioned for long-term scalability and recurring revenue expansion.

Continued Support & Future Development

CanWill Athenaworks remains an ongoing technology partner, providing continuous support, maintenance, and future enhancements for both MINDTRX and its SaaS clients. This includes issue resolution, performance monitoring, bug fixes, and ongoing optimizations to improve user engagement. Additionally, new feature developments and system enhancements ensure that MINDTRX remains at the forefront of innovation, delivering an evolving and competitive product offering.

By establishing a strong technical foundation and fostering long-term collaboration, CanWill Athenaworks ensures that MINDTRX remains a scalable, high-performing platform poised for continued success.

Contact Us

athenaworks.com

