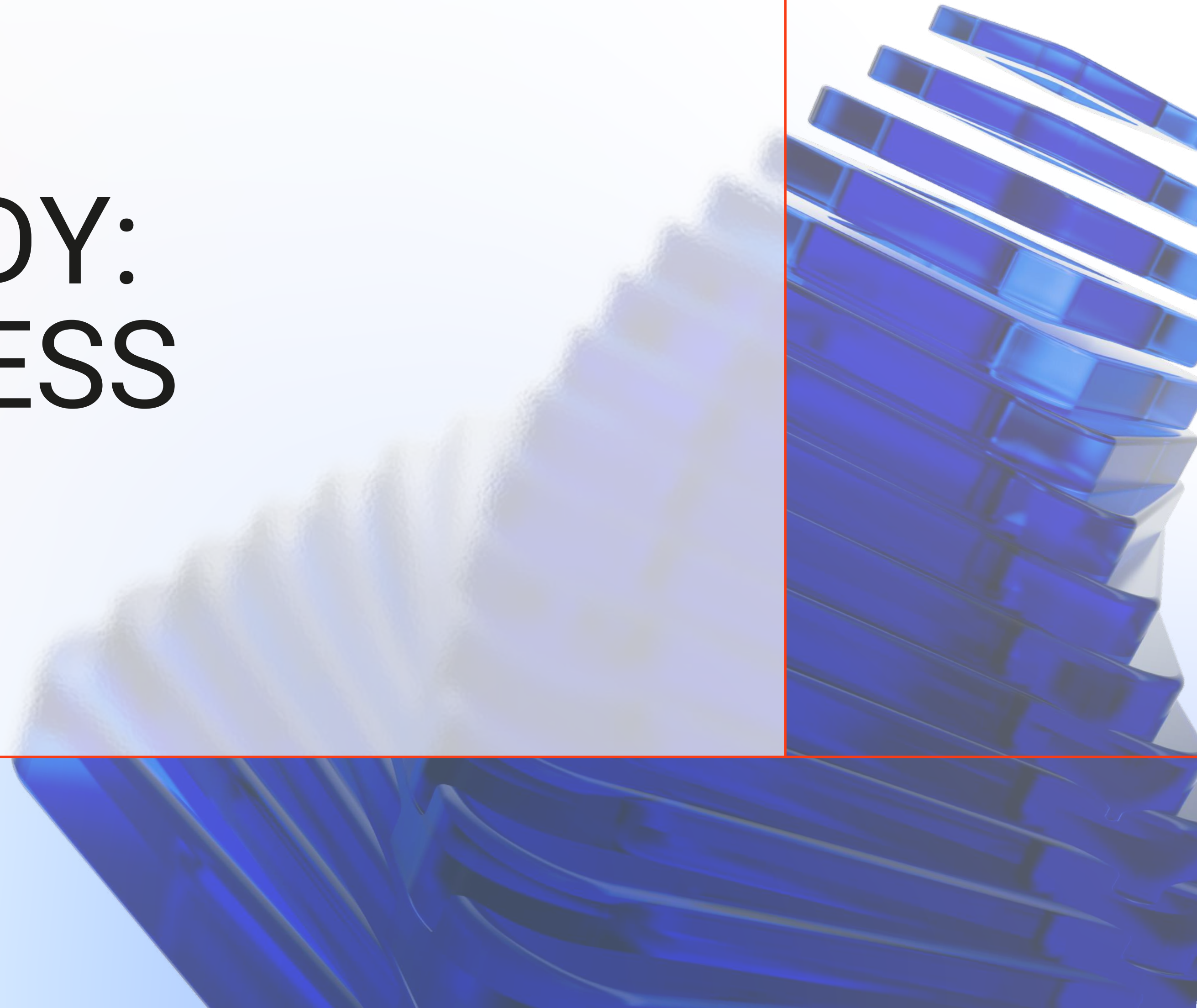


# CASE STUDY: PR. BUSINESS





# A unifying platform that helps businesses get found online

## Partner information:

Partner: PR. Business

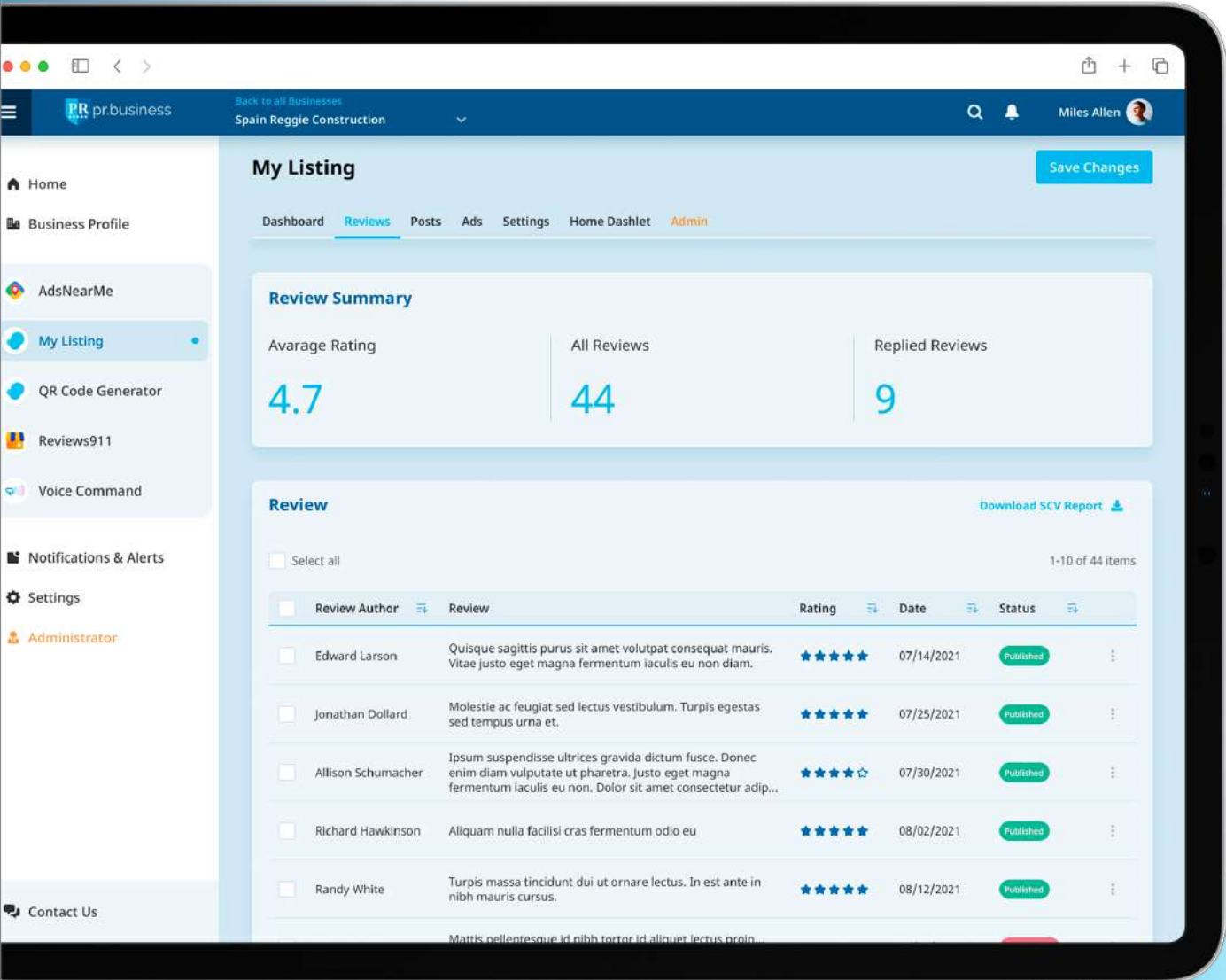
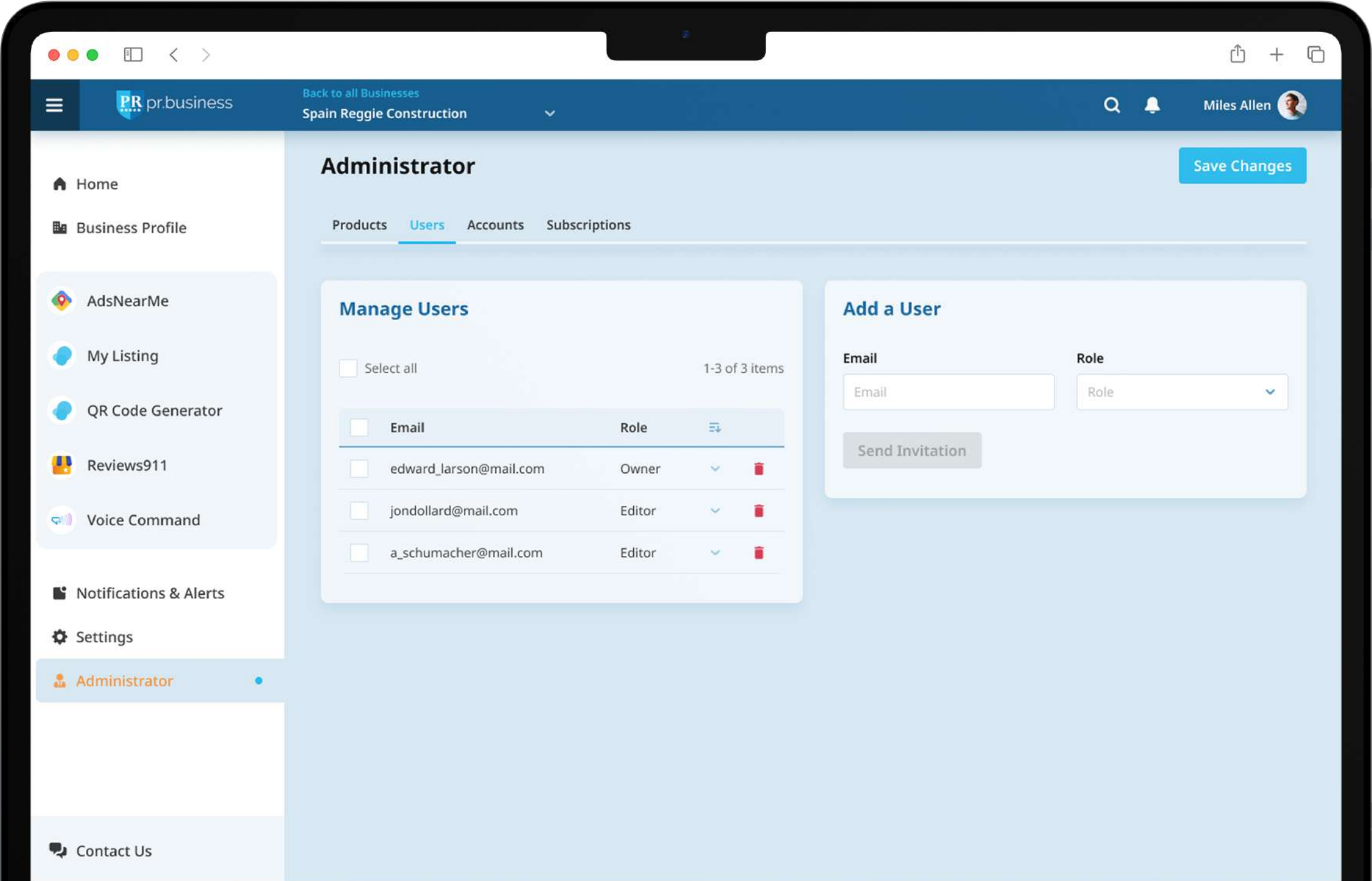
Company size: 51-200

Headquarters: USA

## Team size:

Backend developers: 4  
Frontend engineers: 3  
Tech lead: 1

Full-stack engineer: 1  
DevOps engineer: 1  
UI/UX designers: 2

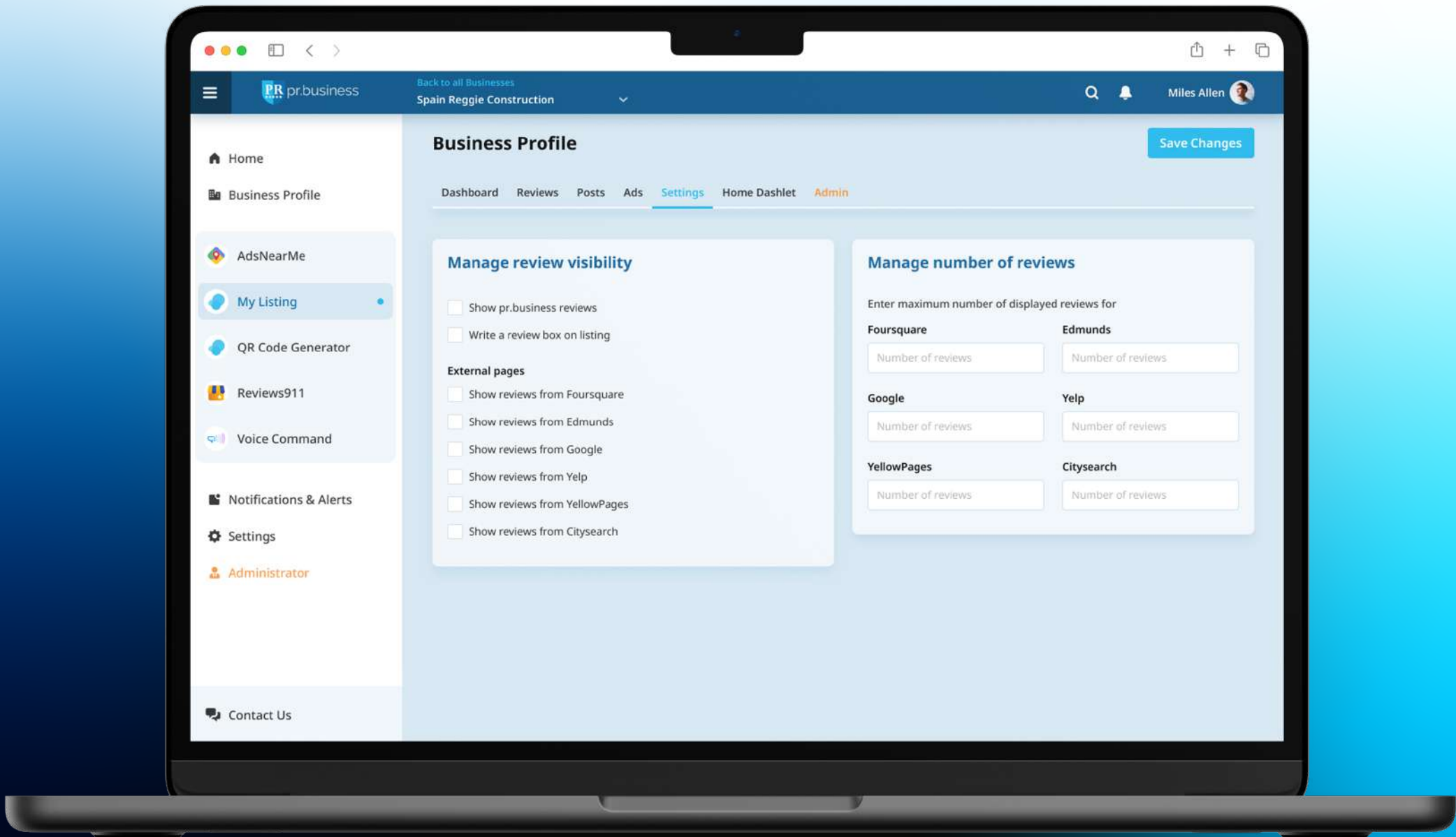


# PROJECT OVERVIEW

## Summary

Our partner sought to solve a critical market gap: Small and medium businesses (SMBs) without websites or social media presence lacked online visibility. They envisioned a centralized B2B platform to help regional U.S. businesses manage their online presence, from business information to customer reviews, and strengthen their reputation across platforms like Google, Yext and Foursquare.

Starting with their concept, our team collaborated with PR. Business to design, build, and scale a cloud-based solution that now supports tens of thousands of listings, handles high traffic volumes, and lets lesser-known, regional businesses to maintain competitive visibility without investing in dedicated websites.



## Provided services

- Front-end development
- Back-end development
- DevOps services
- UI/UX design

## Technologies & tools

- **Frontend:** AngularJS, React, TypeScript, SCSS, Bootstrap
- **Backend:** Node.js, PostgreSQL, Redis
- **DevOps:** Docker, Kubernetes, Google Cloud Platform, CircleCi
- **Third-party tools:** Google My Business, Yext, Foursquare, Salesforce, Braintree, Twilio, SendGrid



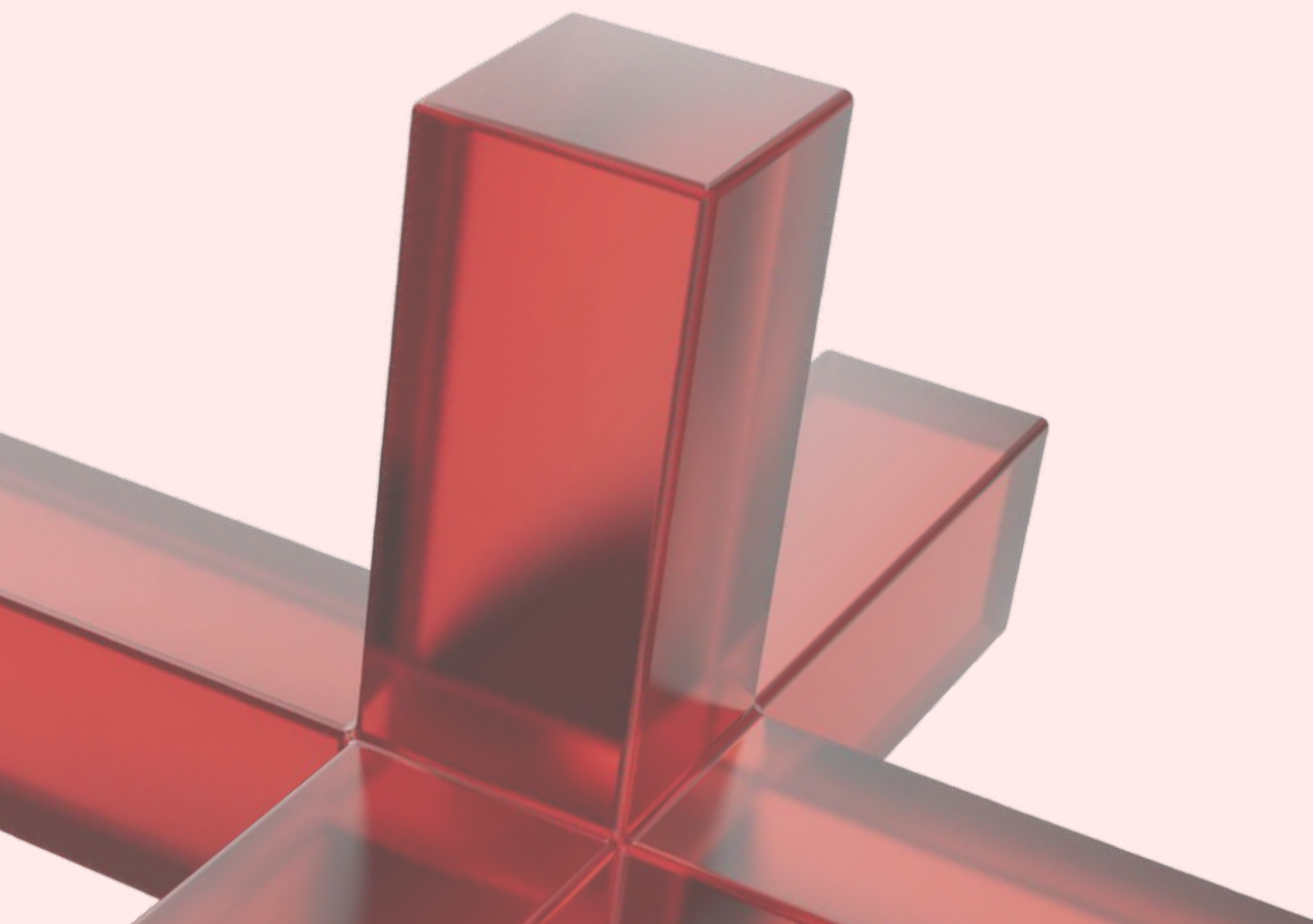
# REQUIREMENTS & CHALLENGES

When they reached out to our team, PR. Business set out to solve a clear problem:

**Small businesses without websites are be practically invisible online.**

Listing data is often fragmented, reviews are scattered across platforms, and managing reputation requires more time and technical effort than most SMB owners can afford.

To address this, they needed a partner who could transform their idea into a working product and ensure it could scale. Key challenges included:



## SEO-first architecture

Designing the platform specifically to help regional businesses appear in top search results by applying solid SEO practices.

## Third-party integration ecosystem

Connecting the platform to services like Google Business Profile, Yext and Foursquare to support unified listing management.

## Real-time update engine

Syncing updates instantly across all integrated platforms to keep business information accurate and consistent.

## Intuitive user experience

Building a simple, responsive interface that gives owners full control over their businesses’ information and customer feedback.

# HOW WE WORK

## Collaboration approach & process

From the start, our **collaboration was built on transparency and mutual trust**. In this case, our partner came to us with a clear vision and set of technologies tailored to their internal expertise and long-term roadmap. While they initiated technology stack decisions **our engineering leads thoroughly reviewed their choices**, making sure they aligned with performance, scalability and maintainability goals.

Throughout the process, **our team took full responsibility for backend and frontend implementation**, while our partner remained closely involved in reviewing prototypes, validating flows and prioritizing features.

**Communication followed Agile principles**, with regular sprint planning, reviews and roadmap adjustments as the platform grew from an idea into a powerful digital product. We held twice-weekly sync meetings with our partner’s CTO for fast feedback loops and tight alignment throughout the development process.

## Partner testimonial

*Aimprosoft helped us get setup and handle that scale.*

*Being a huge directory, we receive a lot of attention from bots, which sometimes bring our site down. Our project manager from Aimprosoft was always quick to respond, which is great, considering the time difference. He has done a great job of not only identifying the problem but also recommending solutions and fixing things fast enough to not impact our clients. I was always given the opportunity to make a final call before implementing final solutions.*

*Aimprosoft has been exceptional at communicating in time and providing an explanation for the reason behind an issue, as well as solutions for it. This has made my job a lot easier.”*

Director, PR. Business





# STEP-BY-STEP PROJECT FLOW

## 1. Discovery and system planning

Our team assessed our partner's business requirements and market positioning to design a scalable, integration-ready architecture. Our UX team worked closely with their leadership to gather requirements, analyze similar platforms and identify UX best practices for designing a user-friendly interface from the ground up. Based on these insights, our team presented a proposal for a revised information architecture, created low-fidelity wireframes and tested multiple navigation options to improve usability for non-technical users. Once approved, these concepts formed the foundation for a responsive dashboard and a consistent design system.

## 2. Backend architecture design and data strategy

We followed a modular architecture approach by splitting core functionalities such as search, sync, and user management into independent services to improve scalability and simplify future development. To support increased data demands, our team moved from MongoDB to PostgreSQL, which handles large volumes and complex queries more efficiently. We also redesigned the full-text search logic, offloading search vectors to a separate table — reducing query response times from 8+ seconds to under 2. One critical microservice was converted from Node.js to Java and we rebuilt the listing page using React and Next.js to improve load speed and rendering performance.

## 3. Frontend and public website implementation

Our front-end team built the user interface with two distinct audiences in mind: businesses and end users. We built the business dashboard with React to let owners manage listings, reviews and performance data in real time. This dashboard also includes an analytics module that provides clear reports on how users discover and interact with listings — including metrics like search appearance, engagement trends and platform performance. Public-facing pages were initially developed with AngularJS and strategically enhanced for search visibility with structured data markup, a Prerender.IO integration, automated internal linking and materialized views for rapid page generation. These improvements led to business profiles ranking higher in regional search results.



# STEP-BY-STEP PROJECT FLOW

## 4. Integration and listings sync

We built a comprehensive integration layer connecting Google Business Profile, Yext, Foursquare and Vendasta for seamless business information synchronization. We integrated Salesforce for CRM workflows, lead creation, and subscription management. Communication tools included Twilio and SendGrid for notifications and engagement. Braintree handled transaction processing. These changes moved the system from manual data handling to fully automated synchronization modules managing updates without conflict.

## 5. Payment and user management

As the platform matured to include premium features, our team added role-based permissions allowing business owners to delegate tasks while maintaining oversight. Payment processing integrated Braintree to handle transactions for premium listing placements. We also developed workflows for business claim verifications and automatic subscription setup to streamline user experience.

## 6. Cloud migration and infrastructure improvements

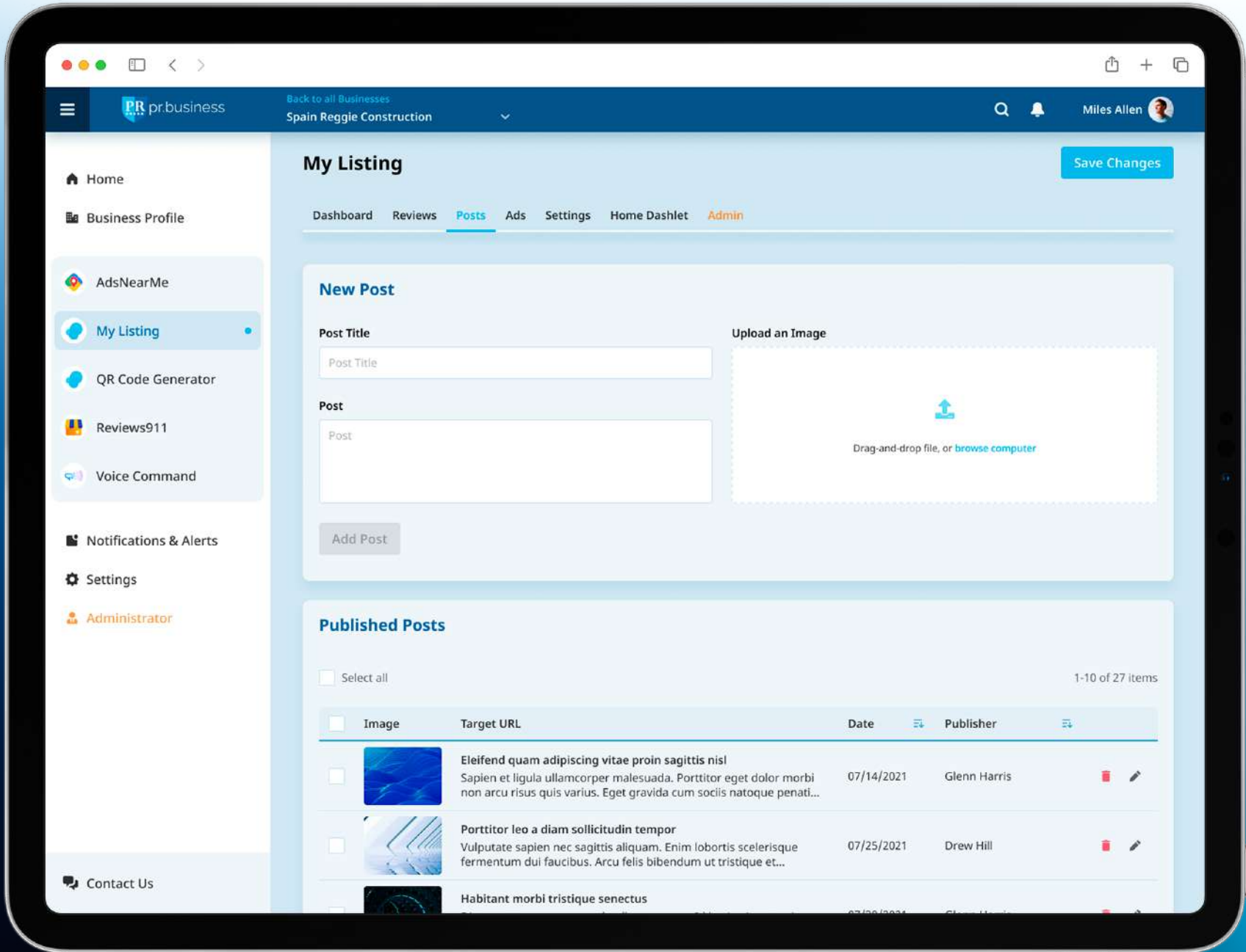
We migrated their infrastructure from AWS to Google Cloud, moving from a monolithic virtual machine setup to a distributed microservices architecture. As part of this shift, we implemented Docker and Kubernetes, introduced resource auto-scaling, and isolated development, staging and production environments. The new infrastructure now handles over 70,000 daily page loads, 500 API requests per second and up to 500,000 read operations per second during peak load, supported by PostgreSQL indexing optimizations.

## 7. System monitoring and stability

Throughout development, our team prioritized platform stability with a proactive, semi-automated approach minimizing manual work and enabling faster incident response. Real-time API health tracking with Runscope and SMS alerts allows quick response to service disruptions. Cloudflare protects against DDoS attacks, while Kubernetes auto-scales resources for traffic surges. Without dedicated QA, production remains stable through comprehensive runtime monitoring, automated checks and developer oversight.



# DELIVERED FUNCTIONALITY



● **Business discovery and SEO optimization:** Thanks to built-in SEO enhancements, many business profiles consistently appear in Google’s top regional search results, even for companies without websites. The platform supports full-text search across 8M+ entries, with filters by category, region and keywords. Schema.org Microdata helps search engines better understand and index content, while automated internal linking and materialized views further improve visibility.

● **Unified reputation management and real-time presence:** Business owners can manage their presence across platforms like Google My Business, Yext, Foursquare and Vendasta from a single dashboard. Reviews across multiple platforms are aggregated into one interface, where business owners can track sentiment and respond directly. The system syncs changes in real time, minimizing inconsistencies across third-party directories.

● **Customizable business profiles with content tools:** Profiles include editable details like services, hours, images, logos and payment methods. Owners can post promotional updates, run banner campaigns with CTAs and embed their profiles on external websites using custom JS widgets. Each profile is designed to be both mobile-friendly and SEO-optimized.

● **Subscription handling and role-based access:** The platform supports paid promotional features through Braintree for secure, frictionless transactions. Business owners can grant role-based access to team members or agency partners to help manage listings and campaigns, all without sharing login credentials.

● **Built-in resilience and system monitoring:** Real-time API health monitoring via Runscope and SMS alerts helps engineers respond quickly to outages. Cloudflare protects against potential DDoS cyberattacks and Kubernetes automatically scales resources under peak traffic conditions. Even atypical load patterns, like sync floods from third-party platforms, are managed without service interruption.



# PROJECT OUTCOMES

<div>High visibility without a website</div> <div>Businesses rank high in local search results and directories, even without standalone websites, thanks to deep SEO optimization and internal linking across 8M+ listings.</div>	<div>Broad reach</div> <div>Businesses improve visibility by syncing listings with trusted platforms like Google My Business, Yext and Foursquare – reaching customers wherever they search.</div>
<div>Stronger search performance</div> <div>Listings frequently rank in Google's top 3 for localized queries due to schema markup, fast-loading pages and search-friendly front-end architecture.</div>	<div>Improved scalability and stability</div> <div>The cloud-native infrastructure comfortably handles traffic at 70,000+ page loads per day and up to 500 API requests per second, with automated scaling for spikes.</div>
<div>Efficient management</div> <div>Owners save time and reduce effort by managing listings, reviews and updates on a single, intuitive dashboard.</div>	<div>Comprehensive analytics</div> <div>Clear reports help business owners understand how customers find and engage with listings, enabling smarter, data-driven decisions.</div>





# aimprosoft

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