3PILLAR GLOBAL

3Pillar Turned an MLS Company's Technology into an Asset that Drove Nearly $2 Million in New Revenue & Savings Combined

AT A GLANCE:

Industry: Information Services

Challenge: Create one unified data and technology stack from twenty different platforms to drive revenue, enable new services, and increase profitability

Offering: Application Modernization

Highlights:

- Achieved $1.75 MM in ROI combined between net new revenue driven and cost savings derived from the technology solutions we built
- Developed nearly 50 new APIs that enabled our client to increase revenue from subscription fees by $50K/month
- Reduced the occurrence of license sharing through an advanced identity management solution, equating to an increase in average subscription revenue by $50K/month
- 50% cost reduction in database licensing costs ($32K/month) and 30% reduction in the Marketing team's operational costs ($15k/month)

Multiple-listing services (MLSs) are critical software applications in the real estate industry that provide comprehensive data about properties for sale in a given market. If you've ever bought or sold a house or even just scrolled through real estate listings on Redfin or Zillow, you've tapped into this type of data.

Our client, one of the largest MLSs in the country, has a business model that relies on subscription and licensing fees from ~100,000 members. Subscribers pay several hundred dollars monthly to access the company's listing data that is provided through web and mobile channels. They also offer an innovative tool library, which provides localized data and services like search and listing management to agents and brokers. The company recently facilitated 250,000 annual real estate transactions valued at more than $85 billion.

CHALLENGE:

3Pillar Created a Unified Data Platform to Power New Capabilities

With the overarching goal of building diverse capabilities for future growth, our client needed to find new ways to derive value from its data while

providing a safe, secure environment for handling it. An additional goal of the company was to enhance the services and customer experience they offered to agents and brokers while expanding their operations nationally. Unfortunately, their legacy technology was getting in the way of achieving that vision.

The company had grown through multiple acquisitions, bringing together twenty MLS companies, which resulted in siloed data and a complicated technology stack. Like many information services organizations, these legacy systems had grown increasingly complex and brittle over time as they added new features. And like a Jenga tower, each new block made the stack less stable.

The underlying technology stack of an MLS can either accelerate product innovation or impede it, explains Bernie Doone, Industry Leader for 3Pillar's Information Services Portfolio. "It can be a source of competitive advantage — or disadvantage. It can position you as an innovation leader — or make you susceptible to disruption."

The company's overly complex, heterogeneous system architecture and technology stack slowed their operations, caused performance issues like frequent outages that impacted the user experience, and made it challenging to innovate and release new features quickly. To achieve their goals and vision for the future, our client needed to build a modern technology platform to bring all its information assets together, making the data accessible for uncovering insights and accelerating innovation.

SOLUTION:

3Pillar Built a Focused Approach to Drive Fast, Effective Results — and Return

The company enlisted 3Pillar Global to help in this business transformation effort. Following our standard methodology for application modernization which prioritizes providing value early and often, we approached the initiative considering three factors: decomposition, automation, and cloud migration/optimization. These three components create a larger strategy for application modernization that focuses on improving agility, scalability, and efficiency. Taking this approach, we immediately got to work helping them modernize their platform to:

- Replace outdated technology that was slowing them down and leaving revenue on the table

- Bring all their disparate data, information, & technology under one roof

- Drive company profitability by reducing costs and accelerating release cycles

An Approach Focused on Decomposition to Replace Outdated Technology

The foundation for our work rested on updating a broad range of the company's existing, outdated technology. One of our most significant wins in this area was implementing stronger identity management controls to eliminate the practice of users sharing licenses. The team developed a cost-effective, cloud-native solution that uses advanced algorithms to continuously analyze login activity and identify and report suspicious behavior. These changes led to the recovery of significant monthly recurring revenue from around 100 agents each month. Other specific technology updates we made included:

- **CloudOps:** Shifting the MLS to an Infrastructure as Code (IaC) provisioning model with a Terraform-based infrastructure management system

- **Modern Digital Experience:** Transitioning to a new content management system (CMS), a switch from Drupal to Contentful. This enabled the company to increase publishing speed and overall performance, as Contentful offers a modern, flexible architecture and intuitive UI that removed their Marketing team's dependency on developers.

- **Modern Identity and Access Management System:** Replacing Forgerock with Okta as the cloud-based identity management provider, which has a user-friendly interface and offers a wide range of integrations with other cloud-based services that were required for specific business needs and priorities

- **Security:** Integrating a Web Application Firewall to encrypt sensitive data

Adding *Automation* and Consolidating Technology to Reduce Costs and Accelerate Release Cycles

We also took several steps to automate processes and bring all their data assets under one roof. This work culminated in a unified data and technology stack, combining all the company's information and assets. Highlights of this work included:

- Shifting to an IaC model, which enabled scaling across multiple environments. This shift reduces possibilities for human error and allows for more consistent and reliable infrastructure deployments. Shifting to this model resulted in a 25% reduction ($13K/month) in infrastructure-related operational costs.

- Establishing an auto-scaling serverless environment that ensures the company only uses and pays for the resources they need and nothing more.

- Integrating Grafana and Quicksight for trend monitoring and performance and data analysis. We took advantage of the automatic telemetry afforded by Grafana and Quicksight to distribute automated alerts and notifications, allowing them to make more informed decisions based on real-time data analysis.

Cloud Migration & Optimization to Address Performance Issues

Alongside the work to replace outdated technology and increase automation, we notched some significant technical wins that helped address performance issues and improve the overall user experience, including:

- Implementing multi-region solutions for regional outages, using AWS CloudFront to reduce latency

and network congestion

- Making several API updates to enable service modernization. Updates included sorting API data using GraphQL, and additional caching and performance updates using Redis

- Developing a new front-end portal to improve the service's digital curb appeal

- Building 49 new APIs to provide access to the company's proprietary data. This valuable work increased revenue from subscription fees by $50K/month.

- Cleansing and streamlining data from MLS providers into a data lake fed into RedShift by ETL jobs, and creating APIs based on usage.

- Tapping into AWS Serverless services to increase scalability, and utilizing AWS S3 data storage, which offered cost savings of more than $30K/month compared to Oracle licenses.

OUTCOME:

Delivering Quick Wins

Less than three months after launching the new solution in the market, our client enhanced data access and security while dramatically increasing profitability and improving the customer experience. Immediate benefits included:

- Increased monthly revenue by an average of $50K/month (or $600K/year) by implementing advanced algorithms that prevented unauthorized access to the MLS and eliminated revenue leakage

- Reduced deployment time in production releases from 1 hour to 5 seconds, a 99.85% reduction

- 50% cost reduction in database licensing costs by switching from Oracle to S3, resulting in cost savings of $32K/month or more than $380K annually

- Upleveling the online portal experience for agents and brokers, including decreasing outages from 5-7/month to only 2 in a year

- Empowering the marketing team to publish and maintain content without needing to rely on development resources, reducing the Marketing team's operational cost by ~30% ($15K/month)

The impact and benefits of the technology updates we made were felt throughout their entire organization and client's core business, not just by the IT department or engineering. This broad business impact is what we aim to provide in any application modernization or platform modernization effort. Starting with specific business goals like increased revenue and decreased operating costs gives you and your team targets to strive for and measure yourself against as you modernize your legacy technology stack.

The company's CTO emphasized that 3Pillar's value far exceeds system integration and platform development. *"Through our partnership [with 3Pillar], we've actually credentialed ourselves as the industry's most creative, forward-thinking tech team,"* he said.

3Pillar Global is here to help you build strategy, shift your cultural mindset, and build modern data products for an evolving market.

Contact us today to speak with a 3Pillar expert.
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