

47

Angie's list

Case Study

1. Executive Summary

47 Degrees helps Angie's List transition from a Legacy .Net backend to Scala.

The Engineering team at Angie's List knew that they needed to transition their site to a more modern, flexible and performance-based framework like Scala. Their rapid growth was not compatible with the current .Net legacy stack and they were finding the infrastructure to be inflexible, slow, and lacking the usability they required to move forward. When they needed specific expertise from highly experienced Scala developers for the transition, the team turned to 47 Degrees.



Problem - Angie's List was facing rapid growth and wanted to move from a database of crowd-sourced reviews to a transaction-driven marketplace. The existing .NET legacy code was inflexible, and the stack wasn't equipped to take the business in the direction they wanted to go. They needed to find a platform that would provide high concurrency and horizontal scalability that they could iterate quickly and move from a developer's desktop, through a Q & A environment, and into production.



Solution - Angie's List enlisted 47 Degrees to help them transition from a .NET infrastructure to Scala using Play Framework. The move required specific expertise and training from the 47 Degrees team in order to efficiently, and effectively move their existing codebase into a microservices architecture and navigate bugs and issues the internal team was facing while simultaneously educating the team in best practices.



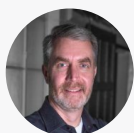
Benefit - The transition to Scala resulted in a more intuitive, functional, and scalable eCommerce marketplace with little to no downtime and an estimated \$15 Billion in annual on-site and mobile transactions. The training and architectural guidance provided by 47 Degrees meant that Angie's List's internal team was moving forward as an informed and, structured unit fluent in the functional aspects of Scala.

2. About Angie's List



Headquartered in Indianapolis, Angie's List believes finding and scheduling services should be a snap. Their business is a subscription-supported web service that provides consumers with crowd-sourced reviews of local contractors and services. Members can see reviews covering a wide variety of companies and services, from home improvement to health providers to auto repairs. Only highly rated companies are list-worthy, which is why more than 3 million households nationwide rely on Angie's List to help them find the right professionals to meet their needs.

TECHNOLOGIES:  Scala  akka  play



Darin Brown, CTO, Angie's List

47 Degrees quickly became an invaluable partner—they helped lead our development efforts. Because we're able to trust them to work independently and take an active role in our growth and success, we see them as more than a vendor—they're part of our team.

3. Problem

Angie's List was growing at a rapid rate, seeing both consistent increases in traffic to the site, and additional business opportunities (including offering discounts and incentives to members), and the performance and the flexibility of the site was extremely limited. The company had the vision to move from their basic self-serve review database model to more of a transaction-driven marketplace. The business model was evolving, as well as the needs of their user-base, but the technology wasn't. They knew their gigantic C# monolithic ASP .NET SQL server stack wasn't equipped to take the business in the direction they wanted to go.

They needed the business to move faster and to enable a more flexible and adaptable platform to adequately lead the company into the future. They also wanted to take advantage of an open source platform to reduce licensing costs and have access to the new solutions developers are contributing to libraries. That's when the company made the decision to move from .Net to a Scala and Play Framework. Scala is a strongly typed programming language that runs on the JVM and offers predictability, elastic scalability and is on-demand across cores, nodes, and clusters—common day-to-day needs for companies growing as quickly as Angie's List.

After making the decision to migrate, Angie's List sent their engineering team to Scala training and Lightbend certification courses to get up to speed. The internal team began the transition by creating a new product, Snapfix. The goal behind Snapfix is to allow a user to take a picture of a problem, have the issue identified, connect the consumer with a highly-rated service provider, schedule an appointment, and pay for the services in one stop. During the initial adoption, the internal team faced development challenges including issues with the IntelliJ plugin, incompatible code coverage via scct, difficulties sharing nontrivial presentation code, and the finesse required to write effective Scala code following best practices.

It was clear that if they were going to make Scala their core development language on the accelerated timeline the business demanded, they would need to bring in an experienced, independent third-party to provide specific and objective expertise. That's when they reached out to 47 Degrees.

4. Solution

As Robert Wiseman, former CTO of Angie's List told the [Insigniam Quarterly](#) of the project, "Nothing beats experience. Everyone thinks they can do it better than the next person, but the one most likely to do it better is the one that has already done it. They know where the mines are and what mistakes not to make again."

47 Degrees offered



Specific expertise - 47 Degrees is comprised of a group of highly-skilled functional programming engineers familiar with the ins and outs of Scala implementation, problem-solving, and project development.



Team augmentation - Committed talent who cares about the client's mission-critical services constituent to their products, to work in tandem with the internal team.



Speed - Angie's List had an accelerated timeline. 47 Degrees offered the assistance of skilled engineers and increased bandwidth, in order to complete projects in a fluid and efficient manner on-time and on-budget.



Mentoring - 47 Degrees provided in-depth mentoring and code reviews to the Angie's List internal team concurrently with project execution.

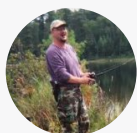


Architectural advice - Provided software architecture advice to help structure workflow and design to best meet the company's business goals and increase consumer usability.

47 Degrees recognized that the transition from the .Net platform to Scala would require a more significant investment than the simple implementation of a new service. Our primary focus, early on, was helping the internal development team get up to speed on the functional aspects of Scala, which was a new concept to most of the department. Our technical know-how and consulting capabilities around the system architecture, design, planning and implementation, allowed Angie's List to move forward with confidence.

The 47 Degrees team helped transition the existing codebase into a microservices architecture, while keeping the code concise, allowing for easy development within a team setting. Angie's List relied on our guidance to build out its Scala capabilities while ensuring best practices moving forward. We were able to quickly and efficiently navigate issues as they approached and provide guidance and training to the internal team concurrently.

The initial success of the partnership led to greater involvement and a long-term collaboration between 47 Degrees and the Angie's List internal team.



Jerry Algood, Software Architect, Angie's List

We were fortunate to have 47 Degrees engaged throughout our recent technology transition. Their expertise has proven invaluable not only in quickly implementing high-quality Scala code, but in helping us to ramp up our existing development staff and providing architectural options when we hit forks in the road. The staff is personable and dedicated, and they seamlessly integrated into our scrum teams.

Of all of the consultants I have worked with over nearly 20 years in software design and development, I have yet to encounter a group so dedicated to the vision of the project. I would look forward to any opportunity to work with 47 Degrees again.

5. Benefits

Angie's List's decision to switch from a .Net infrastructure to Scala has paid off in spades. Today, Angie's List is a more intuitive, functional, and scalable eCommerce marketplace with little to no downtime. The architectural framework implemented with the help of 47 Degrees, has led to an estimated \$15 billion in transactions taking place annually on the web and mobile platforms.



Reduced Costs - Bringing a third party onboard allowed Angie's List to expedite projects associated with a large migration. The concise syntax provided by Scala means increased development productivity and reduced maintenance costs moving forward.



Reduced Downtime - Developers are now able to roll out new features and bug fixes without disrupting day-to-day operations.



Flexibility - The flexible platform and stack allowed Angie's List to move from a developer's desktop, through a Q & A environment and into production quickly.



High Concurrency - Concurrent and distributed systems built using Scala are less error prone meaning the Angie's List is easier to maintain and understand.



Isolation from the backend - Consumer frontend experiences are no longer affected by issues faced in the backend, allowing for undisrupted user experiences.



Light framework - Switching to Scala meant reducing lines of code (LOC) resulting in a condensed, concise, and light framework with increased performance and scalability.

In short, 47 Degrees worked with Angie's List to improve product quality, assist in developing a core team of expert engineers, navigate bugs and issues faced in transition and while adding new features, and helped to manage risks associated with technology evolution.

7. Get in Touch

If you're looking to add Scala, Spark, Akka, Play Framework or the Lightbend (formally Typesafe) Reactive Platform to your company's software mix, 47 Degrees is here to help. We're a proven, experienced functional programming consultancy and Certified Lightbend and Databricks Partner, available for long- or short-term engagements. Follow us @47deg or find us at Scala and other programming conferences around the globe.

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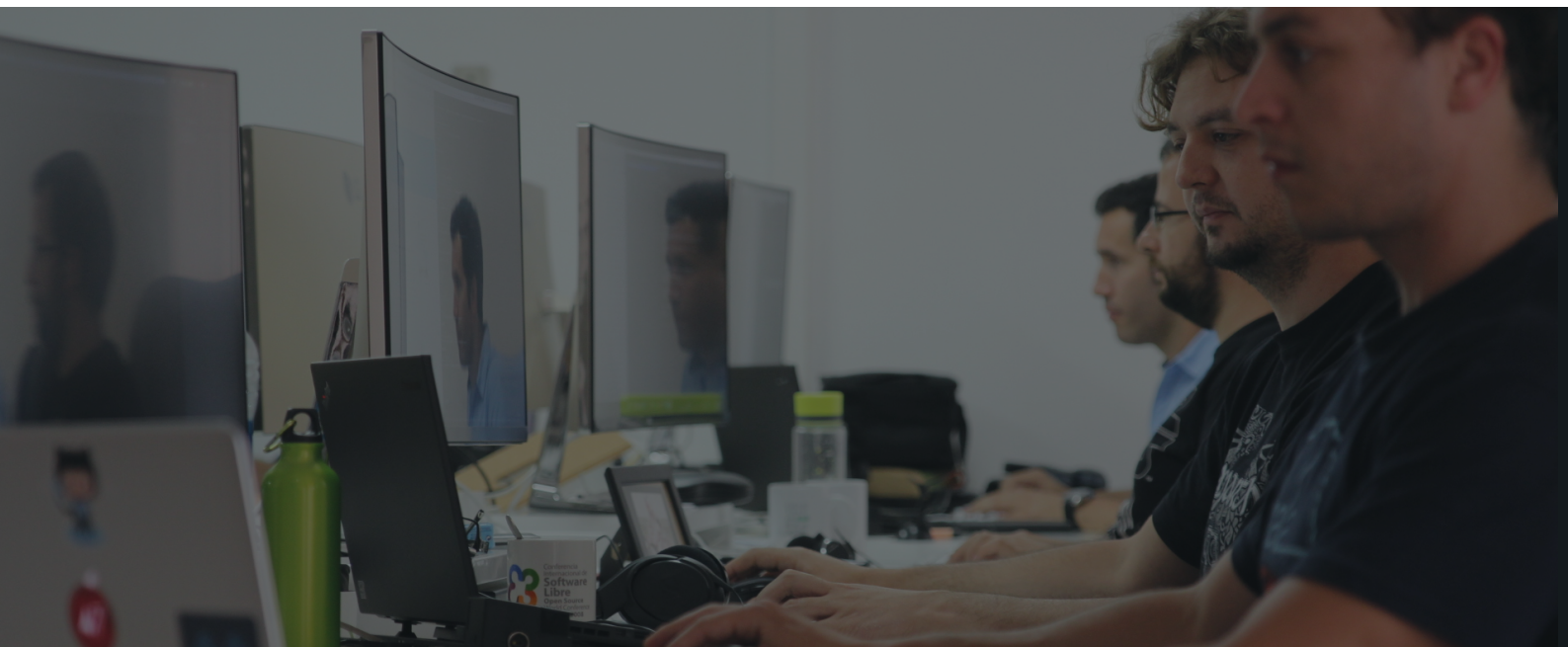
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8. About 47 Degrees



47 Degrees is a global consulting firm specializing in functional programming using Scala, Spark, Akka, Kafka, and Play Framework. Headquartered in Seattle, Washington with offices in Cadiz, Spain, and London, UK, they represent an international network of dynamic, diverse, and exceptional engineers who value your mission, as well as the success of your project.

 Microsoft	 whitepages	 Angie's list	 Leafly
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For more information visit www.47deg.com