PING


CUSTOMER SPOTLIGHT

# Democratizing golf through data insights

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# Summary

PING wanted to create a ball-fitting tool called Ballnamic to match a player's swing to the optimal golf ball. The challenge was finding a way to take complex physics models developed by scientists and turn them into a scalable, user-facing application.

**ABOUT:**

For more than six decades, PING has pioneered golf-club innovation, applying its engineering expertise to create equipment to help every golfer play their best.

**INDUSTRY:**

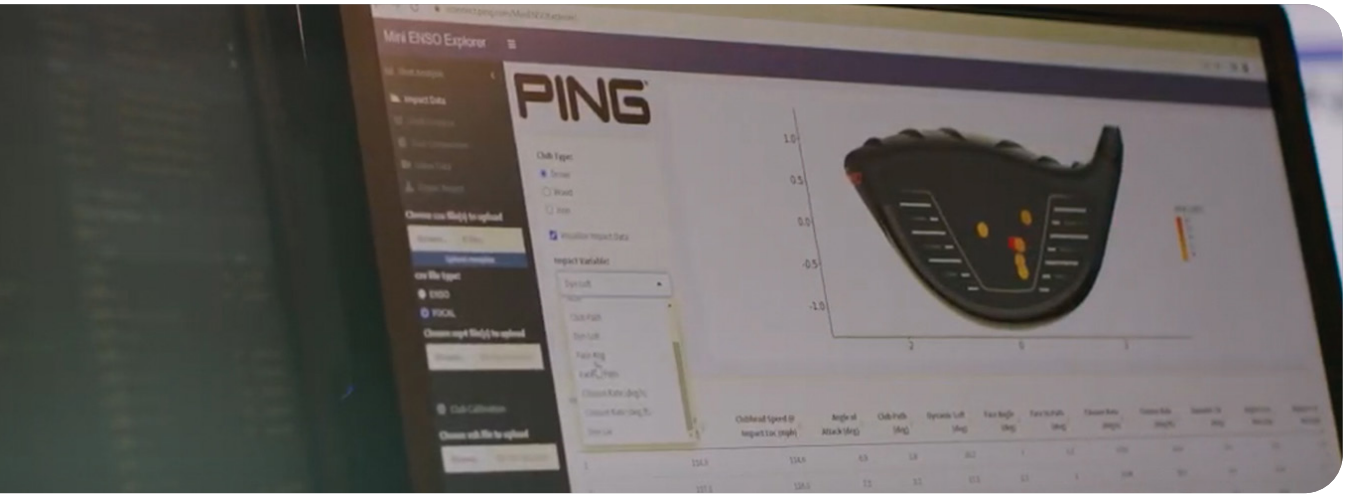
Retail

**TECHNOLOGY USED:**

Posit Connect, Posit Workbench,
Posit Package Manager

# The Challenge:

## The Friction of Technical Silos




The golf science team faced a major bottleneck when moving their physics models from local research environments to production. Without a unified platform, the manual translation of R code into web-ready formats created duplicate work and delayed the release of player-facing tools like Ballnamic.

- **MANUAL TRANSLATION BOTTLENECKS:**
  Early development relied on scientists sharing R-based dashboards with engineers.
- **SCALABILITY BARRIERS:**
  The workflow could not scale because web developers often had to manually translate or reproduce complex R code into other languages to build a public interface.

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"There's been an explosion of data. So data on how the ball flies, how different golf balls fly, data on how golfers move around the course... And then layer on top of that intelligent analytics on what does that data mean."

**MARTY JERTSON**

VP of Fitting & Performance
@ PING

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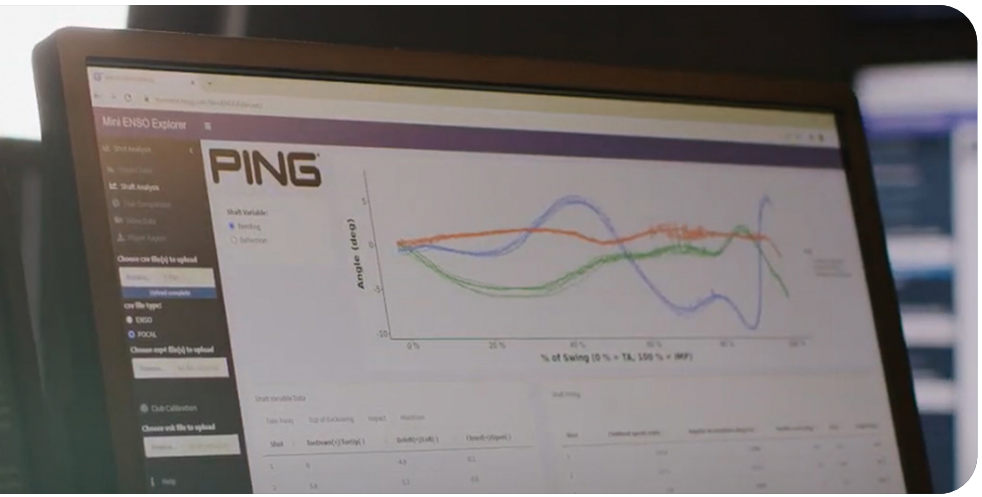
# The Challenge:

## The Technical Roadblocks & the early days of Ballnamic

"Our founder said that the golf ball is the tuning fork of performance"

- **MARTY JERTSON**, VP of Fitting & Performance

In other words, the golf ball tells the golf club, and its manufacturers, what to do. One can not be fully utilized without a scientific understanding of the other. And In the case of Marty and Erik, this understanding meant collecting and analyzing data on everything from ball trajectory and aerodynamics to speed and course weather conditions.





- **THE FRICTION OF MANUAL DATA TRANSLATION:** Early development relied on scientists sharing R-based dashboards with engineers. However, the workflow could not scale because web developers often had to manually translate or reproduce complex R code into other languages to build a public interface.

- **THE BARRIER OF LOCAL ENVIRONMENT INCONSISTENCY:** Before centralizing their infrastructure, the golf science team struggled with local environment inconsistencies that caused models to fail when moved to production, forcing them to spend time troubleshooting mismatches instead of refining their algorithms.

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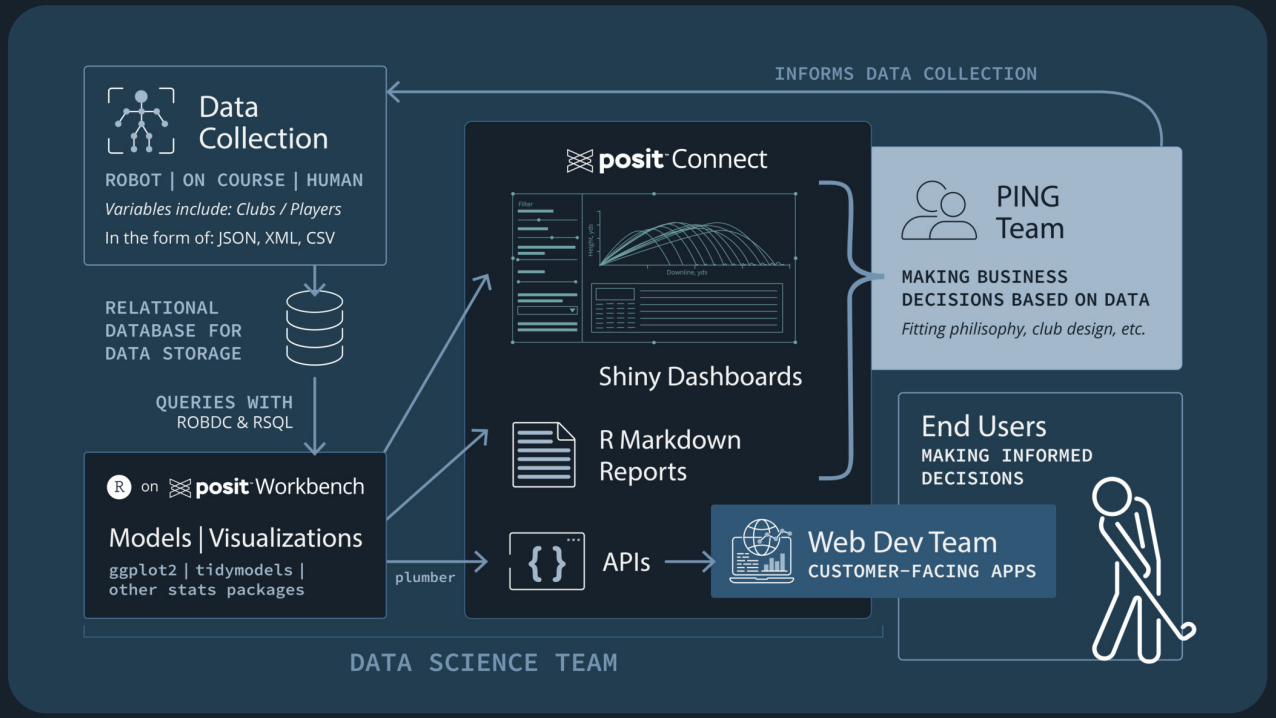
# The Solution:

## Bridging the Gap: From Research to Production

PING overcame their development bottlenecks by centralizing their workflow on Posit Connect. This transition allowed the golf science team to move beyond local silos and turn complex research into accessible, high-performance tools for both internal engineers and external customers.

- **PRODUCTION-READY APIS:**
  The team used the Plumber framework to convert R models into APIs, allowing web developers to access physics data directly without manual code translation.
- **ESTABLISHING A UNIFIED ENVIRONMENT:**
  Posit Connect established a unified environment that bridged the gap between researchers and developers to ensure consistent results across the company.
- **RAPID EXPERIMENTAL CYCLES:**
  Posit Connect allows the golf science team to rapidly move from physics-based hypotheses to functional prototypes, ensuring new data insights are quickly integrated into the fitting ecosystem.fitting ecosystem.




## The Transformation by the Numbers

- **100% Automated Pipeline**
- **Weeks Saved on Production**
- **Zero Manual Code Translation**
- **Scalable "Constellation" Architecture**

# Results:

## Impacting Players through the Ballnamic App


Ballnamic is a ball-fitting application that provides players and golfers of all ability levels with customized ball recommendations. It was created utilizing physics-based, data-driven models, which were then used to develop several APIs within the Plumber framework.

Once the APIs were developed, the team published them on Posit Connect, which then gave front-end developers direct access to the data from the Golf Science team so they wouldn't have to reproduce any work. The developers were then able to build the public-facing user interface.

**ACCELERATED TIMELINES:**
This streamlined approach shaved weeks off the production timeline for the public user interface.

**AUTOMATED PIPELINE:**
PING now utilizes a 100% automated "Insight-to-Impact" pipeline to deliver data-driven business decisions.

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