Hawkin Dynamics **levels up their product in 2 weeks** instead of months

Introduction
Hawkin Dynamics offers research-grade biomechanical data to help sports teams improve their athletes' performances. Their Internet-connected force plates collect athletes' data, which is then analyzed and made accessible in mobile and web apps in real time. The company serves customers in the NHL, NCAA, EPL and other leagues.

Challenge
Measuring an athlete's motions and providing real-time analytics is complex. For example, with a simple vertical jump, Hawkin Dynamics' force plates must capture 10,000+ data points within seconds, then analyze that data in the cloud and deliver the analytics instantly to coaches.

They originally built their back end using Firebase Realtime Database and Amazon Web Services (AWS), with Android and Node.js to deliver their analytics. This required months of effort: stitching components together and building a data layer for their web app. Ultimately, they envision providing a full-blown analytics service to coaches, which will require months or years of development.

Solution
Using Cloud Firestore, Hawkin Dynamics was able to optimize their back end for intensive data calculations and transmission. Using only one developer, the team migrated from Firebase Realtime Database to Cloud Firestore in a few days, simply by removing their legacy web data layer (which they no longer needed because of Cloud Firestore) and replacing their existing Node functions with Cloud Functions.

Before Cloud Firestore, the team planned to hire a back-end developer so they could focus on building new features. After using Cloud Firestore, however, they no longer needed that new hire (for now), reducing their hiring costs by over 50%. They also were able to release new web and Android apps within two weeks. The two new apps included many features they had originally planned to ship months later. With Firebase, the team made a huge leap toward realizing their vision of their product.

> *With Firebase Realtime Database, we felt we had built the best force-plate testing software on the market. Thanks to Cloud Firestore, in only two weeks, we built a system that's significantly better and includes features we never thought possible to ship on Day 1.*

Chris Wales, CTO, Hawkin Dynamics

Results

2 weeks
to elevate product to a new level

50%
lower development costs

2500
fewer lines of code to maintain

Learn more
Find out how to get started with Firebase at:
https://firebase.google.com