

MLB modernizes BI to give fans even more to cheer about



Looker powers MLB all-star access to data-driven decision-making. Speed, agility, and adaptability leads to engaged fans and marketing impact.

A day at the ballpark conjures memories of crushed peanut shells, singing during the seventh inning stretch, and gloved kids in the stands waiting to catch a home run or foul ball. This pre-digital nostalgia can make it hard to picture baseball as a data-driven sport, but it always has been. The players and the fans live by statistics. Baseball fans banter about earned run averages, on-base percentages, and advanced metrics such as strikeouts-to-walk ratios and wins above replacement. Managers update their player stats in real time from the dugout as the game is being played. **Major League Baseball (MLB)**® knows it needs speed, reliability, and advanced agility both on and off the field. Now, thanks to the league's engagement to migrate its entire big data platform to Google Cloud, MLB is building a data-informed culture that will help bring fans even closer to the sport they love.

As a part of its digital transformation journey with Google Cloud, MLB modernized its business intelligence with Looker, Google Cloud's modern BI and data application platform. Read on for a play-by-play of its migration strategy and the benefits to its 30 Clubs, sponsors, marketing professionals, fans, and more.

Moving Beyond Legacy Tools

Major League Baseball previously relied on a traditional business intelligence (BI) reporting solution coupled with a leading visualization tool to deliver static reports to decision-makers at league headquarters as well as to each of its 30 professional Clubs. This combination of tools catered to data professionals exclusively, while creating barriers for the rest of the organization when trying to access, understand, and engage with insights to help drive the business and fan experience.

Key Takeaways

- Migrated from legacy BI platform to create more engaging, user-friendly data experiences
- Built a custom portal for each of the 30 Club teams to access, analyze, and customize reporting based on their market
- Delivered measured social media ROI to sponsors along with data-driven tips for optimizing their partnership
- 2-3 times faster reporting accelerates decision-making with trusted, accessible insights
- Deeper understanding of fan experience, from real-time voting to optimized replays, helps bring fans even closer to the game they love

“Previously, we emailed PDF reports because anyone who tried to log in to our old tool experienced issues and struggled with the interface. For those who could log in, the interface was still very intimidating,” says Joseph Moonsammy, Senior Manager of Business Intelligence at MLB. MLB brought in a visualization tool to complement its legacy solution; however, this added new challenges for metric consistency and trust. Moonsammy adds, “While this was a great tool for visualizations, we didn’t like the backend because the maintenance and semantic layer were really lacking.”

All teams across MLB were dependent on the BI team to access data, since they operate as a central hub, with the various Clubs as spokes. This resulted in manual, repetitive work for the team as well as delayed insights. George Calvo, BI Engineer at MLB, says, “Previously, there was a high technical barrier to entry for users to explore or build their own reports, making most people reliant on our BI team for any reports or updates they needed. Additionally, the team was constantly dealing with the tool crashing, which would result in lost work and time. These resulted in limited access to the real-time data needed to improve decision-making and the fan experience.”

In 2017, MLB took on an initiative to improve data access for its 30 Club teams with its “Wheelhouse” project. The goal was to shift to a self-service BI model by helping each Club access the insights they need to better understand their specific market and fan base without relying on the league BI team to support them. “This was a strategic project to share granular level data with the 30 Clubs, and as a part of that, we wanted our BI tool to analyze and share new datasets. Our legacy BI tools did not leverage the investments we were making in our database and infrastructure. We needed to make it happen, and this was the final turning point leading us to look for another tool. We wanted to keep functionality of the semantic layer, but then add more visual and interactive improvement,” explains Moonsammy.

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Even though baseball is a sport of tradition, it was time to modernize. The BI team set out to increase visibility, self-service, and engagement in order to improve decision-making and efficiency across the business and its 30 Clubs, while also uncovering new opportunities to engage with fans well beyond the ballpark.

Creating an Engaging Self-Service Data Environment

While evaluating several popular tools, the BI team discovered Looker and realized that it would allow them to migrate off both their semantic layer-based traditional reporting tool and visualization tool by combining a powerful, more agile and collaborative modern semantic layer with engaging self-service and customization. “When I first saw Looker, I loved the semantic layer. I thought it was amazing,” says Moonsammy. “It’s what other BI tools should be.”

The team was especially excited about [LookML](#), Looker’s semantic layer. LookML governance makes it easy for non-technical users to understand and easily ask questions of the data, while ensuring data accuracy and consistency. The team would no longer need to trade off data access or accuracy to unlock valuable insights for operating its business.

The BI team had chronic version control problems developing data models in their legacy tool. “Looker uses Git for version control, which allows us to collaborate and build without overwriting each other’s work,” notes Moonsammy. With seamless SAML and Okta integrations, the BI team also reached its goal of single sign-on integration, something that thwarted the team’s previous BI tool.

MLB approached change management with a blank canvas, starting with the best modern user experience and working backwards from there, rather than copying content directly from the prior tool. Leveraging Looker’s semantic layer, the approach was to build a better, more agile foundation in Looker and re-architect the front-end content with new, more modern capabilities. “We didn’t do a lift and shift,” explains Calvo. “Instead, we sat down with each team

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before moving things from our old tool to ask them, 'How can we recreate this better?' Initially, some executives simply wanted the old reports to look exactly the same in Looker. The self-service migration allowed the team to adopt changes according to their own comfort levels. Calvo says, "We took the time to find a middle ground where they were comfortable but also gained increased visibility into the data and more flexibility in working with it."

Through the user-centric process, MLB was able to learn the tool by working with it alongside its business users. Moonsammy notes the benefits of this approach: "Previously, we couldn't build with our end users in mind, so everything was organized and labeled for our team. Now, we're building with our end users in mind, focusing on their experience and goals."

Calvo adds that the ability to display any type of visualization helped build trust with executive users. "One of our key decision-makers wanted a specific visualization, which wasn't offered out of the box with our previous tool. Being able to implement that was a huge turning point in our understanding of the power and flexibility of Looker."

Play Nationally and Market Locally, with Better Data

MLB made it a goal to democratize real-time data access to all its Clubs using the Wheelhouse data platform, but the BI team didn't have the resources to build custom data models and dashboards for each of its 30 teams. With Looker, they didn't need to. Instead, they created one standardized starting point that each team could customize to their own needs. Calvo says, "With Looker, we can empower users to create content in a way that's relevant to their team and market. Giving each Club the ability to customize is really powerful."

With the switch to Looker, decision-makers from each team can log in to their portal to access and explore their data, and MLB has seen a 60 percent increase in usage from Club marketing teams.

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“From the developer perspective, Looker has been huge. Previously, we’d send emails with a PDF because anyone who tried to log into our old tool experienced issues and struggled with the UX. With Looker, we created a portal for the Club teams to log into. Now the Club marketing teams, who make up 80 percent of our users, can explore and customize their own reports,” says Moonsammy.

One way Clubs now leverage data is to increase social media engagement and sponsorship ROI. Club marketers use Looker to show sponsors how their posts perform in relation to their spend, while also using data to consult with them on ways to further optimize their campaigns.

“Our Clubs wanted to see how much a sponsor was paying and then look at the engagement for those posts to identify the ROI and show that to prospective sponsors to give them an idea of what to expect, as well as tips to increase engagement. Looker helped our Clubs tie a dollar amount to social media,” says Calvo.

A Quick Hustle to Boost Engagement

With Looker in place to support Wheelhouse, the BI team turned its attention centrally to the league’s business intelligence power users: the marketing and product teams responsible for driving innovative and engaging fan experiences.

To get a quick start, the team used [Looker Blocks](#)—prebuilt data models for common analytical patterns and data sources—to gauge MLB marketing performance with [Google Ad Manager](#) and [Google Campaign Manager](#). Calvo explains how easy this made it to understand and rapidly create the solution’s marketing impact: “We implemented Looker Blocks for the marketing team and they were able to run with it on their own.”

MLB also uses Looker to help improve the fan experience by optimizing instant replays, which have become integral to the sport. The BI team showed the MLB replay team how to access their data in Looker, and they were quickly able to create their own content.

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Calvo says, “They dove right into building their own data models and dashboards without asking us any questions, which shows how intuitive Looker is.” The team also relied on Looker documentation, which Calvo says was “available at their fingertips online.”

Getting a quick start also enabled **MLB®** to use Looker to support the annual **All-Star Game®**, for which fans choose their favorite players. “When we receive the votes, we use Looker to present that data and pick the All-Star players based on the Looker dashboard,” says Calvo.

Looker took MLB marketing data from the minor leagues to game-ready in time to help teams engage with fans for their most important moments. And with the increased visibility Looker delivers, the marketing and product teams can better understand and deliver engaging fan experiences.

Throwing a Fastball — Accelerating Data Access at Business Velocity

Delivering data to users in Looker is now 2-3 times faster than its legacy platform. Calvo credits this to the increased stability, usability, and scalability. “Previously, a lot of my time was spent either with the interface, the tool crashing, or someone writing over my work because we were out of sync.”

Not only do the results from Looker come in faster, but they’re also more accurate and, therefore, more trusted. Moonsammy says, “On our traditional tool, you could run a report on a local desktop and on the web application and you might see different results. That’s not the case with Looker.”

To make choices that lead to better business impact, MLB can also use Looker’s system activity analytics to better understand and optimize its data infrastructure. Calvo says, “It’s optimized the way we build dashboards and helps me understand what types of content are most used so we can focus on creating more of that.” The league also uses system activity analytics to monitor its cloud spend and query performance, so it can understand and optimize how its BI team works.

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Modernizing BI Helps MLB Build on its Tradition

Beyond training external stakeholders on Looker basics, the BI team now depends on Looker to promote collaboration and content sharing. The team also stays connected to the broader Looker community to continually share and learn from others. Calvo says, "JOIN, Looker's data conference, has helped change our data culture by getting new ideas about how to think differently about data." Looker has also proven to be a great help with day-to-day issues. Moonsammy says, "The customer support from Looker has been mind blowing."

Looker is giving MLB the edge it needs to be a truly data-driven business without compromising on capabilities. By modernizing BI with Looker, the MLB organization has shifted from being relatively passive consumers of weekly canned reports to actively interacting with data to improve decision-making and ultimately, the fan experience.

"Now, we've seen a shift. We're basing our decisions about products on data. The biggest meetings at MLB now include data from Looker," says Calvo.

With faster business intelligence now streaming from real-time data, MLB is helping its teams up their game with self-service access to data that's relevant to their local markets. Looker's tight integration with Google Ad Manager and Google Campaign Manager helps marketing teams get deeper insights into marketing performance. And, the fan experience is getting a boost from optimized instant replays. By modernizing its BI with Looker, MLB is building a tradition of efficiency so fans can get even more out of the game they love so much.

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