Better Data Makes for Better Hockey

THE NATIONAL HOCKEY LEAGUE PULLS DATA FROM THE CLOUD TO ARM COACHES WITH REAL-TIME PLAYER INTELLIGENCE.

**BY THE NUMBERS**

**INDUSTRY**
Sports

**HEADQUARTERS**
New York, New York

**FOUNDED**
1917

**REVENUES**
$5 billion

**EMPLOYEES**
610

**AT A GLANCE**

**CHALLENGE**
Inability to easily access data to make the best coaching decisions and maximize the competitiveness, and thus the drawing power, of the game.

**SOLUTION**
A mobile app that provides coaches with relevant real-time data such as each player’s time on the ice, which ensures well-rested players are rotated in at crucial points in the game.

**RESULTS**
Intuitive, instant access to game data for coaches at rink side and in the locker room, eliminating the need to hunt for printers at each arena or deal with paper reports; plans to expand the system with player and puck tracking to provide additional data such as passing performance.

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**Chris Foster, Director of Digital Business Development, NHL**

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**Data-Driven Coaching**

Tracking players’ time on the ice was a key priority for all the coaches. The digital platform performs real-time calculations to track this statistic for each player and allows coaches to set targets that help them decide when to put a player on the ice or on the bench. Another critical statistic was the percent of each player’s successful face-offs (the mechanism used to start and restart play). Coaches can now track how players fare in face-offs not only during a game but also against

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With its fast pace and unpredictable twists and turns, hockey is a “must-see” event in a competitive North American sports market. Keeping the action brisk requires rapid-fire decisions from coaches, who spend games jammed between the audience and the ice rink’s speeding players and flying pucks. All the while, coaches have traditionally tracked fast-changing data such as each player’s time on the ice (and thus their possible fatigue level) in their heads or on clumsy paper lists — when they can find a printer in an unfamiliar stadium.

To give each team’s coaches equal access to the information they need to optimize performance and keep games exciting, the National Hockey League developed an iPad-based app that provides intuitive real-time statistics from a digital platform to coaches at rink side and in the locker room.

Working with technology and design experts, the league held in-depth feedback sessions with each team to prioritize system requirements. Defining coaches’ needs was a challenge, because each team has a different approach to coaching. This required the development team to satisfy “31 different types of users,” says Chris Foster, the league’s director of digital business development.

The application also had to meet the needs of both “coaches on the bench, who need quick visual cues to make decisions, and coaches using the app in the locker room, who need more in-depth information,” he says, as well as different requirements for use during time-outs and post-game analysis.

Among the benefits of the digital platform, Foster says, is the ability to quickly add new capabilities and avoid the need to install updated versions of the application on every user device. “Once you’re set up and migrated to the cloud, you can build extensions to your original application without having to go back and rebuild the application infrastructure.”

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other specific players over time, as well as their most recent rate of success, to show who is on a winning streak.

Extensive user and A/B comparison testing helped ensure coaches get only the information they need with as little work as possible. Because coaches range in age from young digital natives to people who have never used portable technology in their jobs, it was vital that each coach could customize the interface. “We gave them some very easy-to-use ways to mix and match the statistics” coaches see, Foster says, such as unblocked shot attempts and power plays.

Choosing which of the 65 available statistics to feature most prominently required assessing the needs of all the various user types, and it took significant time “going through several iterations and highlighting or deselecting data for a lot of different types of interactions,” Foster says.

Such user feedback revealed some surprising requirements, including the need to provide separate statistics for the success rates of right- and left-facing face-offs, as each requires different skills and strengths on different sides of the player’s body. “That’s a level of detail we might not have understood” without feedback from the coaches, Foster says.

A New Fan Experience

Once the user interface and key statistics were identified, the team tested how quickly critical statistics could be displayed on the coaches’ application compared with the jumbotron display or the league’s mobile application. To provide peak performance even when fans are accessing a stadium’s Wi-Fi hot spots, the application runs on a dedicated Wi-Fi network.

The league is now introducing new technology to track the location of pucks and players in real time. This data will provide new metrics such as each player’s average speed, the distance they travel in a game and their pass success rate. When fully functional in the 2020–2021 season, this data will help front-office staff make better decisions about which players to recruit and keep on their rosters, Foster says.

“As a league, we wanted to create an even playing field by giving every team access to the same information,” he says. “How they make decisions, how they build their strategy, is every team’s ‘special sauce’ that makes them unique.” The cloud-based delivery of real-time stats empowers every team, and every coach, to deliver the best possible fan experience.

**The digital platform performs real-time calculations to track each player’s time on the ice so coaches can decide when to put a player on the ice or on the bench.**

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