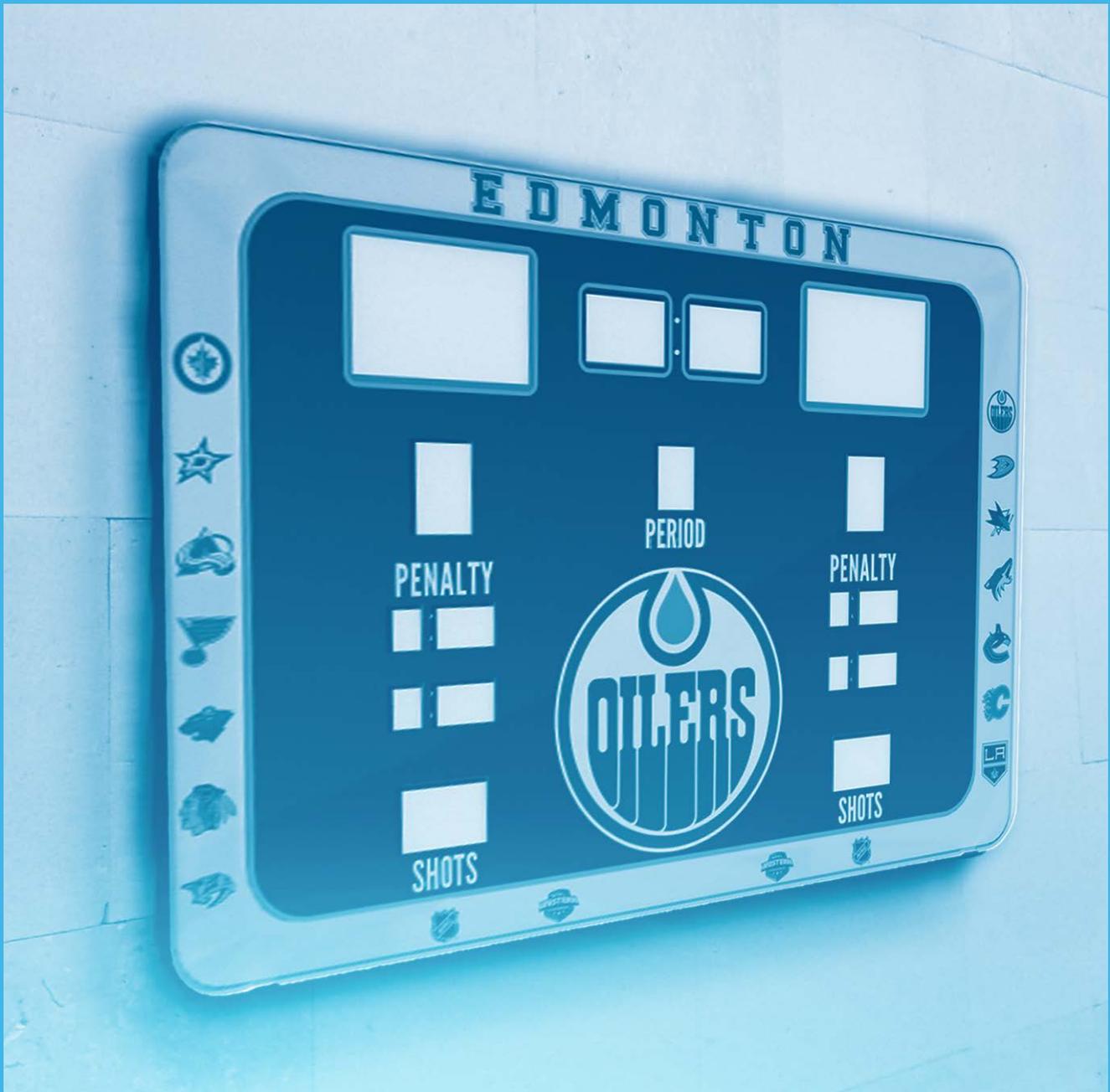# Fantasy Scoreboards Inc.:
# A Customer Success Story

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# Introduction

## The Start of a Journey

Fantasy Scoreboards Inc.'s journey to success was not a direct one. When Will Nault, President and CEO of Fantasy Scoreboards Inc. and Tyler Richards, Vice-President and CFO of Fantasy Scoreboards Inc., came up with the idea of a "connected" NHL scoreboard, it was just two friends having a discussion over beers. Their vision was to bring a real-time score tracking experience into the homes of NHL fans. It wasn't long before they realized that this idea could become a reality. With some ingenuity and perseverance, Fantasy Scoreboards Inc. was born and on its' way to creating the connected scoreboard.

While the "industry" of connected products is still in its infancy, the infrastructure around it is growing rapidly. There is a proliferation of sensors and connection tools, new analytics engines to make sense of the data collected, and many choices for platform partners and service providers to host these products. With all of these options, it seemed relatively straightforward to create a connected product. Just put a sensor in it, get it connected, and away you go. That proved to be very wrong.

Their initial endeavor toward creating the connected scoreboard was rocky and became very costly. From cracking open some connected devices to see what made them tick, to trying to identify component manufacturers, it was a definite challenge.

By the time Fantasy Scoreboards moved beyond a business case to design, and then to building a prototype, they were realizing the connected product onion had many layers. Although on the surface it might seem ridiculously easy to add connectivity to almost any given product, there are some challenges that make it radically different from current commercial activities. These challenges ranged from the

customer journey, physical design, IT team readiness, radio selection, software and mobile apps, and remote control, to security, support, and warranties.

After selecting an organization to assist with the product creation, Fantasy Scoreboards soon realized that the costs of production for their connected product were going to be so high that they would not be able to meet the business and revenue models that they had defined. Their prototype cost alone was at twice the amount needed to meet projections.

They realized that to make their IoT project successful, they needed to work with companies that understood the overall project initiative, and that worked together towards the same objectives.

## A Fresh Start

Fantasy Scoreboards now understood the realities of the current IoT (Internet of Things) ecosystem. They realized that to make their IoT project successful, they needed to work with companies that understood the overall project initiative, and that worked together towards the same objectives.

For the software design and development, they turned to Macadamian. Initially, Macadamian was engaged to help with project leadership and guidance, and provide high-level business direction. From there, Macadamian took over the entire technical program management and oversaw all third party partners/vendors for the cloud and end user software design and development work.

To obtain a new focus on hardware and manufacturing, Fantasy Scoreboards worked with Design 1st. They assisted with conducting a business assessment and analyses of electronics, manufacturing the embedded firmware, and determined the product look, lighting, and housing design. Design 1st also had an initial focus on the necessary strategy for low cost Wi-Fi radio options and information transfer to and from the cloud. The overall industrial design direction was maintained, but all parts and manufacturing strategies needed to be completely overhauled to cut down on costs.

## Back on Track

Macadamian and Design 1st worked closely during the overall (software and hardware) assessment of the previous prototype that Fantasy Scoreboards had built, and also throughout the whole connected product creation process.

Several critical deficiencies with the hardware and software prototype were quickly identified:

- The scalability would not be enough to meet projected data volumes.

- The hardware was not developed to be cloud controlled and maintained.

- The physical design, selected materials, and volume manufacturing features would never meet the required market price point identified by Fantasy Scoreboards.

It was clearly identified that the success of this product meant completely starting from the ground up without losing the momentum that Fantasy Scoreboards had developed as part of its go-to-market activities. The timelines were tight. Macadamian and Design 1st only had five months to complete the user experience design and software development (cloud-ready) on a completely redesigned portable scoreboard that was ready to ship to market. To put it into perspective, an aggressive timeline to complete a project of this complexity would have easily extended to eight months or more. However, Macadamian and Design 1st understood the significance of this endeavor for Fantasy Scoreboards and were able to meet the aggressive timelines.

**Both teams worked in lockstep to create this completely new product from the ground up.**

## From Design to Production – A Lockstep Partnership

Macadamian and Design 1st considered the design for the entire customer journey. They focused on a holistic approach of designing, looking at use patterns on how a customer interacts with the product (and vice versa). The partners dove into each software and hardware interaction to build a design from the perspective of the end user. A solid project plan was created from there.

Both teams worked in lockstep to create this completely new product from the ground up. Macadamian moved the product to a "pub nub" model, enabling data to be sent to all scoreboards based on events. This allowed event data to be delivered faster, as well as reducing the cost of operations. A Python-based VM was used to consume the content from GameData, LLC and ensured a reusable approach for future data ingestions and future game logic. Microsoft Azure was selected for the game data ingestion and delivery server. Macadamian also provisioned, setup, and configured all software production and pre-production environments to enable the connected scoreboards to be sold to customers by launch date.

Design 1st considered cost management right from the start and ensured the new design and carefully selected materials were in line with the market tolerances, as well as future proofing the product with the cloud. Other innovations that helped to keep costs in check included reducing the size of certain display panels, while enabling display scrolling for longer team names and messaging. This maintained the user experience, while allowing for even more information to be displayed to the user. The messaging panel was introduced and added additional business opportunities and recurring revenue avenues from advertisements.

Fantasy Scoreboards was new to contract manufacturing, so Design 1st presented options, viable alternatives, and even created the quotation packages and travelled with Fantasy Scoreboards to the contract manufacturer locations to assist with the final selection of a strategic manufacturing partner.

## The Results

Through the close partnerships with Macadamian and Design 1st, Fantasy Scoreboards did not lose time, in spite of their initial product creation setbacks. With prototyping and production development happening virtually all at once, Fantasy Scoreboards was able to progress from design to a market-ready product in only a few months.

With the launch of their connected (IoT) NHL scoreboards, Fantasy Scoreboards has truly differentiated themselves in the marketplace. Customers receive an NHL game-like, real-time score experience at home. And, satisfaction is high with a fast out-of-the-box setup time and convenient ongoing scoreboard management using a choice of iOS or Android apps.

## The Future

What does the future hold? As Will and Tyler put it, "There are a lot of other sports out there and a lot of fans that want that in-person scoring experience." NFL, NBA, and MLB fans hold tight. Perhaps you too will soon get that "at the game" experience in your home.

"Working with both Macadamian and Design 1st was really a seamless experience," said Will Nault, CEO of Fantasy Scoreboards Inc. "They manage themselves, effectively connect their teams as needed, and deliver results – on time and on budget."

# Thank you.

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Macadamian is a full service software design and development firm. From product ideation to market ready – and everything in between, we provide a complete range of usability, design and engineering services. From big consumer brands to enterprise, telecom, and healthcare; our solutions are founded in design that thinks of the customer first while leveraging the cloud, Big Data, and Internet of Things to deliver context-aware and adaptive experiences. The result? Engaging software solutions that have a direct impact on the bottom line.

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