Rugby Football Union Tries Big Data

In 1871, twenty-one English clubs decided that their sport, officially called rugby union but commonly referred to simply as rugby, needed an administrative body. The clubs formed The Rugby Football Union (RFU), which today manages the English national team (England Rugby) in partnership with Premier Rugby Limited. Responsible for the promotion of rugby at all levels, the RFU organizes the Six Nations Championship, the unofficial northern hemisphere championship featuring teams from England, Scotland, Wales, Italy, Ireland, and France, and the Heineken Cup, its club-level counterpart. Owned by its member clubs, the RFU's mission is to maximize profits from international ticket sales and vending so that it can support the more than 60,000 volunteers who organize matches and seminars, help secure loans and insurance policies, fundraise, write grant proposals, provide medical advice and support, and perform the clerical duties that keep the lower-level clubs operating.

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To succeed in this complicated mission, the RFU entered into a five-year deal with IBM to capture and analyze Big Data that will be useful to both fans, and later—it is hoped—the players themselves. The system is called TryTracker. In rugby, a try, worth five points, is the highest scoring opportunity. Teams get possession of the ball through a scrum, a contest for the ball where eight players bind together and push against eight players from the other team. The outcome determines who can control the ball. To score a try, a team must break through the opposition's defenses, move into their in-goal area, and "ground" the ball. This is done in one of two ways. A player can either hold the ball in one or both hands or arms and then touch it to the ground in the in-goal area, or exert downward pressure on a ball already on the ground using one or both hands or arms or the upper front of the body (from the neck to the waistline).

The IBM TryTracker does not just track tries, however. It uses predictive analytics to track three categories of data: keys to the game, momentum, and key players. TryTracker uses over 8,000 measures of performance. Traditional rugby statistics on team and individual performance as well as live

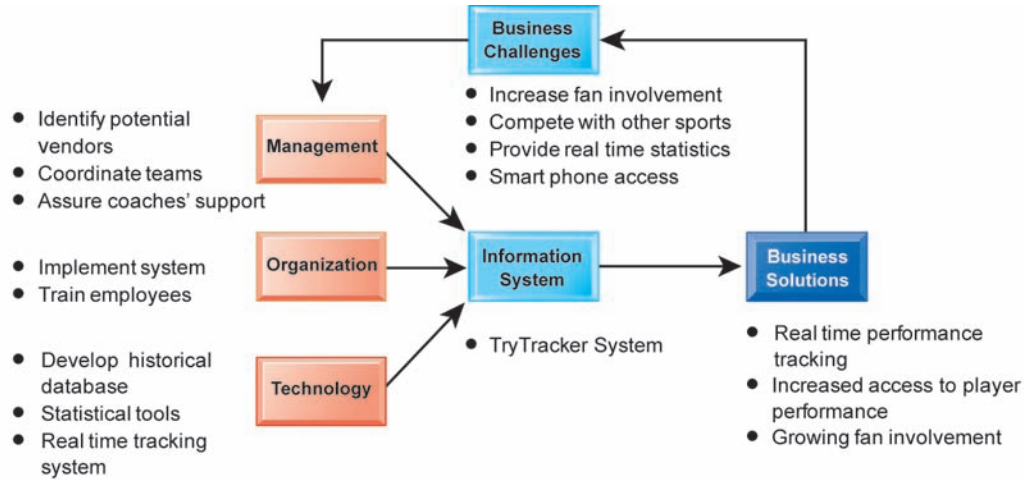
text commentary complement the TryTracker data. The keys to the game are determined ahead of a specific contest by analyzing a historical database of past matchups between a pair. For example, in 2015 England's key was to average at least 3.2 meters per carry in the forwards; attempt an offload from 10 percent of opposition tackles; and make more than 66 percent of total line-breaks in the match. Fans can use their mobile devices to keep track of how their favorite team is faring, concentrating on game elements that will increase its winning chances. Key players for each team are selected after the game by comparing a single score compiled using different criteria for each position. Goal scoring is currently excluded so as not to overvalue kickers and undervalue players who contribute to creating scoring opportunities.

Like the IBM SlamTracker used at the Grand Slam tennis tournaments, the goal of TryTracker is to provide data visualization and real-time statistics to draw in fans. To compete with more popular sports such as Premier League football, the RFU hopes that enhanced communication will increase fan engagement. In 2015, IBM TryTracker was an ever-present fixture of EnglandRugby.com's extensive match coverage. As their understanding of game mechanics and emotional investment in what their team needs to do in order to prevail grows, casual fans will become dedicated fans who return again and again. Beyond marketing strategy, the long-term potential of predictive analysis is that it may provide tactical insights to players and coaches that will improve match play and thus the overall product offered to fans.

In 2016 IBM has deployed the same predictive analytics technology to the Australian New South Wales Waratahs Rugby team with an emphasis on predicting player injuries based on their general health, and performance data on the field generated from GPS sensors that players wear.

Sources: IBM, "Building a Solid Foundation for Big Data Analytics," IBM Systems Thought Leadership Paper, 2016; IBM, "IBM Predictive Analytics Reduces Player Injury and Optimises Team Performance for NSW Waratahs Rugby Team," IBM.com, accessed November 14, 2016; IBM, "3 Ways Big Data and Analytics Will Change Sports," by Preetam Kumar, IBM Analytics, ibmbigdatahub.com, December 17, 2015; Simon Creasey, "Rugby Football Union Uses IBM Predictive Analytics For Six Nations," ComputerWeekly.com, 2016; "About Us," rfu.com, accessed December, 14, 2015; "TryTracker: Rugby Data Analysis," *Telegraph*, November 19, 2015; Oliver Pickup, "How Does TryTracker Work," *Telegraph*, November 19, 2015; Simon Creasey, "Rugby Football Union Uses IBM Predictive Analytics for Six Nations," *ComputerWeek*, September 2015; "IBM Rugby Insight Summer 2015," MSN.com/sports, September 3, 2015; "Live England vs. Scotland with IBM TryTracker," www.englandrugby.com, March 15, 2015; "IBM TryTracker Confirms Performance," www.englandrugby.com/ibmtrytracker/, November 29, 2014; IBM UK, "IBM TryTracker Rugby Insight: QBE Internationals 2014 England vs. Australia," *IBM Rugby Insight,* November 27, 2014; Oliver Pickup, "IBM TryTracker: How Does It Work?" *Telegraph*, October 31, 2013.

The challenges facing the RFU demonstrate why information systems are so essential today. The RFU is classified as a "Friendly Society," somewhere between a true company and a charity. It receives both government support and corporate sponsorship money. But it must maximize revenues from ticket sales, hospitality and catering, television rights, and its travel company in order to support both grassroots and elite rugby in England.



The chapter-opening diagram calls attention to important points raised by this case and this chapter. The RFU entered into a strategic partnership with IBM to educate and engage fans. Using the data collected by sports data company Opta and the analytics developed by IBM, it may also be able to improve coaching and game performance as an additional way of cultivating customers. IBM is also helping the RFU to develop a customer relationship management (CRM) system integrated with its Web site.

Here are some questions to think about: What role does technology play in the RFU's success as the administrative head of rugby union in England? Assess the contributions which these systems make to the future of RFU.

1-1 How are information systems transforming global business, and why are they so essential for running and managing a business today?

It's not business as usual in the global economy anymore. Information systems and technologies are transforming the global business environment. In 2015, global firms and governments spent about €3.4 trillion on information systems hardware, software, and telecommunications equipment. In addition, they spent another €544 billion on business and management consulting and services—much of which involves redesigning firms' business operations to take advantage of these new technologies (Gartner, 2016; IDC 2016; Shumsky, 2016). In fact, most of the business value of IT investment derives from these organizational, management, and cultural changes inside firms (Saunders and Brynjolfsson, 2016). It is not simply the technology that is changing. Figure 1.1 shows that between 2005 and 2015, global investment in information technology