

## INTERACTIVE SESSION TECHNOLOGY

### Smart Products—Coming Your Way

If you don't use a smart product yet, you soon will. Your shoes, your clothing, your watch, your water bottle, and even your toothbrush are being redesigned to incorporate sensors and metering devices connected to the Internet so that their performance can be monitored and analyzed. Your home will increasingly use smart devices such as smart thermostats, smart electrical meters, smart security systems, and smart lighting systems.

Under Armour, noted for performance clothing, spent \$710 million to scoop up mobile apps such as MyFitnessPal, Map My Fitness, and Endomondo, which enable it to tap into the world's largest digital health and fitness community, with more than 225 million registered users. According to company data, Under Armour's connected fitness users have logged more than 500 million workouts and taken 7 trillion steps since the company started tracking the data. Analyzing these data has provided insights such as 3.1 miles being the average distance for a run and that May is the most active month for exercise.

Under Armour is trying to enhance its performance clothing with digital technology. The company now sells connected running shoes. The shoes come in several models and feature a built-in wireless Bluetooth sensor that tracks cadence, distance, pace, stride length, and steps, even if the runner does not bring a smartphone along. The data are stored on the shoe until they can sync wirelessly to Under Armour's Map My Run app for iPhone, iPad, and Android devices. Users can also connect to the app on third-party devices such as AppleWatch, Garmin, or Fitbit, to incorporate metrics such as heart rate that can't be tracked by the shoes. The shoe's analytics will let users know when it's time to purchase new shoes and sensor batteries have to be charged.

Under Armour has recently added a digital coaching feature for the connected running shoes and Map My Run app. Runners will be able to monitor their gait and stride length mile after mile, and see how that impacts their pace and cadence. By analyzing these data, along with data about the runner's gender, age, weight, and height, Map My Run will be able to provide a runner with tips on how to improve his or her pace and splits, by taking shorter or longer strides while running, for instance.

Under Armour can generate revenue from in-app ads, including ads from other companies, and purchases from app users referred to its products. The platform delivers unprecedented depth of information and insight about fitness- and health-oriented consumers, creating numerous opportunities for Under Armour and other brands to engage with potential and existing customers. For example, Map My Fitness collects data about a user's name, e-mail address, birth date, location, performance, and profile if the user connects to the app using social media. Under Armour does not sell identifiable personal data about individuals to third parties but does provide advertisers with aggregate information about app users. Under Armour is hoping that daily use of its smartphone apps will build stronger ties to customers that will lead to stronger sales of its own apparel, footwear, and other athletic gear. The company is clearly benefiting from bringing the power of software to its physical products.

Smart products are also finding their way into people's homes. Between 2017 and 2022, Con Edison, which supplies electrical power and natural gas to the New York City metropolitan area, is installing 3.6 million new electric smart meters and 1.2 million new gas smart meters in all its customers' homes and businesses. A smart meter is a digital meter that communicates between a residence or business and Con Edison through a secure wireless communication network. The smart meter records and transmits each customer's energy consumption regularly throughout the day. The smart meter transmits data to a system of access points on utility poles, which send the usage information to Con Edison.

The smart meter will let the company know when a customer loses service, resulting in faster repairs, and will also provide real-time billing information to customers based on energy usage, enabling them to pinpoint areas for energy savings. They will also permit more definitive voltage regulation, enhancing electric distribution-system efficiency, reducing costs, and providing savings that ultimately get reflected in lower customer bills. Data from the new meters will let Con Ed set prices based on customers' time and level of use. Rates might jump during summer hours

when hot weather makes people turn on their air conditioners, or drop overnight when power use is lowest.

Con Ed customers can use an online My Account dashboard with tools to track their daily energy consumption down to 15-minute increments. They can analyze their usage by comparing hour to hour, weekday versus weekend, or day versus evening use to see where they can save, and they can receive high bill alerts if they are using more energy than usual. Con Ed also offers a mobile app for iPhone

and Android smartphone users so that they can track their detailed energy usage while they are on the go.

*Sources:* Jen Booton, "Under Armour's New HOVR Smart Shoe Will Automatically Track Your Run," *SportTechie*, January 26, 2018; Edgar Alvarez, "Under Armour's HOVR smart running shoes are more than just a gimmick," *Engadget*, February 9, 2018; [www.coned.com](http://www.coned.com), accessed March 28, 2018; Edward C. Baig, "Under Armour and HTC Team Up on Connected Fitness," *USA Today*, January 5, 2016; [www.underarmour.com](http://www.underarmour.com), accessed April 20, 2018; and John Kell, "Why Under Armour Is Making a Costly Bet on Connected Fitness," *Fortune*, April 21, 2016.