



Diageo and Thinfilm Unveil the Connected 'Smart Bottle'

Diageo's iconic JOHNNIE WALKER BLUE LABEL® will showcase technology at Mobile World Congress in Barcelona

London and Oslo, Norway – February 25, 2015 – <u>Diageo plc</u>, a world leader in beverage alcohol, and <u>Thin Film Electronics ASA</u>, a global leader in the development of printed electronics and smart systems, will look to completely change the role of a bottle in the consumer experience, with a prototype JOHNNIE WALKER BLUE LABEL® "smart bottle" that will be unveiled at <u>Mobile World Congress</u>, taking place March 2-5, 2015.

The connected "smart bottle" aims to enhance the consumer experience by using printed sensor tags featuring Thinfilm's OpenSenseTM technology, which can detect both the sealed and opened state of each bottle. The tags and the sensor information they contain will allow Diageo to send personalized communications to consumers who read the tags with their smartphones.

The innovation, created by Thinfilm in collaboration with Diageo Technology Ventures, will make it possible to send consumers targeted and timely marketing messages, whether at retail or after purchase, such as promotional offers, cocktail recipes and exclusive content.

Thinfilm's proprietary and patent-pending OpenSenseTM technology makes use of smartphones' Near Field Communication (NFC) capabilities. The technology allows Diageo to track bottle movements across the supply chain, in-store and to the point of consumption, with the sensor tags remaining readable even when the factory seal has been broken, providing an additional layer of security in protecting the authenticity of the product.

Unlike conventional static QR codes that are often difficult to read, easy to copy, and do not support sensor integration, OpenSenseTM tags can dynamically detect if a bottle is sealed or open with the simple tap of an NFC smartphone. To ensure authenticity, the tags are also completely and permanently encoded at the point of manufacture and cannot be copied or electrically modified.

Helen Michels, Global Innovation Director, Futures Team at Diageo, said:

"Mobile technology is changing the way we live, and as a consumer brands company we want to embrace its power to deliver amazing new consumer experiences in the future.





"We constantly experiment with the latest cutting edge technologies to enrich and enhance the experiences delivered by our iconic brands. Our collaboration with Thinfilm allows us to explore all the amazing new possibilities enabled by smart-bottles for consumers, retailers and our own business, and it sets the bar for technology innovation in the drinks industry."

Davor Sutija, Thinfilm Chief Executive Officer, said:

"As mobility becomes ubiquitous, consumers want and expect brands to follow suit and deliver custom mobile experiences. But today's conventional NFC mobile marketing solutions are not technologically advanced enough to create immersive or customizable consumer experiences.

By leveraging OpenSense[™], Thinfilm is enabling the 'smart bottles' to carry digital information that can be accessed via NFC smartphones. Diageo can reap the benefits of the intelligence gleaned from our smart sensors and create engaging experiences for its customers. This is how we will begin to build the real Internet of Everything."

The prototype bottle will be on display at Thinfilm's booth at Mobile World Congress in Barcelona, Spain throughout the four-day event.

<u>Diageo Technology Ventures</u> was established in September 2014, and is a program specifically designed to solve some of the company's existing business challenges and unlock new opportunities for future growth by working with emerging technology companies. As the first initiative to be rolled out as part of this program, the working prototype bottle illustrates the new possibilities Diageo's packaging enables for customers and retailers including advancements in sensors, electronic printing, material sciences and mobile technologies.

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About DIAGEO

Diageo is a global leader in beverage alcohol with an outstanding collection of brands across spirits, beer and wine categories. These brands include Johnnie Walker, Crown Royal, J&B, Buchanan's, Windsor and Bushmills whiskies, Smirnoff, Cîroc and Ketel One vodkas, Captain Morgan, Baileys, Don Julio, Tanqueray and Guinness.

Diageo is a global company, and our products are sold in more than 180 countries around the world. The company is listed on both the London Stock Exchange (DGE) and the New York Stock Exchange (DEO). For more information about Diageo, our people, our brands, and performance, visit us at www.diageo.com. Visit Diageo's global responsible drinking resource, www.DRINKiQ.com, for information, initiatives, and ways to share best practice.

Celebrating life, every day, everywhere.

About Thin Film Electronics ASA

Thinfilm is a leader in the development of Printed Electronics. The first to commercialize printed, rewritable memory, the Company is creating printed systems that include memory, sensing, display, and wireless communication, all at a low cost unmatched by any other electronic technology. Thinfilm's roadmap integrates technology from a strong and growing ecosystem of partners to enable the Internet of Everything by bringing intelligence to disposable goods.

Thin Film Electronics ASA ("Thinfilm") is a publicly listed Norwegian company with headquarters in Oslo, Norway; product development and production in Linköping, Sweden; product development, production, and business development in San Jose, California, USA; and sales offices in the United States, Japan, and Singapore.