

Let's put on our running shoes

Success story – Project with BSR idware GmbH



Test shoe vending machine / Source: DerAutomat Harrer KG

Project goals

Provide the community runners with the latest running shoes for extensive testing under real conditions on uneven surfaces and tie them to the Adidas brand.

Challenges

Ensure fast access to new running shoes at all times (24/7), even during peak periods.

Solution

An RFID based fully automatic shoe dispenser, as a self-service solution to meet the needs of the runners.

Advantages

New running shoes can be useful too at any time extensively under real conditions in order to facilitate the purchase decision for the community.

Test shoe vending machine for the adidas Runners Vienna Community

The well-known sports goods manufacturer has set up the world's first test shoe vending machine for the adidas Runners Community in Vienna; special transponders and UHF readers from deister electronic ensure the running shoes are correctly identified and returned.

adidas Runners see themselves as a "global running community that motivates and supports runners around the world". This new movement in the running scene not only offers personalised training regimes and coaching by experts, but also organises special community events. Running enthusiasts in the Austrian capital have been part of the global endurance network since

April 2016. They now have a very special service: a double container unit with changing facilities and an automatic test shoe vending machine. Every registered community member can borrow a pair of running shoes free of charge.

Everyone knows the problem: there's too little space in a sports shop to properly try out a new pair of running shoes and the treadmill is seldom accurate enough to carry out a proper endurance test. A frustrating fact, since you probably won't know where the shoes pinch until you've been running in them for a few hours in harsh conditions or on uneven ground.

Registration with running shoe PIN

Here, running enthusiasts in Vienna have a clear advantage. Those who want to partake in the test campaign only need to register via a website. Here they will be asked to enter their name, email address and telephone number. The telephone number will be verified within 24 hours and then the runners can start borrowing shoes. They only have to enter their PIN on the screen of the shoe vending machine located on Franz-Josefs-Kai (Franz Joseph Quay) and select the shoe model and size. If the shoes don't fit perfectly, two more pairs can be selected, i.e. three in all. They can be properly tried out for 24 hours before being returned to the dispenser or be purchased (previously only possible in a shop).

Shoes can be tested as often as required. The RetailCube24 vending machine, which contains about 500 pairs, was developed by DerAutomat Harrer KG (derautomat.com), a company focusing on the automation of retail processes. ▶



Filling the Test shoe vending machine in Vienna / Source : 1.000 things.at

Rugged RFID hardware by deister electronic

The feasibility of this customer-friendly campaign was mainly due to modern RFID software technology from deister electronic's long-time system partner BSR idware GmbH in Salzburg and hardware from deister electronic in Barsinghausen, Lower Saxony.

A UST 2080 RFID transponder tag is fitted into the sole of the shoe. This extremely robust tag has its own antenna and is resistant to heat, pressure and moisture. The transponder chip complies with the international ISO 18000-6 C standard and hence can be used in various sectors around the world.

A compact TSU 100 UHF reader is integrated into the shoe vending machine in the channel shaft above the shoe return compartment. The reader also withstands large temperature fluctuations that are common in Austria, and is protected against moisture. The reader, which can be quickly built into the vending machine thanks to its integrated antenna, identifies the tags with high reliability. It provides visual and audio confirmation of successful identification.

Thanks to its robust housing, it is always reliable, even in tough environments. This is because data generated in the reader is uploaded to the Adidas server and managed in the cloud. This also provides protection against misuse, as each shoe model can only be borrowed once.

RFID in the sole of the shoe

"Of course, this means the transponder in the sole of a shoe must meet very demanding technical requirements," explains Christian Scheidt, deister electronic's Area Sales Manager for logident & BiTech. "Not only does it need to be robust and pressure-resistant it must also be breathable, permanently elastic and hard-wearing. You'll find similar tags attached to items of laundry in the healthcare sector, for example. And such items are exposed to rather challenging stresses. Contactless identification offers runners a high level of convenience: if you want to go for a run immediately after work and test a new model of shoe straight away, you simply get a pair from the vending machine. Then there's nothing standing in the way of a spontaneous after-work training session."

RFID-enabled vending machines: for use in all industries

RFID-enabled vending machines with return monitoring and customer allocation can be used in many sectors, including industry. For example, qualified personnel can use the so-called ToolButler24 to collect and return temporarily needed tool, consumables or personal protective equipment around the clock, seven days a week, all without the presence of staff. Continuous inventory tracking and demand planning is possible by means of a connection to the ERP system. ■

About BSR idware

BSR idware has been one of the leading providers of identification and barcode systems in Austria for more than 25 years. The company was founded in Salzburg in 1990 by Albin Rainer and currently employs 20 people. Its headquarters are located in the Salzburg Technology Centre in the district of Itzling.



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About deister electronic

deister electronic is an innovative, family owned global business with 40 years of experience in developing electronic and mechanical products for security and industrial automation. Widely acclaimed for our expertise and specialist implementation of RFID technology within practical applications, from key management and access control to logistics and process control.



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