Digital Transformation of the Shoe Industry

shoe commerce relies on computed tomography Services of the ZEISS Quality Excellence Centers
The digital transformation of the shoe industry — that’s the mission of the startup scs shoe commerce GmbH from Cologne. Their solution determines the correct fit for each foot in a fast and convenient way. When measuring the inner volume of safety shoes, shoe commerce uses the computed tomography services of the ZEISS Quality Excellence Center in Cologne. Thanks to this collaboration, workers get shoes that are not only safe, but also promote healthier feet thanks to their optimal fit.

The topic of foot health has until now earned little attention in Germany and in other countries, even though the health of one’s feet can have far-reaching consequences for one’s overall health and the ability to work. The German Shoe Institute’s “Current German Foot Report” from 2010, at the time the biggest action in 50 years to measure Germans’ feet, found that in 2010, 60% of German adults suffered from problems with their feet, even though 98% of all babies in industrialized countries are born with healthy feet. The main reason for problems with one’s feet is the wrong kind of shoes, as only around one in five people wear shoes that really fit them. And nothing seems to have changed much during the last decade.

The startup from Cologne wants to change that. CEO Alexander Görtz explains the company’s vision: “No two feet are alike – that applies not only to the size of a foot but also to its form and its unique characteristics, such as whether someone has a flat foot, a splay foot, hallux and much more. With our BestFit solution, we ensure that each foot gets the perfectly fitting shoe, including an orthopedic solution if needed.” On the platform MyPSA (My Personal Shoe Accessories), that is also possible for safety shoes. In order to exactly measure the inner volume of safety shoes, shoe commerce relies on the CT services of the ZEISS Quality Excellence Center in Cologne, one of 60 ZEISS Excellence Centers worldwide. It’s a cooperation yielding tangible benefits: More and more employers, from small, local organizations to large companies, now rely on the services offered by shoe commerce. As a result, shoe commerce is making an important contribution towards occupational health management because workers who wear the right footwear ultimately feel healthier long term and experience fewer limitations in their abilities on the job.
From a scan to the right safety shoe
Whether firefighters, police officers, construction workers or employees in production – there are an endless number of applications for safety shoes. Safety shoes often weigh up to one kilo and, unlike comfort or sports shoes, barely bend under strain. If they don’t fit the form of one’s foot, the foot can become deformed. Faulty foot positions can develop or worsen, often resulting in pain. With MyPSA, shoe commerce is proving that this can be avoided. The employees at shoe commerce scan the person’s feet using 3D laser technology. Next, an algorithm “analyzes” the foot for its length, width, height, underfoot surface, etc. Gender, weight, and usage behavior are also determined. This data is then compared with the interior volume of the large number of safety shoes that have already been measured precisely. ZEISS collects this data as well for its length, width, height, underfoot surface, etc.  Gender, weight, and usage behavior are also determined. This data is then compared with the interior volume of the large number of safety shoes that have already been measured precisely. ZEISS collects this data as well for its length, width, height, underfoot surface, etc. Gender, weight, and usage behavior are also determined. This data is then compared with the interior volume of the large number of safety shoes that have already been measured precisely. ZEISS collects this data as well.

From Users for Users
shoe commerce / Cologne / Germany

Zeiss supports startup with technology and measurement strategy
The branch manager of the ZEISS Quality Excellence Center in Cologne, Philipp Willier, can still remember well his first contact with the startup. “They came by and told us: ‘We want to digitize shoes.’ That was a new area for us, and as it turned out it was more complex than we first thought.” You can’t just put shoes in the CT and press ‘start’ for the measurement. The reason: it quickly became clear that both the position of the shoes and the fixturing method impacted the measurement results. A consulting and test phase followed, during which shoe engineers, orthopedists, IT specialists and other experts were consulted for their advice. A procedure was finally developed that enabled ZEISS to capture the values in the desired precision in a fast measurement time. “I feel really lucky that I have such an innovative and motivated team that decided to take this on and experiment with it,” says Philipp Willier. “That allowed us to find the right solution for our customer – which, of course, is our objective at ZEISS.” Today, the whole procedure is a well-oiled process: Employees from shoe commerce regularly bring new models of safety shoes to the ZEISS Quality Excellence Center. After the measurement, ZEISS sends the data back to shoe commerce, where the data is saved in their database. More than 700 shoe models have been saved for the algorithm, and new models are constantly being added.

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Alexander Görtz, CEO shoe commerce

Trust-based partnership of equals with technical excellence
According to Alexander Görtz, ZEISS was the right choice from the start. “We have very high standards when it comes to the products we make because they’re related to people’s health. That’s why we want to use the best technology, and when it comes to measurement technology, ZEISS clearly has the best.” He was very pleased with the cooperation. “We were impressed that ZEISS immediately took us seriously as a startup and worked with us as an equal partner in finding a solution. Everything felt right – not just the technology, but also the interactions at the personal level. A relationship based on trust was formed very quickly. It’s a fantastic basis for a long-term collaboration.”

Philipp Willier adds: “At ZEISS we understand that a startup today can become a large company tomorrow, provided they have the right idea and can embed it in the market over the long term.” He, too, looks forward to a successful cooperation with shoe commerce: “For us, it’s a great success because we can contribute to better-fitting safety shoes, something that protects workers’ health. After all, at ZEISS we also have a lot of employees in production, so we know their needs very well.”

Shoe commerce has ambitious plans for the long term: “Prevention through the right form and fit – shoe commerce, a synonym for foot health,” says Alexander Görtz. Whether used for safety, comfort, or sports shoes, thanks to the company’s digital services, every person can get his or her shoe fast and easily, without having to accept any compromises on orthopedic quality. It’s an important contribution towards fostering healthy feet, a topic that still does not receive the amount of attention it should.

Alexander Görtz, Managing Director shoe commerce, in dialog with ZEISS Quality Excellence Center Branch Manager Philipp Willier (left)

With MyPSA shoe commerce scans the person’s feet using 3D laser technology.

The measurement of the inner volume of the safety shoes is done at the ZEISS Quality Excellence Center in Cologne.

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