



CONNECT

Digital orthopaedics

Background

The medical technology company Ottobock, which was founded in 1919, has pursued the goal of developing innovative products that offer patients a high degree of freedom of movement and prevent damage to their health from the very beginning. As a global technology leader in wearable human bionics, the product range includes everything from orthotics and human mobility to prosthetics and human care. The family-run company invests heavily in their research and development to continuously provide their customers with high levels of quality, custom product designs, and technologically advanced solutions. In the field of digital orthopaedics, Ottobock works with their iFab technology, which replaces traditional plaster casts and manual labor with reliable 3D scanning and milling.

Orthopaedics goes digital

The traditional orthopaedic trade is rapidly developing in the direction of the digital workshop. Arguments are based on the guarantee of a better fit, higher quality, an improvement in freedom of movement and the qualitative gain in time that can be spent on patient care. Nevertheless, many orthopaedic technicians are still sceptical about the trend. Digital orthopaedics - is this possible?

Based on a recent survey, there are 16,128 practicing orthopaedists in Germany who are dedicated to acute and chronic diseases of their patients. The demand for orthopaedic aids in Germany is growing by about 4% annually. According to statistics, the greatest physical weakness of Germans is the wear and tear of knee and hip joints. Last year, around 193,000 patients received artificial knee joints and another 200,000 patients needed hip replacements.

Medical technology companies like Ottobock, which have been established in the industry for many years, are aware of their responsibility and are therefore always focus on progress and patient benefits. With its digital platform iFab, Ottobock is taking orthopaedic technology to a new level. By combining digital modelling and manufacturing processes with craftsmanship, patient care and production are made more efficient. Using a 3D scanner, orthopaedic surgeons will be able to digitally capture areas of the body while viewing the scan result on screen in real time. CAD software designed for orthotics and prosthetics is then used to process the data from the scan result into a digital model. In the final step, an individual, true-to-size image is milled in foam or produced as a 3D print using a selective laser sintering process.

However, the complete package of 3D scanning, CAD modelling and the subsequent use of additive manufacturing on a positive model is not the end of Ottobock's digitalization. The step up from smart, computer-based orthopaedic technology, which drastically reduces sources of error, is the



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use of artificial intelligence in exoprostheses. The integration of electrodes allows movements of the wearer to be automatically detected without the need for complex signals to be triggered by muscle contractions. The control can be trained, regulated, and optimized via an app on the smartphone.

The future goal of the world leader in prosthetics is to develop exoprostheses that can not only respond smart but are also able to „feel“ so that patients no longer need to feel a difference between the body and additive accessories.

Do you find the topic of digitalization in medical technology exciting? Do you want to be kept up to date on the latest innovations? Or would you like to learn more about the company? Simply get in touch with us and we will help you with your request. We will be happy to put you in touch with innovation-driven companies. arcoro CONNECT links people, companies and trends - personally and directly.

COMAPNY	LOCATION	WEBSITE	FIELD OF EXPERTISE
Ottobock Health-care Deutschland GmbH	Germany	https://www.ottobock.de/	Digital Orthopaedics solutions
OpenBionics	UK	https://openbionics.com/	Digital prosthetics
Mercuris GmbH	Germany	https://www.mercuris.com/	Digital orthopaedics
Össur hf	Iceland	https://www.ossur.com/en-us	Digital orthopaedics
Rodin4D	France	https://www.rodin4d.com/de/	Digital orthopaedics
Spentys	Beldium	https://de.spentys.com/	Digitale Orthopädie
Kerkoc GmbH	Germany	https://www.kerkoc.com/kerkoc3d/	Digital orthopaedics
mediCAD Hectec GmbH	Germany	https://medicad.eu/de/	Digital orthopaedics
Digital Orthopaedics	Belgium	http://www.digital-orthopaedics.com	Digital orthopaedics

We would also be glad to connect you directly with industry experts from the field of digital orthopaedics. Let us convince you of innovative approaches, years of industry knowledge, strong visions, and modern perspectives. Discover some international opinion leaders here:



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INDUSTRY EXPERT	JOB POSITION	FIELD OF EXPERTISE
PD Dr. David Alexander Back	Specialist in general surgery, orthopedics and trauma surgery	Orthopedics, general surgery & trauma surgery
Dr. Nancy Lynch	Founder of Advisororthopaedics Incorporated	Orthopaedics
PD Dr. Dominik Pörringer	Specialist in orthopedics	Orthopaedics & digital health

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