



EXOSKELETON REPORT

VOL 1

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ISSUE NO 3**



**NEW DEVICE
INTRODUCING THE
OMNISUIT® BY
AUXIVO AG**

**EKSO BIONICS
IN SUPPORT
OF CMS PROPOSED
RULES CHANGES**

SEE YOU AT

WearRAcon
EUROPE

25-26 OCTOBER 2023

DURING A+A 

Partner:



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Cover Image: OmniSuit courtesy of Auxivo AG

Header Image (above): WearRAcon Europe at A+A Banner Ad



INTRODUCING THE OMNISUIT® BY AUXIVO AG

How can occupational exoskeletons be more versatile and benefit a broader range of physical workers? Auxivo AG introduces its solution with the OmniSuit: a combined shoulder and back support exosuit tailored for overhead, lifting, and forward-leaning activities.

Many exoskeletons in the industry are limited to specific tasks. For instance, a shoulder-support device might aid work at chest height but not for lifting from the ground. OmniSuit addresses this limitation by offering dual support for both shoulder and back. This design is meant to ensure assistance across tasks, from ground-level lifting to overhead work, minimizing fatigue and strain.

The OmniSuit isn't the first combined back and shoulder assist wearable. Both suitX and MAWASHI have already done this in the past. What is different is that the OmniSuit is only 2.7 kg (6 pounds) while still retaining a hybrid frame made from soft and rigid materials. The company achieved this feat using advanced materials such as aerospace-grade aluminum, polymers, and technical textiles.

Experience it for yourself:

The best way to understand wearable robotics is to put it on yourself. The first public presentations are scheduled for October 17th – 19th at the Transport & Logistics fair in Antwerp, Belgium, and from October 24-27 at the A&A Fair in Düsseldorf, Germany, which will include WearRAcon Europe 2023 and the Exo Park ([link](#)).



Photography: Courtesy Auxivo AG

WHO MAY BENEFIT FROM A COMBINATION BACK-SHOULDER SUIT?

This new exoskeleton is expected to work well for people in logistics, construction, manufacturing, or where many tasks and movements are frequently required. The design offers versatility and support for overhead, lifting, and forward-leaning workers. Two possible applications come to mind:

Working With Warehouse Robotics

One possible fit for a back-shoulder combination exo-like could be working with warehouse picking robots. Currently, robots are capable of bringing items for sorting, however, they arrive in tall towers. A warehouse employee may have to bend or kneel down or reach up to identify and pick an item.

If the exosuit can be used while sitting down, another application could be in the dental and dental surgery fields. Dentists must regularly lean forward with their arms stretched outwards while working on patients. The combination of lift and forward-lean support may be a good fit. It is another matter of how a patient who may already be suffering from tooth pain reacts to their dentist walking in with an exosuit!

"The needs of our customers are as versatile as it gets. So, our exoskeletons needed to reflect this." said Volker Bartenbach, CEO of Auxivo AG. "With the addition of the OmniSuit to our occupational exoskeleton portfolio, we offer a wide range of solutions to our customers across many industries."

Visit [Auxivo.com](https://www.auxivo.com) for more information.



Photography: Courtesy Auxivo AG



International trade fair and congress for
safety and health at work.

SEE YOU AT

Wear**RA**con
EUROPE

25-26 OCTOBER 2023
DURING A+A

24 - 27 OCTOBER 2023
DÜSSELDORF, GERMANY

People matter. www.AplusA-online.com

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University of Stuttgart
Institute of Industrial Manufacturing
and Management IFF



Wear**RA**
WEARABLE ROBOTICS
ASSOCIATION



Messe
Düsseldorf



EKSO BIONICS SUPPORTS CMS PROPOSED RULE CHANGES

Ekso Bionics Holdings, Inc., a frontrunner in medical and industrial exoskeleton technology, has expressed its support for the Centers for Medicare & Medicaid Services (CMS) initiative to incorporate personal exoskeletons into the 2024 Medicare benefit category for braces under the Home Health Prospective Payment System Rate.

The CMS's suggested rule aims to reinforce the existing Medicare definition of a brace, clarifying the Medicare Part B benefit's scope for leg, arm, back, and neck braces. Consequently, this would categorize specific exoskeleton devices as braces eligible for Medicare payments. Presently, only 56% of the 294,000 individuals with spinal cord injuries are covered by Medicare or Medicaid five years after their injury. The proposed rule's approval could notably widen the market for the Ekso Indego Personal.

Debbie Wagoner, a spinal cord injury patient, acknowledged the transformative advantages of the Ekso Indego Personal. Due to the device's exclusion from Medicare and Medicaid benefits, Ms. Wagoner had to undertake a lengthy and expensive self-fundraising campaign to acquire her device. The proposed CMS alteration could enable more spinal cord injury patients with Medicare and Medicaid benefits to access the Ekso Indego Personal at a significantly reduced expense.

Ms. Wagoner shared, "My neurologist attributes my remarkable pain reduction and enhanced life quality to the Ekso Indego Personal. I've always believed there was a purpose behind my injury. My goal is to showcase my regained independence and inspire others with spinal cord injuries to reclaim their freedom."

Source: [Ekso Bionics Press Releases](#)

ErgoSanté opened the doors to its US production plant this week. The company has already started producing occupational assistive exoskeletons in Wilmington, North Carolina. The plan for this was first announced at the 2023 WearRAcon. As originally reported, the company hopes that this move will show its commitment to the US market, which is projected to become 50% of its customer base by 2028. This development should also help their exclusive distributor NUVO operate in the American market.



The new manufacturing will be under its subsidiary "HAPO USA Corporation," named the same as the company's flagship exo. The HAPO exo can be found in facilities operated by Louis Vuitton, Sanofi, Airbus, Mars incorporated, and Ford. The new US factory will not only help keep up with demand but also clear regulatory hurdles, like Buy America, if the customer base is to expand to US government agencies.



Wandercraft has announced the commencement of its commercial operations in Germany by delivering two of its pioneering Atalante X exoskeletons, the world most advanced self-stabilizing walking devices, to prominent neurorehabilitation clinics: Vivantes Klinikum Spandau in Berlin and Schön Klinik Bad Aibling Harthausen near Munich.

These exoskeletons will be pivotal in the EarlyExo study, aiming to assess the Atalante X's efficacy in routine clinical rehabilitation for patients with severe hemiparesis post-stroke. The study, recruiting 66 patients, is set to span two years, concluding in Q2 2025. Wandercraft's CEO, Matthieu Masselin, emphasized the launch's significance in solidifying Wandercraft's global leadership in self-stabilizing assisted locomotion technology.

WANDERCRAFT



Fourier
Intelligence

Fourier Intelligence - Robotics is now accepting preorders for its GR-1 humanoid robot.

In the past, there have been companies with humanoid robots that have built their own exoskeletons: Toyota, Honda, and SRI are some examples. However, this may be the first time that an exoskeleton company has used the lessons learned about bipedal walking to create a humanoid robot.



German Bionic presented the Apogee+ powered hip exoskeleton at the Deutscher Pflgetag 2023 (German Nursing Day) conference in Berlin. The Apogee+ is designed to support nurses when lifting and moving patients.



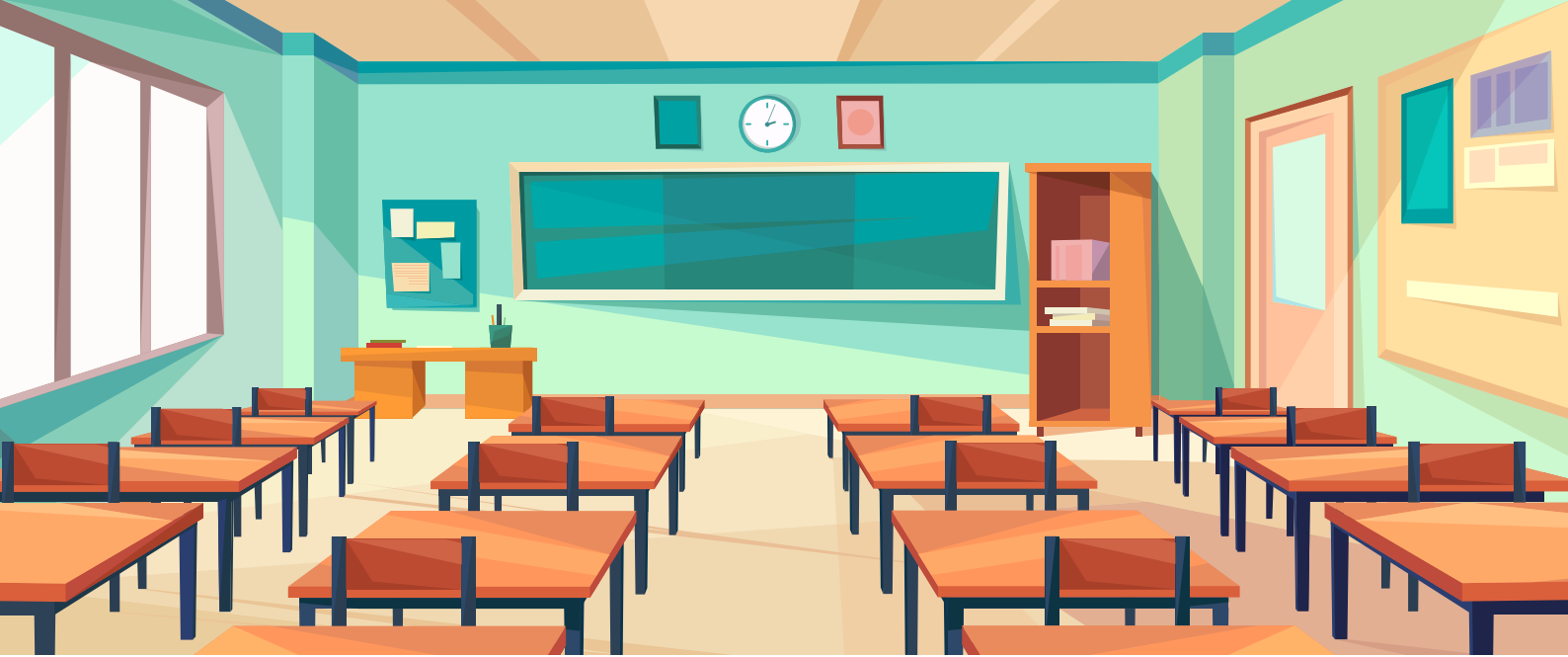
HEADLINES



This month, the Spanish pediatric powered exoskeleton company Marsi Bionics marks its 10th anniversary. Originating from a crowdfunding campaign, the company has grown significantly from its initial team of six in a small office led by Elena Garcia Armada to its current team of almost 40 professionals.

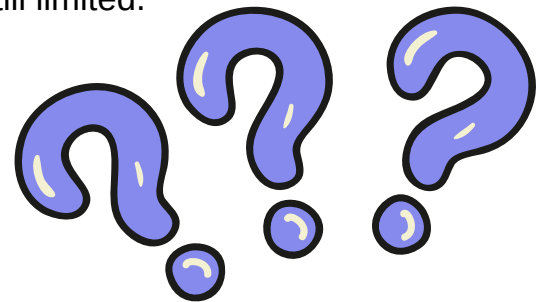
Over the past decade, Marsi Bionics has achieved significant milestones. Their Atlas series of gait assist pediatric exos have reached children in countries such as France, Poland, Italy, Ireland, and Mexico





Members of Daiya Industry Co., gave a lecture last month on Smart Agriculture Practical Theory at the Agricultural College of Okayama Prefectural Agriculture, Forestry and Fisheries Research Center. The company used the opportunity to demonstrate assistive suits, which remain virtually unknown to many, and opportunities to experience and wear one are still limited.

Question: Is direct outreach at the college and university level an underexplored opportunity to introduce exoskeleton technology?



Proteso – “Exoskeletons for industrial workers,” exhibited its powered hip exo at Tech Chill Milano, an international startup & tech event that was organized in partnership with B4i Bocconi for Innovation.



77 Episodes and Counting!!!

<https://www.etcoe.org/>



Header: Road to Horizon by quickshooting via Getty Images

On The Horizon

ReWalk to present at The Academy of Neurologic Physical Therapy (ANPT)'s 2023 Annual Conference in Minnesota.

The ReWalk team will demonstrate medical gait assist exoskeleton, which the FDA finally approved to climb stairs and curbs.

The 100th Annual Conference of the American Congress of Rehabilitation Medicine in Atlanta is scheduled to attract over half a dozen exoskeleton companies: Ekso Bionics, Gloreha, Fourier Intelligence, Harmonic Bionics, Roceso, ReWalk, Wandercraft and possibly Myomo.

ExoIQ, the developer of a powered shoulder support occupational exoskeleton S700, will be joined by another dozen exo developers at the upcoming A+A International Trade Fair and Congress.

Don't forget to visit the Exo Park and WearRAcon Europe while you are there!

[Link](#)

Researchers from the Department of Industrial and Systems Engineering led by Maury Nussbaum are delving into the potential benefits of exoskeletons for construction workers. Given the physically demanding nature of construction jobs, many workers often wake up feeling as if they've been "hit by a car." With high rates of shoulder and back issues prevalent among these professionals, the team was motivated to explore exoskeletons as a solution.

The team has identified two primary types of exoskeletons to test: arm support and back support exoskeletons. These are crucial, given that arms and backs are the most strained body parts in construction work.

The research comprises three phases:

- Expert Consultation: A national survey involving nearly 200 individuals
- Laboratory Testing: Simulating construction tasks, performed in a controlled environment.
- Field Testing: Real-world application is crucial.

Link: [YouTube](#)

EXOSKELETON EVENTS CALENDAR



OCT 23 All day
ErgoX 2023

WearRAcon
EUROPE



OCT 24 October 24 - October 25
WearRAcon Europe 2023



OCT 24 October 24 - October 25
ExoBerlin 2023



NOV 20 November 20 - November 22
IBERDISCAP 2023 Conference



Find out more about these upcoming events at the ExoskeletonReport.com Events Calendar.

There is a good chance that the Exoskeleton Report team will be in Europe later this year! Nothing will make our team happier than to be able to cover how exoskeletons, exosuits, wearable robotics, and assistive suits are changing people's lives all over the world!

Do you know of any upcoming exo-focused events that are not listed above, let us know by sending an email at: hello@ExoskeletonReport.com



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The Exoskeleton Report (ExR) e-magazine is written and produced by Borislav (Bobby) Marinov and the Exoskeleton Report.

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