An Introduction to Sp1ke® Technology

A Path to Creating a Greater Insole *with Feeling*

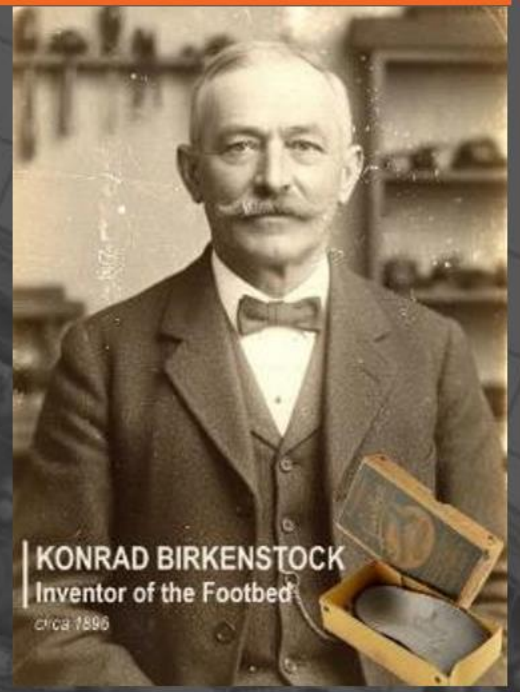


The Construction of Footwear — What's in Your Shoes?

The Last shapes the shoe, but the Footbed shapes the experience.

FOOTWEAR ELEMENT	ROLE IN CONSTRUCTION & PERFORMANCE	LET'S CALL THEM
Last + Upper	The last sets the shoe's internal volume. The upper is formed around it and retains that shape. Your brand ID lives here	**THE LAST**
Footbed / Insole / *Sockliner*	The surface the foot touches. It shapes fit, feel, pressure distribution and sensory input. The afterthought – low value	**THE FIRST**
Midsole	The cushioning layer between the footbed and ground. It manages impact, energy and stack height. The tech story of the decade	**THE 1.5**
Outsole	The ground-contact layer. It provides traction, durability and protection from the surface below. Brands like Vibram own this space	**THE SECOND**





In 1896 Konrad invented the first anatomically contoured footbed designed to support the natural shape of the foot. 90 years later Birkenstock became an industry success

Many types of footwear have no midsole (soccer cleats, dress shoes, skates & ski boots) - Every shoe has a First.

The Origin of Sp1ke Technology - Founded in Sports Protection

SP1KE didn't begin in footwear.

It was developed for protection from intense impact in ice hockey.

Its globally-patented structure disperses, absorbs, & progressively manages force.

That dynamic response perfectly supports the human body - sitting and standing.

Continuous sensory input enhances circulation, postural awareness, balance, & muscle activation to provide exceptional COMFORT.







“Sp1ke® Inside” Offer Better Cushioning Components

We’ve Made a Difference with Great ODM Solutions for Top Brands Before

HAWORTH



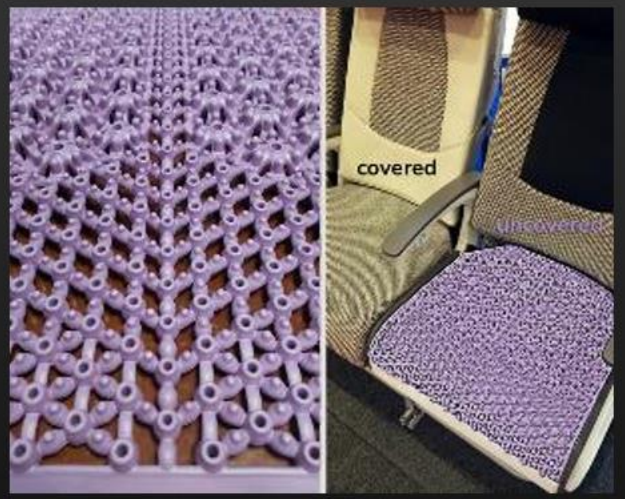
Greater Comfort Proven
From 1” of Sp1ke in an office chair cushion

TRUE HOCKEY



Game-changing Sports Protection
Better impact protection without heat and sweat build-up, or the stink

STARK® AIRCRAFT



Healthier Aircraft Seating
Proven in an intensive 3rd-party EMG & qualitative clinical trail

KINGSONS



Best Backpack Biomechanics
Providing students with better load balance, posture & comfort

The question consumers oftened ask us . . . **“Why can’t I have this feeling inside my shoes?”**

But This Has Already Been Done Before - Right? Many Times?

The truth is - No, it has not.

Here's a bunch of shoes and insoles with "bumpy surfaces", but they don't move in dynamic harmony with the wearer, like walking on the ground.

Adissage Naboso Dr. Scholls NuNorm Akusoli Nike Mind 001



Sp1ke is fundamentally different to all that has come before.

Massaging nubs move & morph with each step - like natural turf transforming the passive footbed into an active biomimetic interface for greater comfort, movement, health, and performance.

The BIG Problem is That We've Ignore Foot Neurology

The True Path to Foot Health is NEUROmusculoskeletal

True human biomechanics must work as an integrated TRIPOD of processes *- each one codependent on the others.*

Leaving out the NEURO aspect is like expecting a tripod to stand with one broken leg



Body balance & movement requires continuous and effective neuro signaling to maintain proper Foot-Brain communication

The Missing Link to Foot Health: Foot Neurology



$1.3 TRILLION
GLOBAL ANNUAL COST

1.5–2×
WOMEN'S HIGHER RISK

PERCENT OF POPULATION SUFFERING FROM NEUROPATHY

5%
GENERAL POPULATION

15%
AGES 40–65

35%+
BY AGE 75

75%
FOOTWEAR DESIGN STUDENTS
NO FORMAL BIOMECHANICS EDUCATION

HEALTHIER FOOTWEAR BEGINS WITH NEUROMUSCULOSKELETAL DESIGN


A Greater Insole with Feeling
OUR VIEW OF THE SOLUTION — THE FOOT-BRAIN CONNECTION
It's where the next performance dimension begins
SP1KE
Your globally-patented solution for ultimate footbed comfort, performance, and health



Our platform offers a broader performance profile

—not simply more cushioning

AT-A-GLANCE DIFFERENTIATION

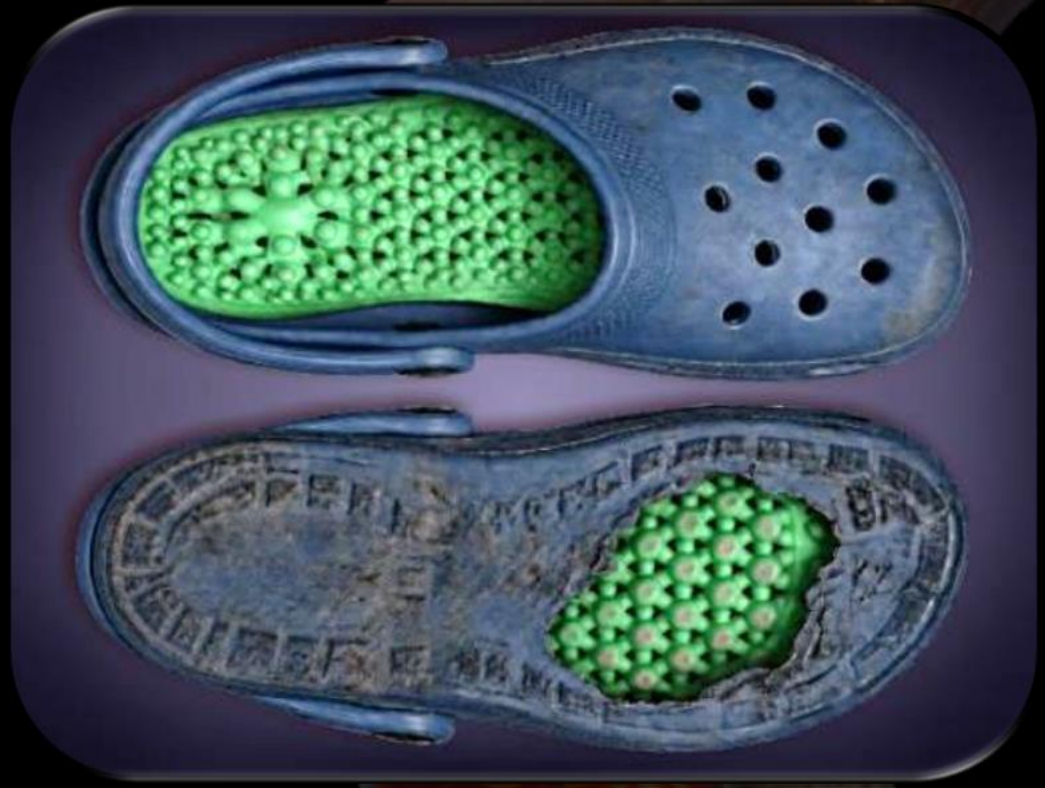
	CUSHION	SUPPORT	PRESSURE	AIRFLOW	WASHABLE	MORPHING	SENSORY	TUNABLE	DURABLE
CONVENTIONAL FOAM	✓	✓	✓						
ORTHOTIC	✓	✓	✓					✓	✓
GEL / MASSAGE	✓		✓				✓		
SP1KE	✓	✓	✓	✓	✓	✓	✓	✓	✓

Rubric expresses prominent public/product-positioning dimensions.

Exceptional Performance = Greate Value for Consumers



Open-grid Tips & Mesh structure offers uncommon airflow & moisture release from sweat – to keep feet cool & dry.
WASHABLE DAILY!



EXCEPTIONAL DURABILITY
Sp1ke insoles after one year of daily wear in Crocs clogs. Outlasted *2 pairs!*

It's Time to Give People What They Want & Need From Footbed Surfaces

Not Just For Some, But For Everyone – In Any Footwear



For a toddler learning to walk, an athlete striving for a personal best, a factory worker on their feet all day, or an elder dealing with neuropathy – changing the footbed to gain proper Foot-Brain signaling changes performance and health. **Maybe it's you?**

It's Time to Give People What They Want & Need From Footbed Surfaces

Not Just For Some, But For Everyone — In Any Footwear



Regardless of our stage of life, personal challenges, or goals. We all require the same thing to maintain proper human movement. Precise feeling of the earth beneath our feet is the foundation for achieving our best neuromusculoskeletal performance & health.

Wellness Demand is Reshaping the Footbed Market

Sp1ke® Insoles Can Improve Any Brands Position & Bottom Line



BETTER FOOT HEALTH IS BOTH A HUMAN NEED AND A BUSINESS OPPORTUNITY

CONSUMER PRIORITIES ARE SHIFTING TOWARD PRODUCTS THAT SUPPORT EVERYDAY HEALTH.

Sp1ke® Insoles are Fully Developed as a Standalone Product

Worldwide we've sold over 75,000 pairs - self-branded and as private label









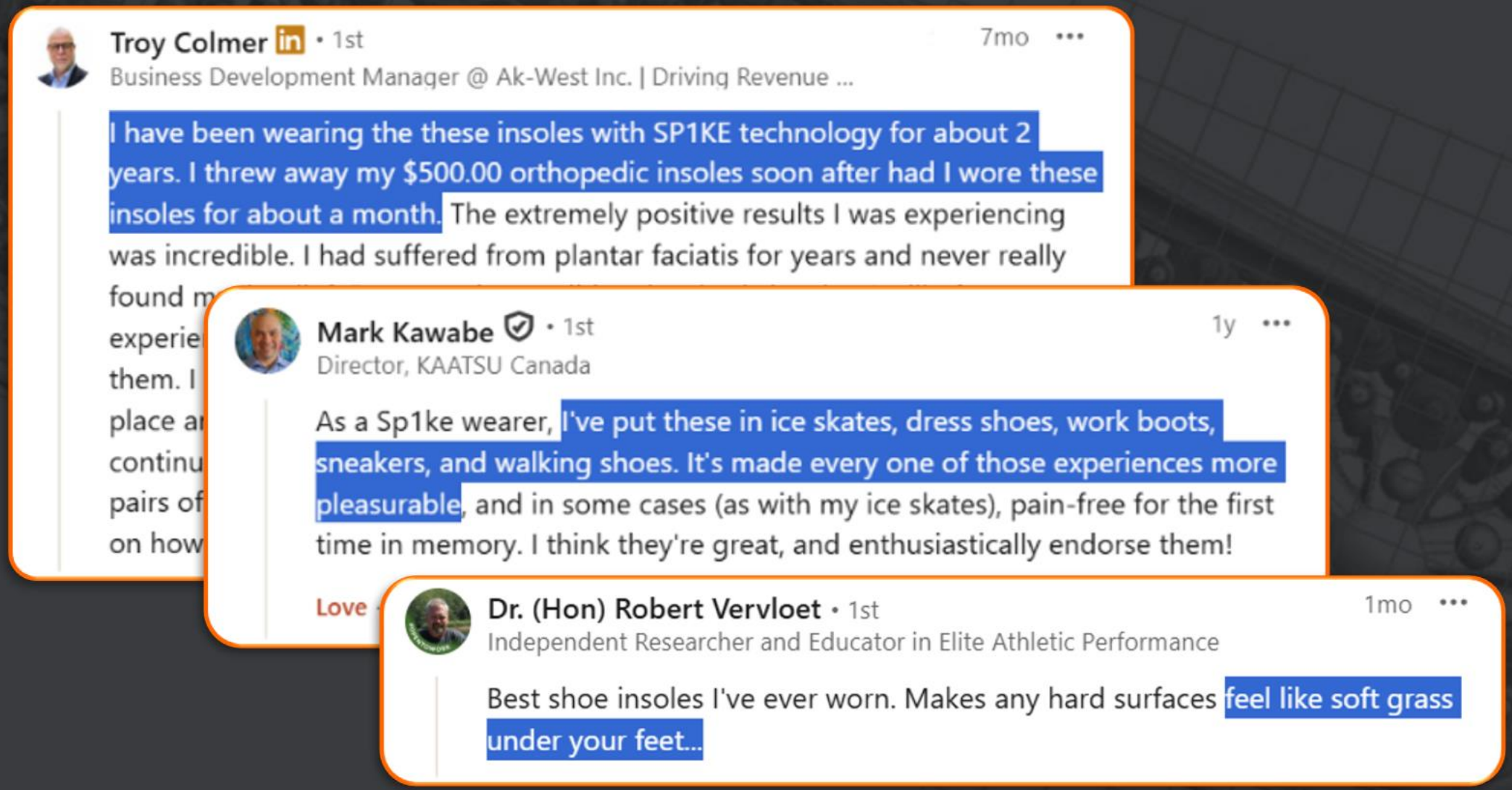


Consumers across the globe enjoy the benefits of our insoles in every kind of footwear.

A multitude of health & wellness practitioners, clinics & shops serve as resellers.

Here's What Consumer Reviews Are Saying About Sp1ke® Insoles

We're Giving People What They Want & Need From a Footbed Surface



Consumer Reviews, Endorsements & White Papers Advocate Sp1ke® Insoles

with coverage on Good Morning America & CCTV1 China

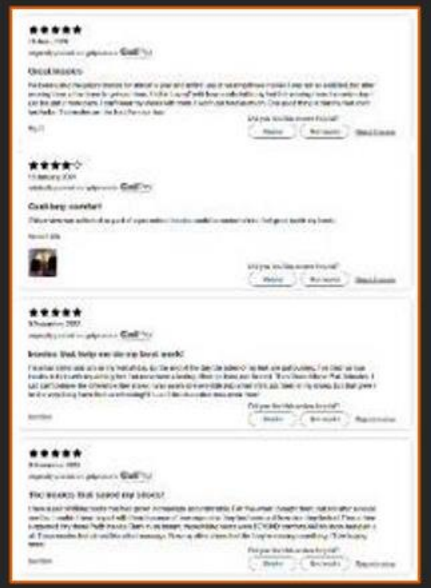




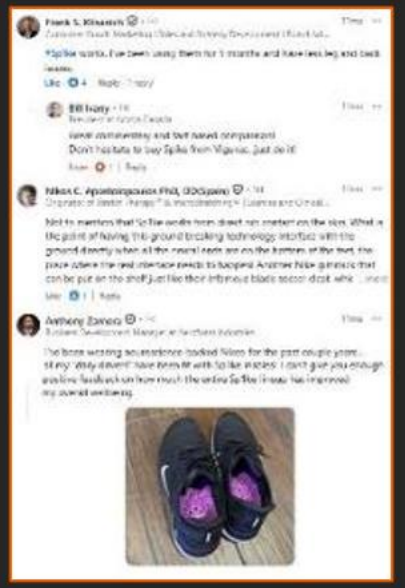




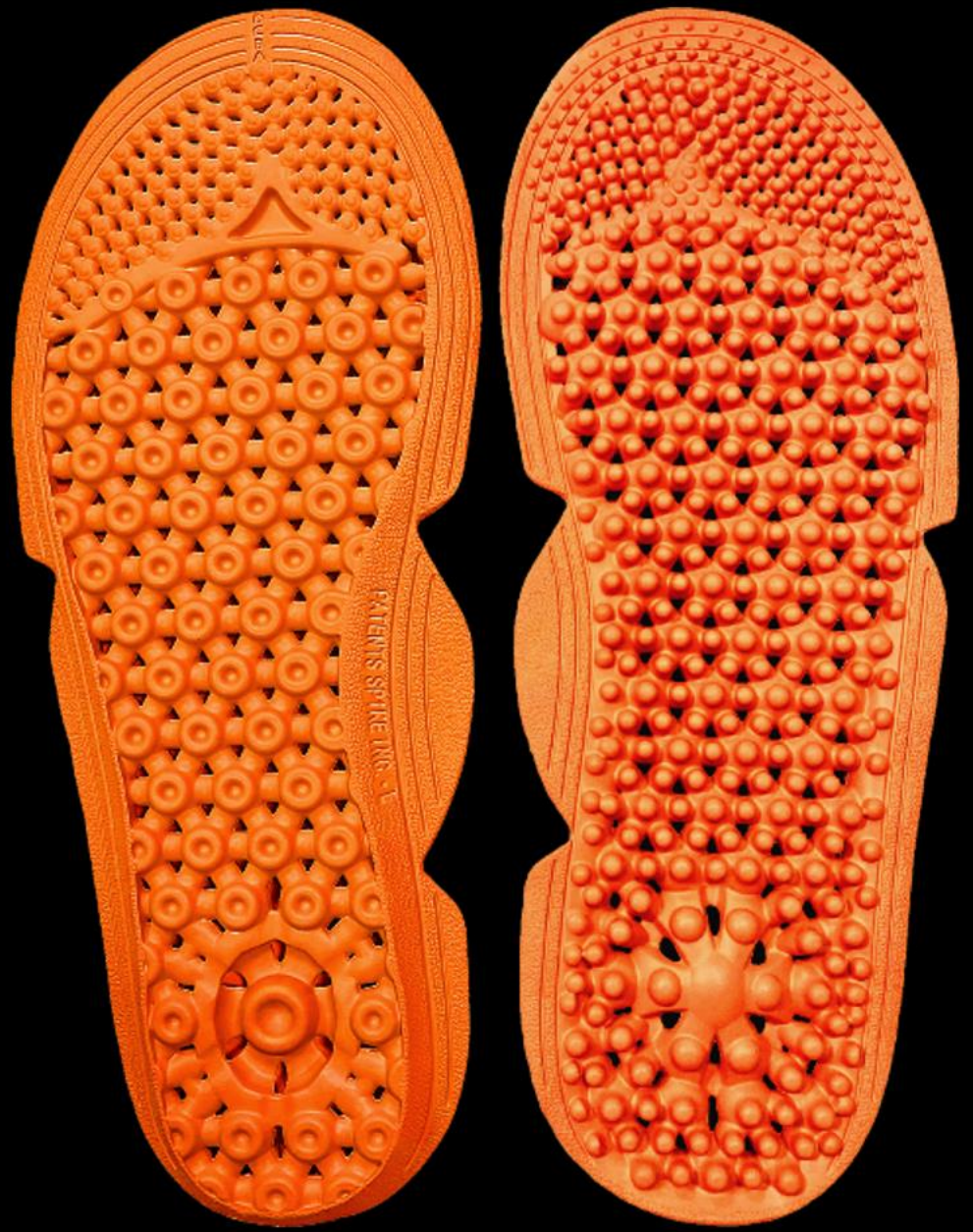












We've Done Our Design Due Diligence

and earned affirmations

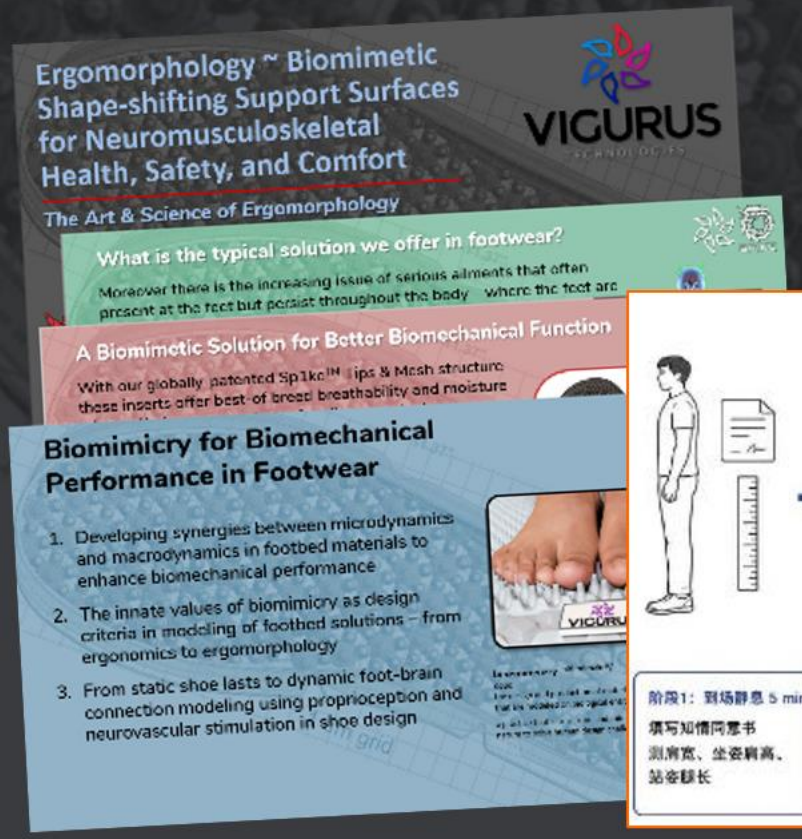
Sp1ke is the only technology endorsed by these organizations

INTERNATIONAL OSTEOPATHIC ASSOCIATION

NATIONAL ACADEMY of OSTEOPATHY

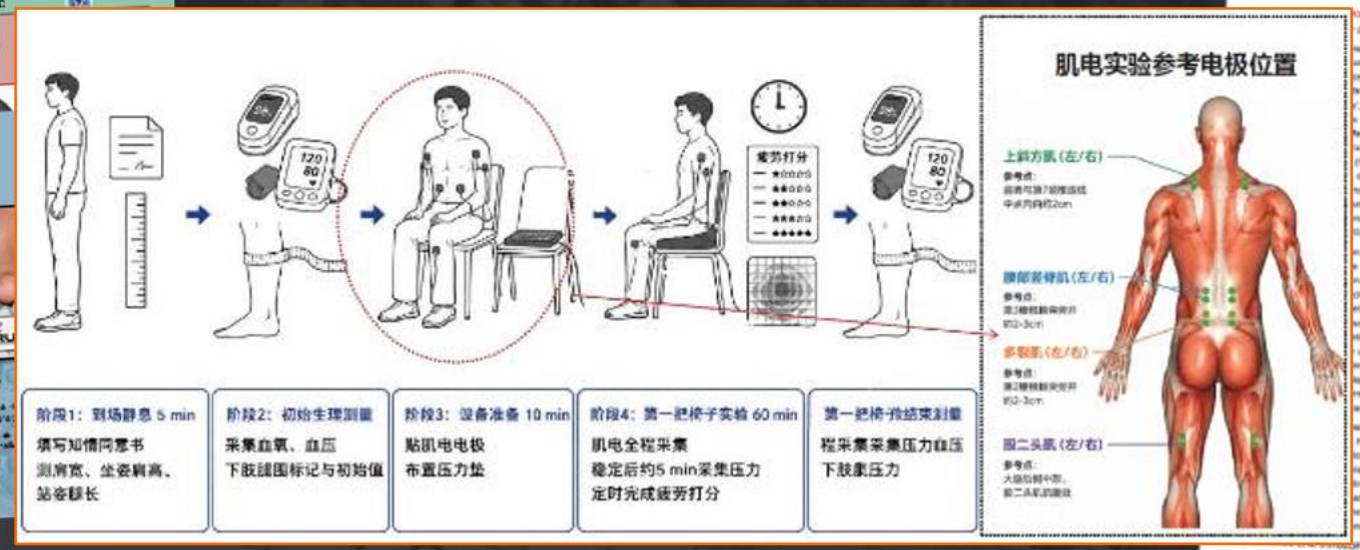
And We've Done the Proof-of-Concept Research

Presented at Polymers In Footwear & the Comfort Congress



THE IMPORTANCE AND FUNCTIONAL BENEFITS OF CUTANEOUS STIMULATION IN INSOLES

by Dr Nikos C. Apostolopoulos PhD.





A recent clinical trial proved **Sp1ke®'s unique ability to maintain blood/oxygen flow, and reduce muscle fatigue & discomfort** over long duration seating.

Similar research for footwear will prove *significant improvements in neuromusculoskeletal performance and health.*



Sp1ke® Footbeds are a Mature and Versatile Solution Platform ~ Ready for Collaboration with Footwear Brands

Our insoles have been refined through:

- 3 tooling series,
- a dozen polymer advancements,
- injection-molding and supercritical physical foaming processes,
- *and by the experiences of 75,000 users*

Sp1ke® Insoles ~ One Platform. Almost Any Footwear

Sp1ke® architecture can be engineered across materials, processes and product categories.

1. LOOKING FOR DEVELOPMENT PARTNERS

COMMERCIAL FIT

$1.40 – $2.50

BOM FOOTBED TARGET COST

Cost-effective and patent-protected platform - customized for any footwear program.

From base to premium bio-based SCF materials

SEEKING ONE GREAT SHOE PROGRAM TO START



2. MATERIAL + PROCESS FLEXIBILITY



EVA + ADVANCED POLYMERS



NATURAL RUBBER HYBRIDS



PLANT-BASED + BAMBOO FIBRE



INJECTION MOULDING • SCF-N_2 • NEXCELL®



ASKER C 20–40

3. ENGINEERED BY APPLICATION

6–7 mm
DRESS SHOES



8–15 mm
SLIDES • RUNNERS • BOOTS • CLEATS • SKATES



20–25 mm
INTEGRATED INSOLE–MIDSOLE



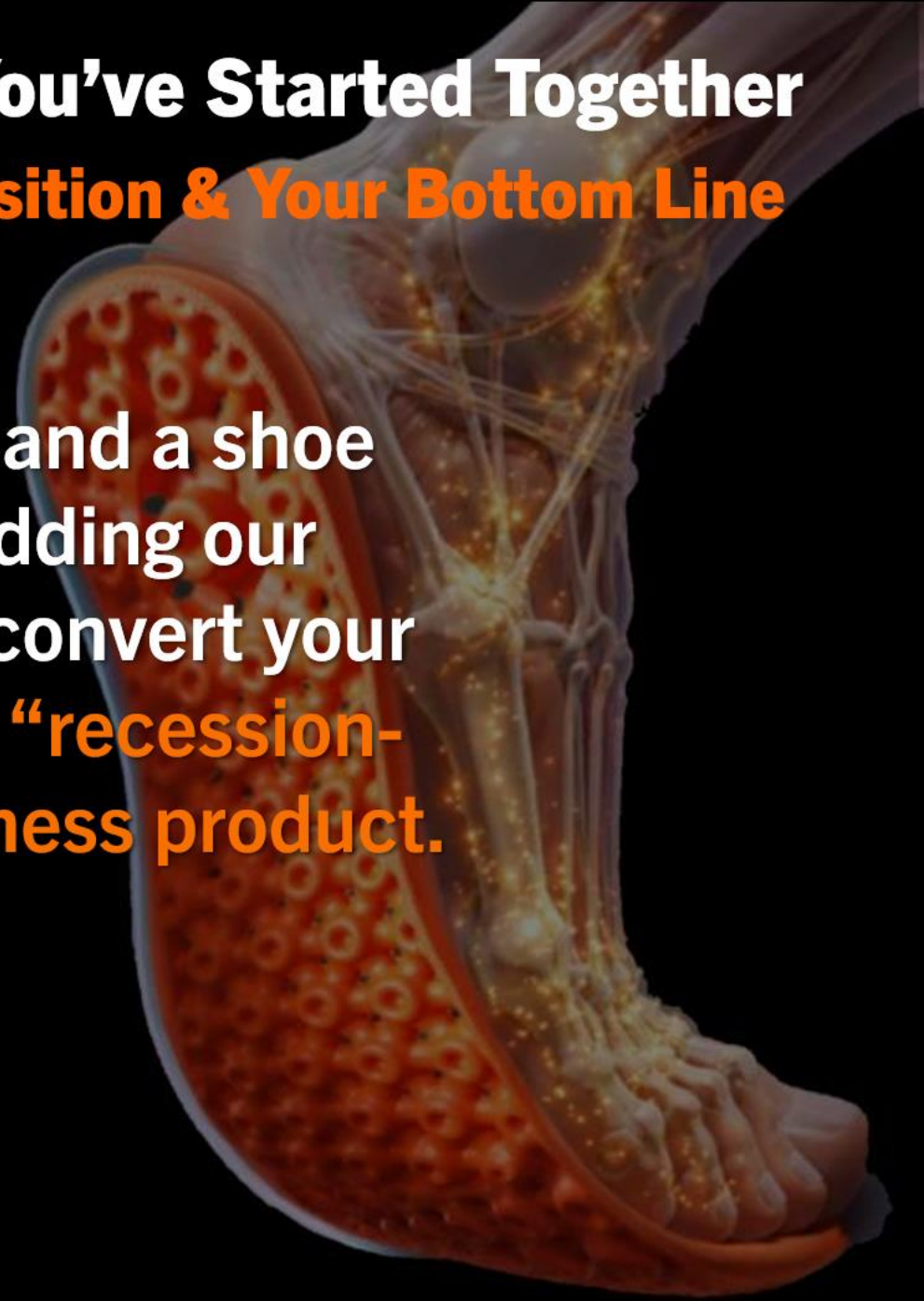
ONE-PIECE MOULDED CLOG
COMPLETE SOLE STRUCTURE



ONE ARCHITECTURE. ENGINEERED FOR EACH BRAND, MATERIAL AND USE CASE.

We're Ready to Build on the Mission You've Started Together

Sp1ke® Insoles Can Improve Your Brand Position & Your Bottom Line



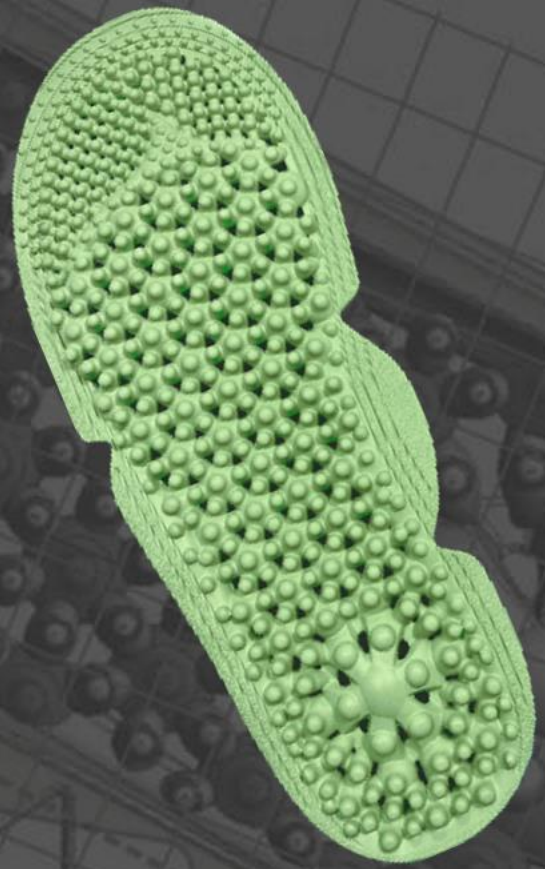
Got the product test facilities we need, and a shoe program that could use a leg up? Embedding our "Sp1ke® Inside" footbed platform can convert your lifestyle & performance footwear into a **"recession-proof" science-backed health and wellness product.**

What's in your shoes?

SP1KE® TECHNOLOGY

A GREATER INSOLE *WITH FEELING*

Earlier I gave you all the insoles I had *LEFT*.



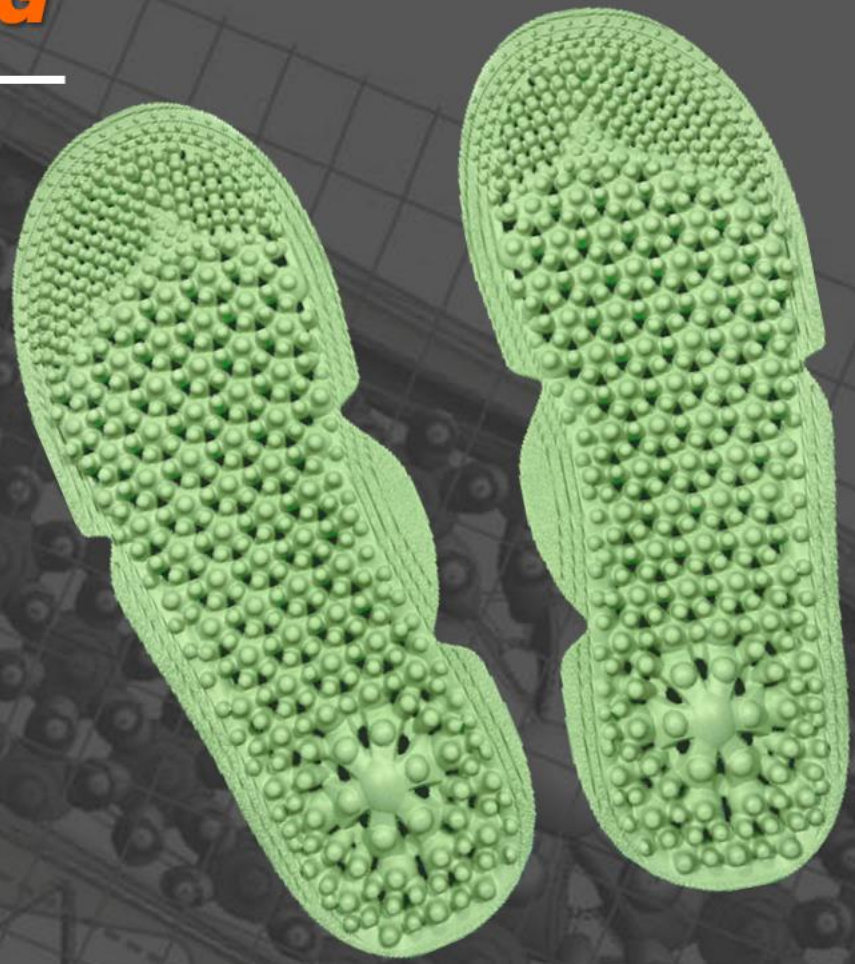
Your globally-patented solution for ultimate insole comfort, performance, and health

SP1KE® TECHNOLOGY

A GREATER INSOLE *WITH FEELING*

Earlier I gave you all the insoles I had *LEFT*.

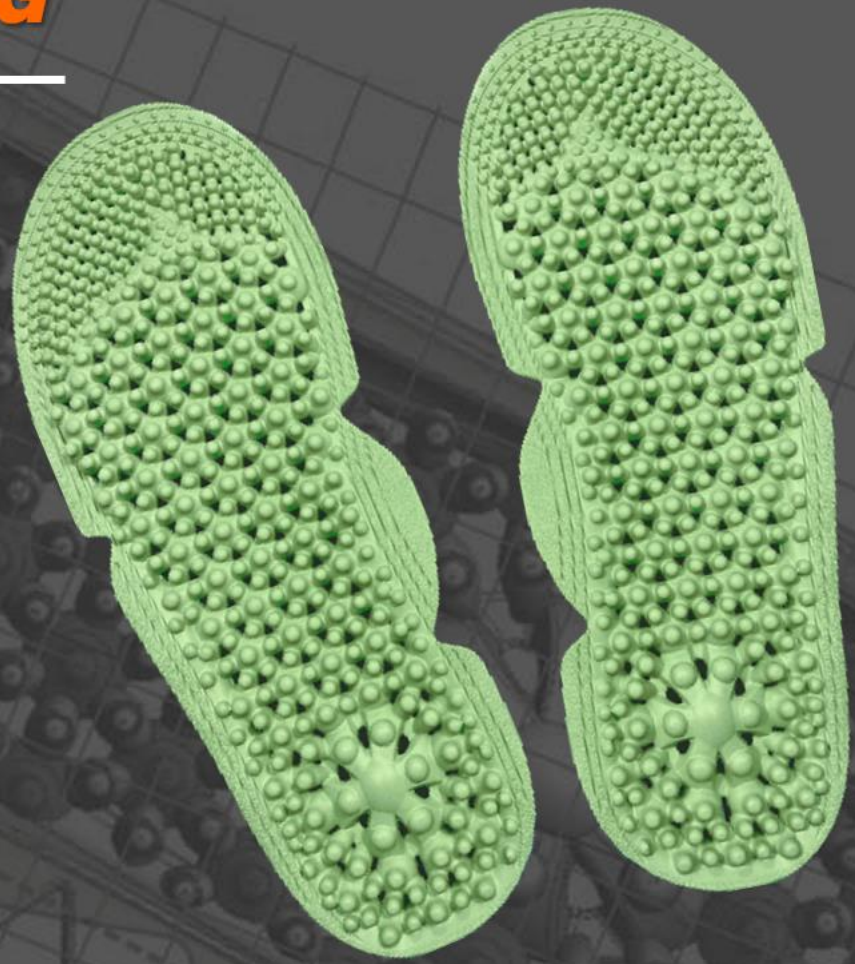
Now I have the insole that's *RIGHT* for you!



Your globally-patented solution for ultimate insole comfort, performance, and health

SP1KE® TECHNOLOGY

A GREATER INSOLE *WITH FEELING*



Earlier I gave you all the insoles I had *LEFT*.

Now I have the insole that's *RIGHT* for you!

Let's pair up!

Your globally-patented solution for ultimate insole comfort, performance, and health