



Liquid Metal X

The Future of Flex

Patented Liquid Metal Technology for Flexible Wearable Electronics.

08.01.2024



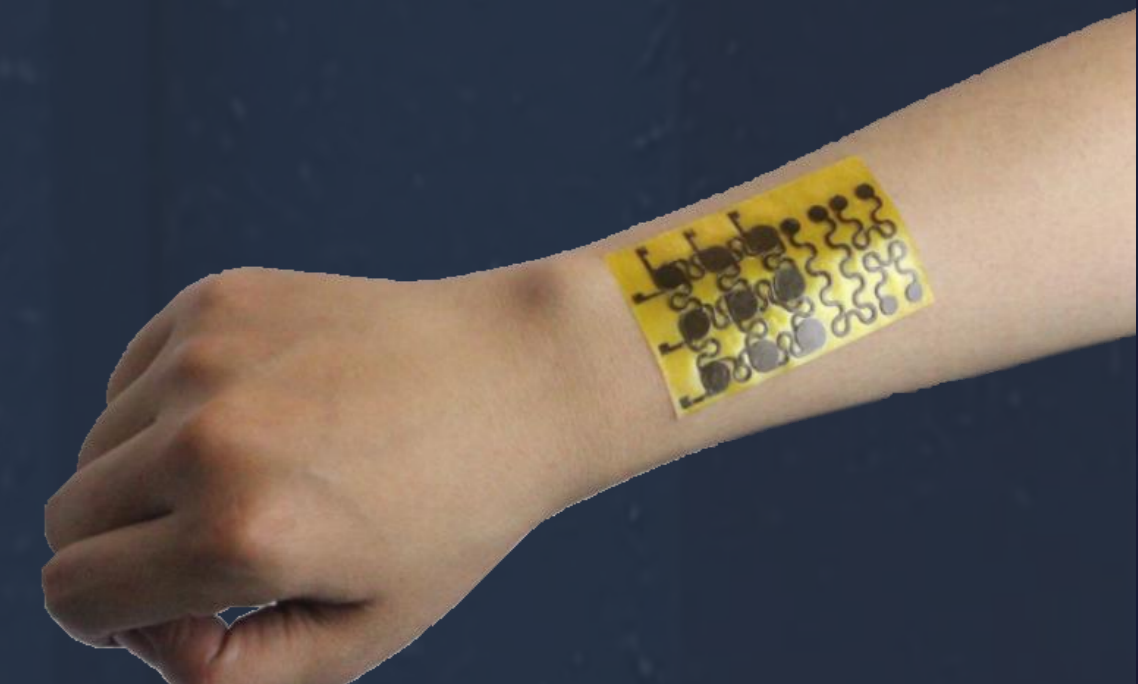
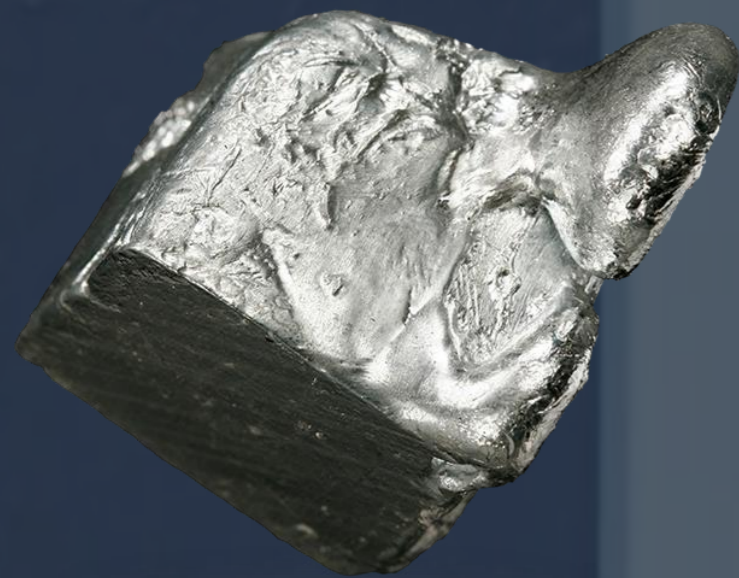
What We Have

Patented Deep Tech with value in diverse medical, scientific and engineering fields.

An opportunity to be a pioneer in hot new markets for flexible wearable tech.

Thin, translucent, self-healing, and recyclable materials that can mimic the mechanical properties of human skin.

The ability to place specialized sensors on any part of the body.



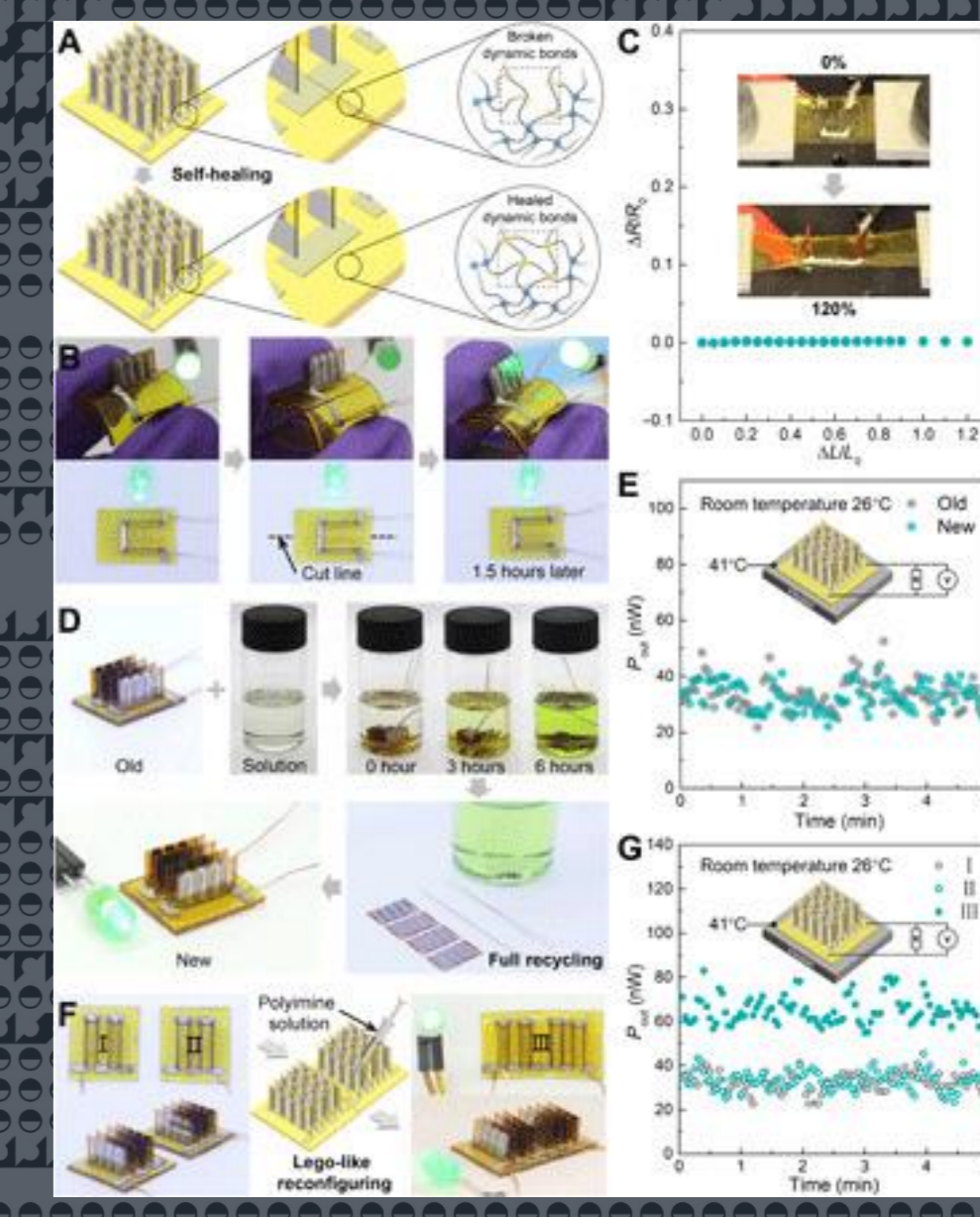
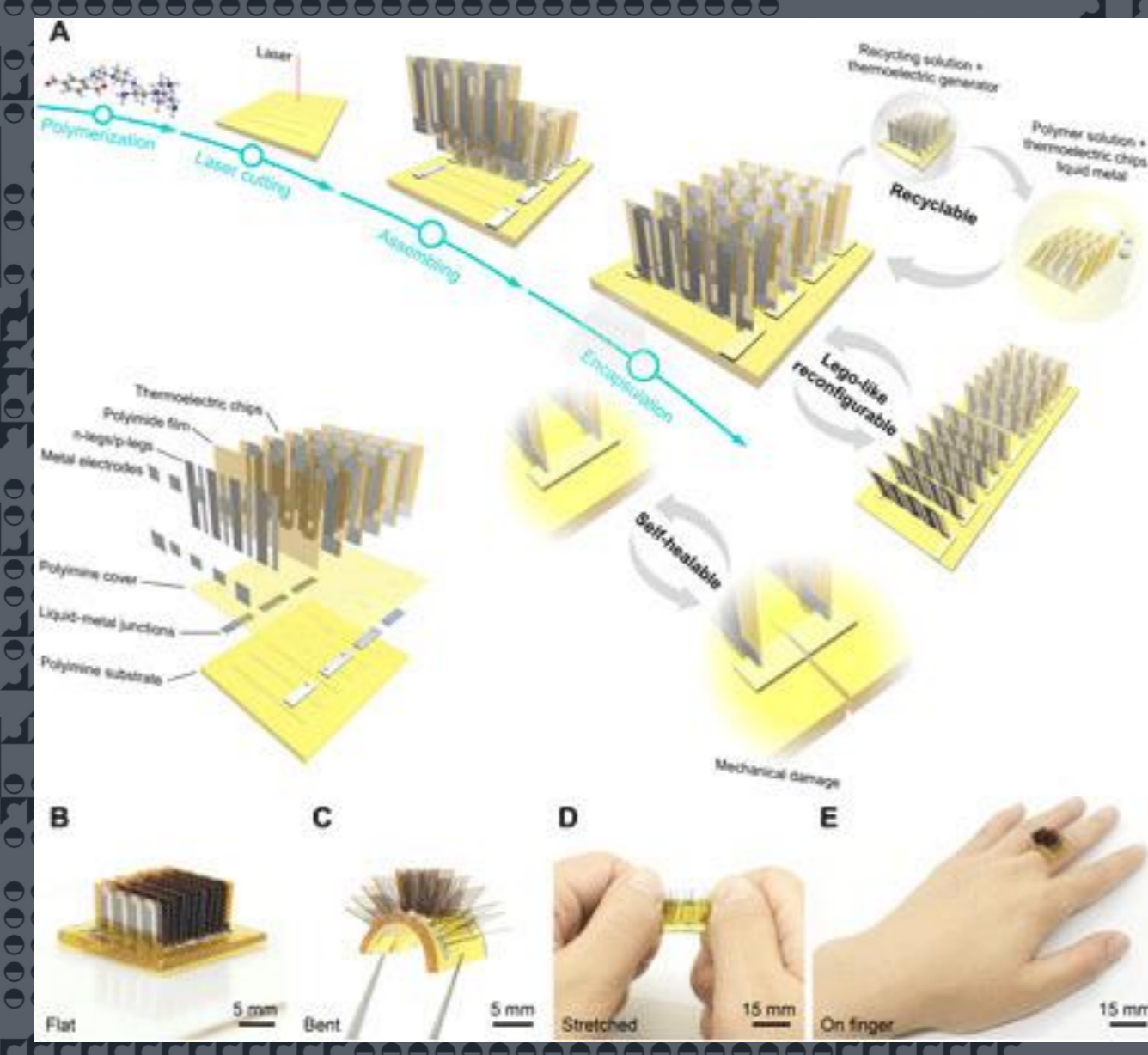
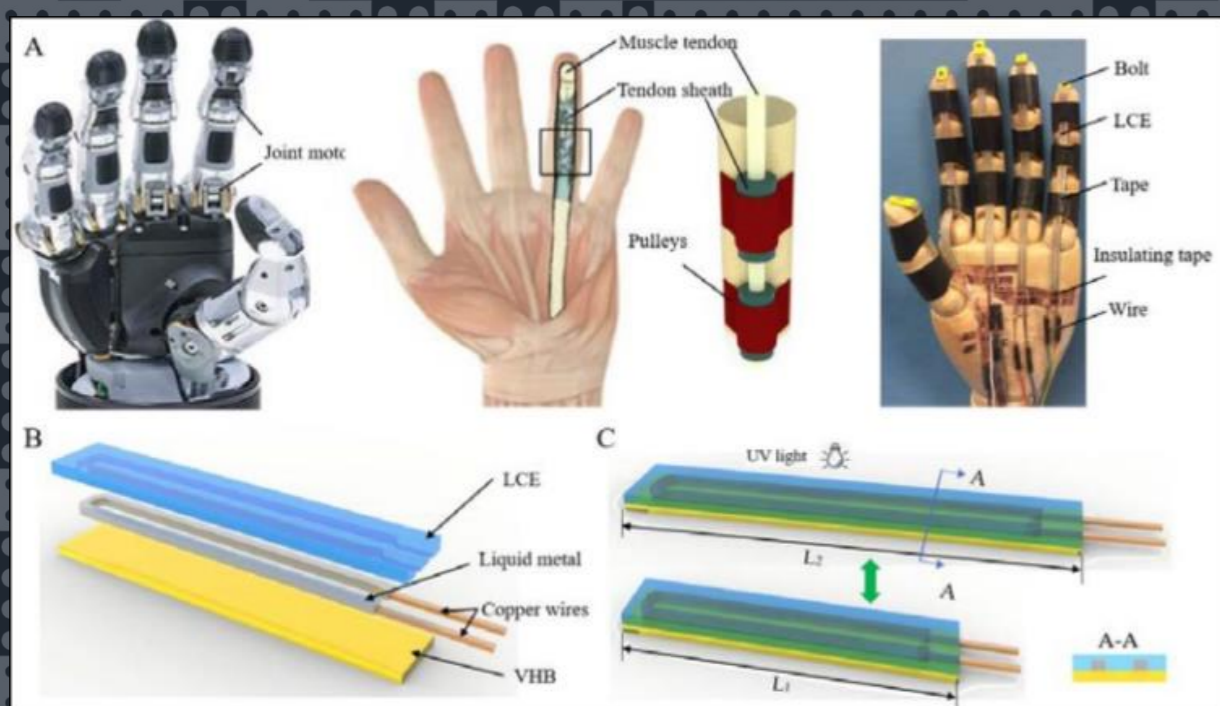
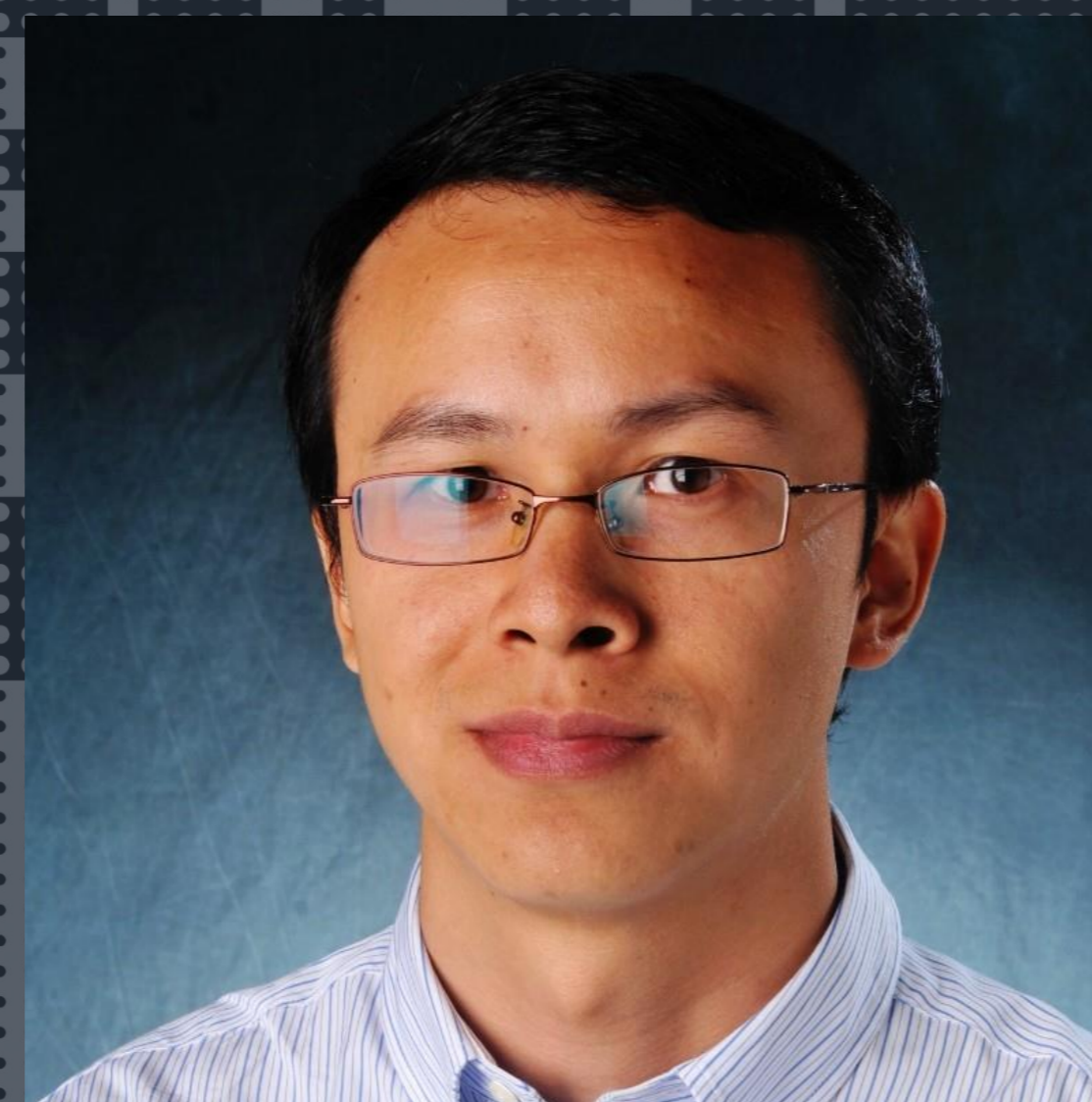
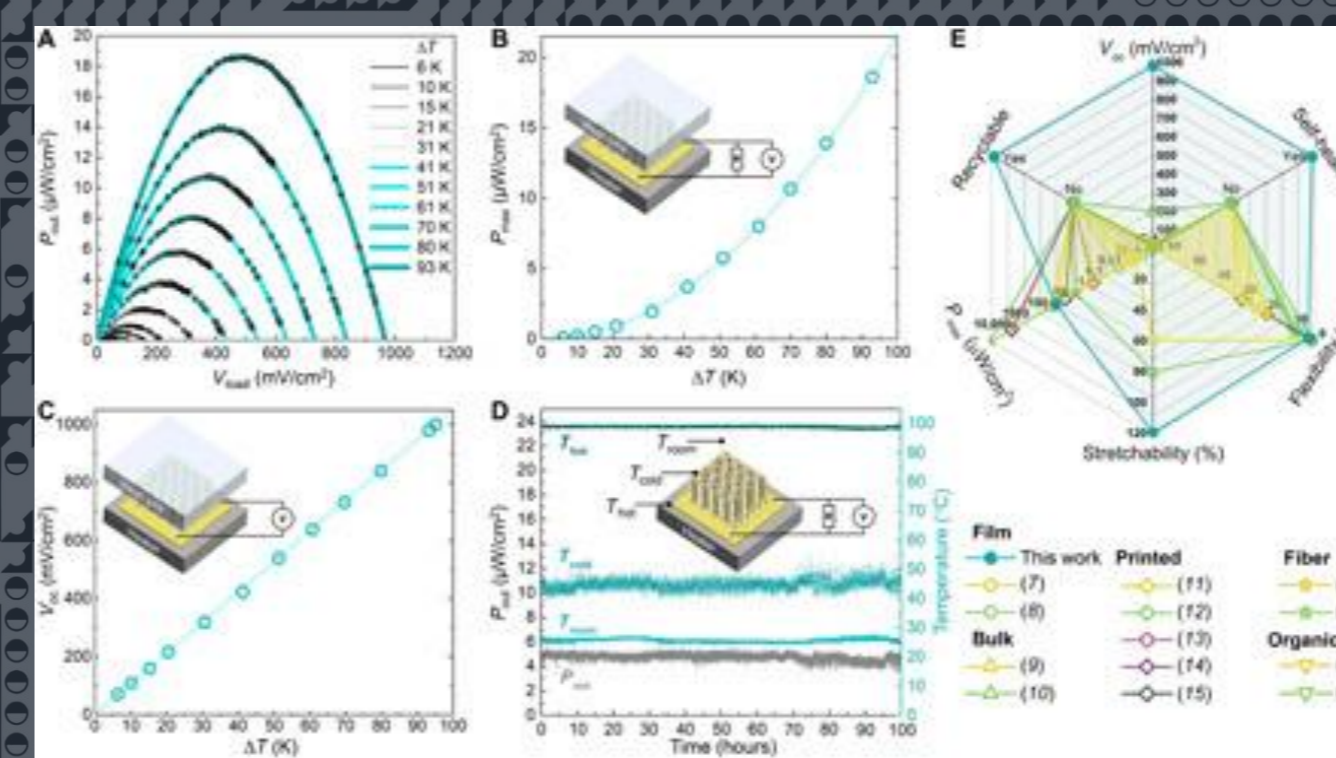
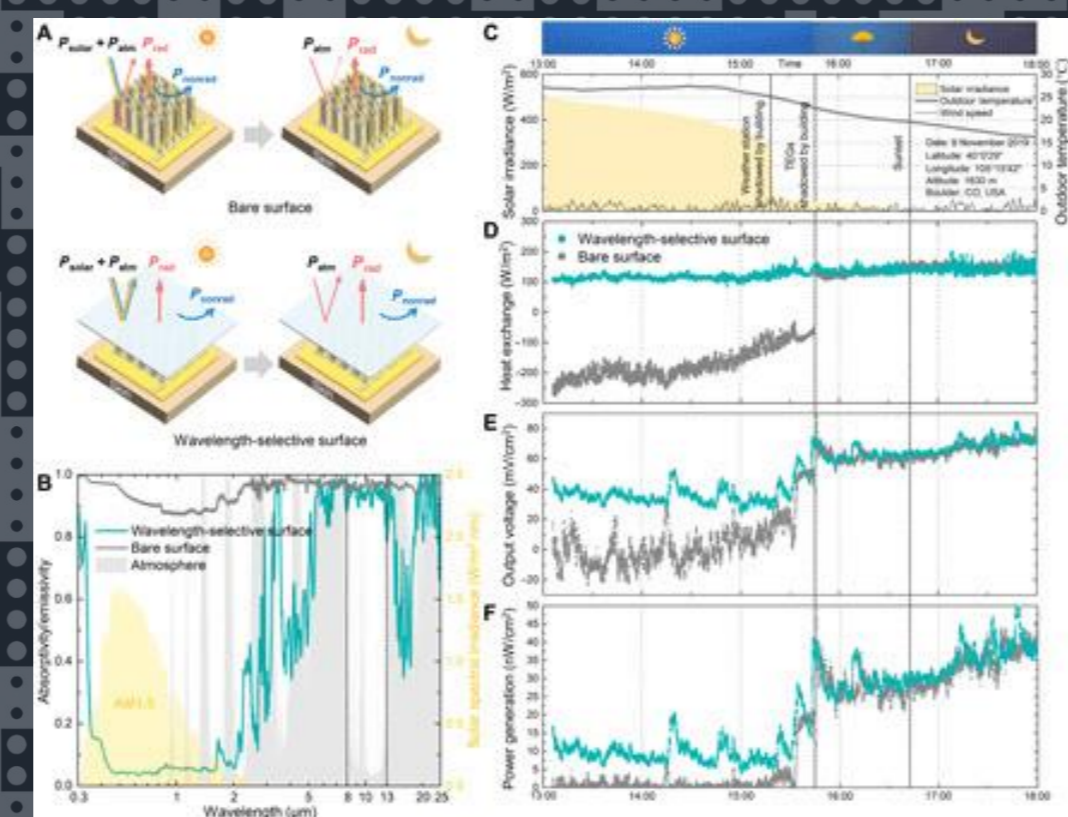
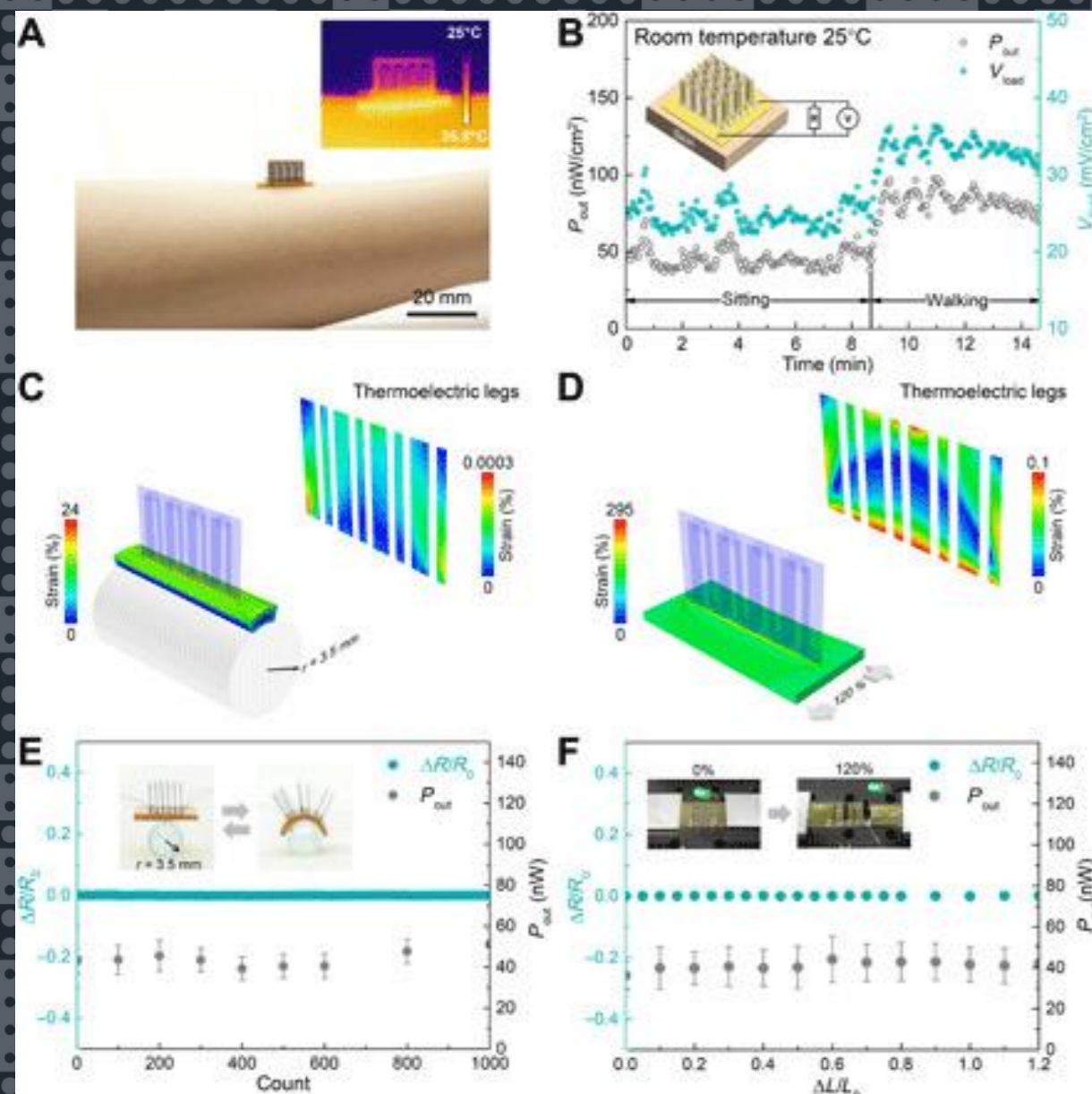
"It's like putting together a bunch of small Lego pieces to make a large structure. It gives you a lot of options for customization." --Jianliang Xiao

Cutting-Edge Scientific Research

Including patented technologies primed for commercialization.

QUANTUM

QUBIT





Go To Market

Start small serving existing manufacturers.

*"Iteratively Learn,
Grow, Engage. X, Y,
and Z."*



Crawl

Serve device manufacturers in a narrow market experiencing blazing hot demand: Open-Source Motion Capture (MOCAP).

Walk

Establish Liquid Metal X as a platform for flexible wearables in multiple industries, with slot-in bring-your-own-chip customization (BYOC) for any part of the body.

Run

Tackle the Healthcare Industry.



Our Solution: Liquid Metal X, Y, and Z

Iterative process for growth.

Crawl

"X" for "Flex"

- Liquid Metal X for serving existing wearables manufacturers seeking customized circuitry solutions.

Walk

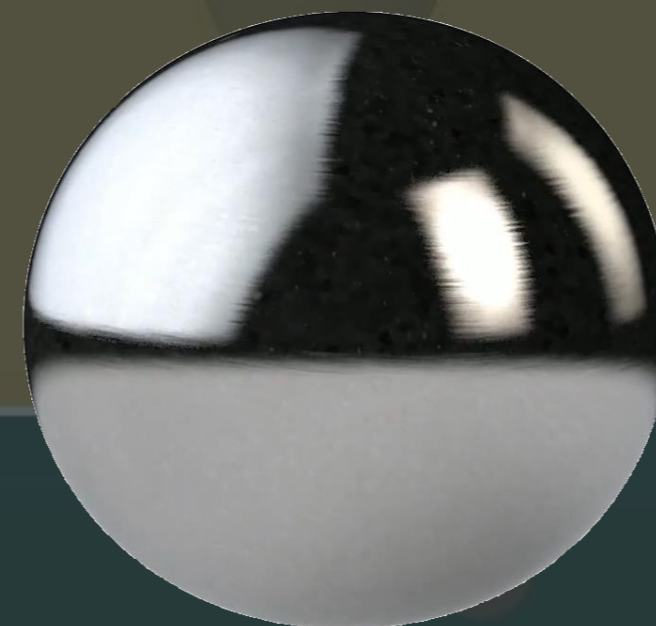
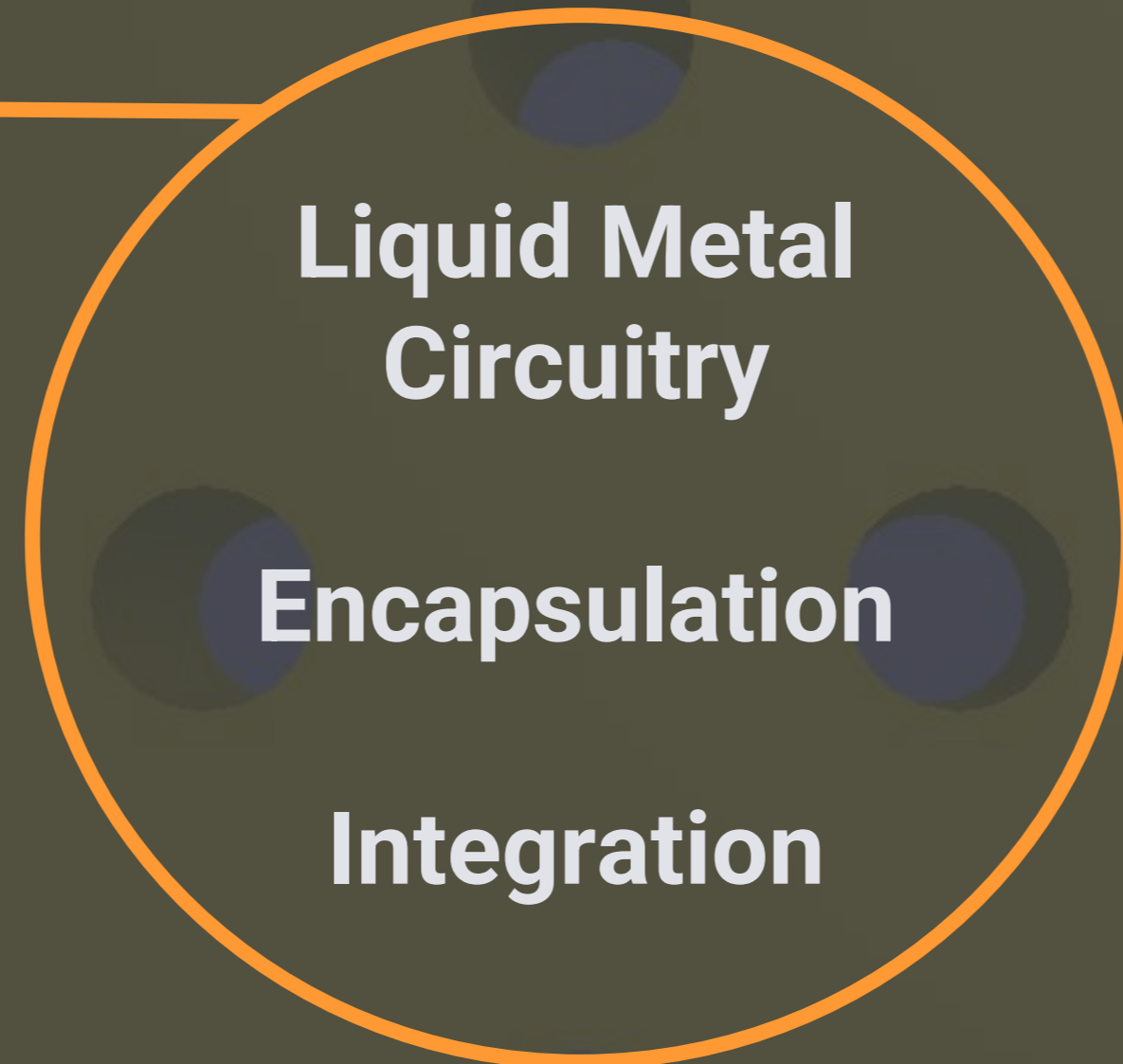
"Y" for "You"

- MOCAP (motion capture) and more.

Run

"Z" for "Zen"

- Customized bio-sensor solutions for your health that move with you.



We will help you design flexible circuitry that can be integrated with any wearable device or existing sensor technology for optimal mechanical and thermoelectric performance.



Markets

X lays the foundation for an entire integrated sales systems in some of the hottest markets.

X (Flexible PCBs)

- The global flexible printed circuits market size surpassed **\$21.81 billion** in 2023 and is projected to reach around **\$56.70 billion** by 2032, rising at a **CAGR of 11.20%**.

Y (MOCAP / VR)

- The global 3D motion capture market is poised to reach **\$484 million** by 2029 and grow at a **CAGR of 7%**.

But MOCAP tech fuels **BIG** businesses:

- The global virtual reality (VR) market size was estimated at **\$59.96 billion** in 2022 and is expected to grow at a **CAGR of 27.5%**.

The live streaming market size reached \$70.2 Billion in 2023 to reach **\$520.7 Billion** by 2032 at a **CAGR of 24.93%**.

Z (Healthcare)

- The global wearable medical device market size was around \$26.80 billion in 2022 and is projected to hit **\$263.93 billion** by 2032, growing at a **CAGR of 25.80%**.

Some of the fastest growing markets in wearable electronics.

“\$500+ Billion: Crazy numbers!”



Case-Study: The MOCAP Market Problem

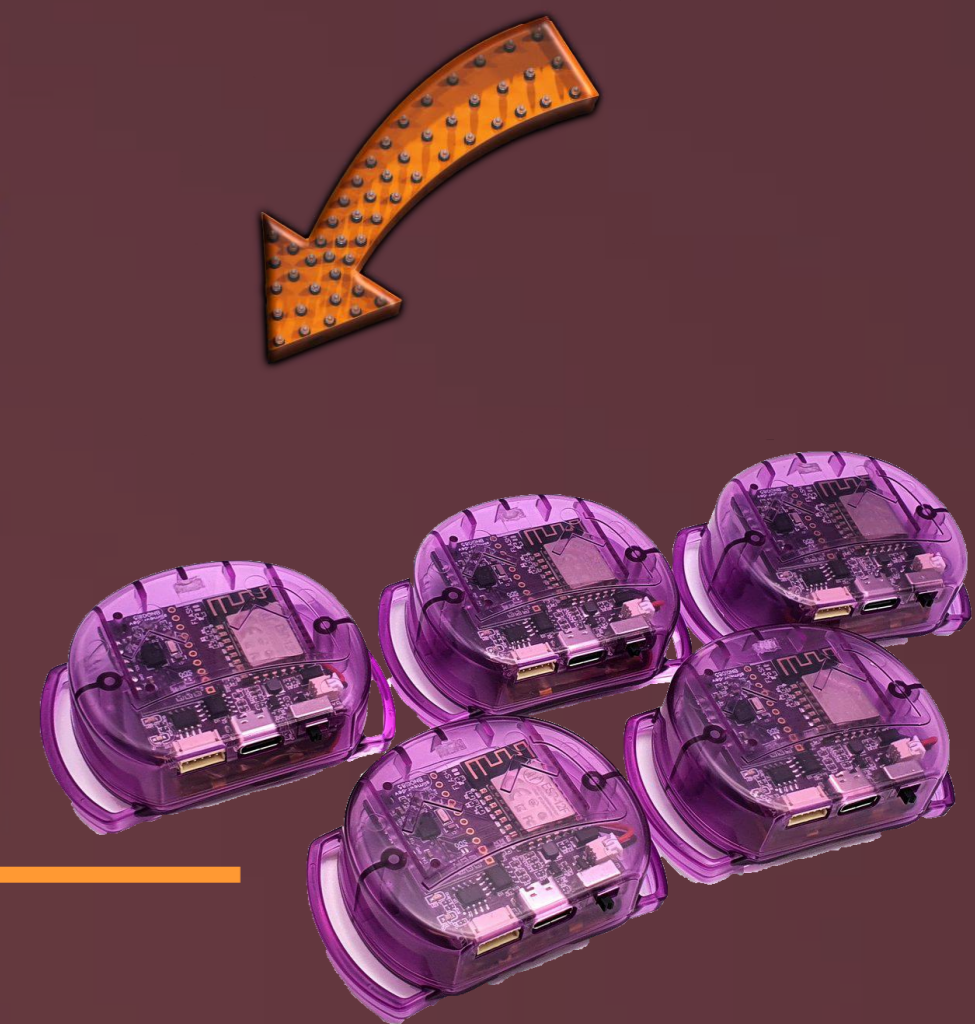
Significant unmet demand for customizable motion capture technology fueled by the rise of open-source SlimeVR protocol.

High demand, low supply. A unique opportunity to become a disruptive newcomer with disruptive technology.



SONY

"Not you, Sony."



"We want more, we want better, and we want now."

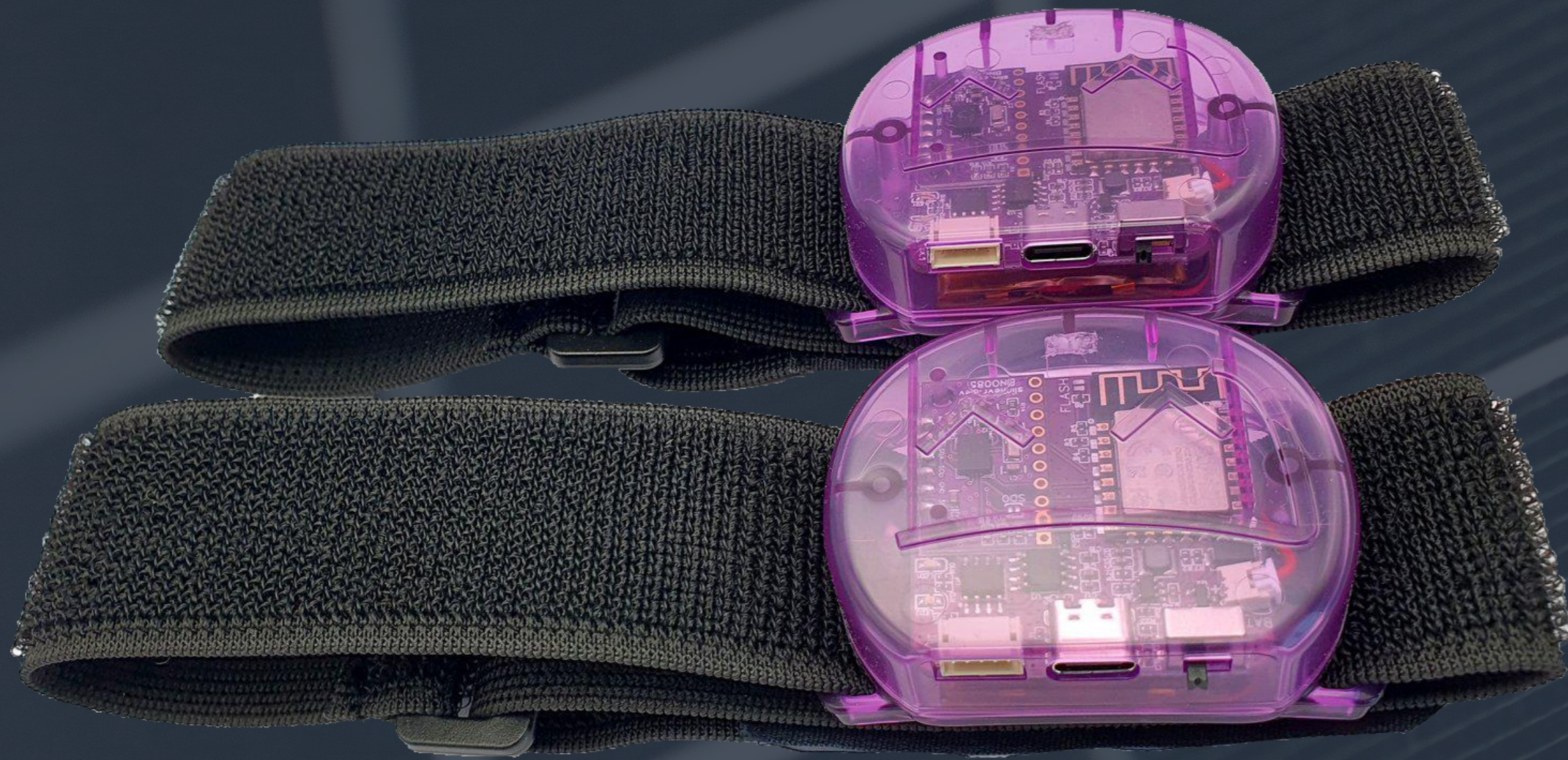




Opportunity

Serve manufacturers that are struggling to keep up with demand for customized motion capture (MOCAP) circuitry and devices.

Manufacturers want to...
Turn This.



Into...
This.





Extensive Market Research

From biggest to smallest.

Players: Sony

Sony's latest MOCAP solution: Mocopi.

Mocopi

- **Aesthetic** product design, caters to non-professionals.
- Expensive compared to SlimeVR trackers (\$400).
- Poor results, suffering from serious drift and frequent calibrations.
- Lacking open-source compatibility (people are hacking them to work with other open-source platforms).
- No tracking for hands, feet, face. Mostly closed system.

The Edge

- Cater to the **non-professional market** with **easy-to-use, pleasing-to-the-eye** MOCAP products for consumers, but built with an **open non-proprietary** software system (such as leveraging existing **open-source** SlimeVR).
- Up the ante with customizable **premium IMUs** and smaller-footprint hardware.
- **Integrations** galore.



Sony

Players: XSENS

The gold standard in motion capture technology.

Corporate defenders Xsens users

So you don't use your Xsens motion capture suit anymore because you don't want to pay 500\$ per month everytime you need to export a few .fbx files? **Yes**

Parent Company Movella

- For Professionals with BIG budgets.
- The Adobe of the MOCAP world (every move is made to cement the user into an elaborate (and expensive) sales system for life).
- April 2024 Movella listed on OTC Pink Market (after their stock MVLA tumbles 99% off all-time highs).



Customer Feedback

- A pattern of making steep changes to license pricing.
- Failure to innovate.
- Growing presence of AI competitors.
- Capping the amount of data a license can reprocess.
- Poor communication with its customers.

NOW's Time to Move into their Market

- Significant opportunity to enter and **eclipse the MOCAP market leader for professionals** (and 2nd in line!). Significant revenue potential.
- Backed by innovative new Liquid Metal solutions, cost-savings, open-source tech, and community to fuel development (and **create happy customers**).

XSENS*

Players: Obskur

Bought by (guess who?): Movella.

lonelady75 • 8mo ago

Following cause I'm in the same boat

I have been watching slime and obskur closely -- obskur is the one I'm most hopeful about because I really do want gloves. But yeah, you're right, they are being weirdly stupid about locking their hardware to their own software. No one is buying their hardware because no one wants to stop using the software they are using. Like Obskur appears to be trying to replace OBS, which is dumb as all hell. OBS is free and ubiquitous and works with pretty much everything. If Obskur would just get off their weird and stupid path and make it so people could actually use their product, I think it would take off, but the way it is right now, even people like fofamit who have an obskur just aren't using it because they are being so weird by locking it to their own system.

A One-Stop Non-Stop Sales System

- OBSKUR is a broadcast software platform that gives content creators user-friendly tools to deliver interactive experiences during livestreams on well-known streaming sites such as Twitch.
- The power of Unreal Engine 5 built-in Character Creator, User Generated Content Marketplace, and Stream Analytics all in one.

The Edge

- Liquid Metal offers the opportunity to use **mesh sensor systems** for accurate real-time and difficult-to-track movements backed by **curated open-source solutions** and the thriving community built around it.

Obskura*

Players: Rokoko

2nd to XSENS. Top contender for Movella market share.

r/Rokoko • 1 yr. ago
Worth Ability_3808
I Hate My Rokoko Suit

Customer Feedback

- We did try to use one and it was horrible. It had technical issues from day one.
- The animation was imprecise at best, completely broken at worst.
- We wasted several months of production on this and didn't get a single second of usable animation out of it.
- Finally we gave up.

BrokenStrandbeest • 8mo ago
Very expensive, flakey piece of crap. I just get angry when I see it hanging, unused.

The Edge

- Liquid Metal circuitry and **perfect chip selection** leads to considerable **cost savings**, with **customizable designs**. With the second in line failing hard, it's a great time to move in this space. With **considerable margin** to work with.

Rokoko

Players: Stretch Sense

Owned by (guess who?): Movella.

Bulletproof on shoots

Designed for all-day shoots capturing high action scenes.

- Performer setup in under a minute
- 8 hour battery life
- Free and comfortable movement
- Robust and durable (machine washable)
- 65ft+ Bluetooth range and on-glove SD card
- Capture up to six performers at once

\$2,995 Gloves: Ouch

- Proprietary end-to-end super sales system.
- With the Movella kingdom crumbling, now is the time to MOVE.
- Significant market share up for grabs and significant margins to work with.

The Edge

- Liquid Metal offers the opportunity to use **proprietary mesh systems** for accurate real-time representations of difficult-to-track movements (including fingers).
- Create a more effective, less costly **glove** or glove-less system.

Stretch Sense*

Players: HaritoraX

Middle of the road DIY solution similar to SlimeVR.

Customer Feedback

- HaritoraX is the name of the motion tracking device produced by Shiftall, a subsidiary of Panasonic based in Japan.

- Good: It's a good price for tracking.
- They work as you expect.
- You need to calibrate often.

- Bad: Bluetooth problem.
- The setup and the manual can be complicated.

Pricing

- HaritoraX 1.1B **\$199**
- HaritoraX Expansion set for elbow tracking **\$99**
- HaritoraX Expansion set for hip tracking **\$49**

The Edge

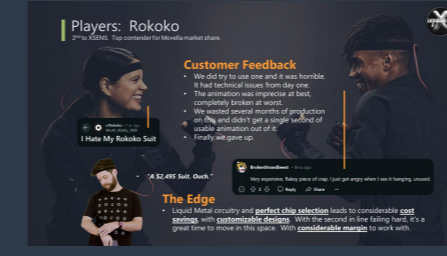
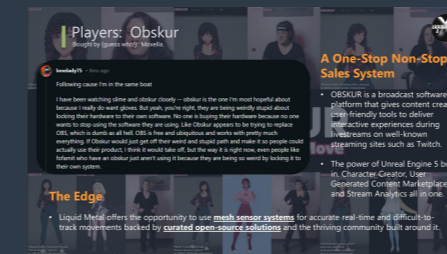
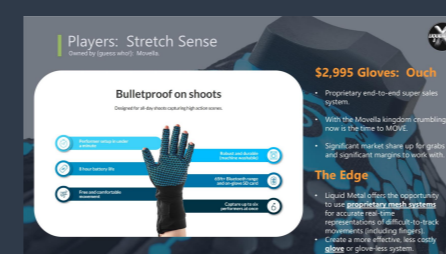
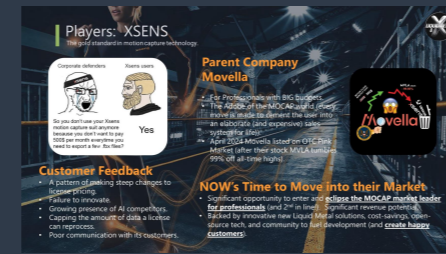
- **Better hardware, simplified process, circuitry supremacy, community, compatibility, accuracy.**
- A **stateside** MOCAP solution.

HaritoraX



MOCAP Players

From biggest to smallest.



Sony

Movella

Rokoko

HariToraX

SlimeVR

Liquid Metal X

Costs

\$400

\$3k-\$15k

\$2500

\$200

\$195

TBD

Unmet Demand



Bring-your-own-Chip (BYOC)



Made for MOCAP market



Open-Source





Value Proposition

For your health, capturing motion, livestreaming, and virtual reality. "Y" is for "You."

Wireless

- Our Liquid Metal technology allows you to place discrete sensors (including Inertial Measurement Units (IMUs) anywhere on the body.

Suit-less

- Get pinpoint precision without bulky proprietary suits that can cost upwards of \$15,000.
- Animate your world and enter a new one.

Camera-less

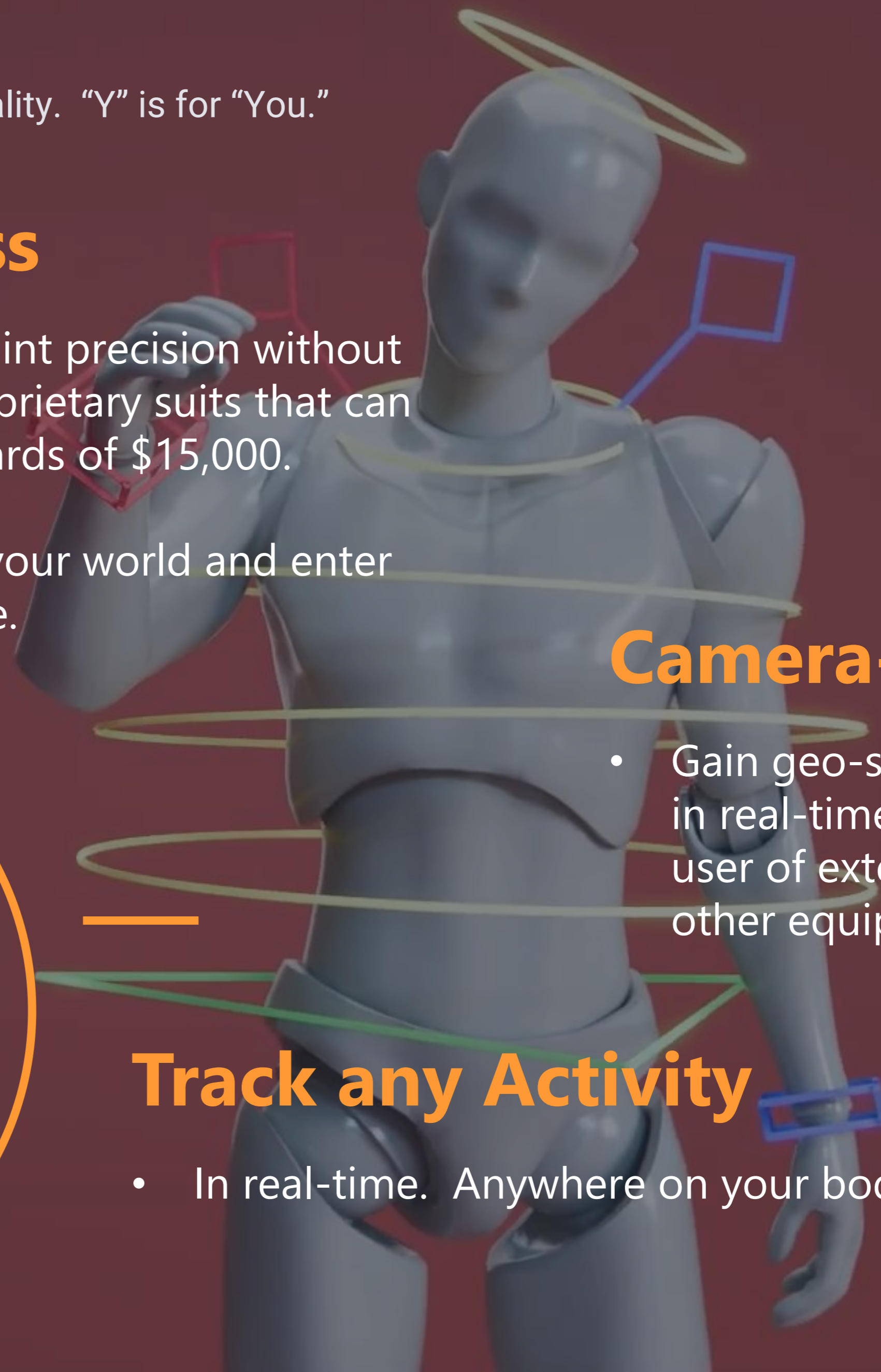
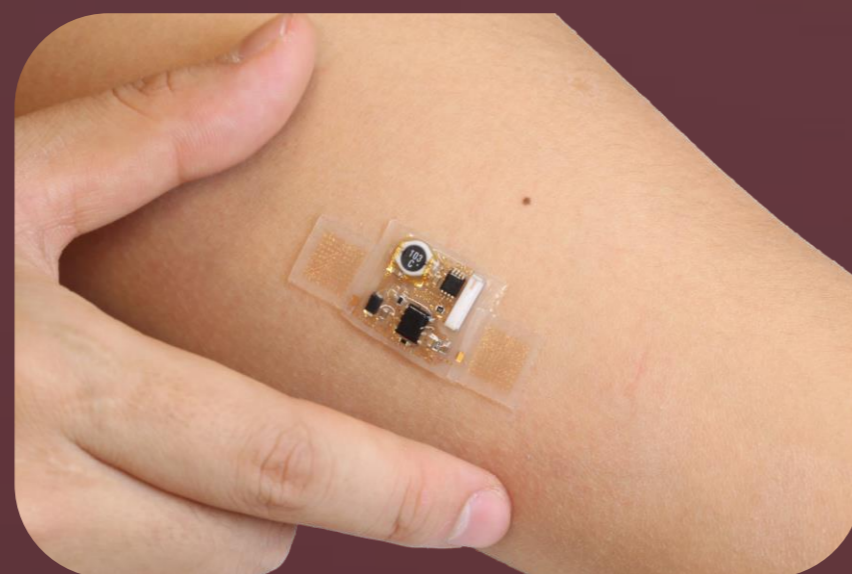
- Gain geo-spatial awareness in real-time without the user of external cameras or other equipment.

Track any Activity

- In real-time. Anywhere on your body.



**Flex
the new "YOU!"**

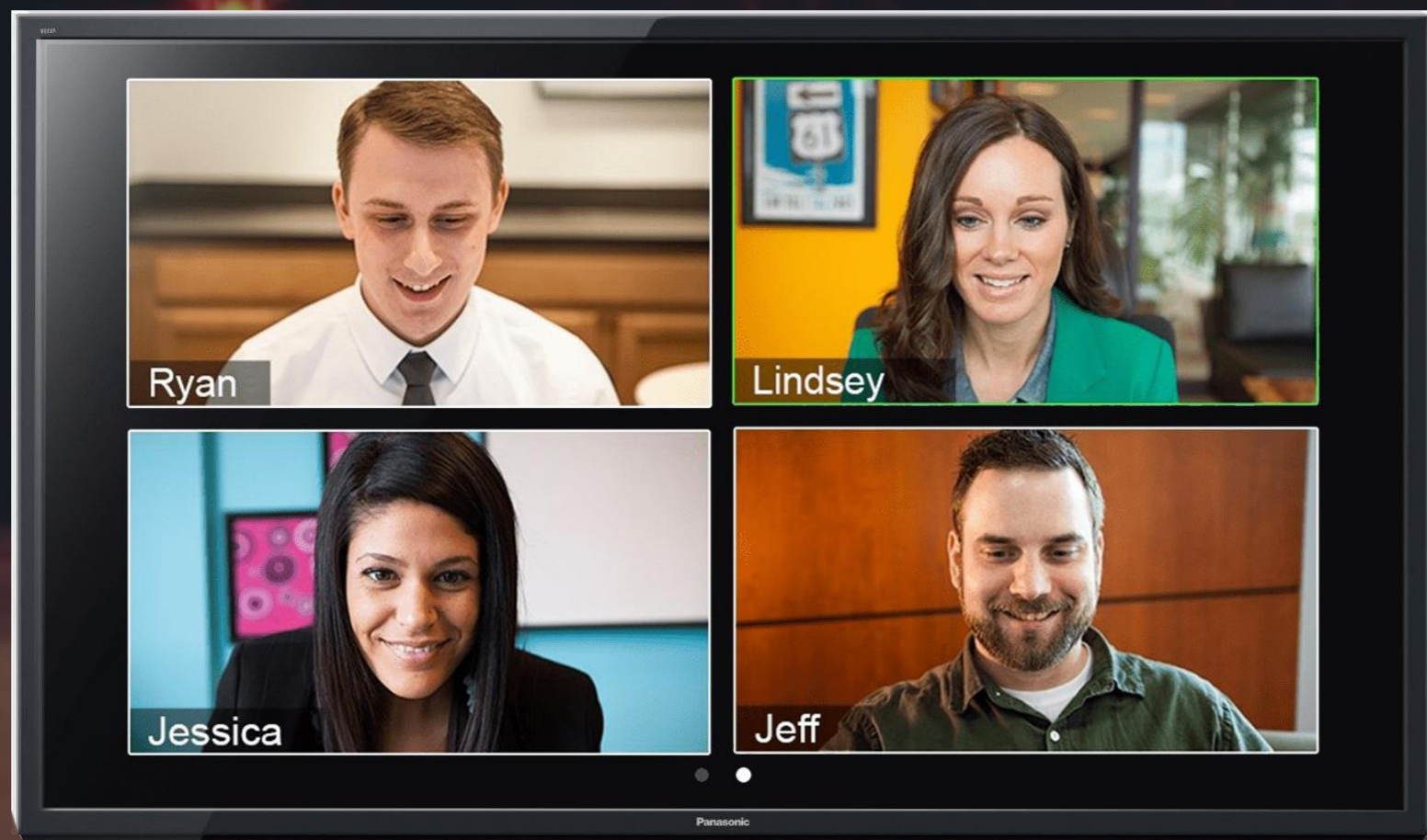




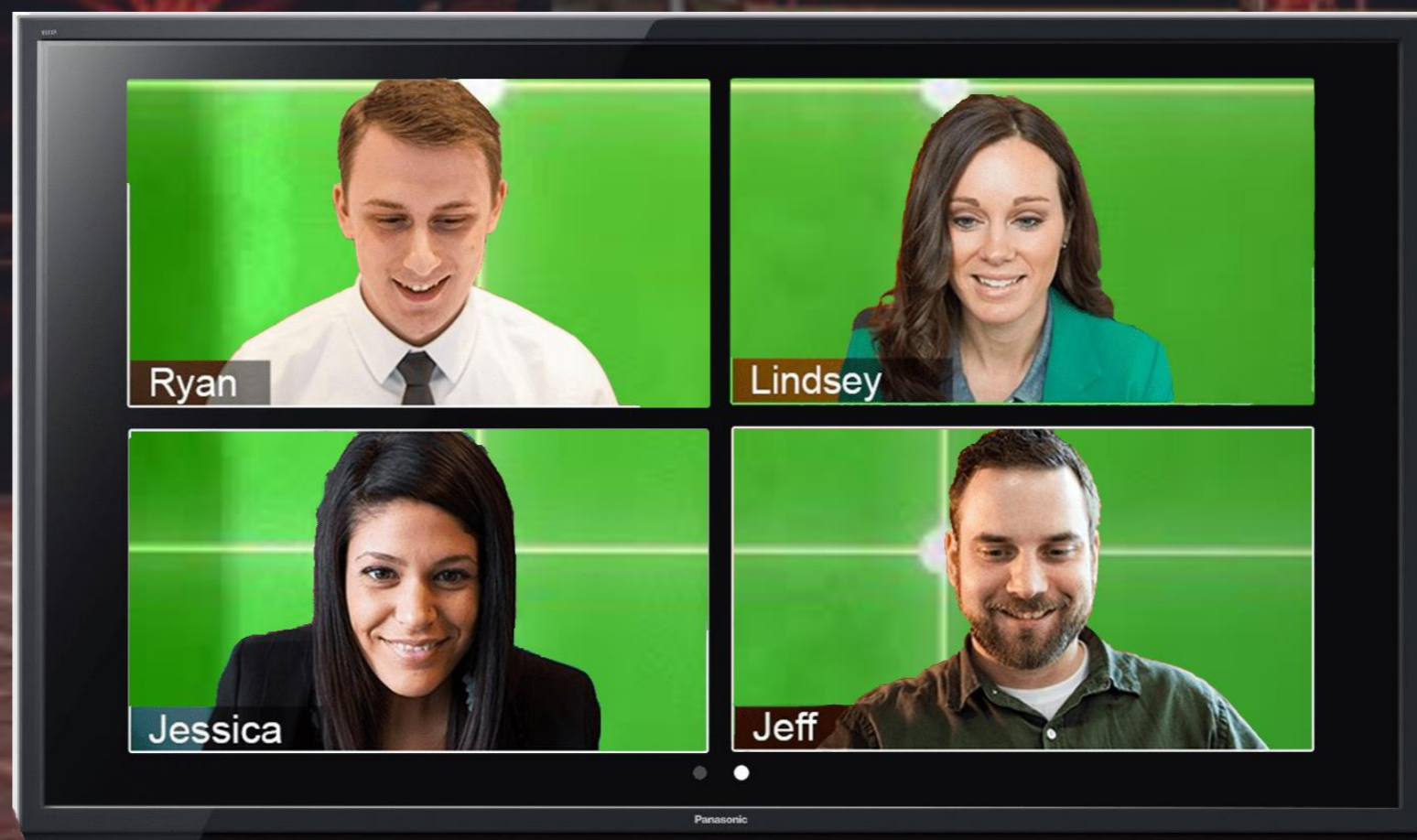
Why Is MOCAP A Big Deal?

Motion capture technology is paving the way towards full-body digitization.

Before



Now



The Next Frontier



Virtual Spaces

Yeah!

VP LAM 

The "\$10,000,000 Studio."

Not A

Real

Office



Become the Virtual "YOU"

OH yeah!

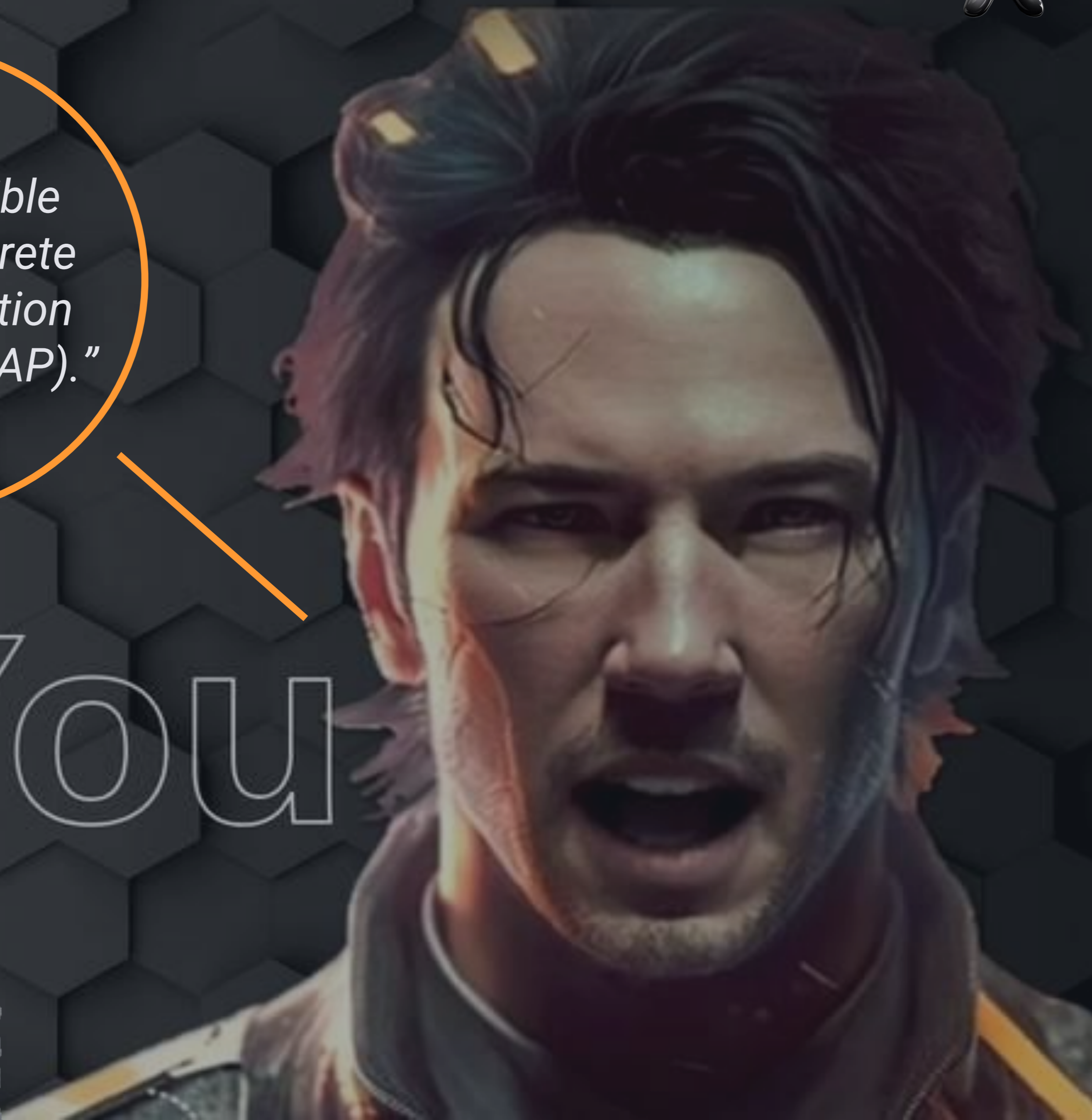
"Made Possible Through Discrete Full-Body Motion Capture (MOCAP)."

"Brought to you by the Future of Flex."

Virtual You

A virtual version of you

[Details about the service →](#)



Design Philosophy

Codename: Chordotonal.



"The Future of Flex"

Inertial Motion Tracking Inspired by Nature

- Johnston's organ, a large chordotonal organ exclusively in insects and crustaceans that is exquisitely sensitive to near-field acoustic signals.
- Described as stretched between two points like a string, they listen through resonance.

Sensory Neurons Respond to Being Stretched

- Similar to how insects listen to each other and their surroundings. Through organs that accurately measure motion through sensory stretching.





Liquid Metal Y (MOCAP)

A gateway into the world of realistic digital livestreaming.



Turn This.



Into This.



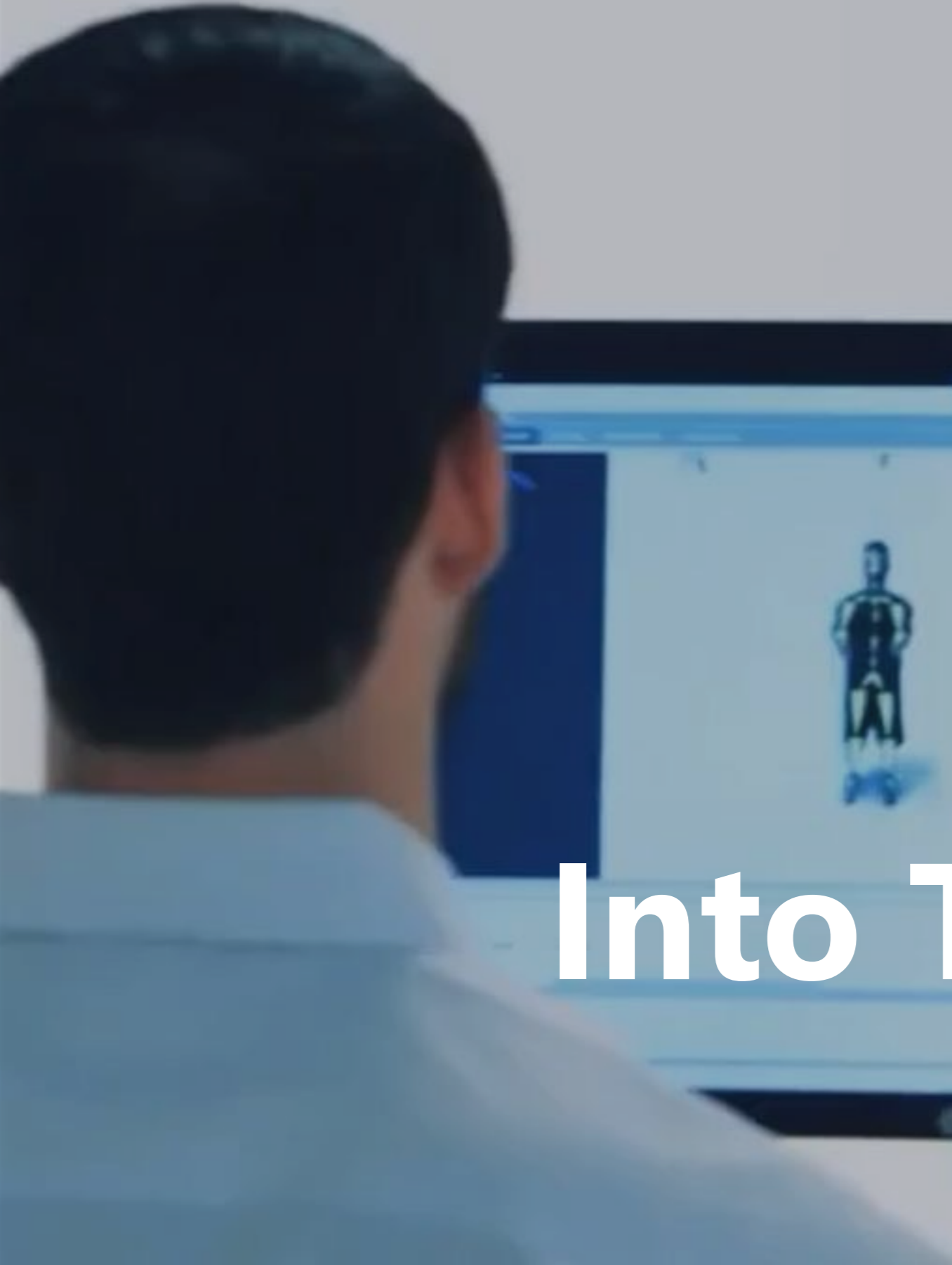
Liquid Metal Y (“You”)

Realistic motion capture for rehabilitation.

And This.



Into That.





Liquid Metal Y ("You")

Join the pro sports elite through cutting edge technology.

You Flex.

We Flex.



Off to the Races

Now is the time to seize this unique market opportunity.

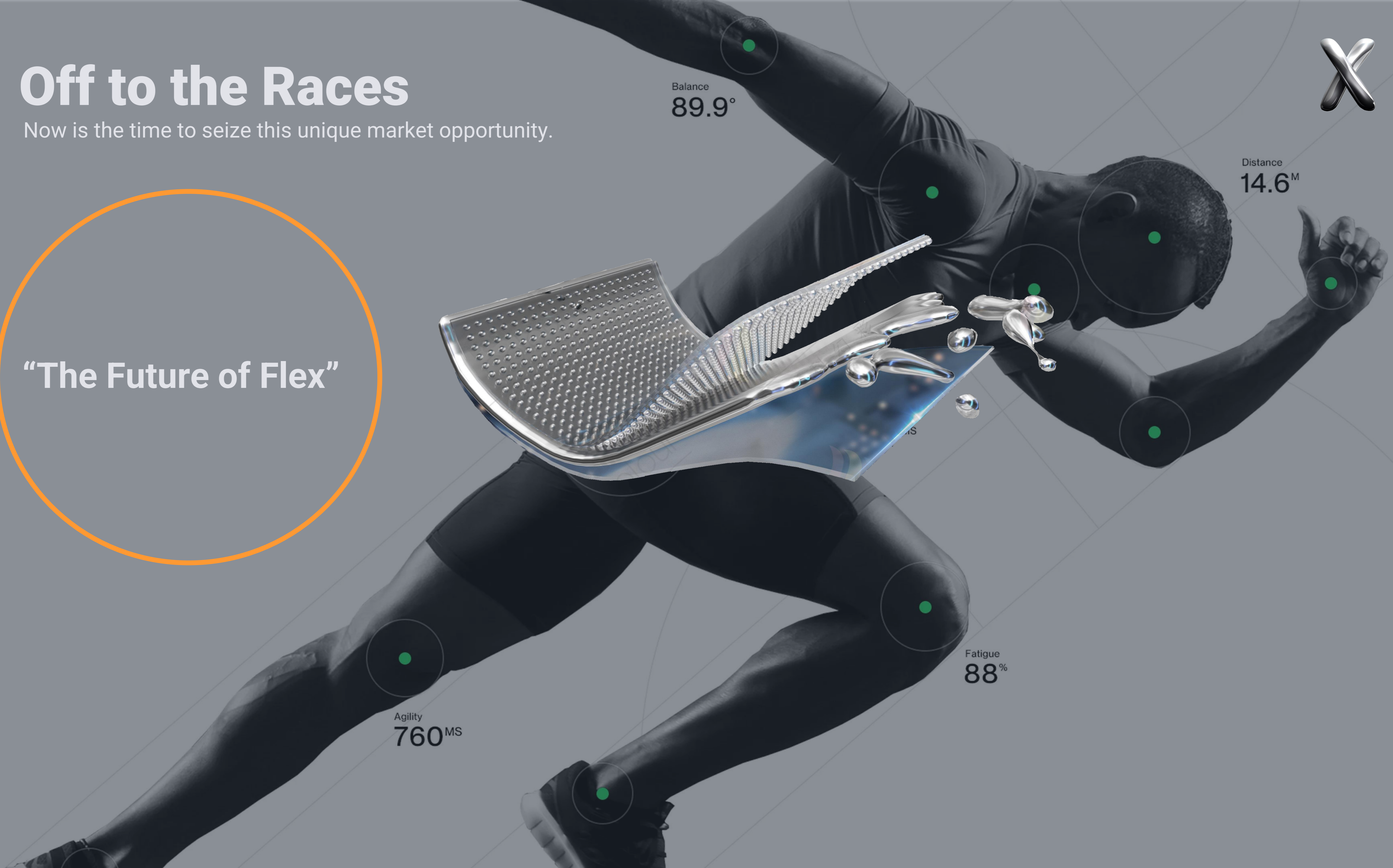
“The Future of Flex”

Balance
89.9°

Distance
14.6^M

Agility
760^{MS}

Fatigue
88%





Why Open-Source?

Open-source for wearable tech is growing (not only on the software front).

“Open-Source Offers Us the Opportunity to Learn, Grow, Serve, and Engage.”

Engage with Community

Tap into large communities and grow our own starting on Day 1.

Foundation for Growing Our Own Software Solution

Motion makes math, math makes data, data makes software.

Perfectly-Paired Hardware/Software Solution

Crowd-funded Slime VR raised over \$3 million at the end of 2021.



“Maker” Marketplaces

Makers take Plug ‘n Play 3rd-party components and turn them into finished products. A growing industry for wearables across the board.

Maker Marketplaces, Endless Customization:

Inertial Measurement Units

Makers (Inertial Measurement Units) are available at Mouser Electronics from industry leading manufacturers. Mouser is an authorized distributor for many IMU manufacturers including ACEINNA, Analog Devices, Bosch, MicroStrain by HKB, Movelva, Murata, STMicroelectronics, TDK & more. Please view our large selection of inertial measurement units below.

Products (486) | Datasheets | Images | Newest Products

Results: 186 | Smart Filtering

Applied Filters: Sensors | Motion & Position Sensors | IMUs - Inertial Measurement Units

Manufacturer	Mounting Style	Package / Case	Sensor Type	Interface Type	Output Type	Acceleration	Resolution	Sensitivity	Minimum Operating Temperature	Maximum Operating Temperature	Supply Voltage - Min	Supply Voltage - Max	Operating Supply Current	Packaging	Qualification	Series
STMicroelectronics	Chassis Mount	138 mm x 25 mm 15 mm x 11 mm	3-axis 9-axis	CAN, Ethernet, UART, USB-C	Analog and Digital	0 g 1.7 g	0.02 mg 0.05 mg	70 294 ndeg/s/LSB 0.061 mg/LSB, 0.122 mg/LSB, 0.244 mg/LSB, 0.488 mg/LSB, 0.976 mg/LSB	-55 C -40 C -30 C -25 C	+85 C +105 C +110 C +125 C	1.2 V 1.7 V 1.71 V 2.16 V 2.4 V 3 V 3.15 V 3.2 V 3.3 V 4 V 4.5 V 4.6 V 4.75 V 4.9 V	3.45 V 3.0 V 3.63 V 5.2 V 5.25 V 5.5 V 16 V 24 V 32 V 34 V 36 V	2 uA 130 uA 160 uA 170 uA 200 uA 300 uA 300 uA 351 uA 550 uA 650 uA 670 uA 685 uA 750 uA 880 uA	Bulk Cut Tape MouseReel Reel Tray	AEC-Q100	3DM-GV7 ADIS16362 ADIS16364 ADIS16365 ADIS16375 ADIS16445 ADIS16460 ADIS16465 ADIS16467 ADIS16470 ADIS16475 ADIS16477 ADIS16480 ADIS16487 ADIS16488A ADIS16489

Search within results

Part # / Keyword

In Stock Active RoHS Compliant

Normally Stocked New Products

Buy Selected | Compare Selected (up to 20)

Select	Image	Part #	Mfr.	Description	Datasheet	Availability	Pricing (USD)	Qty.	RoHS	ECAD Model	Mounting Style	Package / Case	Sensor Type	Interface Type	Output Type	Acceleration	Resolution	Sensitivity
<input type="checkbox"/>		Mfr. Part # 3DM-CVT-INS Mouser Part # 130-3DM-CVT-INS	MicroStrain by HKB	IMUs - Inertial Measurement Units	Datasheet	17 In Stock	1-\$1,087.85 \$-1,083.22 10-\$1,042.72	Min: 1 Mult: 1		3D Model	Chassis Mount		3-axis	UART, USB	Digital	16 g		
<input type="checkbox"/>		Mfr. Part # 3DM-GV7-AHRS Mouser Part # 130-3DM-GV7-AHRS	MicroStrain by HKB	IMUs - Inertial Measurement Units REQUIRED: 6212-0031, 6212-0032, 6212-1200	Datasheet Product Comments	8 In Stock	1-\$1,555.81 \$-1,530.35 10-Quote	Min: 1 Mult: 1		Request Free CAD Models	Chassis Mount	35.6 mm x 35.2 mm	3-axis	RS-232, USB	Digital			
<input type="checkbox"/>		Mfr. Part # 3DM-CVT-VRU Mouser Part # 130-6555-7250	MicroStrain by HKB	IMUs - Inertial Measurement Units IMUs - Inertial Measurement Units High Performance GNSS Navigation Sensor, OEM Package	Datasheet	1 In Stock	1-\$977.50 \$-962.15 10-\$949.39	Min: 1 Mult: 1		Request Free CAD Models	SMD/SMT		3-axis	Serial, USB	Digital	8 g	0.05 mg	
<input type="checkbox"/>		Mfr. Part # 3DM-CVT-AR Mouser Part # 130-3DM-CVT-AR	MicroStrain by HKB	IMUs - Inertial Measurement Units High Performance OEM IMU/VRU	Datasheet	89 In Stock	1-\$908.30 \$-894.52 10-\$883.06	Min: 1 Mult: 1		Request Free CAD Models	Chassis Mount		9-axis	UART, USB	Digital	0 g		
<input type="checkbox"/>		Mfr. Part # 3DM-CVT-AHRS Mouser Part # 130-3DM-CVT-AHRS	MicroStrain by HKB	IMUs - Inertial Measurement Units High Performance OEM IMU/AHRS	Datasheet	65 In Stock	1-\$977.50 \$-962.15 10-\$949.39	Min: 1 Mult: 1		3D Model	Chassis Mount		3-axis	UART, USB	Digital			
<input type="checkbox"/>		Mfr. Part # ICM-40627 Mouser Part # 410-ICM-40627	TDK InvenSense	IMUs - Inertial Measurement Units Highly accurate MEMS based motion sensor with bundled Air Motion algorithm for pointing and motion control	Datasheet	5,655 In Stock	Cut Tape 1-\$9.59 10-\$4.57 100-\$3.72 250-\$3.42 500-View Reel 3,000-\$2.54	Min: 1 Mult: 1 Reel: 5,000		PCB Symbols, Footprints & 3D Model	SMD/SMT	LGA-14	6-axis	I2C, SPI	Digital	2 g, 4 g, 8 g, 16 g	16 bit	16384 LSB/g

The core feature of our technology for commercialization:

“lots of options for customization.”

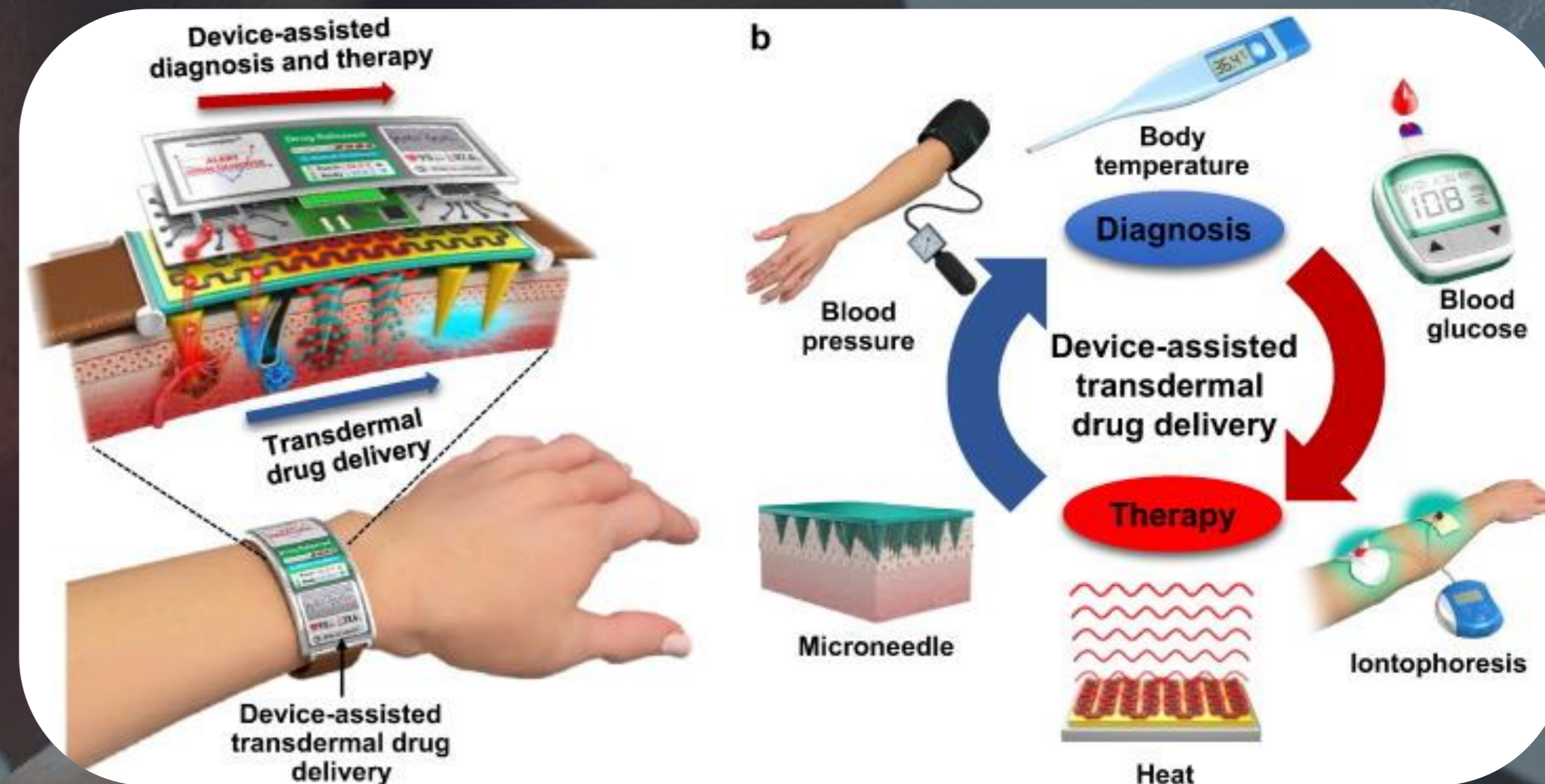
A slot-in flexible circuit design for sensor placement is a dream come true for the “makers” of next-gen wearables.

Run: Liquid Metal Z (“Zen”)

Pioneer innovations in wearable tech for the healthcare industry.

Bio-sensors that can detect cytokine storms and more.

“The ability to place sensors anywhere on the body will usher in a new era of targeted treatment.”

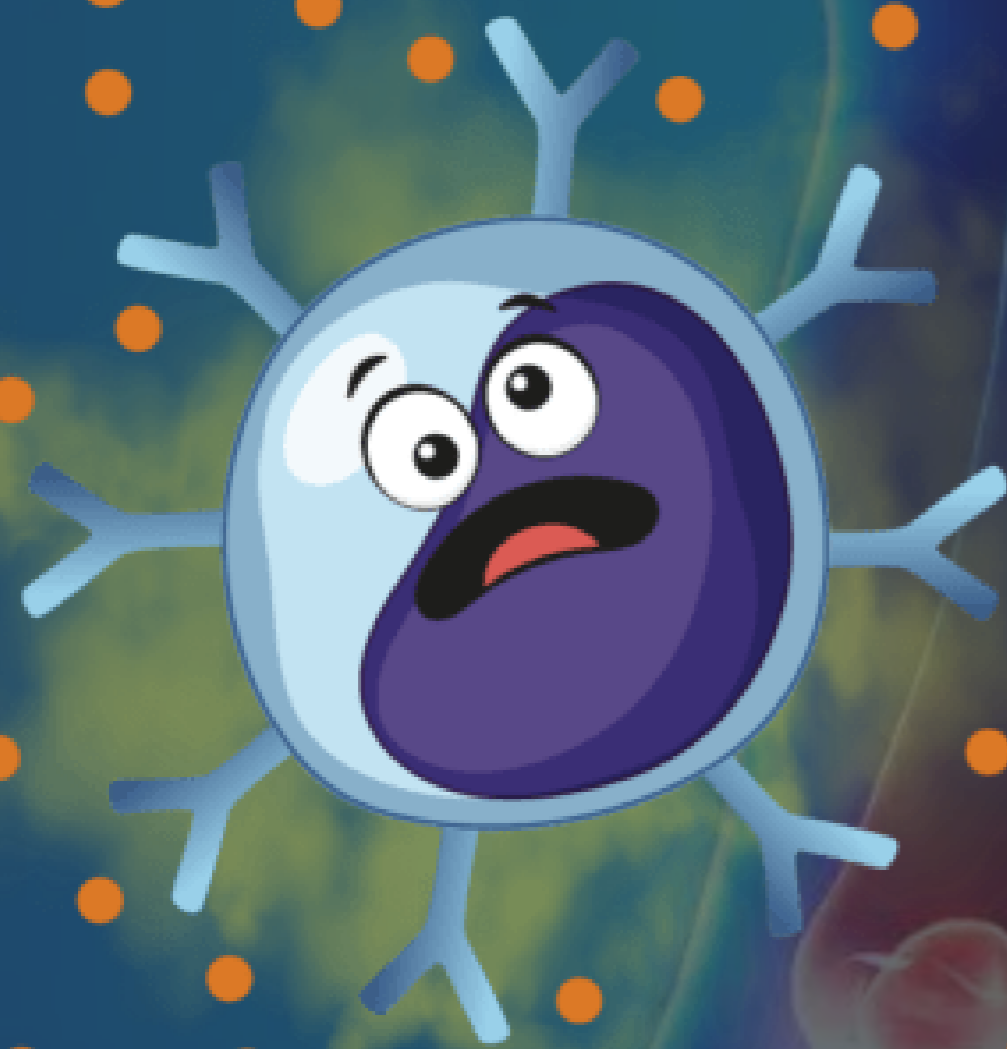




Fighting Inflammation

Pioneer innovations in wearable tech for the healthcare industry.

The Fight Against Inflammation



The fight against inflammation is the next frontier in flexible bio-sensors.



Researchers at the University of Texas and EnLiSense, have developed a skin sweat sensor that can measure cytokine levels continuously.

Liquid Metal Digital

Leveraging free and open-source technology for slick digital experiences.



*We're in it to
win it!*

INNOVATION OF SEMICONDUCTOR

반도체 혁신

Based on the invention of transistors and the highly-integrated circuits, semiconductors have become the foundation for the modern electronics industry as an indispensable part of our lives. Semiconductors are not only leading the future industry, but also continuously evolving for quality of life.

반도체는 현대 산업의 기초가 되고, 우리 생활의 질을 높여줍니다. 반도체는 미래 산업을 주도하는 것은 물론, 가치 있는 삶의 질을 위해 끊임없이 노력하고 있다.

Thanks!

The Mobile Age

모바일 시대



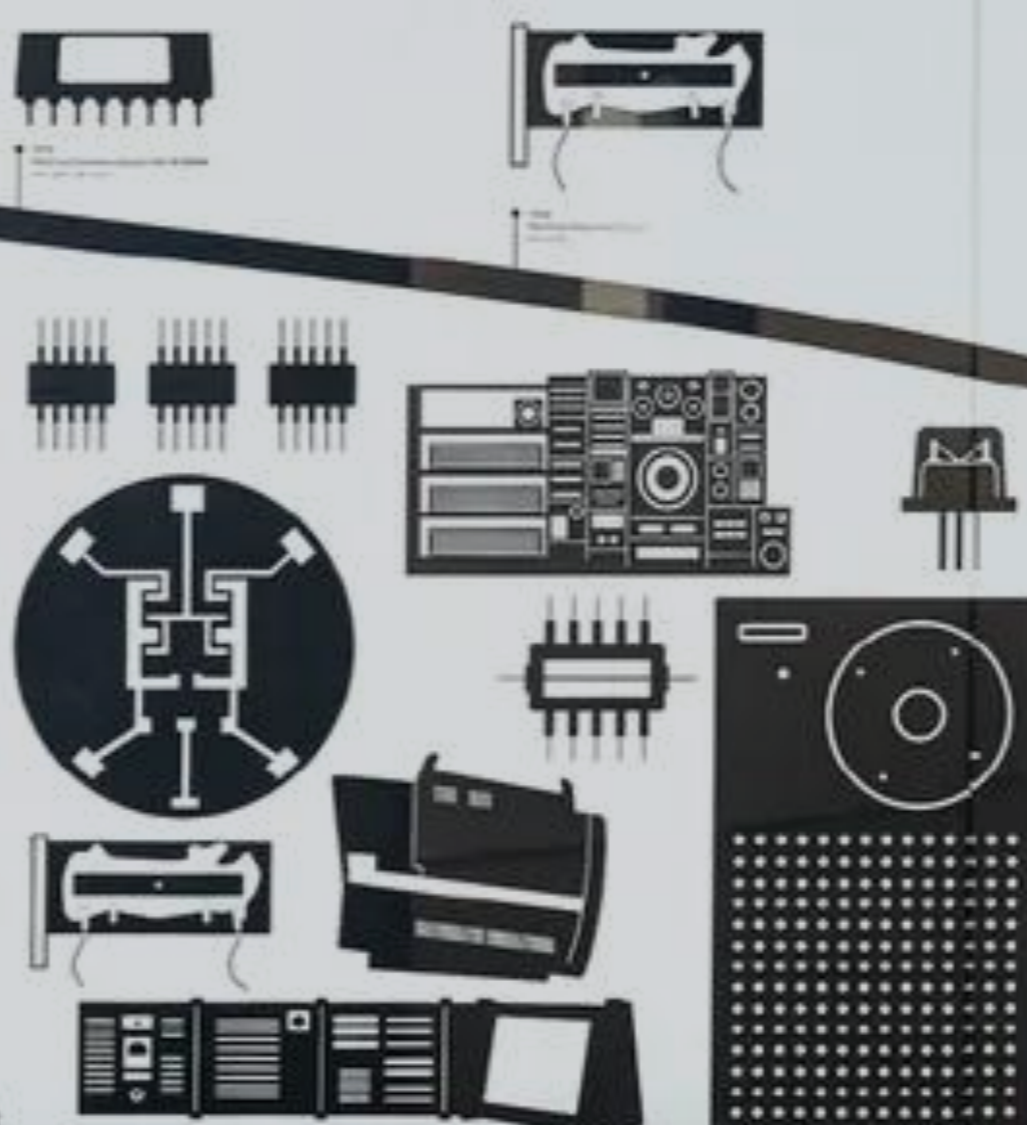
The Age of the PC

PC 시대



The Age of the Integrated Circuit

집적회로 시대



The Age of the Transistor

트랜지스터 시대

