



Remote Training for Technicians

2024

NVRT LABS

NVRT Labs is an XR software company focused on the creation of highend immersive content to train technicians and students on various maintenance, troubleshooting, and repair procedures. NVRT Labs provides customized content development services and turnkey hardware solutions to technician workforces, device manufacturers, educational institutions, and service organizations looking to scale their service capabilities and streamline their training budgets.

Combining in-house XR development talent with proven, proprietary design methodologies, NVRT has created the formula to produce meaningful XR training content that develops real-life competencies.



Matthew Bassuk

FOUNDER & CEO
MBASSUK@NVRTLABS.COM



Aaron Hanna

CHIEF TECHNOLOGY OFFICER
AARON@NVRTLABS.COM



Who We Work With:

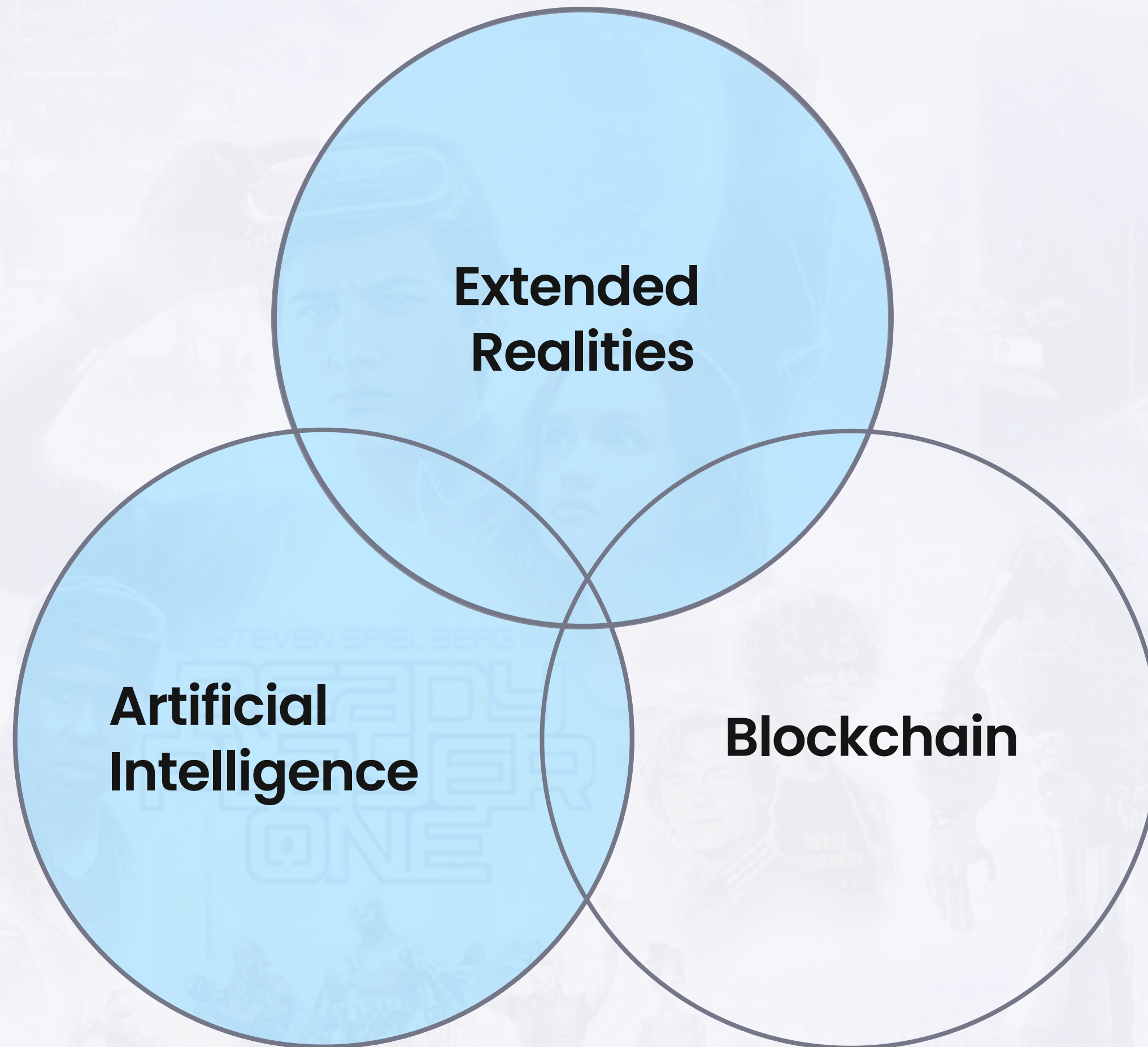


And More...



What will the future bring?

Web3

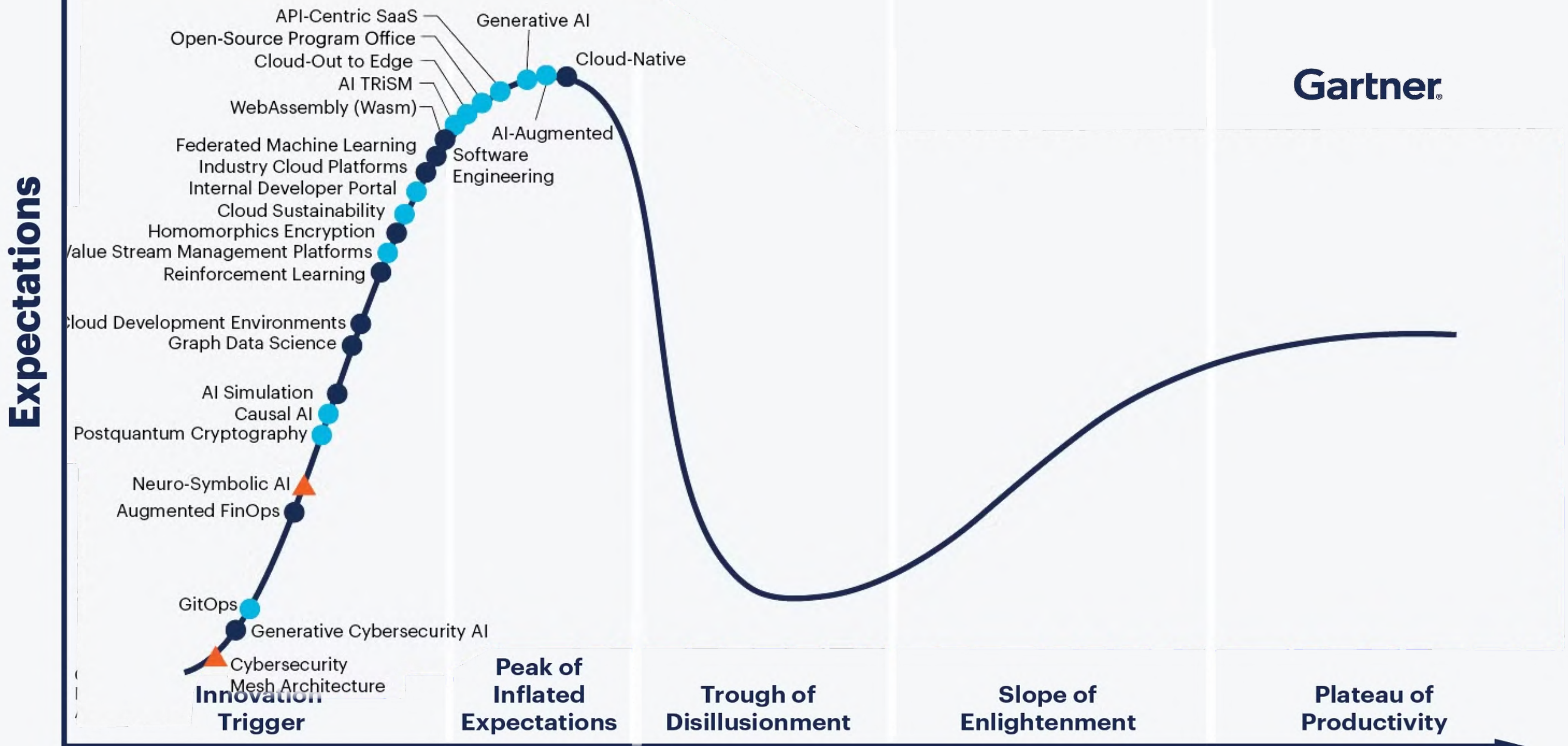


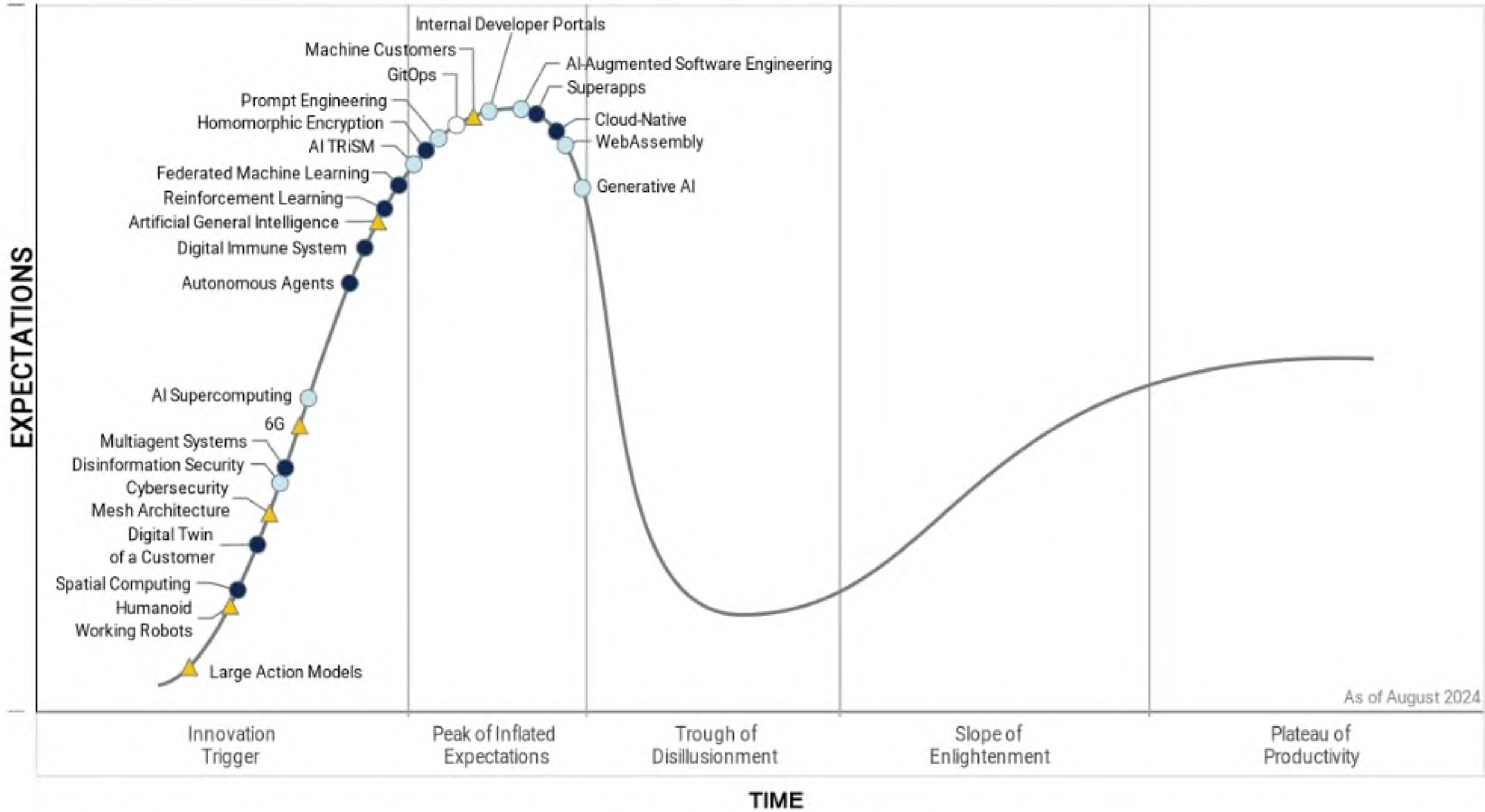
**Extended
Realities**

**Artificial
Intelligence**

Blockchain

Hype Cycle for Emerging Tech 2023





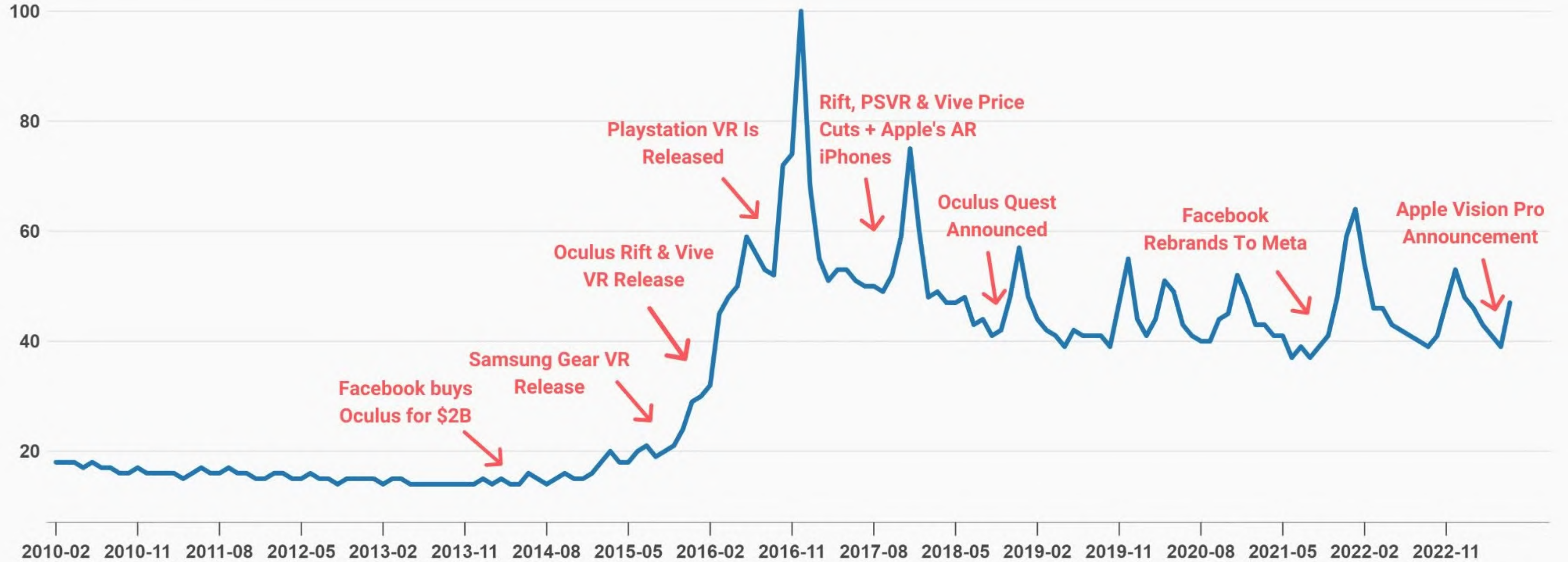
Plateau will be reached: ○ <2 yrs. ● 2-5 yrs. ● 5-10 yrs. ▲ >10 yrs. ⊗ Obsolete before plateau

The Story Of Virtual Reality

@JoelUnscripted

Mapping public interest in VR with time.

— VR Related Search Queries



Virtual Reality



...simulated experience
employing near-eye displays
to create an immersive feel of
a virtual world

AR



world
computer-

Spatial Computing



...human-computer
interactions that are
perceived as taking place in
the real world, in and around
physical environments.



NAME _____

SUMMARY REPORT
PARTIAL LISTING

REPORT START TIME 29 MAY 11 12:00
LAST EVENT TIME 29 MAY 11 12:00

TOTAL SHOCKS 1
PACER TOTAL TIME 00:00:00

SYSTEM SERIAL NUM 00000000
DEVICE ID: 00000000 000





INDIANA PACERS		PACERS		2:08		LAKERS		LOS ANGELES LAKERS			
		PTS	REB	AST	PT						
FIELD GOAL %	48.3	23 NESMITH	12	4	2	1	28 HACHIMURA	14	0	0	2
FREE THROW %	92.9	43 SIAKAM	22	11	6	0	23 JAMES	16	10	8	1
3-POINT FG %	33.3	33 TURNER	10	5	3	4	3 DAVIS	24	15	3	0
ASSISTS	26	2 NEMBARD	10	2	2	1	15 REAVES	16	13	6	2
REBS (OFF)	44 (5)	0 HALIBURTON	21	8	8	2	1 RUSSELL	6	3	5	3
BLOCKS	6	107		4TH QTR		88		FIELD GOAL %	48.5	REBS (OFF)	48 (10)
STEALS	7			2 TIMEOUTS 1				FREE THROW %	83.3	BLOCKS	3
TURNOVERS	8			3 FOULS 2				3-POINT FG %	17.2	STEALS	3
				PENALTY				ASSISTS	24	TURNOVERS	15



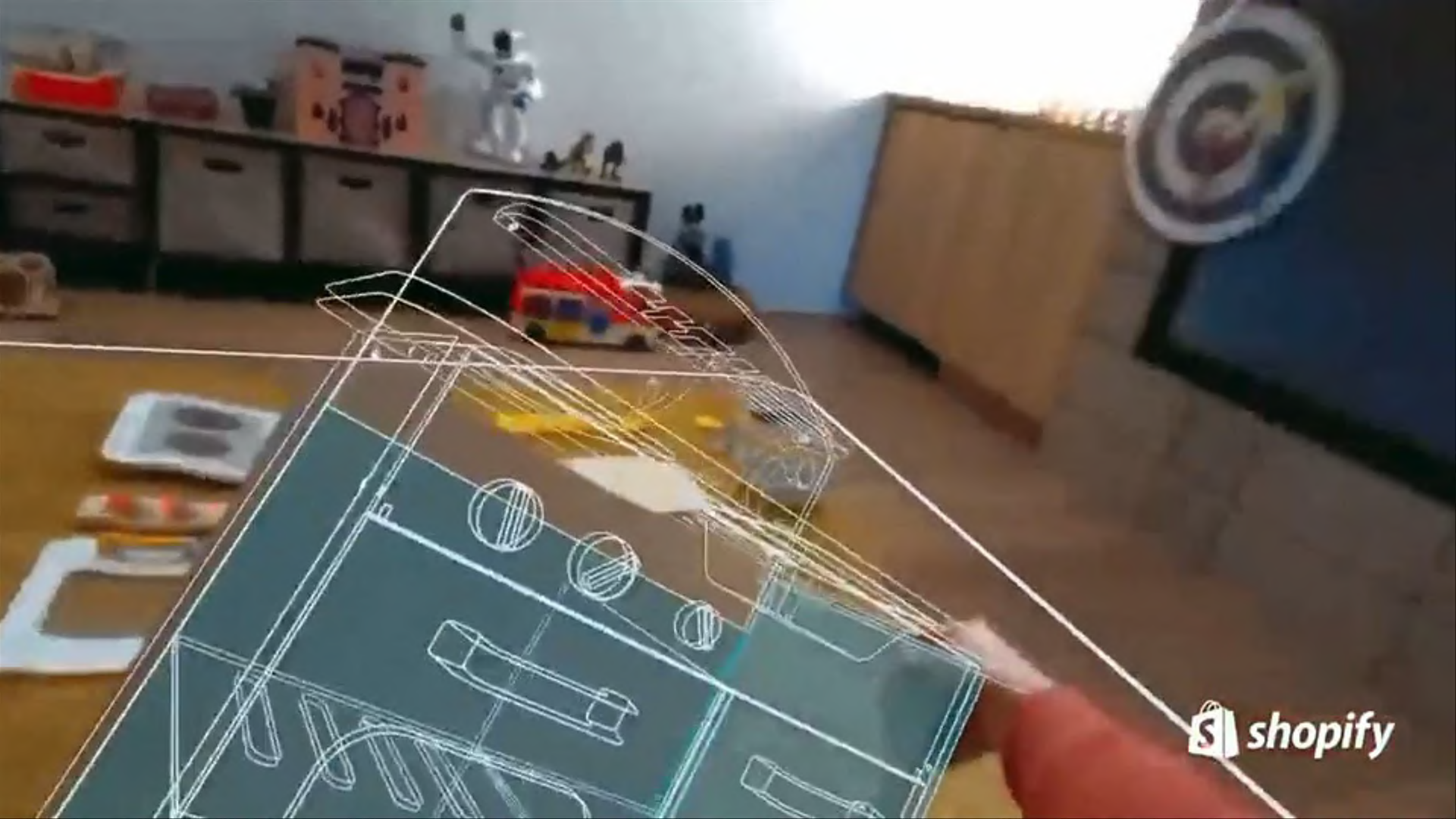




Using augmented reality.









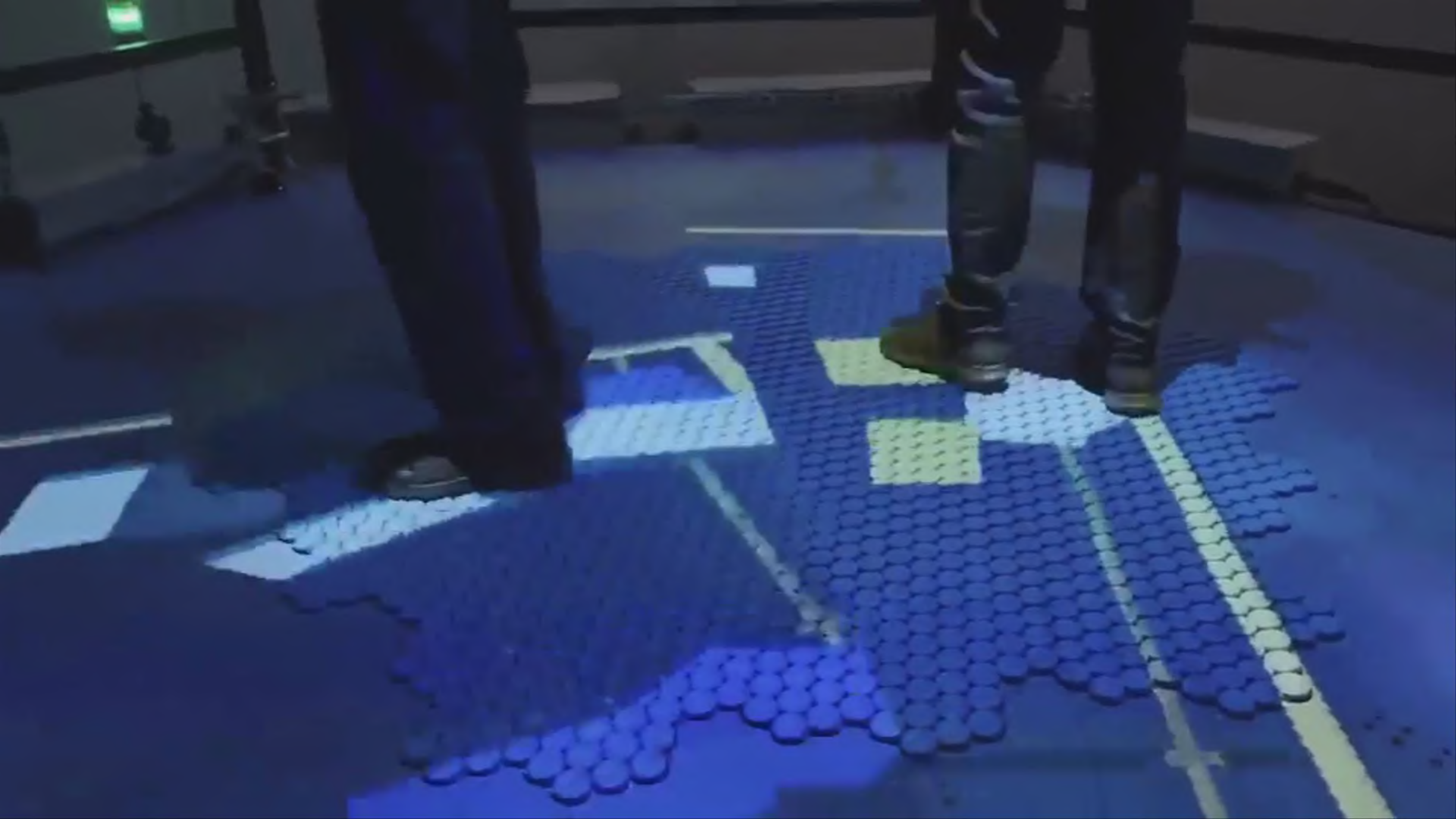


Hardware of the future















**GETTYSBERG
ADDRESS (1863)**

Four score and seven
years ago our fathers
brought forth on this
continent, a new



Type here to search

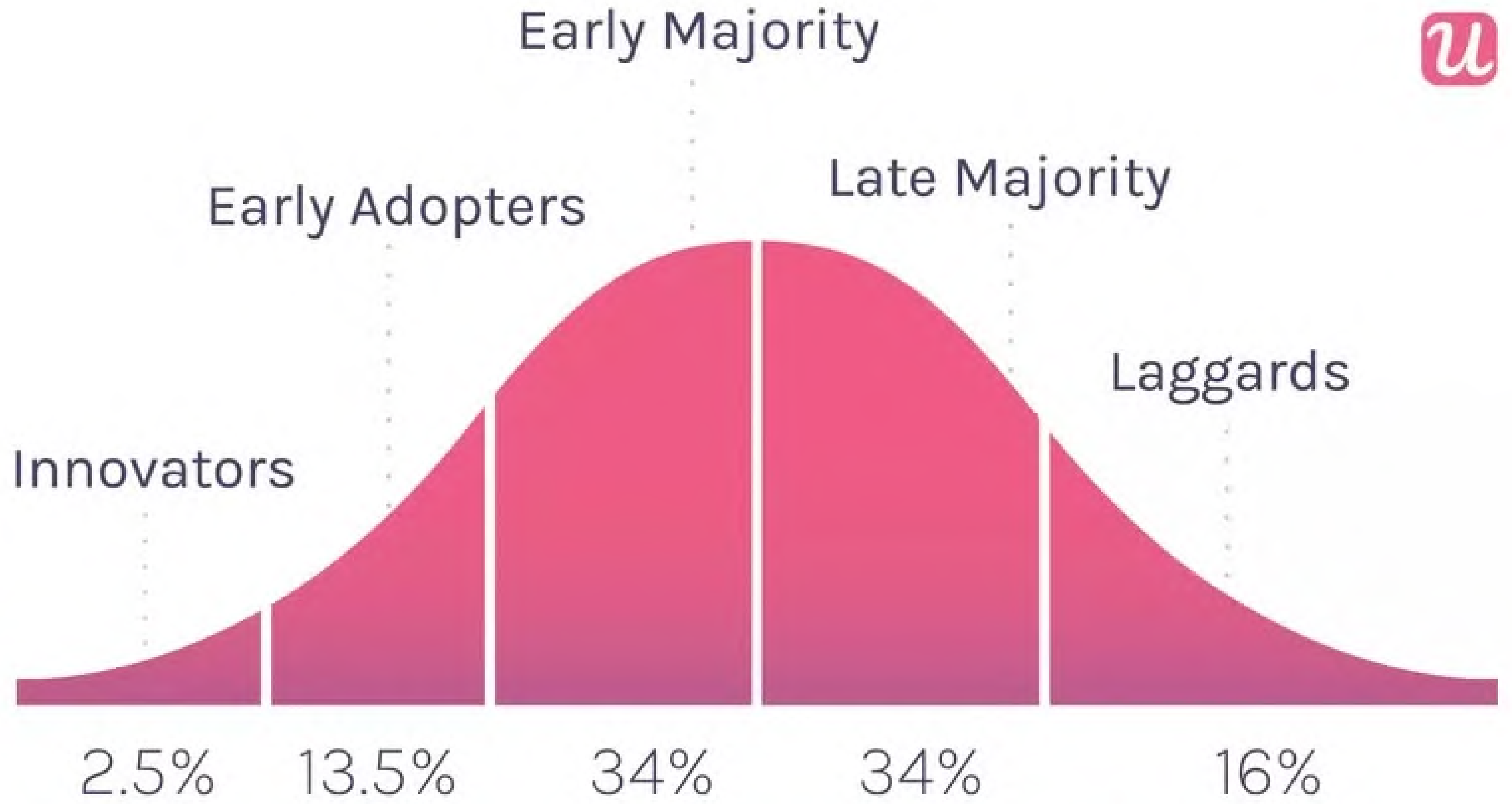


81°F

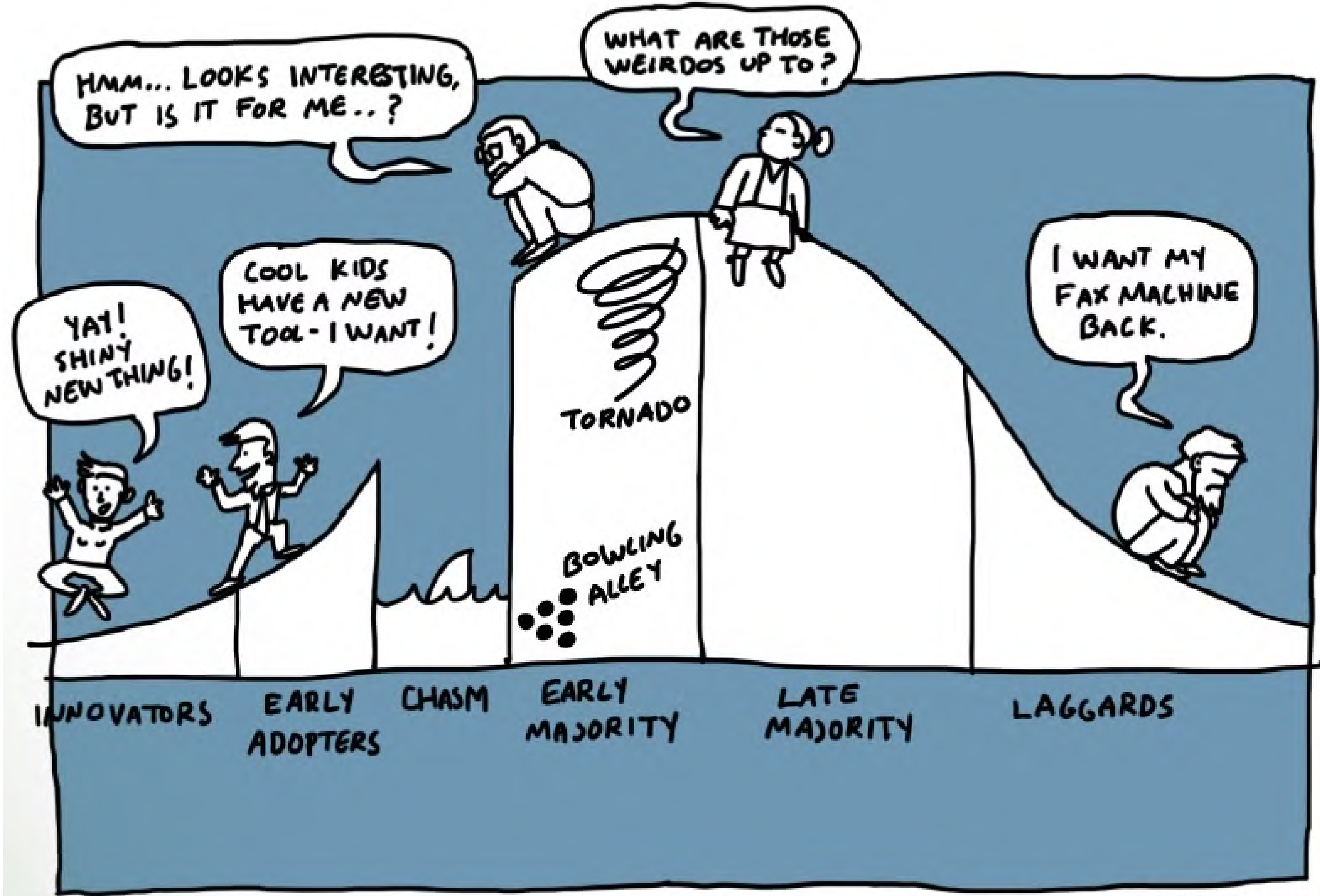




Adoption



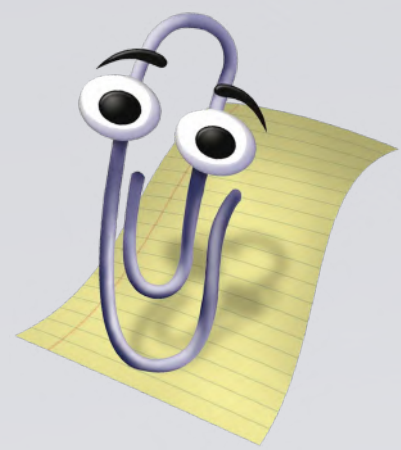
INNOVATION ADOPTION LIFECYCLE







**Ai is here.
Should we be worried?**



Types of Ai



Narrow Intelligence

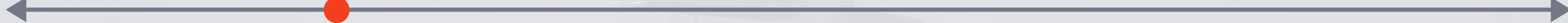
Artificial General Intelligence (AGI)

Super Intelligence

"Weak" AI

Ai Agents

"Strong" AI



Trained on given datasets

Extended Memory
Web Access
Code execution

Can teach itself new tasks.

Self Aware

Reactive Machine

Human level intelligence

Independent thought

Deep Blue

Netflix
Spotify

Limited Memory (Deep learning)
Facial recognition
Speech recognition

Natural language processing
Autonomous Driving

Generative Adversarial Networks (GANs) - Image Generation
Generative Pre-trained Transformer (GPT) - Natural Language Processing
Large Language Model (LLM) -

Ai in Robotics



1x speed

No teleoperation

Astribot S1

Did You Exercise Today?

Breaking Records!

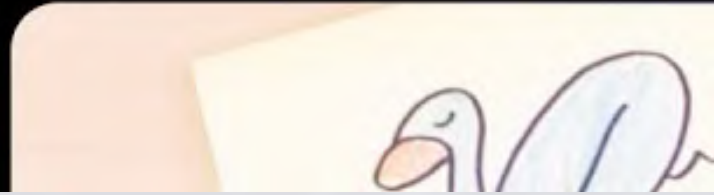
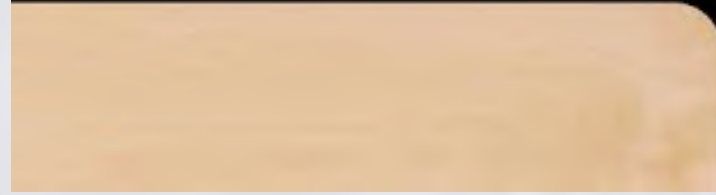
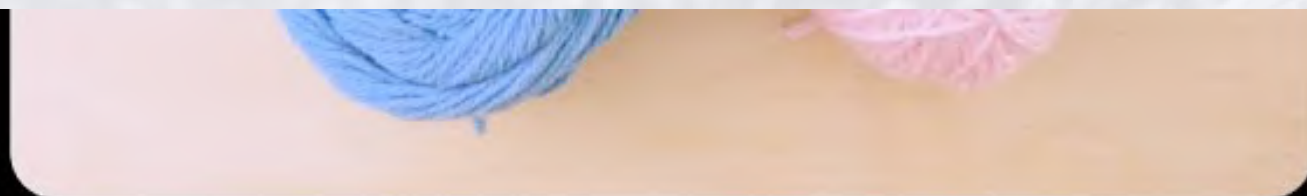






Optimus Gen 2

Multimodel Ai



Ai can't replace you. It can only make you better.

For now...



There is a massive **skills gap** in the biomedical equipment technician workforce.

As more experienced biomedical equipment techs retire, hospitals are faced with skills gaps amongst their current staff. BMETs are increasingly expected to perform all types of service on virtually any medical device, regardless of individual training and expertise.

-Elite Biomedical Solutions

40%

of currently employed BMETs are age 55 or older, and 22% are over 60 and nearing retirement. *-24x7*

10%

projected growth in job openings in the field by 2031

-Bureau of Labor Statistics

67%

of healthcare CEOs said that labor and skills shortages would have a big impact on profitability over the next 10 years. *-PwC*

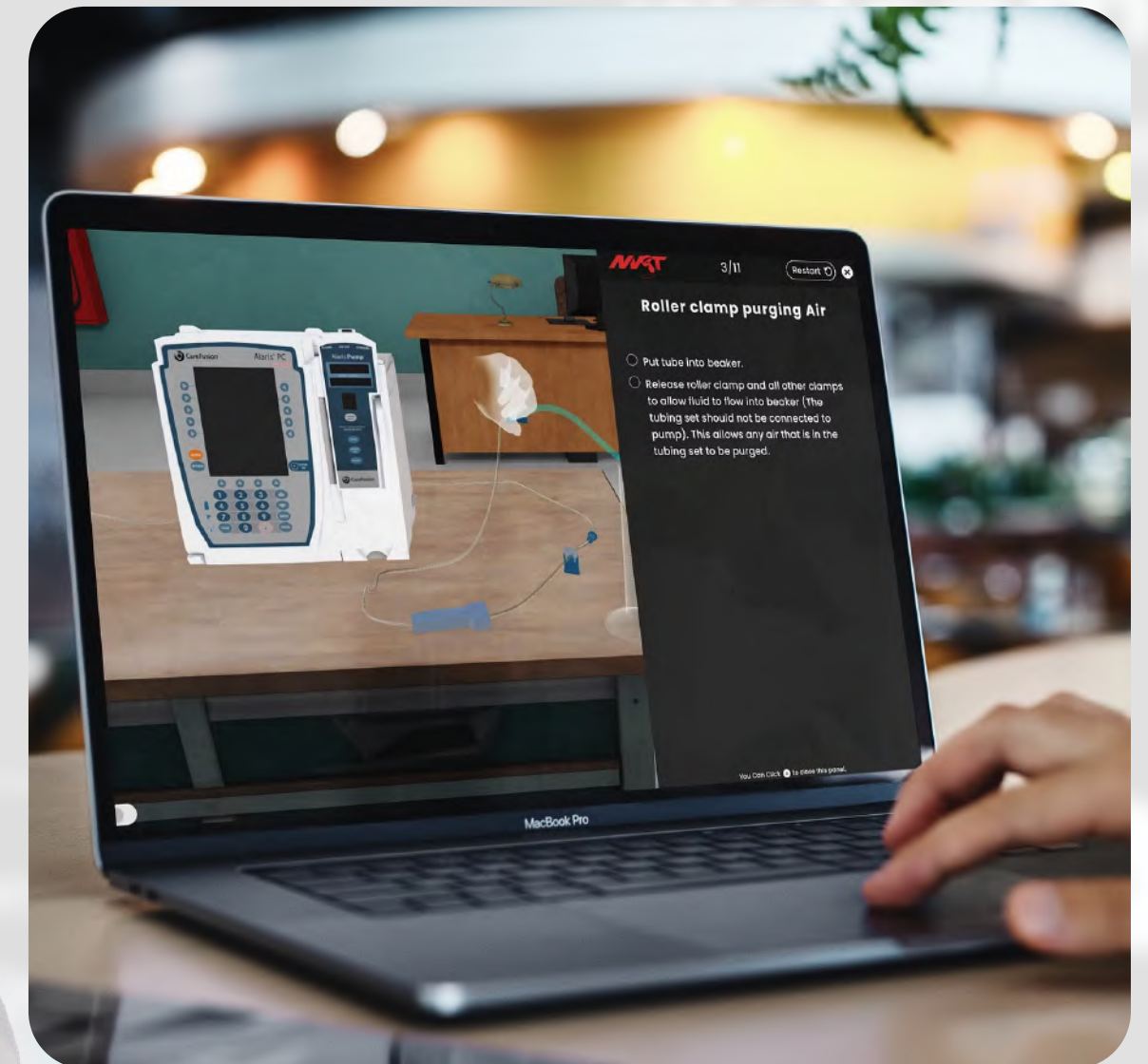
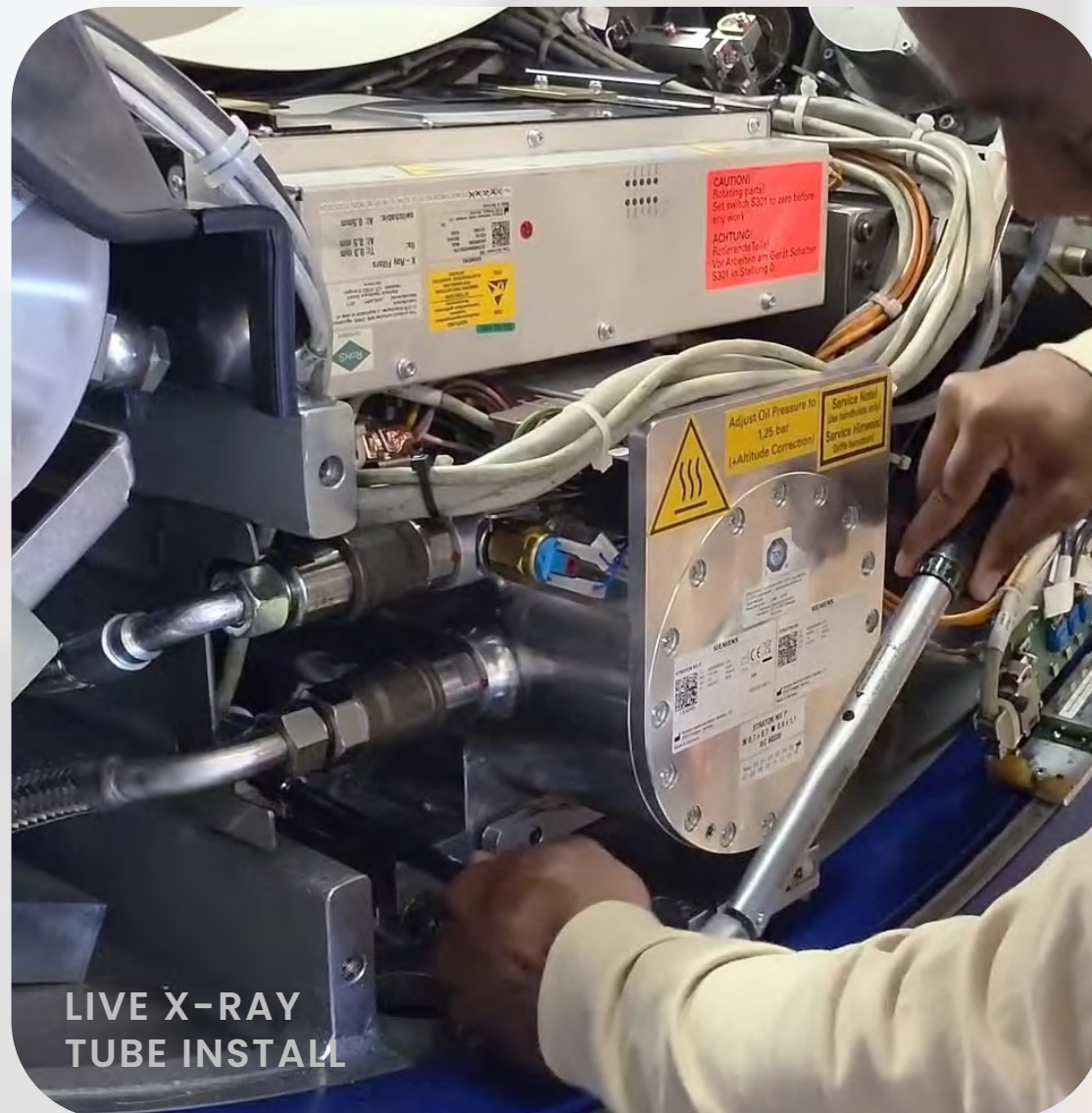


So we're putting
skills & training
into **Extended
Realities!**



World Class Immersive VR Experiences:

Guided Activity VR training modules that cover a 1 to 1 simulation of operational procedures, service, calibration, and corrective maintenance procedures. Modules include "Voiceover Coach" that provides auditory guidance and written step-by-step instruction presented on a "virtual instruction board."



WebGL Desktop Browser Version

Collaborative Mixed Reality Alpha



- Instructor can guide and observe trainees virtually.
- Lecture Tools: Exploded view, laser-pointer, click to remove interactions
- Multiple participants can be Co-Located, Remote, ...or both.

BMET Library:

NVRT Labs has developed and deployed a library of 20 modules for biomedical equipment repair technicians on our platform in the last 18 months. As a single vertical MVP go to market strategy, we have a critical mass of content that is gaining traction with college program as well as health system and ISO training programs.



Virtual CT gantry to train learners the procedure to uninstall and replace a Straton X-Ray tube in a Siemens CT Scanner. This training was split into two phases each totaling 20 minutes of guided instruction and simulation.



At the 2022 AAMI Exchange, AAMI hosted two 4-hour Contrast Injector training courses featuring NVRT's VR MedRad Stellant PM procedure. The offering qualified for CEUs.

nvrtilabs.com/library



LIFEPAK 20e Defibrillator

Preventative Maintenance Inspection

Full preventative maintenance procedures for a Physio-Control LifePak 20e defibrillator using a Fluke Impulse 7000DP analyzer.



Ohmeda Suction Regulator

Device Rebuild

Use a Pronk SimCube manometer to test the suction on a wall mounted suction regulator. Disassemble the device and replace all filters, gaskets, and O-rings.



Hill-Rom Advanta 2 Patient Bed

Electrical Safety Test

Perform an electrical safety test on a Hill Rom patient bed using a BC Group SA-2005 safety analyzer. Determine that the power cord is faulty and replace it.



VR Training is wildly effective.

80%

Retention rate of up to 80% one year after training, compared to 20% one week after traditional training.

4X

Employees can be trained 4 times faster in VR courses than in classrooms.

6X

Learners are 6 times less-likely to make a mistake during a procedure after training in VR.

275%

VR learners are 275% more confident applying skills after VR training.



"Learning is an experience and everything else is just information."

-Albert Einstein

VR HTM Proof of Concept AAMI eXchange '22



0 / 29

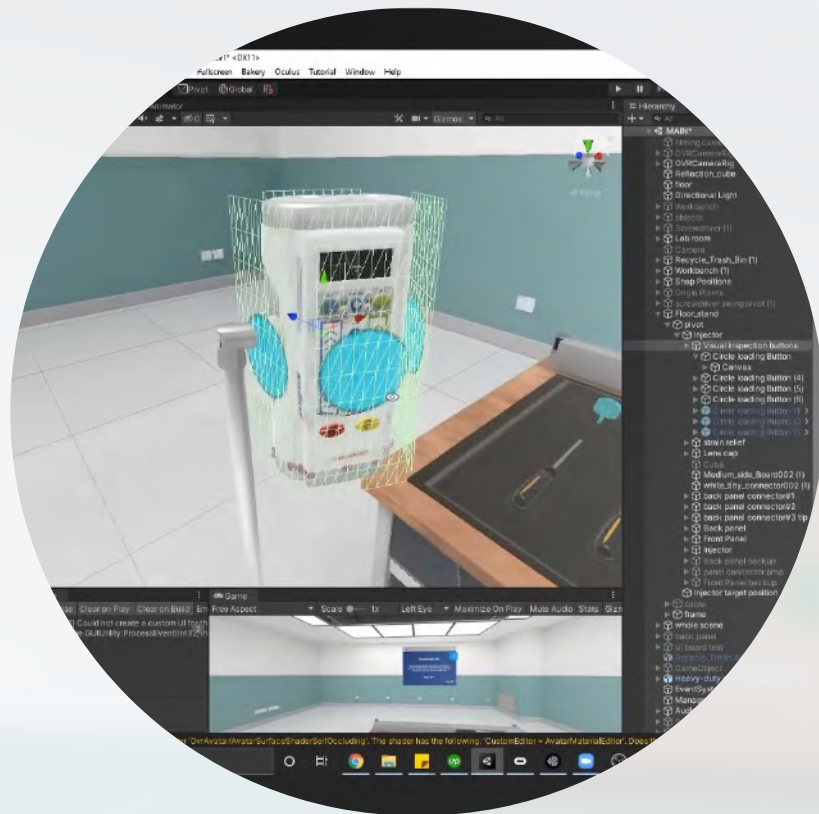
Welcome

Press the button to select the button



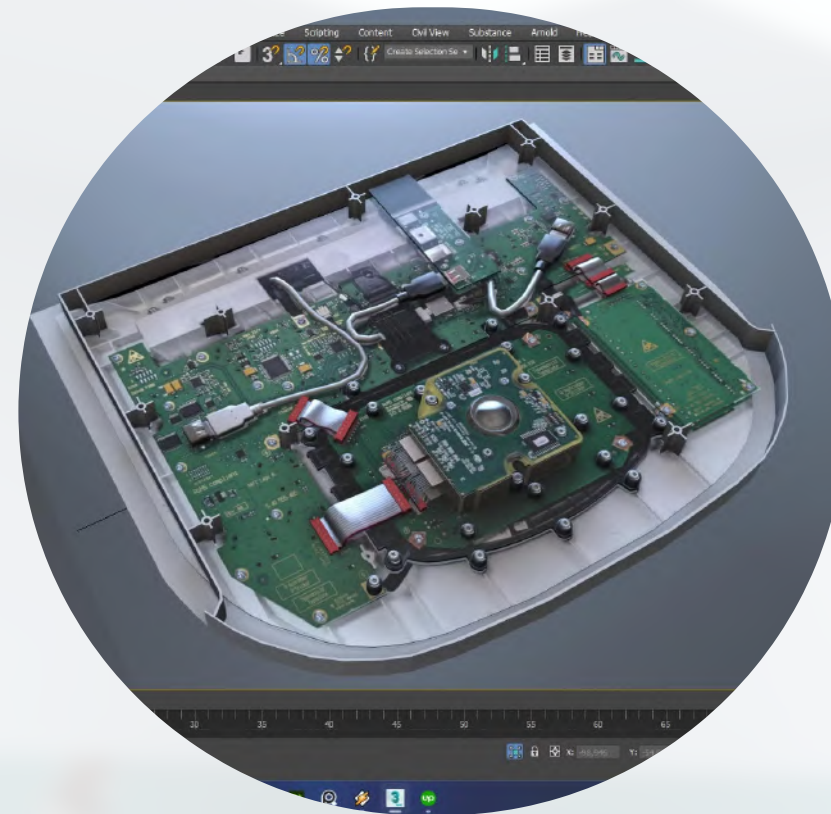


Development Approach:



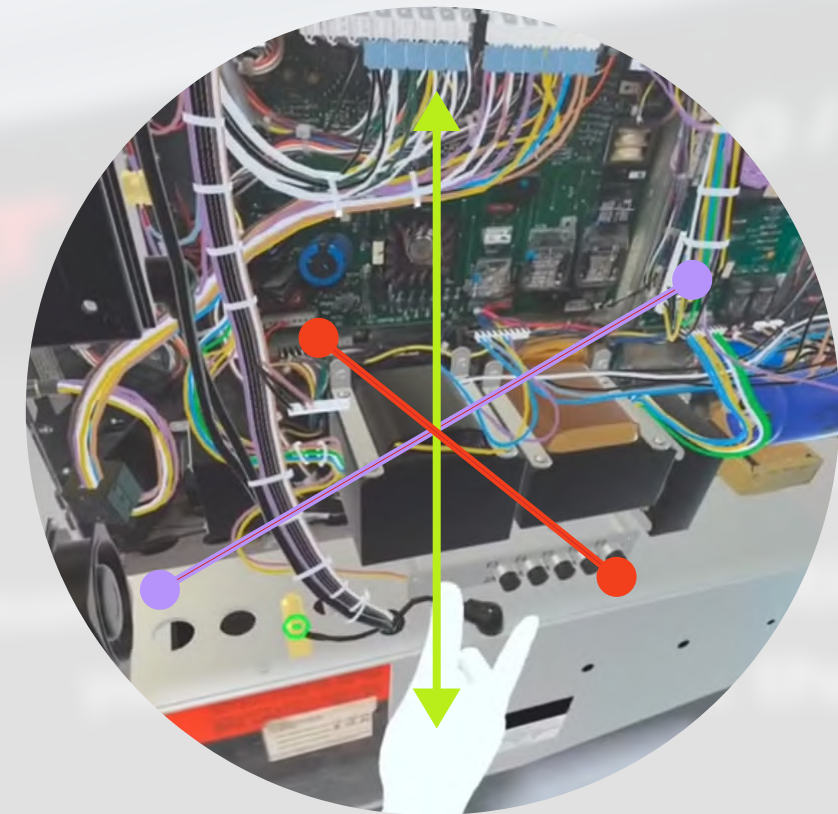
Frameworks

The module will be developed in Unity 3D 2023 using the **OpenXR**, VRIF and VR Builder frameworks and SDKs.



High-Fidelity 3D Models

Photorealistic 3D models will be built from scratch using our proprietary method of converting photos and photogrammetry into Autodesk 3DS Max models, then exported to FBX and imported to the Unity Universal Render Pipeline where shaders are applied.



Locomotion

In addition to **6 degrees of freedom**, locomotion in each module will be controlled both joysticks on the controllers allowing user the freedom to move around the environment, even when seated or standing still.

A person wearing VR goggles is shown in a semi-transparent, light red overlay against a solid red background. The person is wearing a white VR headset and holding a controller in their right hand. The text is centered over the image.

**But Extended Reality is NOT the
future of training and education.**

It's the present!

and it's growing...

53M

53 million US adults currently own a VR system. By the end of 2024, more than 34 million additional VR headsets will be in use.

-security.org

33%

33% of US teens (the next generation of techs) currently own a VR headset, half of whom are weekly users.

-Piper Sandler April 2024

39%

39% of enterprises use VR/AR for training. Those organizations are saving 30-70% when they switch to virtual training.

-Chaos Theory

VR EXPERIENCES ARE NO LONGER NOVELTY, THEY ARE PART OF THE CORPORATE TRAINING STRATEGY



"More than half of the Fortune 100 companies have already bought Apple Vision Pro units and are exploring innovative ways to use it to do things that weren't possible before." -Tim Cook, Earnings Call April 2024



BOOTH 423

EXIT

AWT

AWT Probo PARTS SOURCE RSTI

exchan AAM

exchan AAM



MEN

AAMI
exchange

AAMI
exchange



SIEMENS Healthineers

XIT

ZOPE MEDICAL
The World's Smallest Hospital UPS Battery with 7 patented technologies

Hi, I'm Anah, your Cynci AI assistant
May I schedule your PPA now?

Cynci
Enterprise AI Management

WAT Probo PARTSOURCE RSTI

eXchange AAMI







"There are two kinds of people: Those who think VR will change the world, and those who haven't tried VR."

-John Carmack



LABS, INC

© 2024