HADEAN
BRIDGING PHYSICAL AND VIRTUAL WORLDS

Powering the Metaverse

Craig Beddis, CEO | craig@hadean.com

Hadean has built the infrastructure for the Metaverse
Powering an $8-13 trillion economy by 2030*

Hadean has traction today in...

Commercial ($200bn)

- Gaming (inc. crypto/NFTs etc)
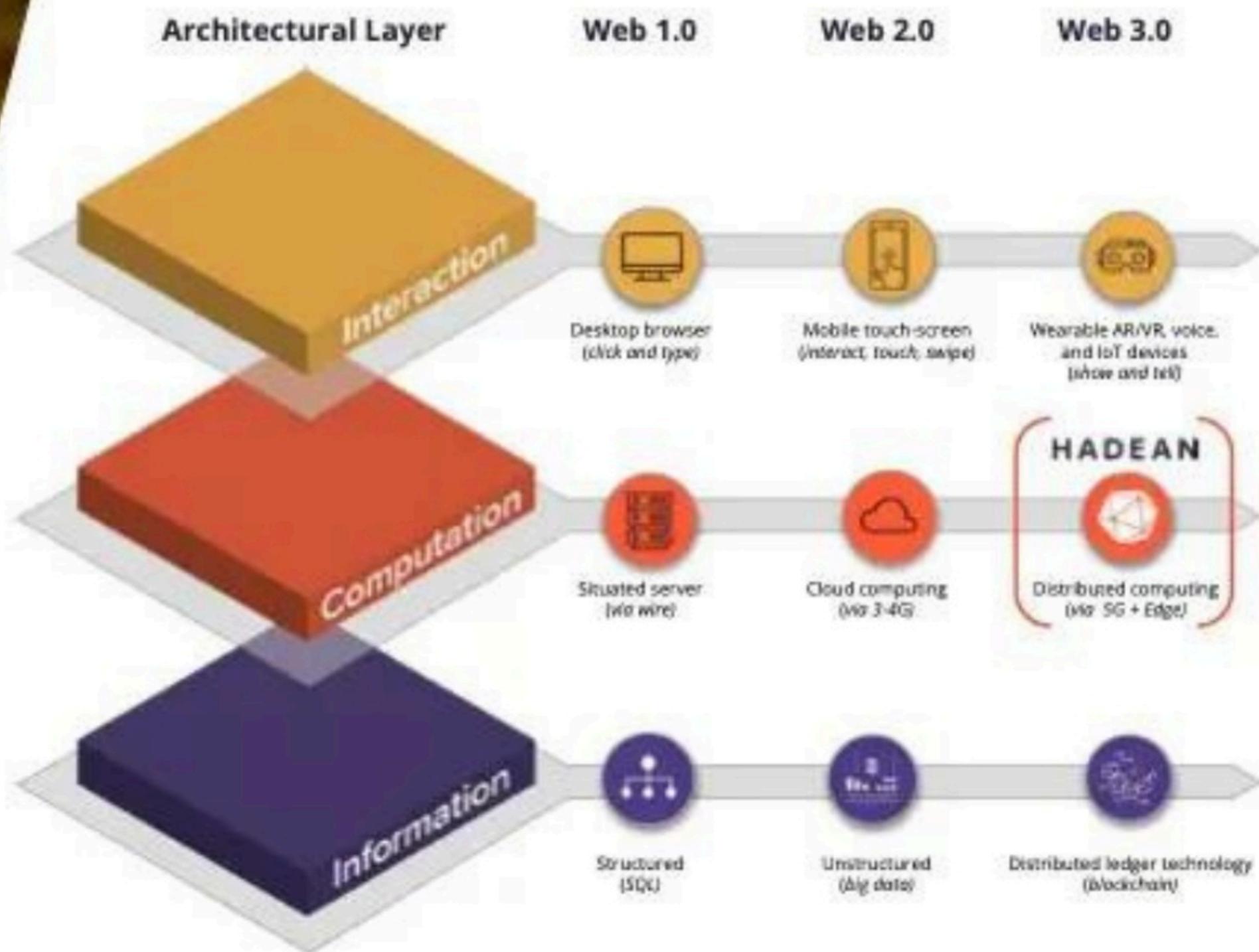- Virtual Concerts & Events
- Immersive Entertainment

Government ($20bn)

- Single Synthetic Environments
- Live Virtual Constructive Training
- Decision Support Simulation

Enterprise ($70bn)

- Digital Twins
- Virtual Workspaces
- Autonomous Systems

*Citi GPS, March 2022

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Record breaking tech at the forefront of the Metaverse

Hadean / EVE Aether Wars
14K CCU (2019)

Improbable / ScavLab
10K CCU (2021)

Epic Games / Fortnite
100 CCU (Present)

"[Hadean] is a game-changer that opens up a range of new design possibilities — not just for games like Minecraft, but for streaming platforms, developer communities, and even enterprise applications."

– Michael Wellbecher, CTO / Mojang Studios

"Hadean's technology has the potential to unlock huge creative and design-orientated freedom within virtual worlds such as EVE."

– Hilmar V. Pétursson, CEO / CCP Games

"We're pleased to help Unreal Engine developers gain easier access to distributed computing capabilities for creating realistic digital twins, large-scale gaming experiences, and advanced simulations using Hadean"

– Kim Libreri, CTO / Epic Games

"We are very excited with this partnership to enable a truly large scale gaming hub where players can play, create and own their gaming experiences in an open and scalable metaverse: the Universe Game."

– Alex Suarez, CEO / Gamescoin

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Trusted by Enterprise & Government

DASA Innovation
In partnership with the British Army's Headquarters' Futures Team, Hadean is enabling a decision support capability that reduces a 9-12 month analytic process down to <1 day

"Hadean is quickly developing a strong reputation based upon the real performance of its new and exciting products both in its core gaming sector and now in non-adjacent industry applications."

– Andrew Naismith, MD Defence & Security / CAE

"We are really excited to collaborate with Hadean which is a world leader in harnessing the power of computing technology for immersive synthetic training environments."

– Andy Kendall, Director of Training Strategy / BAE

"Cervus are immensely proud to be working with our partners at Hadean. The compute power needed to run multiple simulations to quickly examine different courses of action has limited the way we deliver decision support to date."

– Alan Rosn, MD / Cervus

CTTP is working with Army Innovation and Hadean to exploit new technology in the FCTS This demonstration will deliver outputs that showcase how the technology from the commercial games industry could support transformation of training.

– Mike Cooper (SRO), CTTP, UK MoD

*The next level of simulation training: enter the defence metaverse

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Today, the Metaverse is a limited experience

Small Scale

Fans Say the Foo Fighters' Metaverse Concert Was A Total Disaster

There goes my hero

US Air Force chief: Interoperability is key to winning future wars

Siloed Applications

FUTURE AND TECHNOLOGY

The metaverse has a groping problem already

Nothing Concerns the Public More About the Metaverse Than the Misuse of Their Personal Data

Insecure Access

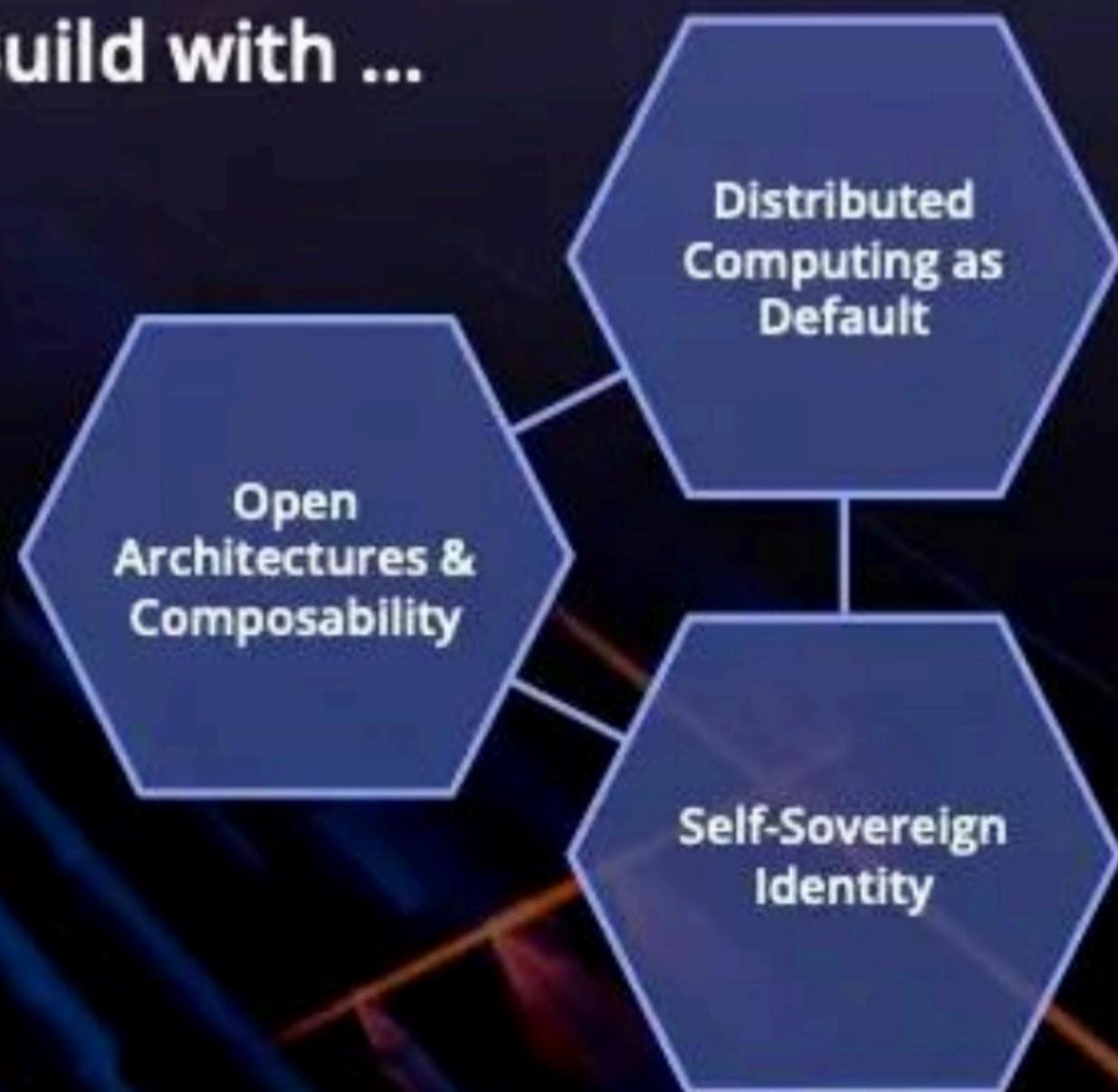Fortnite: Epic Games Addresses Problems With Travis Scott Concert Event

Creators, Enterprise, and Government cannot access true Metaverse capabilities

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How do we realise the full potential of the Metaverse?

Build with ...   **... to enable**

Distributed Computing as Default

Open Architectures & Composability

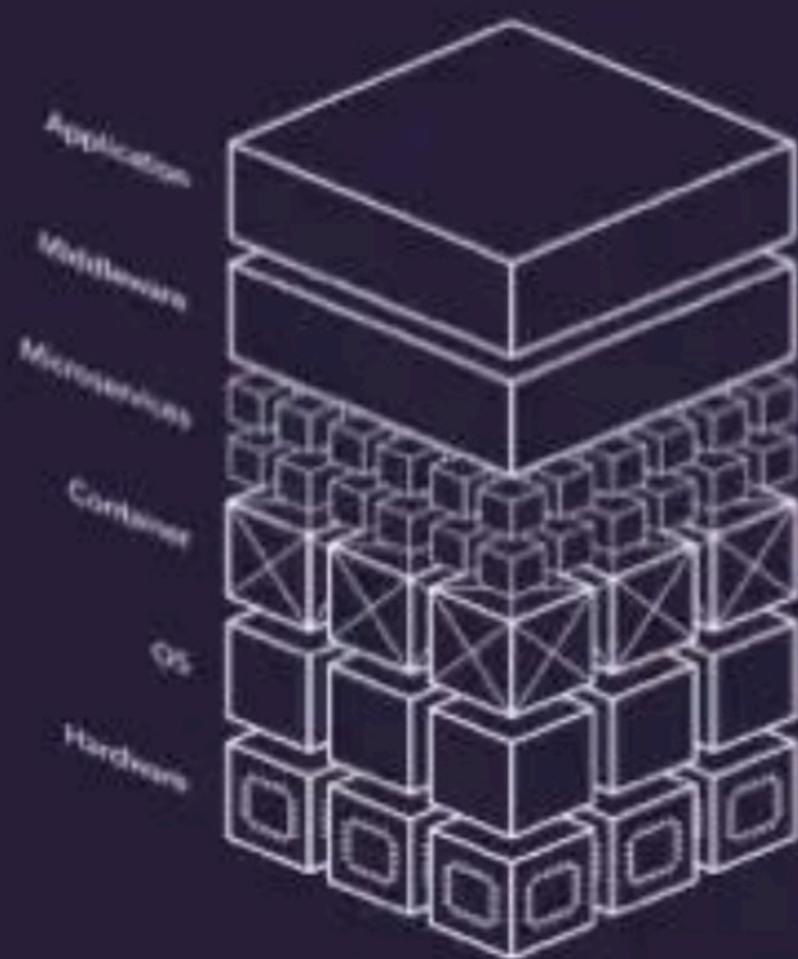Self-Sovereign Identity

Community Ownership

Property Rights

Social Immersion

The success and mass adoption of the Metaverse relies on the ability of users to build their own, using *metaverse-as-a-service* technologies
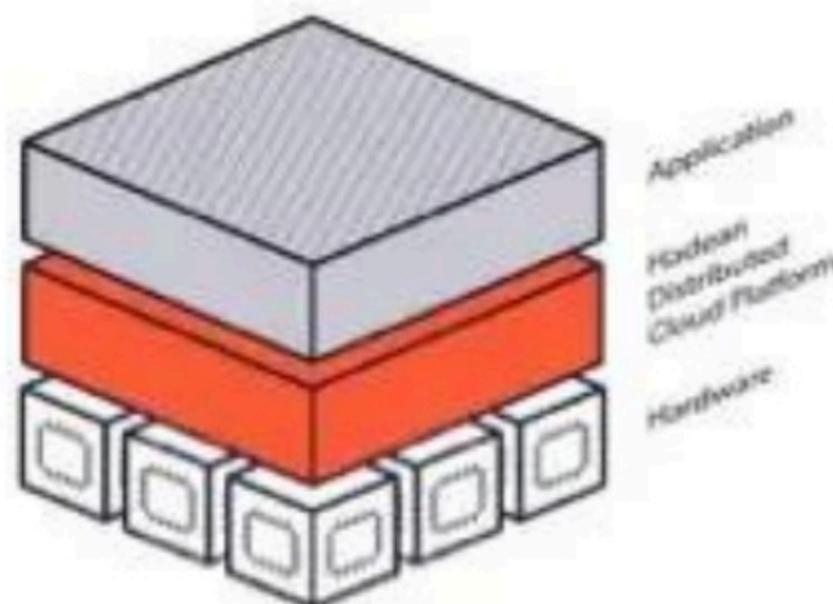
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Legacy Stack

- Reliance on multiple frameworks and technologies

- Requires bespoke architecture specific to the application and restricted to that scale

- High skill and resource cost requirement

- Requires manual ops and maintenance

- Not designed for high-performance computing

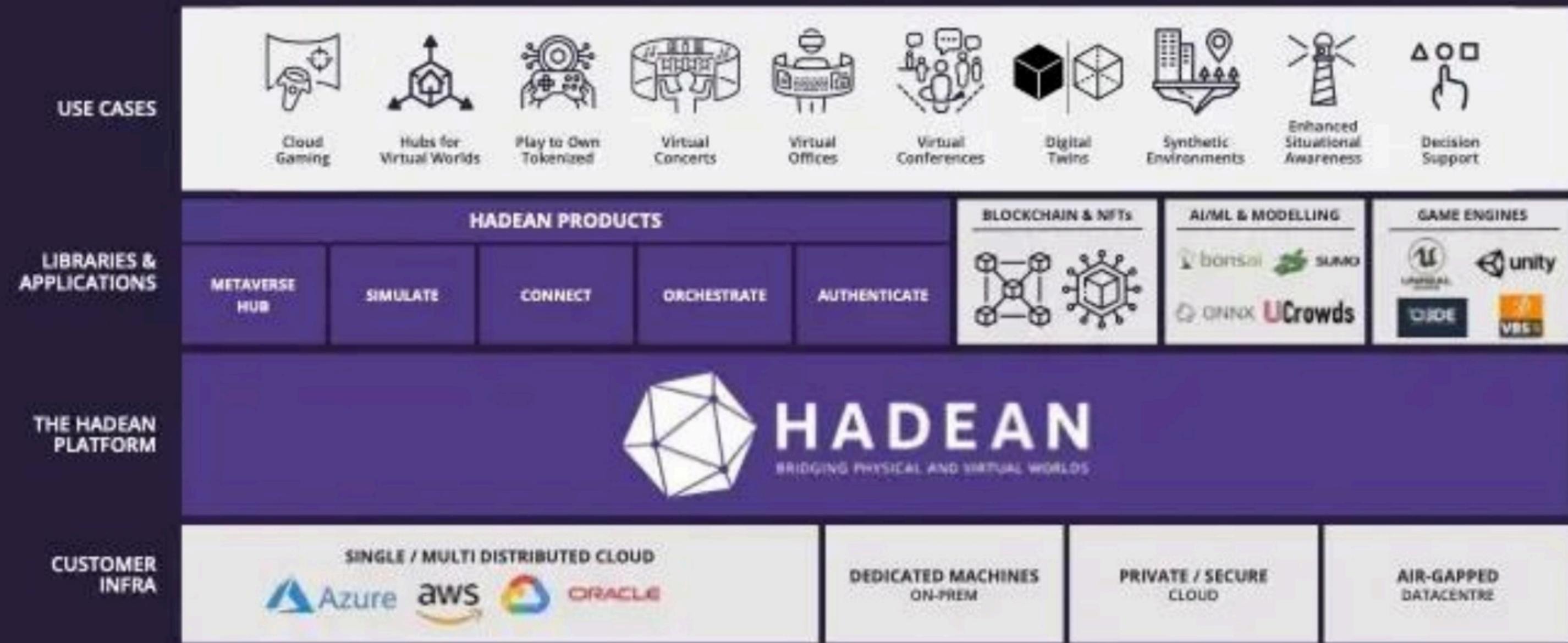**Large engineering team**

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- High-performance Rust core that is **secure by design**

- **"Bare metal"** performance

- **Dynamic scalability** removes the need for manual operations

- **Interoperable** with C++ / Python APIs and integrations with game engines, AI/ML libs, and blockchain

- **Cloud-native design** for Public or Private Cloud, Air-Gapped, or On-Prem Infra

Minimal DevOps

Executive Team

Craig Beddis
Co-Founder & CEO

Entrepreneurial senior executive with 25 years transforming business and accelerating growth. 15 years in Cloud/Infra Automation and DevOps.

- Successfully raised $37m funding for Hadean
- Automic Software - consistent 50% net new YOY revenue growth. Created the product and brand change that drove company transformation leading to a $600m exit
- Extensive experience building enterprise sales, product and marketing teams in start-ups & large corps post acquisition

Aidan Hobson-Sayers
Co-Founder & CTO

Recognised as an industry leader in the field of Distributed Compute programming languages. Co-authored 2 books on Docker.

- Key member of Rust, an ultra fast programming language for distributed compute
- Senior Software Engineer at OpenBet, a leading sportsbook betting platform
- University of Cambridge graduate, Computer Science

Mimi Keshani
Co Founder & COO

Startup experience in Sales, Operations and Product development. Leads Hadean's Life Science R&D.

- Started at Hadean in a product role and rapidly promoted to run operations and Partnerships
- 10+ years experience at startups in Product Development and CS roles building cloud data platforms for scientific research
- University of Cambridge Masters in Micro & Nanotechnology Enterprise

Shany Elkarat
Chief Product Officer

25 years leading Product, Marketing and Innovation functions in Technology and Telecom industries.

- Career spanned through business innovation and portfolio / product strategies
- Successfully driven results in start-ups to large international enterprise companies
- MBA from Heriot Watt Edinburgh Business School and BSc in Electrical Engineering from the University of Tel Aviv

Ralf Paschen
Chief Marketing Officer

Insightful and strategic leader with deep commercial experience and a proven track record in enterprise technology.

- Designed and developed solutions that connect clients with products and executed highly successful campaigns and sales
- Well versed in marketing technology products globally and managing distributed teams

Lars Koschin
Chief Gaming Officer

Gaming and technology veteran with over 25+ years experience launching and running some of the biggest MMO games.

- Numerous exec, technology, and advisory roles at leading Games companies including Wargaming, Gamigo and Curse
- Launched 25 MMO games including Runes of Magic, one of the most successful free to play MMOs on the market

Investors & Technical Advisors

John Taysom
- Non-Executive Director
- 18+ IPOs & 82 investments
- Co-founder Privitar

Robert Sansom
- Investor – Titan IC Systems
- Cambridge Angels Founder
- Sold FORE Systems for £2.8bn

Phil Osborn, CBE
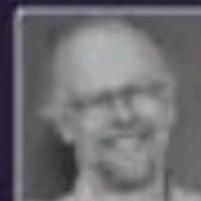- Former Chief of Defence Intelligence, with three decades of UK Defence experience

Marcus Willett, OBE
- Three decades at GCHQ
- IISS Senior Adviser for cyber

Prof. David May
- XMOS Semiconductor founder
- Inventor – 1st parallel microprocessor

Prof. Paul Kelly
- Professor of Software, Imperial College, London
- Developed Meshix for Distributed Compute

Jerome Joaug
- Partner at Aster Capital
- DeepTech investor focused on energy transition, mobility and Industry 4.0.

David Gardner, OBE
- Co-founder and General Partner of Lvp
- Over 30 years experience in the games sector (Atari, EA)

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Products & Case Studies

Hadean provides the bridge into the Metaverse

A distributed computing platform and products, built on Rust, for composable Web3 applications

Hadean Platform

Dynamic Scalability / Infra-Agnostic / No DevOps / Secure by Design

Hadean Metaverse Hub

Interoperability / Intelligent Social Graphing / Tokenised Economy

Hadean Simulate

High Fidelity / Large-Scale Worlds / Cost-Efficient Resourcing

Hadean Connect

Global Connectivity / Bandwidth Reduction / Low Latency

Hadean Orchestrate

Parallelised Simulation / Data Modelling

Hadean Authenticate

Traffic Verification / No Shared or Stored Data / Deduplication

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Distributed Simulations

EPIC GAMES | **UNREAL ENGINE**

Hadean received an Epic MegaGrant in support of their work integrating Unreal Engine, enabling UE developers to design and build vast distributed simulations without the challenge of handling computational limits or auto-scaling algorithms themselves.

- Providing UE developers with higher performance netcode
- Extensibility with key libraries including PhysX
- Forward-facing compatibility with UE5

"We're pleased to help Unreal Engine developers gain easier access to distributed computing capabilities for creating realistic digital twins, large-scale gaming experiences, and advanced simulations using Hadean."

Kim Libreri, Epic Games CTO

Watch the video
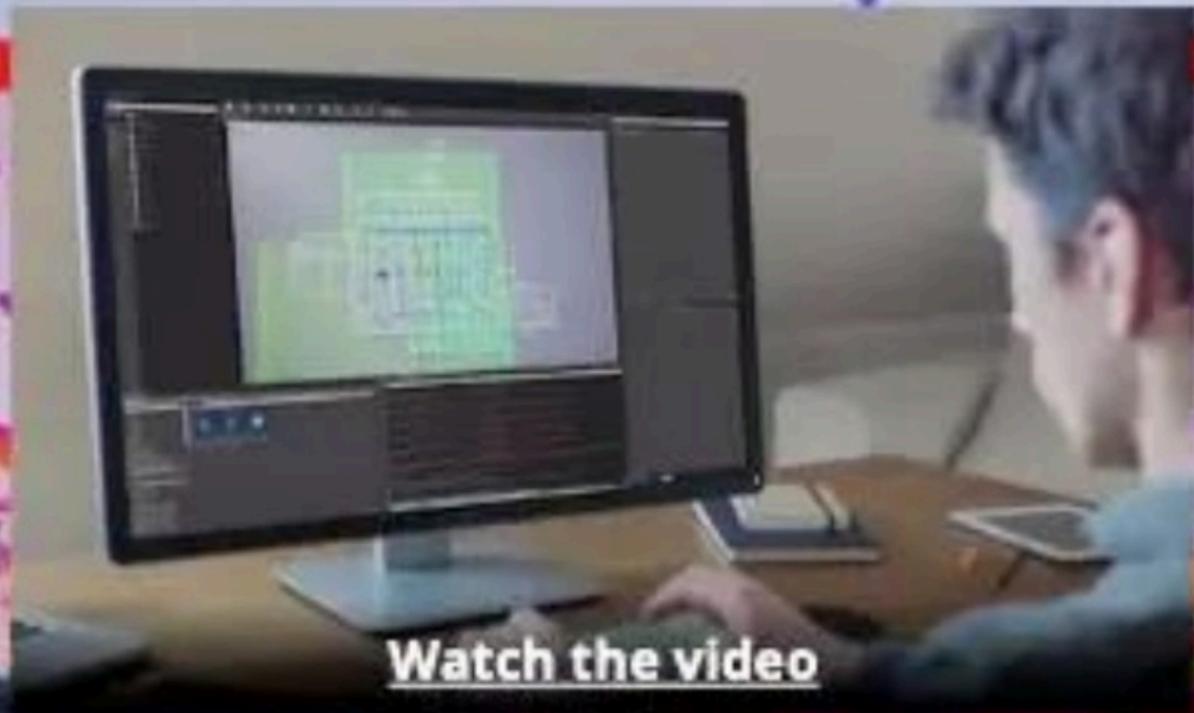
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MMO Global Concurrency

CCP

Hadean expanded the scale design possibilities of CCP's renowned MMOG, EVE Online, and conducted three large-scale public playtests for the world's first cloud-native game, EVE Aether Wars.

- Record breaking 14k concurrent players in a single PvP battle
- High performance at-scale gameplay (30hz) in a single global shard
- Players from 120 countries with 8 client servers distributed across 3 continents
- 5x bandwidth reduction // 3x cost efficiency.

"Hadean's technology has the potential to unlock huge creative and design-orientated freedom within virtual worlds."

Hilmar V. Pètursson, Chief Executive Officer, CCP Games

Watch the video and see MMO gaming at scale

VentureBeat

Why CCP Games crammed 14,274 spaceships into an Eve Online battle

gamesradar+

Eve: Aether Wars is a 10,000-player deathmatch destined to "explore the boundaries of human achievement on a large social scale"

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"Play to Own" Metaverse

GamesCoin Group

Hadean Studio and Gamescoin are building the UNIVERSE GAME METAVERSE, the world's first massively multiplayer blockchain gaming platform.

- Leveraging Hadean Hub to interconnect multiple gameplay worlds
- Powering a tokenised Gamescoin/NFT economy
- Hadean Platform dynamically scaling an ever-growing UGC environment

"We are very excited with this partnership to enable a truly large scale gaming hub where players can play, create and own their gaming experiences in an open and scalable metaverse: the Universe Game."

Alex Suarez, Gamescoin CEO

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