

METaverse TECHNOLOGICAL STACK



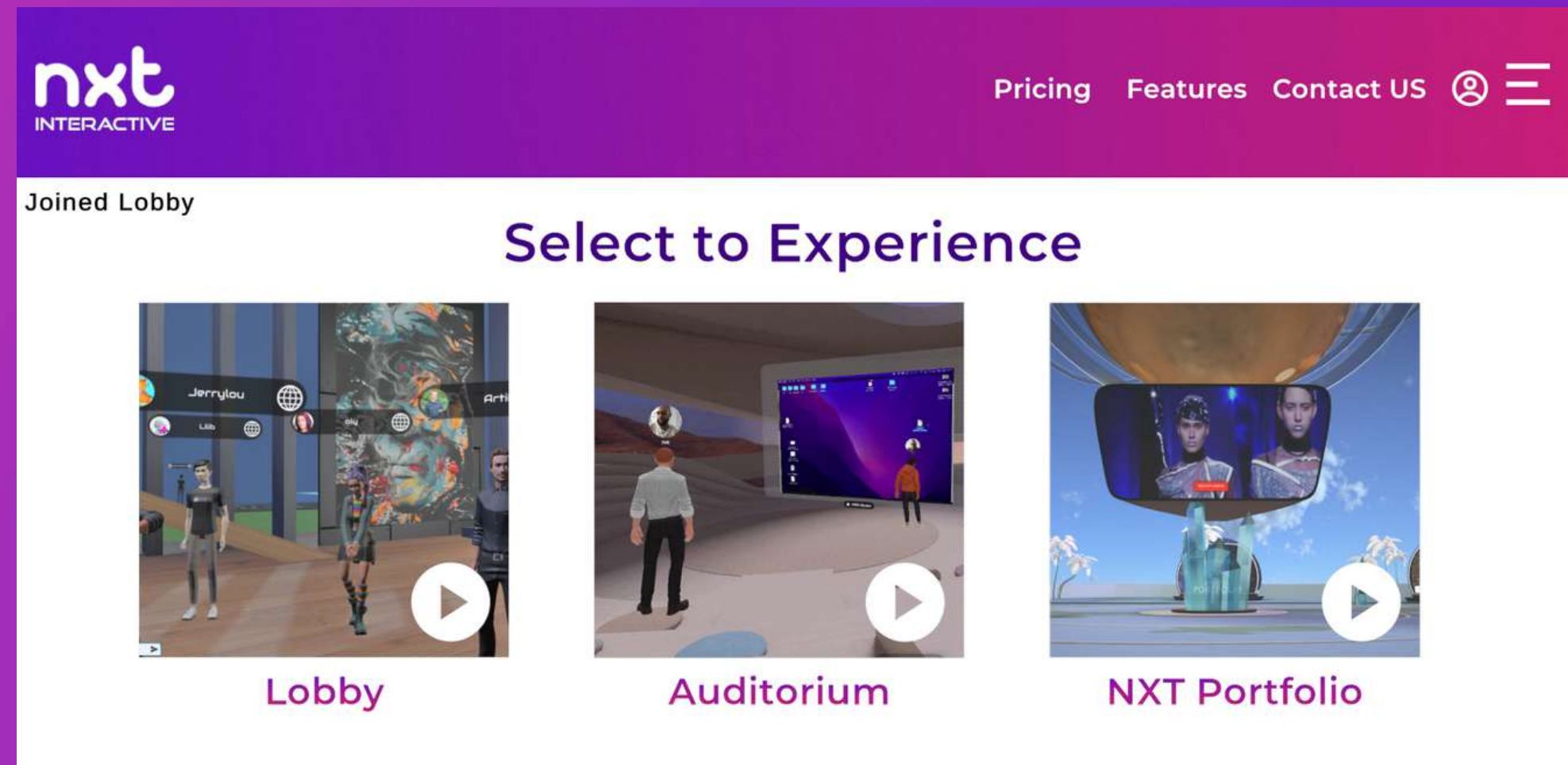
SUMMARY OF TOPICS

- Our Past Work
- Metaverse tech Stack
 - Technology Used in Metaverse
 - Metaverse Technology Layers
 - Frontend
 - Middleware
 - Backend
 - SDKs
 - UI & 3D Design Tools
 - Platform Architecture
 - Uses of Blockchain, Crypto and NFT in Metaverse
 - Servers and its cost

OUR METAVERSE SOLUTIONS

NXT METAVERSE SOLUTION

- NXT Metaverse in Singapore is our own Metaverse that showcases our capabilities and our past work in an interactive way
- Consists of a custom auditorium, custom room lobby and virtual portfolio on Unity, which allows users to register, log in, select or customise avatars, dd host company decks, event youtube videos, photo booth, virtual games, custom 3D models, video/audio/gif content, user analytics, etc.



NXT Metaverse

BIFW METAVERSE EVENT 2022

- Bangkok International Fashion Week (BIFW) 2022 in Singapore with a custom auditorium, custom rooms and virtual public space on ReactJS, which allows users to register, log in, select or customise avatars, customise the space, add host company decks, event youtube videos, photo booth, virtual games, custom 3D models, import 3D libraries, video/audio/gif content, user analytics, live telecast of the physical fashion show, etc.



WEB 360 METAVERSE SPACE



- We developed a 3D life-like virtual replica of their new showroom. To enhance the experience of a user in an engaging manner within the store, we used intrinsic Animations, & Web Virtual Reality. We also utilized a combination of optimised 3D Models, lighting & texturing that brought a real look to the laminate textures.



SHISEIDO METAVERSE PRODUCT LAUNCH

- Shiseido product launch in Singapore with a custom auditorium, custom rooms and virtual public space on ReactJS, which allows users to register, log in, select or customise avatars, customise the space, add host company decks, event youtube videos, photo booth, virtual games, custom 3D models, import 3D libraries, video/audio/gif content, user analytics, etc.



SHISEIDO

SEPHORA METAVERSE PARTY



- Sephora virtual event in Singapore with a custom auditorium, custom rooms and virtual public space on ReactJS, which allows users to register, log in, select or customise avatars, customise the space, add host company decks, event youtube videos, photo booth, virtual games, custom 3D models, import 3D libraries, video/audio/gif content, user analytics, etc.



CHANEL D&D 360 SPACE



- Chanel virtual event in Singapore with a custom auditorium, custom rooms and virtual public space on ReactJS, which allows users to register, log in, select or customise avatars, customise the space, add host company decks, event youtube videos, photo booth, virtual games, custom 3D models, import 3D libraries, video/audio/gif content, user analytics, etc.



IESA VISION SUMMIT 2020

- IESA vision summit with a custom auditorium, custom exhibition space, virtual public space, custom exhibition booths, NPCs and audio/video features on ReactJS, which allows users to register, log in, add host company decks, event youtube videos, photo booth, virtual games, custom 3D models, import 3D libraries, video/audio/gif content, user analytics, etc.



METaverse NFT MUSEUM

- Metaverse NFT Museum with a custom exhibition space, custom avatars on PlayCanvas, which allows users to register, log in, add NFTs, youtube videos, photo booth, virtual games, custom 3D models, import 3D libraries, video/audio/gif content, etc.



METaverse EXAMPLES

BIFW 2022 Metaverse

Login: na@yy.com

Password: 123

Chanel 2022 Metaverse

Login: test1@event.com

Password: 123

Sephora 2022 Metaverse

Login:

harshit@digitaljalebi.com

Password: 123

METaverse EXAMPLES

IESA VISION SUMMIT

Name: Use any made-up name

Email ID: Use any valid email address

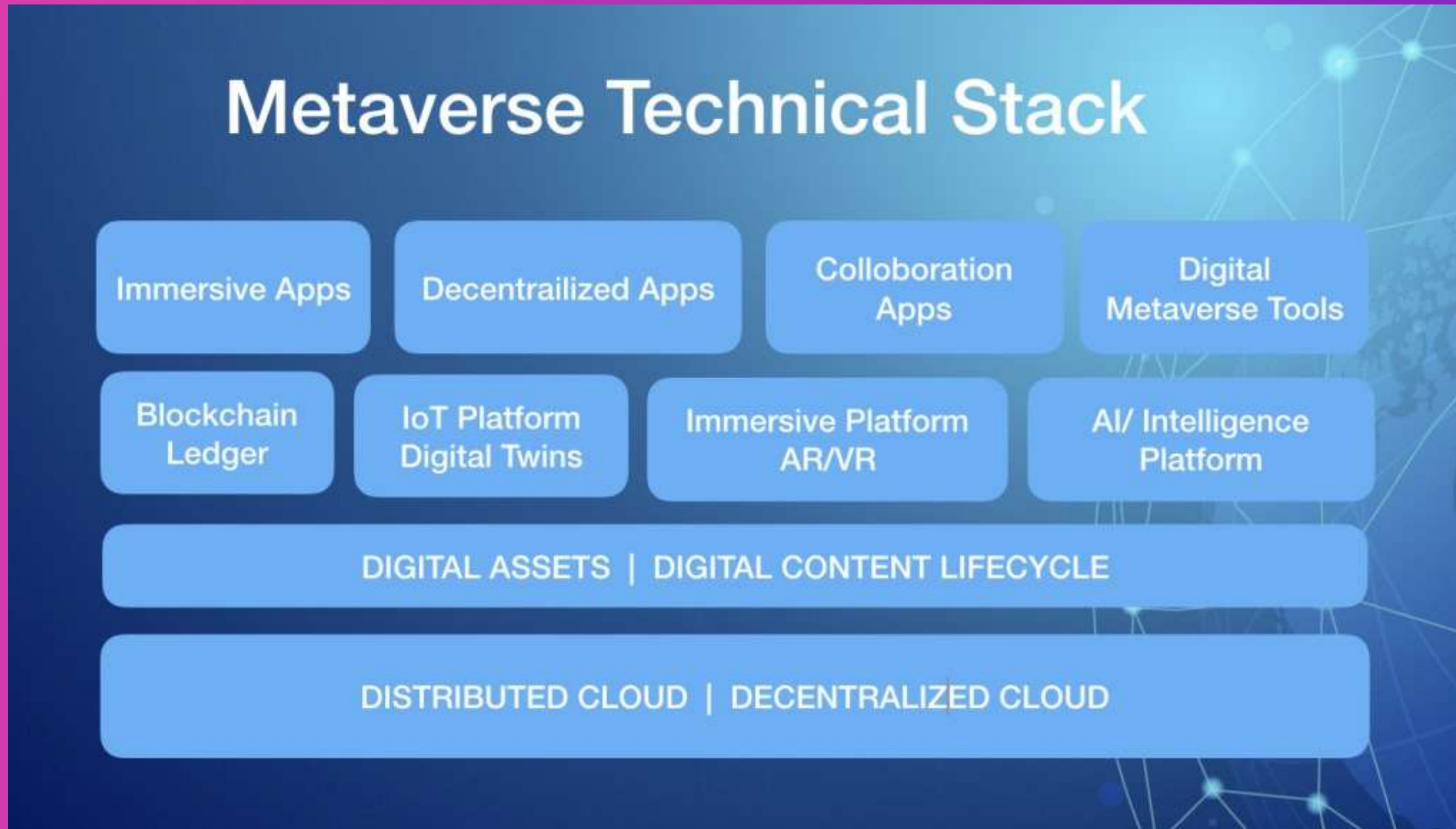
Metaverse NFT Museum

Web 3D 360 Spaces

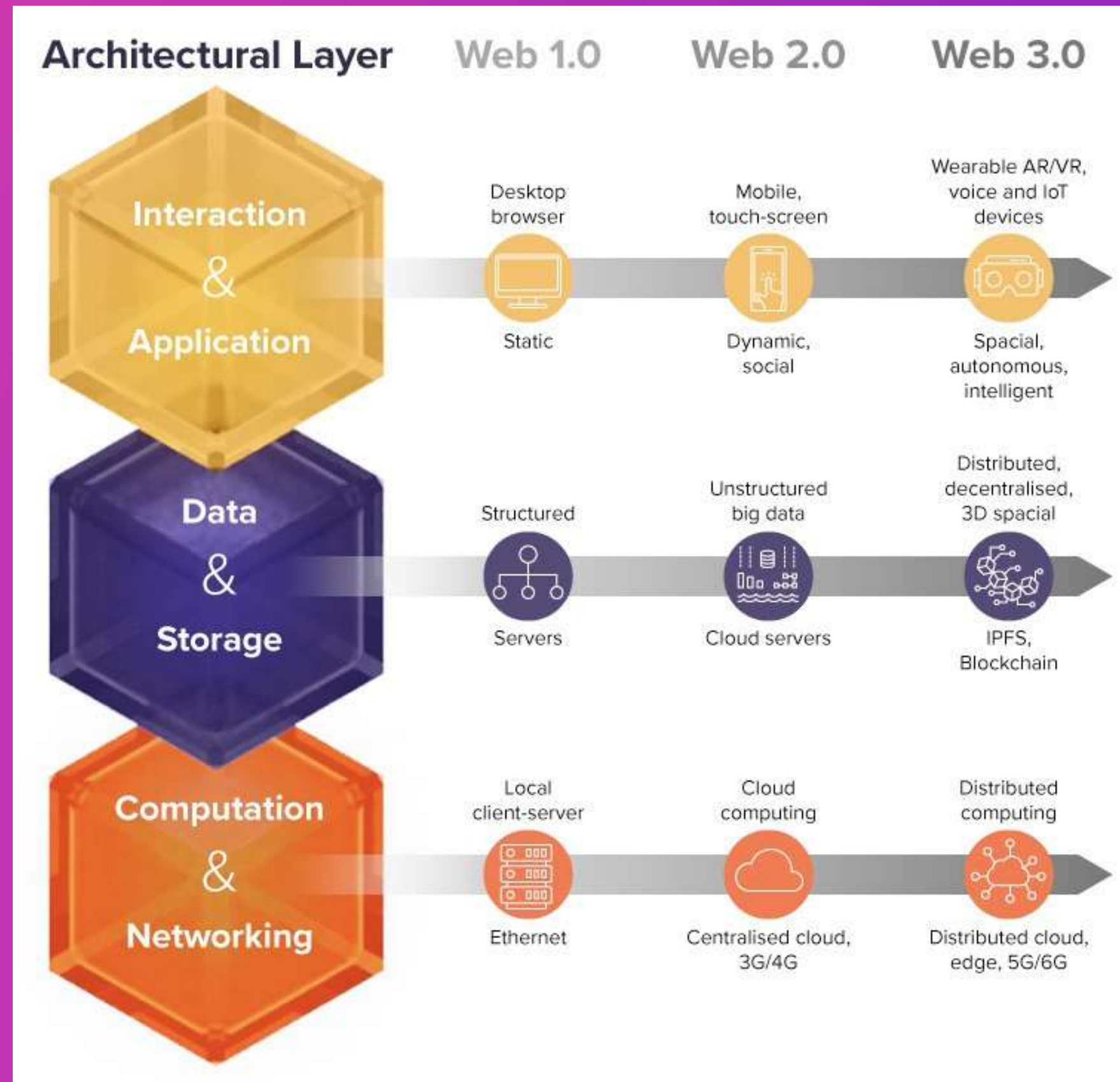
Shiseido 2022

METaverse TECH STACK

TECHNOLOGY USED IN **METaverse**



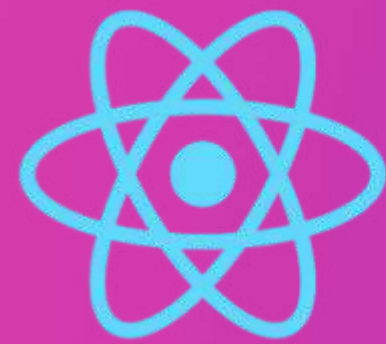
METaverse TECHNOLOGY LAYERS



TECHNOLOGY STACK – FRONTEND



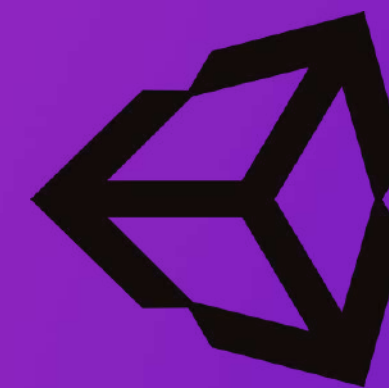
A combination of programming languages, frameworks, and tools that developers use to build a web or mobile app



React



Front End
Technology –
React/WebGL for
Desktop



unity

Front End
Technology –
Unity for Mobile

TECHNOLOGY STACK – MIDDLEWARE

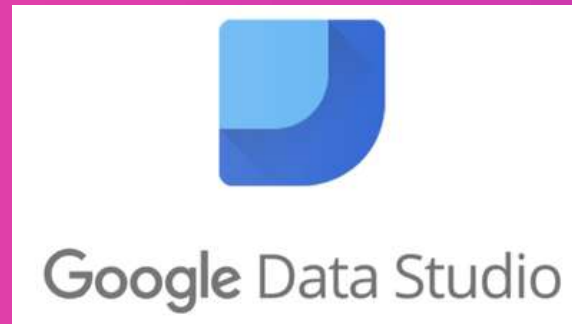


Web analytics service offered by Google that tracks and reports website traffic



BigQuery

Serverless data warehouse that enables scalable analysis over high volumes of data



Data Visualization tool by Google that helps in sharing customizable informative reports and dashboards with custom views & tables

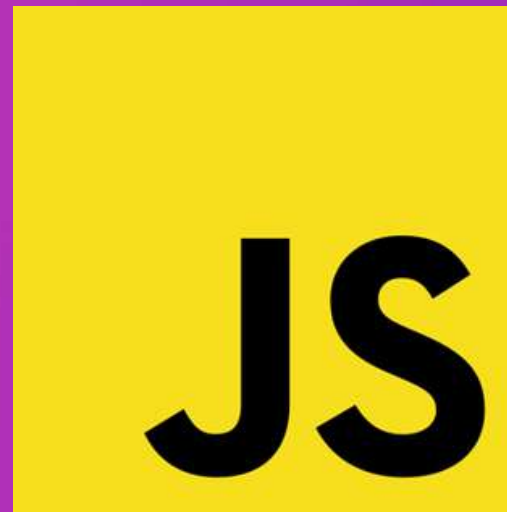
TECHNOLOGY STACK – BACKEND



A combination of servers and storage, that developers use to build APIs and store data



Google Cloud
Server
Infrastructure
Services



Front End
Technology –
JavaScript



Firebase

Google Firebase
Storage Services

TECHNOLOGY STACK – SDK



A combination of programming SDK, frameworks, and tools that developers use to build a web or mobile app



SDK for
Audio/Video/Chat



SDK for
Audio/Video/Chat

UI AND 3D – TOOLS

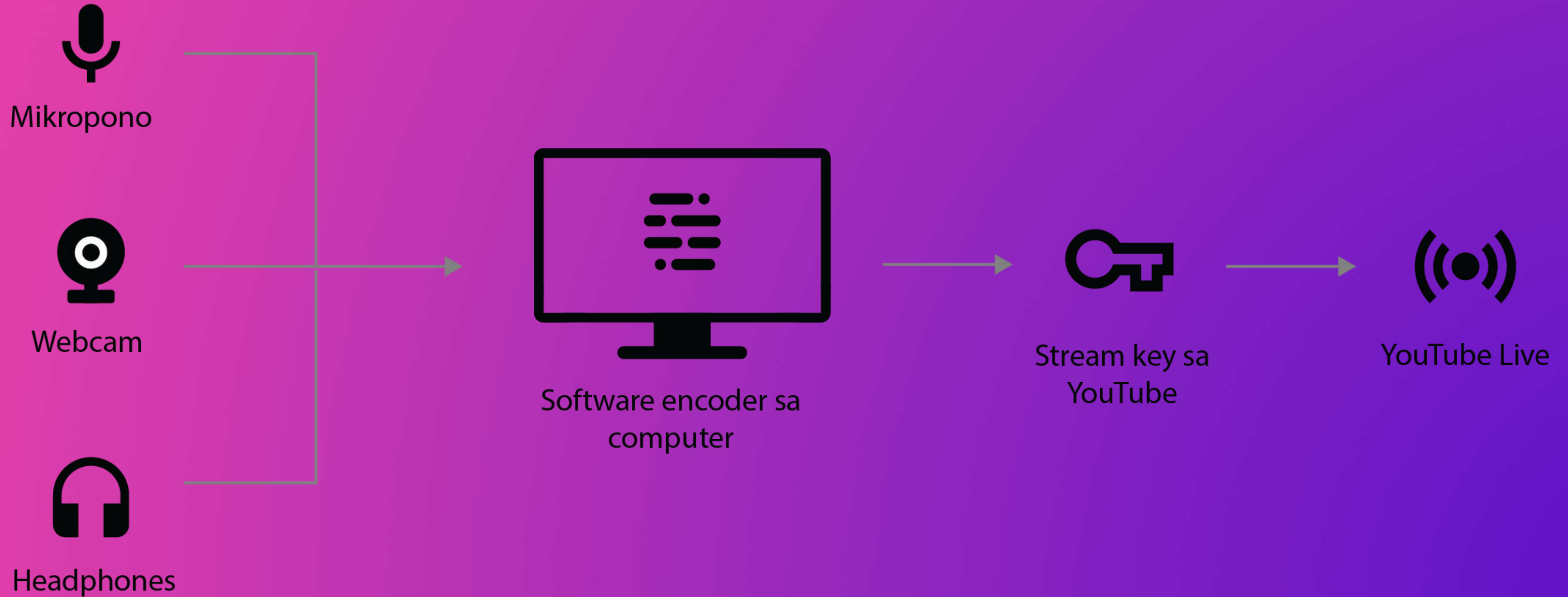


Figma for
UI/UX



Blender for
3D

LIVE STREAMING



PROPOSED PLATFORM ARCHITECTURE

FRONT END

Metaverse FRONT END

Avatar Module

Char/call/vcall

Visual Elemets

Enviroment

MIDDLEWARE COMPONENTS

BACK-END SERVICES

USER DATA

ANALYTICS

Item Library

DASHBOARDS

BACK END

SCALABILITY

AUTO SCALING
ELASTIC INSTANCES

GLOBAL
REACH

RELIABILITY

99.5%+
UPTIME SLAs

TIER III DATA
CENTERS

SECURITY

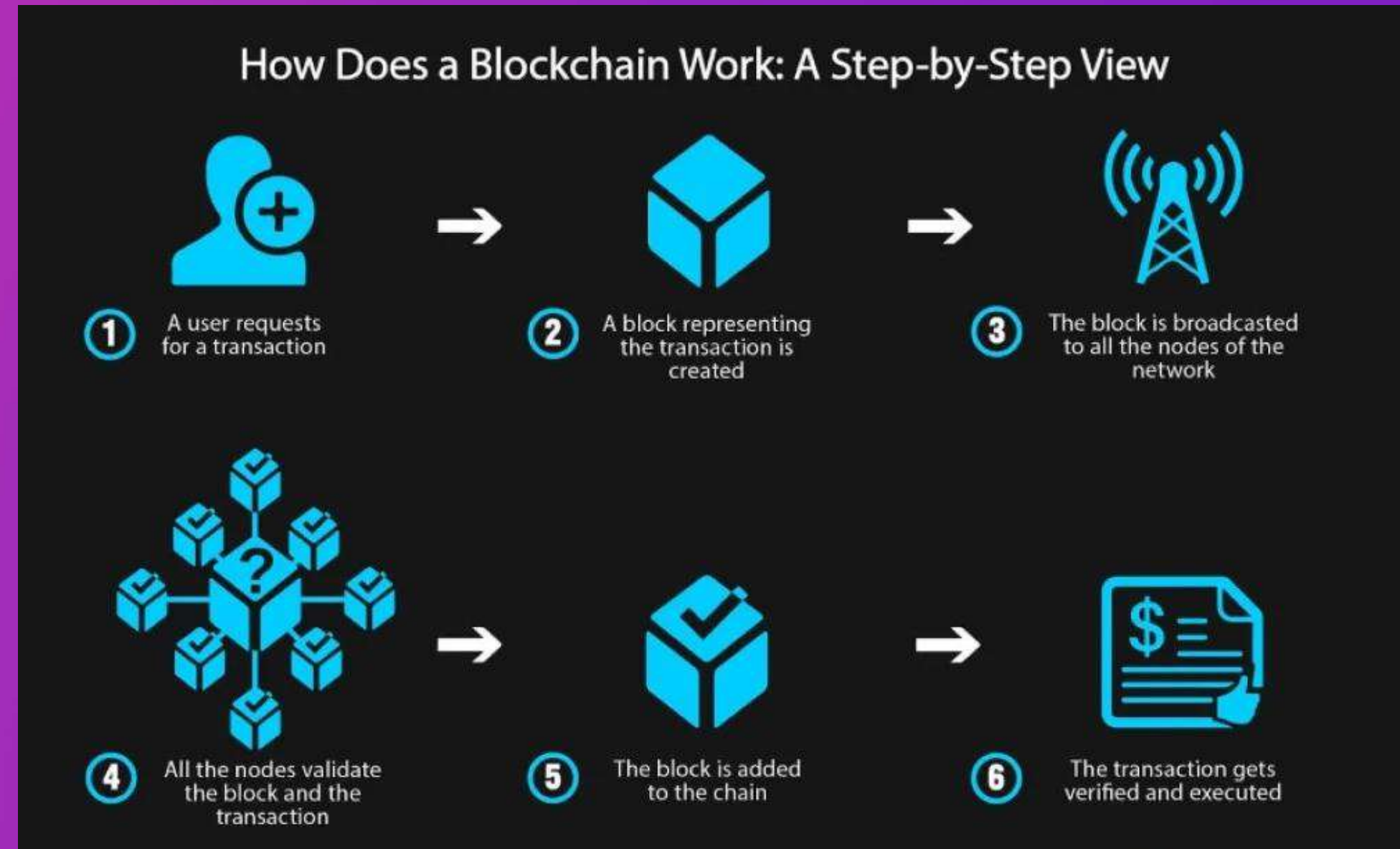
SOC 2
COMPLIANT

ENCRYPTION IN
TRANSIT & REST

USES OF DIFFERENT TECHNOLOGIES

BLOCKCHAIN

- The blockchain serves as an immutable ledger which allows transactions take place in a decentralized manner
- In other words, every action in all the metaverse platforms is logged into an extremely secure ledger called blockchain



USES OF DIFFERENT TECHNOLOGIES

CRYPTO CURRENCY

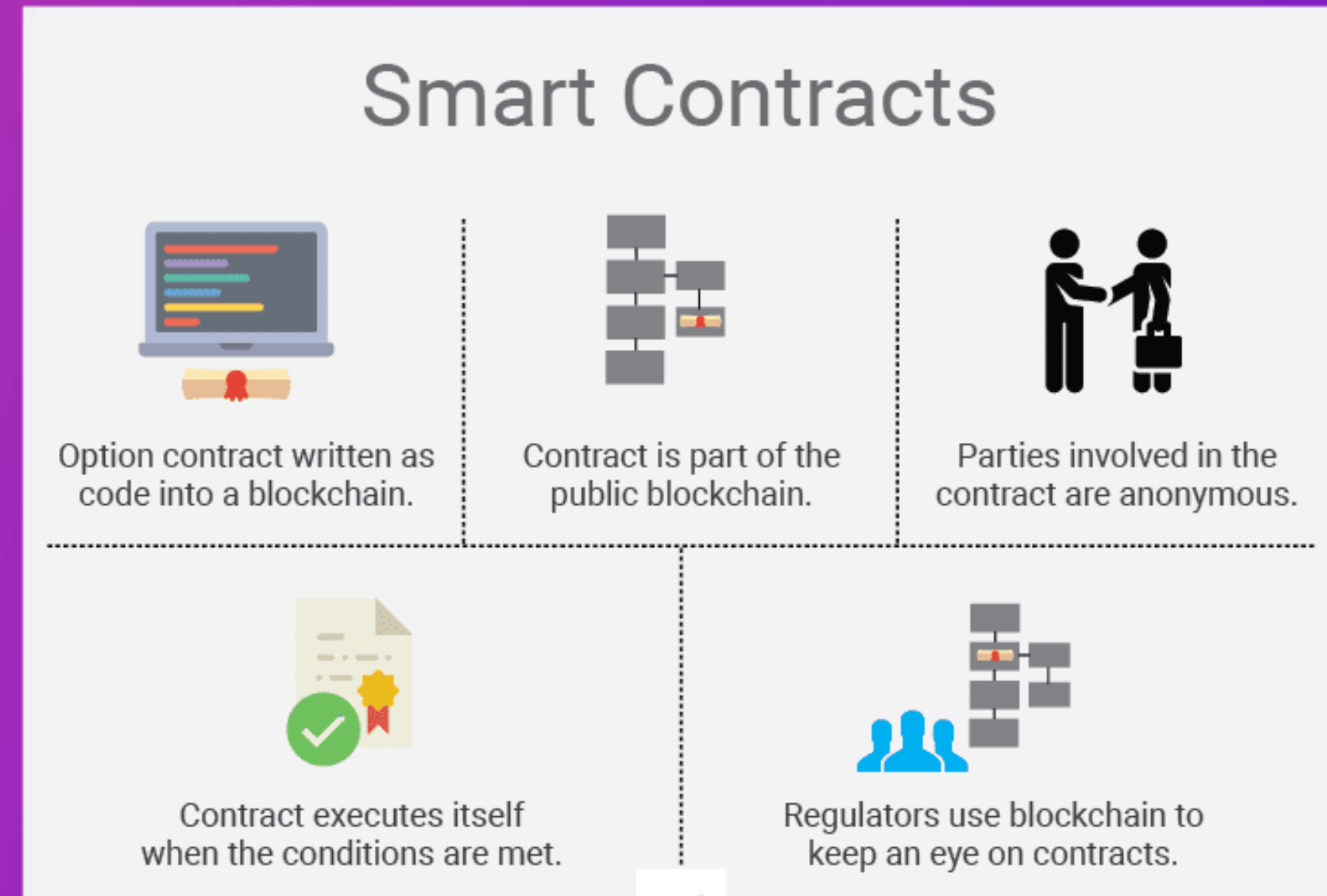
- A digital currency in which transactions are verified and records maintained by a decentralized system using cryptography, rather than by a centralized authority
- In other words, the money with which the user can buy stuff in the metaverse



USES OF DIFFERENT TECHNOLOGIES

SMART CONTRACTS

- A smart contract is a computer program or a transaction protocol that is intended to automatically execute, control or document legally-relevant events and actions according to the terms of a contract or an agreement.
- In other words, what's the proof that a user bought land on metaverse. Show the smart contract



USES OF DIFFERENT TECHNOLOGIES

NON FUNGIBLE TOKENS (NFT)

- Imagine buying a piece of digital artwork on the Internet at a reasonable price and getting a unique digital token known which proves your authority over the artwork you bought. Wouldn't it be great? Well, that opportunity exists now, thanks to NFTs



METaverse SERVERS AND COSTS

- Costs depend on the number of users entering a metaverse, because with each user, the cost of content download/upload, the space usage on the server, etc. will increase/decrease.



**Reference
Link**

THANK YOU.

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