



Exploring the possibilities of the Metaverse on the South African society and industrial economy

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science & innovation

Department:
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REPUBLIC OF SOUTH AFRICA



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Touching lives through innovation

What is the Metaverse



- A Collective, **permissionless** space ready for innovators



Who's building what?

- Hundreds of billions of dollars flooding into the industry
- Focused on gaming, remote work, social interaction
- What would commerce in the Metaverse look like?



Who's buying?

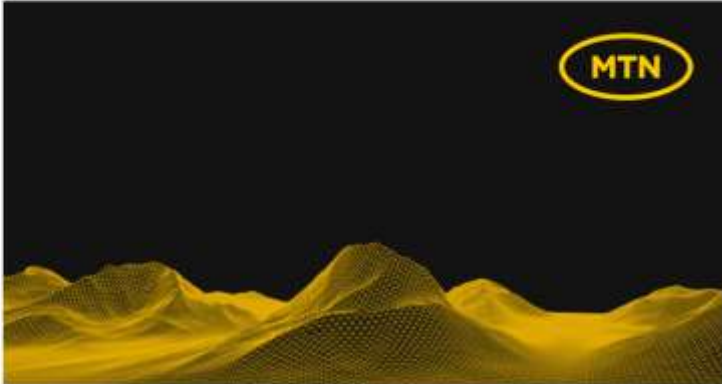



MTN About Sustainability Investors Newsroom Careers

NEWSROOM MEDIA RELEASES

MTN Group becomes the first African company to enter the metaverse with land ownership on Africarare

28 February 2022



Africarare is the first Virtual Reality metaverse in Africa

MTN today became the first African company to enter the metaverse by purchasing land in Africarare.

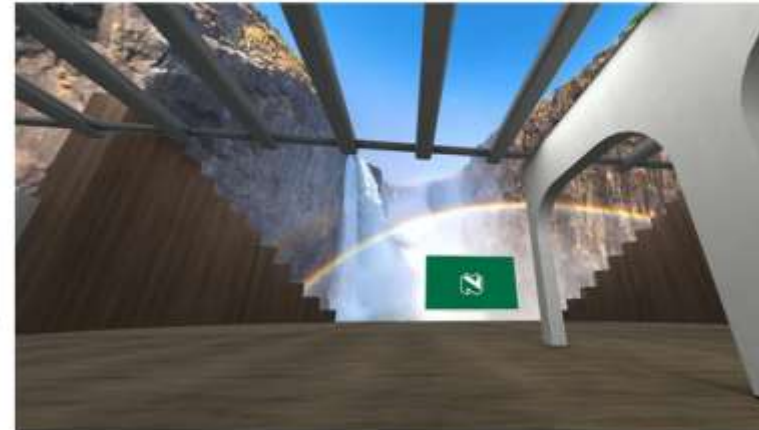
Africarare which made its debut in South Africa in October 2021, is the first African Virtual Reality metaverse featuring digital land. This purchase will see MTN owning 144 plots of virtual land with an overall area of 12x12m.

Nedbank takes banking services to the metaverse

By **SIBAHLE MALINDA**, ITWeb senior news journalist.
Johannesburg, 21 Sept 2022

Read time: 2min 30sec

Comments



Big-four bank Nedbank has secured a 12x12 village in UbuntuLand – a village on Africarare – Africa's first metaverse.

The bank says it has established its presence as the first African financial services organisation to enter the metaverse.

Why invest in the Metaverse?



- Assuming the Metaverse would become a place where people spend their time
- Some corporates are preparing for the shift in client behavior
- Like a mall / cinema
- It makes sense to get an early presence
- Digital presence & operational benefits:
 - No physical limits on clients
 - No infrastructure maintenance
 - Open 24/7
 - Borderless. Increased customer reach
- Where does scarcity fit in? Can anyone create new “land”?

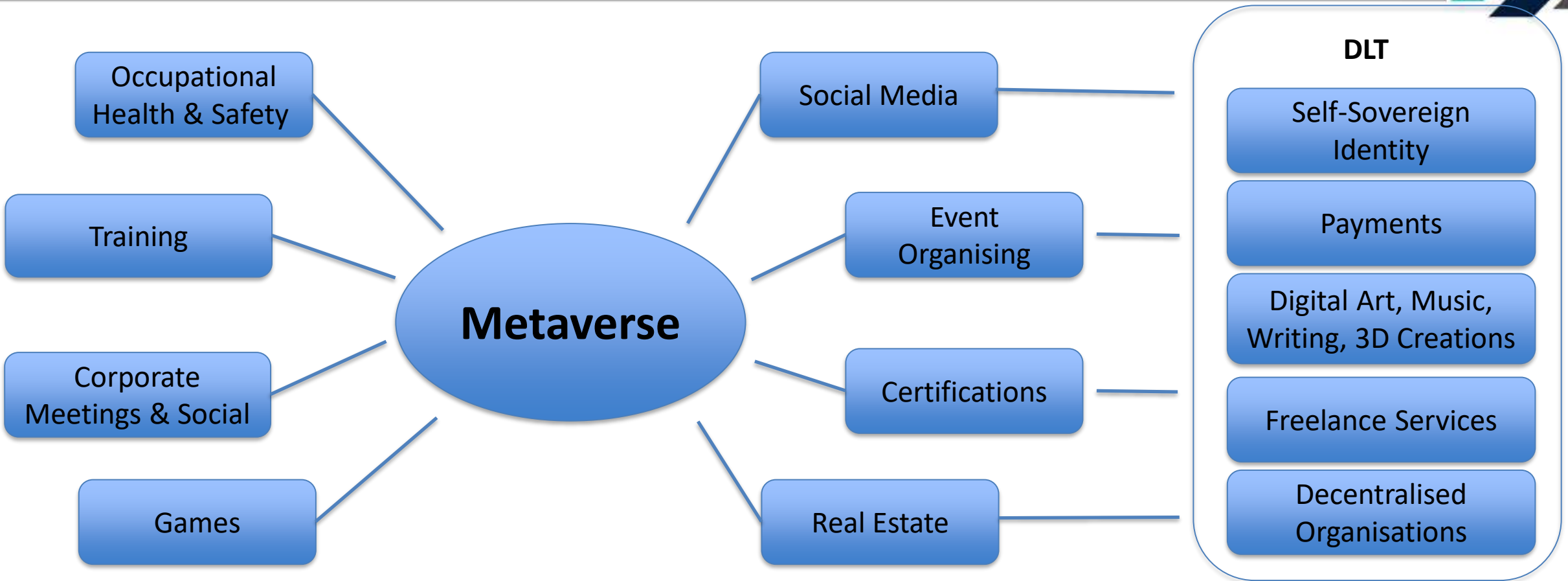
DLT in the Metaverse



- Commerce to be as popular in the virtual world as in the physical world



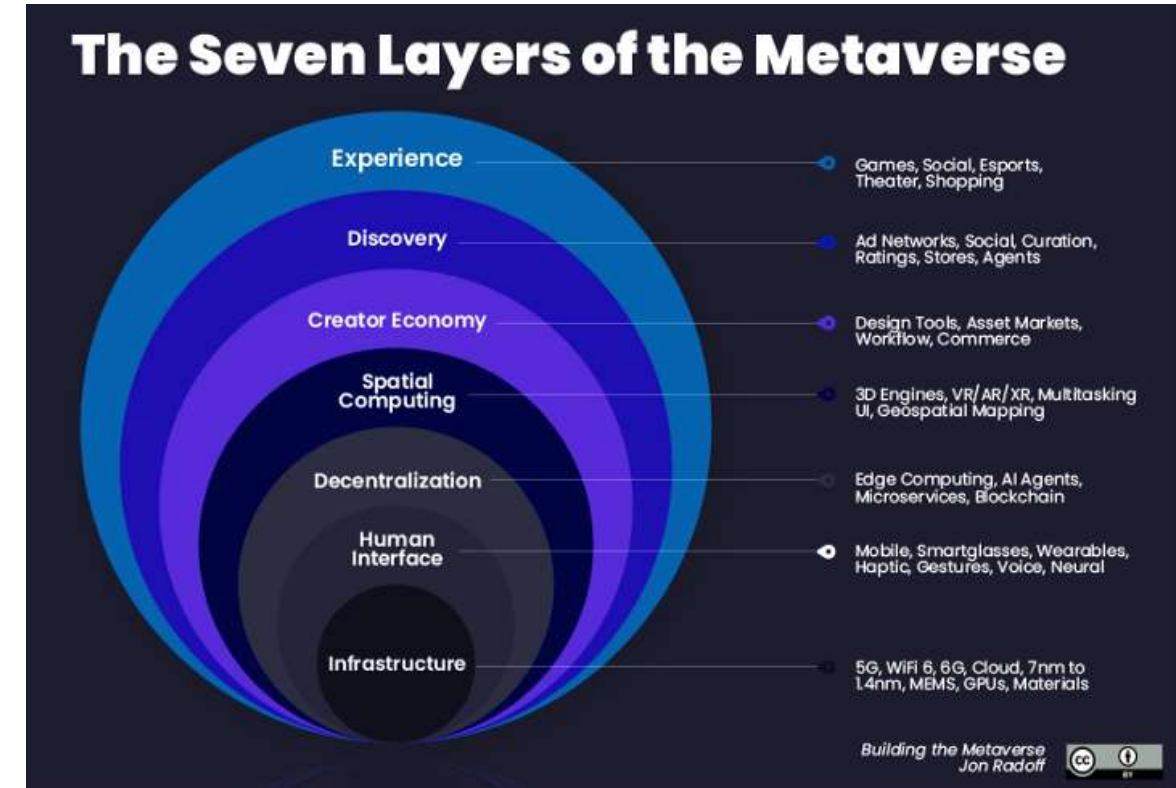
DLT in the Metaverse



DLT in the Metaverse: CSIR

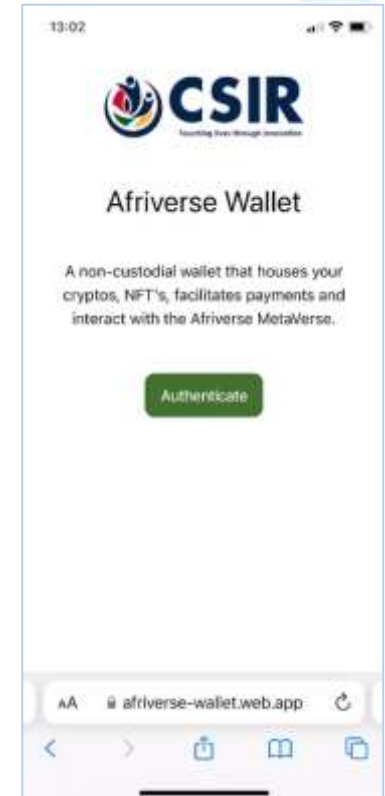


- Building tools and infrastructure to enable commerce as a turnkey solution
 - Payment rails
 - NFTs
 - Self-Sovereign Identity
 - A non-custodial wallet
- Interoperability with other layers and systems



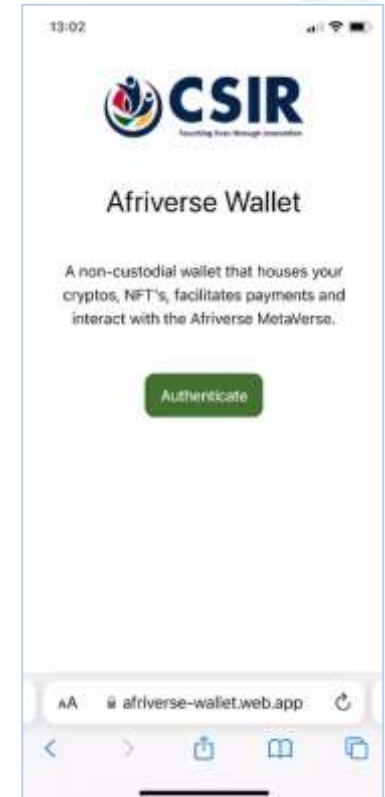
DLT in the Metaverse: Payment rails

- Payments to be conducted on a per-second micropayment subscription basis
- Money flowing like information, borderless and always available
- Traditional rails cannot support these transaction volumes, cross border transactions, 24/7 availability
- There is only one protocol that can handle this: The Bitcoin Lightning Network



DLT in the Metaverse: Non-Fungible Tokens

- Lots of hype in NFT space. Million \$ JPEG files, money laundering, scams, etc.
- Can NFTs provide real-world utility?
- Yes, mainly as a permissions-layer
 - A token providing permission to do something
 - Tickets
 - Certifications
 - Credentials
- But an NFT is always interoperable. Can be traded in other marketplaces. Cannot sell your university degree! Solved by SSI



DLT in the Metaverse: Self-Sovereign Identity

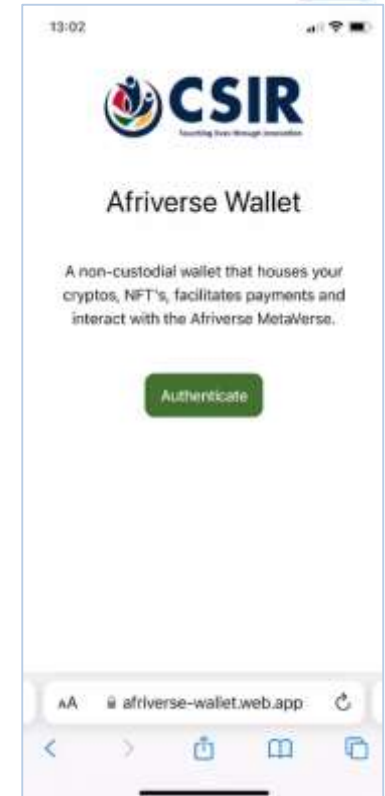
- An NFT can act as a credential, but only if that credential is independent of the holders' identity
- Using an SSI protocol, we can issue credentials that are sensitive to the user identity
 - Certificates
 - An ID number
 - Medical data
 - Credit record
 - An insurance claim



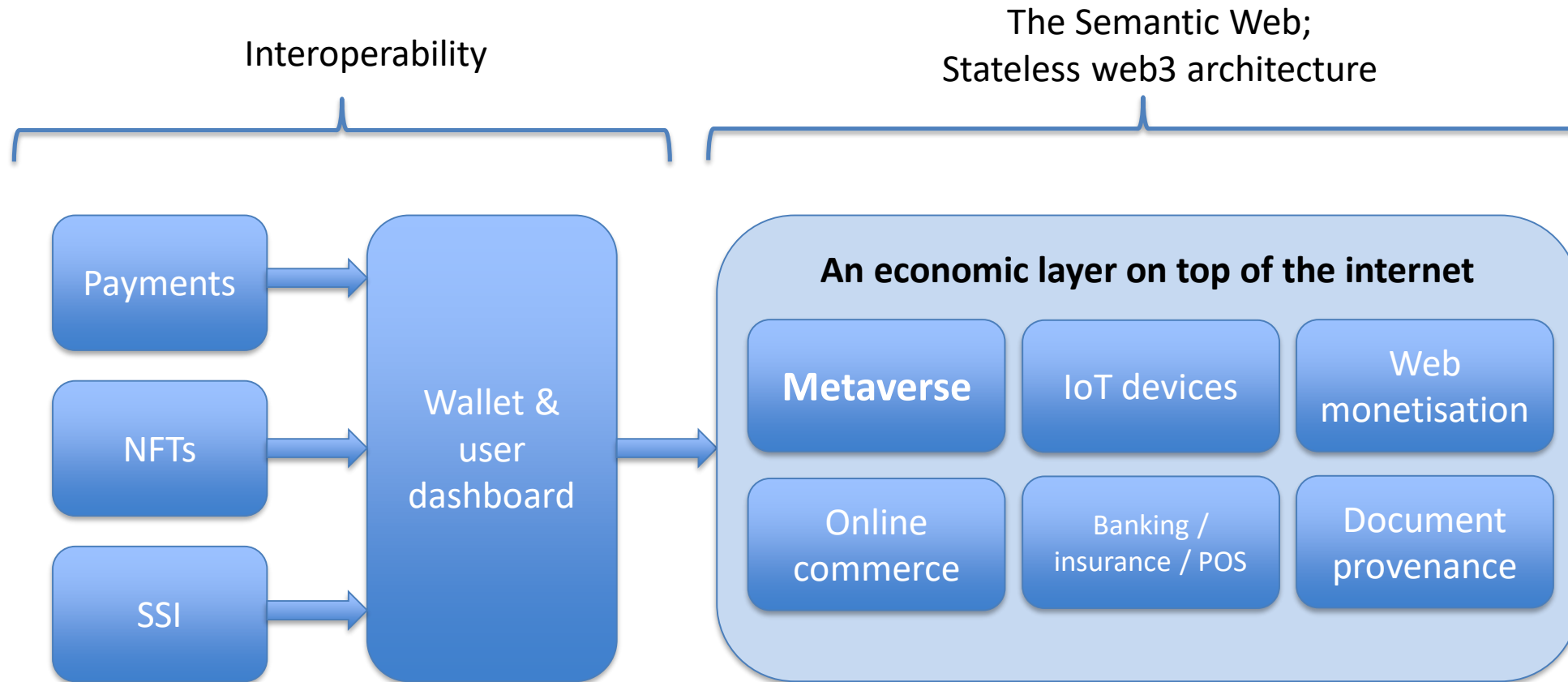
DLT in the Metaverse: Non-custodial wallet



- The user interface where everything comes together:
 - Payments infrastructure
 - NFT minting, trading & management dashboard
 - Decentralised Identity & verifiable credential management (SSI terms)
- Web3 principles state that the product shall function optimally without harvesting user data. Therefore, it needs to be non-custodial
- These modules work with cryptographic algorithms. Private and Public keys
- Non-custodial means that the keys are managed by the user. If user loses their device, then the keys are lost and also their money & identity. Challenging problem to solve
- Enabling a semantic, stateless web architecture



The CSIR product: A modular design





THANK YOU