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CLASS OF 2023

RISE OF WEB 3.0



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On 4th October 2021, Facebook and all its services, including Instagram, WhatsApp, and Messenger went down for close to 6 hours. For you and me that doesn't seem to be a huge issue, nothing is lost if we do not scroll through endless reels for a few hours, but for businesses and people who depend on those platforms to transact, the losses could be in the millions of dollars.

One small error from Facebook had a ripple effect that affected millions of people, and that is the real risk of the deeply connected world we live in today. The internet as we know of today has opened up true globalisation, but the downside is that most businesses depend on services like Microsoft Azure, Google Cloud or Amazon Web Services to run and store their data. A few companies are essentially responsible for most of the data we generate today as a species, which in case of downtime could mean huge losses as we saw above.

This is where Blockchain and the concept of Web 3.0 comes in.

Why do we need to trust and pay some of these central authorities to be connected to one another? Why do businesses and governments need to build, or trust service providers, to store data on huge server farms (data centers)?

Blockchain is nothing but a distributed database maintained over a network of computers. It records every transaction and documents it in a block, which is immutable. A set of new transactions clubbed together is what forms a block, which is further added to the last block via a consensus mechanism. It's a truly democratic system and there is no need for a central authority anymore.

Blockchain will be the database layer of Web 3.0, which is the next version of the internet. Data can be stored across individual machines spread across the globe rather than in centralised datacentres controlled by one company.

Governance of the operation of these technologies will be done through a democratic consensus methodology, or through DAOs (Decentralised Autonomous Organisations).

There are several key Web 3.0 features that help to define what the third generation of the web will likely be all about, including the following:

- **Decentralized.** As opposed to the first two generations of the web, where governance and applications were largely centralized, Web 3.0 will be decentralized. Applications and services will be enabled in a distributed approach, where there isn't a central authority.
- **Blockchain-based.** Blockchain is the enabler for the creation of decentralized applications and services. With blockchain, the data and connection across services are distributed in an approach that is different than centralized database infrastructure. Blockchain can also enable an immutable ledger of transactions and activity, helping to provide verifiable authenticity in a decentralized world.
- **Cryptocurrency-enabled.** Cryptocurrency usage is a key feature of Web 3.0 services and largely replaces the use of fiat currency.
- **Autonomous and artificially intelligent.** More automation overall is a critical feature of Web 3.0, and that automation will largely be powered by AI.

Web 1.0 vs Web 2.0 vs Web 3.0

Web 1.0. This was the earliest version of the internet with static webpages just to store and refer back to information. These were no dynamics web apps as we see today

Web 2.0. This refers to websites and applications that utilize user-generated content for end users. Web 2.0 is used in many websites today, chiefly focusing on user interactivity and collaboration. Web 2.0 also focuses on providing more universal network connectivity and communication channels.

Web 3.0. This is more focused on the use of technologies like machine learning and AI to provide relevant content for each user instead of just the content other end users have provided. Web 3.0 also focuses on decentralisation which is a contrast to Web 2.0

Web 3.0 could have a stark impact on businesses going forward with the use of applications like NFTs, dapps (decentralised applications), Defi (Decentralised Finance) and DAOs. Web 3.0 isn't without its challenges, however, which include scalability, speed and security.

There are efforts being made to solve these issues but a democratic, connected world is something everyone needs to prepare for, especially organisations as traditional modes of value creation and capture start to shift.