

Web 5.0

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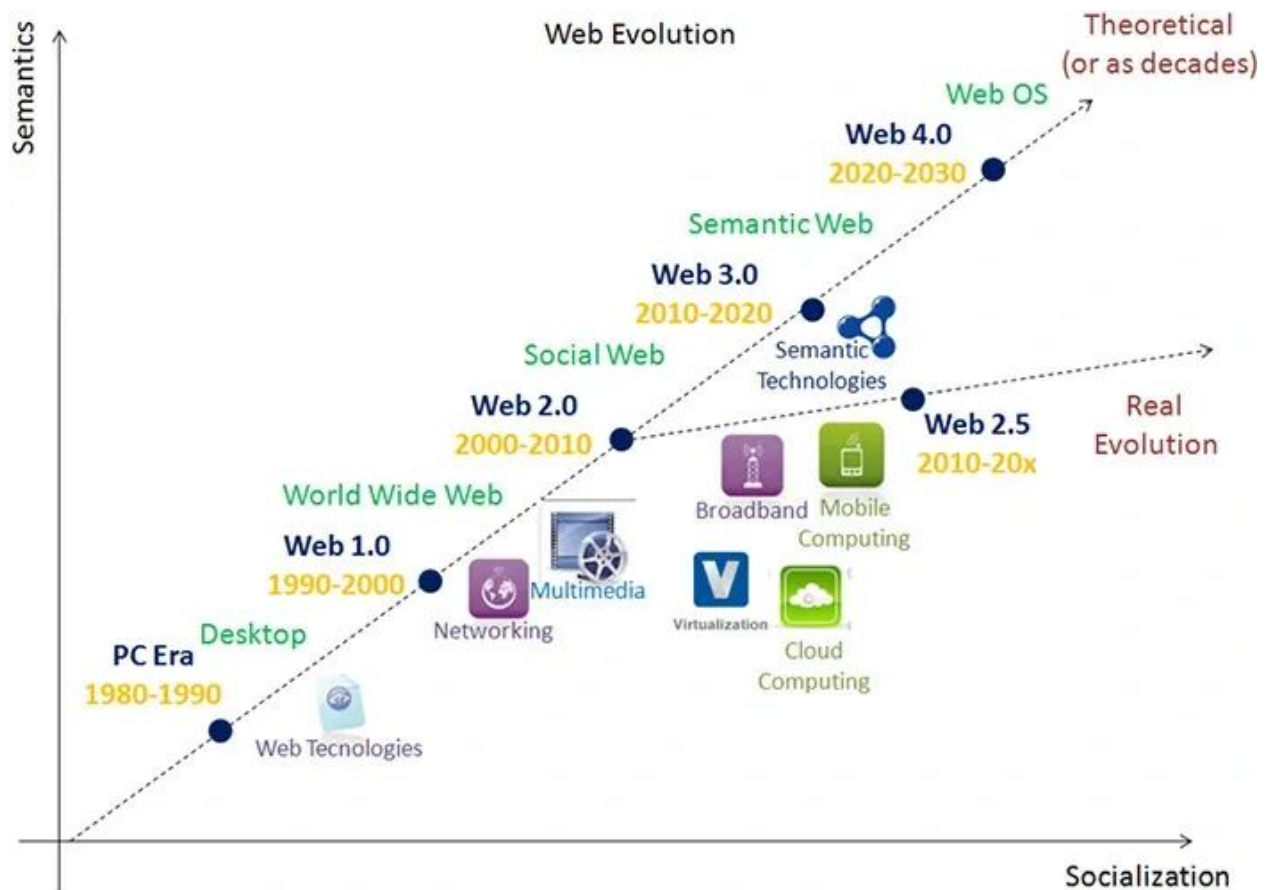


Web 5.0 is an upcoming web platform that envisages extra **decentralization**, thereby allowing individuals to control his/her identity and claim data ownership. It allows developers to build decentralized web applications with verifiable credentials and decentralized web nodes. It is being developed by Jack Dorsey's Bitcoin business unit, "The Block Head," by using **blockchain technology**.

The primary objective of Web 5.0 is to develop **computer-human emotional interactions with semantic capabilities**. It intends to share the traits of **both Web 2.0 and Web 3.0** and has the potential to communicate directly with its users while respecting the privacy and security of individuals.

Evolution of the World Wide Web

Our technological practices continue to evolve with time. The journey from Web 1.0 to Web 5.0 is meant to enhance the Internet and the user experience of the digital world.



Web 1.0:

- It was the first generation of the global digital communications network.
- The Internet was characterised by **static web pages**.
- It is often referred to as the “**read-only**” and largely allows for passive engagement such as file storage and maintaining records.

Web 2.0:

- It has the feature of “**read and write**”.
- It introduced the concept of **participation by creating a social web**.
- This is the World Wide Web **presently being used**.

Web 3.0:

- Named as **semantic web**, it is an evolving next-generation **decentralised** platform with the characteristic of a “**read-write-execute**” web, leveraging blockchain technology.
- It is to be driven by Artificial Intelligence and Machine Learning, where machines will be able to interpret information like humans.
- It has introduced the concept of being interconnected with the virtual world and became the starting point of social media.
- Some of the examples of web 3.0 are **Apple’s Siri, Google’s Cloud API, Wolfram Alpha**, etc.

Web 4.0:

- It is also known as the "Intelligent Web" and is characterized by a shift from traditional static web pages to more intelligent, dynamic, and interactive web applications.
- It is more intelligent, intuitive, user-friendly, and easy to navigate.
- It is expected to be driven by intelligent agents that are capable of understanding user preferences and providing personalized content and services.
- Possible applications of Web 4.0 include AI-powered chatbots and virtual assistants, allowing for more natural and intuitive interactions with users.

Key Features of Web 5.0

It is set to be a game-changer in the new digital age as it is based on the following key features:

- **Shared Traits of Web 2.0 and Web 3.0:** It shares features of both Web 2.0 and Web 3.0 such as communication with servers from Web 2.0 and decentralisation features from Web 3.0. Hence, it allows people to 'own their identity' and 'manage their data' on the Internet.
- **Emotional intelligence:** The central feature of the Web 5.0 version of the internet is emotional intelligence, using **blockchain, Artificial Intelligence,** and deep learning.
- **Data ownership:** Users will have their own **blockchain participation** in order to safeguard and own their data securely.
- **Absence of intermediary:** There will be no involvement of third parties on the Web 5.0 platform.

Significance of Web 5.0

It is going to ensure an improved digital experience that is rooted in its features. There are some of the following significance:

- **Protect Individual Privacy:** It will enable better control of user data as it operates on the bedrock of **blockchain technology**, offering consumers the benefits of decentralization and **cryptographic security**.
- **Space for innovation:** It will facilitate the exchange of information and collaboration in a more efficient and secure way for business entities, leading to a more competitive and innovative business environment.
 - Moreover, the emotional intelligence component of Web 5.0 can be utilized by the e-commerce industry to establish the infrastructure for real-time communication with users to enhance the value of user experiences.
- **Democratization of platforms:** Both Web 3.0 and Web 5.0 envision an Internet without the threat of censorship from governments or big tech and without fear of significant outages.
- **Transparency:** It facilitates transparency as it is based on blockchain technology, which offers decentralized services.

Concerns Associated with Web 5.0

Since Web 5.0 is currently in the development phase, there could be the following speculative concerns associated with this technology.

- **Regulatory challenge:** Decentralised operation gives rise to multiple stakeholders, thereby making regulation one of the key concerns associated with Web 5.0.
- **Digital divide:** Since internet penetration is still limited in remote areas, it can limit the proliferation of emerging technology, including Web 5.0.
- **Adoption issue:** It is anticipated to have a higher service cost that would limit the adoption of this technology to the larger masses.
- **Absence of Roadmap:** It is still under development, and the company has not mentioned explicitly about its possible rollout.
- **Lack of operational clarity:** It is still unclear about its operational mechanism, who would control it, and what would be the safety scenarios for the vulnerable population.

Source: <https://vajiramandravi.com/upsc-exam/web-5-0/>

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