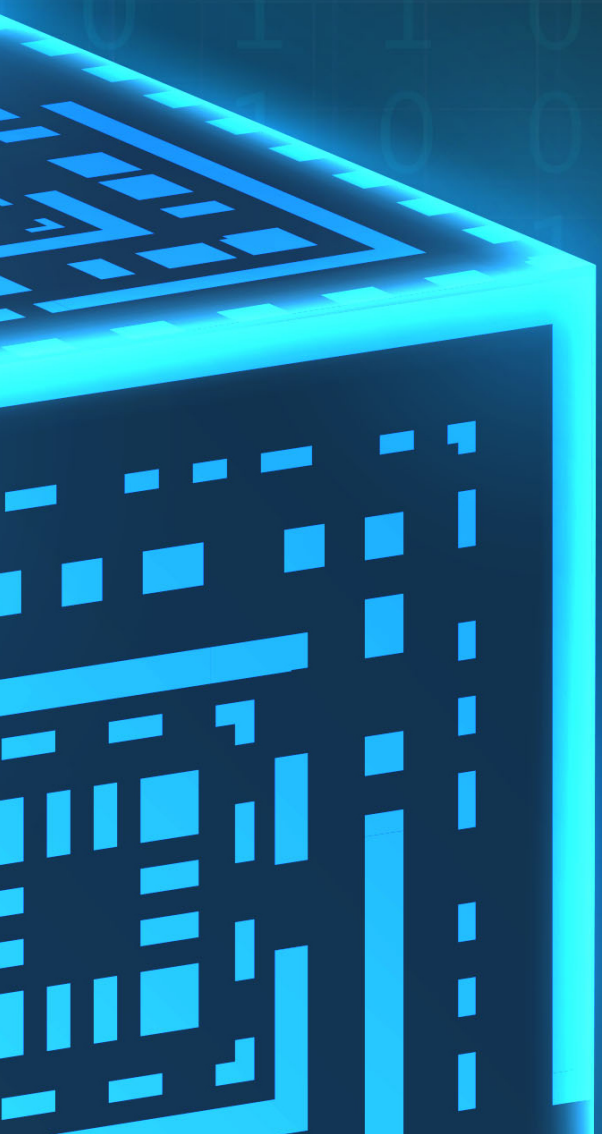
SOLACTIVE
German Index Engineering

AN INTRODUCTION TO
WEB 3.0



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What is Web 3.0?

To be honest, we don't really know either. We do know that the term Web 3.0 describes the **next big transformational change** to what we call the internet or world wide web. We believe that we are currently at the beginning of this transformational shift – we just don't quite know where it is taking us yet. We are also fairly sure that in 10 years we will look back at this time and consider it the time when Web 3.0 started to take shape.

WEB 1.0 - the original internet

Problem statement: A lot of knowledge exists in decentralized repositories across the world (such as university libraries) but access is physical only and very cumbersome.

Solution: The knowledge is digitalized and made available for reading and reference to users anywhere and at any time through the original world wide web.

WEB 2.0 - the creative and collaborative internet

Problem statement: All information on the original internet is read-only and fairly stale. There is no collaboration or interaction between users and additional value creation.

Solution: The web has become a platform driven by a number of large key players providing a place for users to interact, collaborate, share and create content.

Now, to make an attempt at **defining** what **Web 3.0** may or may not be let's examine the previous two major iterations of the Web that we can all already agree on. We believe each of those iterations is driven by a set of **technological and organizational innovations** that together generate a significant improvement over the previous version or in other terms that have successfully addressed a common problem statement.

Both iterations so far have added distinct **new features,** addressing previous issues and fundamentally changing how the web is organized and used. Additionally, each iteration has changed the dynamics of value creation and ownership of data and content.

In order to get to grips with what the next iteration will entail, let's examine potential problem statements that a Web 3.0 could address:

Problem statement 1

Few **big players** like Alphabet, Meta & Co. **dominate** value generation through data monopolies. Users generally have little control over their data and the monetization of the content they generate.

Problem statement 2

The majority of content and data available on the Web is **unstructured and not optimized for machine consumption**. This blocks further advances in artificial intelligence as data requires time and resource intensive labelling.

Problem statement 3

The current web is **highly resource intensive** in terms of required bandwidth, computing power, and storage and will become unsustainable if information just continues to grow.

Problem statement 4

Due to a **lack of digital identities** and the ability to identify users consistently cybercrime and fraud is rampant, while identity management is cumbersome and inconvenient.

We believe that the Web 3.0 iteration will emerge from addressing any combination of the four statements above. From this we can derive a potential view of different Web 3.0 scenarios:

The decentralized web

Based entirely on **blockchain technology** and related technologies such as **NFTs** this next iteration breaks up the market structure of concentration with the few big players and returns privacy, ownership and control to the individual contributors. Data will no longer be stored and kept by few central repositories but be stored in decentral form across different blockchains. Decentralization might also address some of the performance and hardware issues in todays world.

The semantic web

Through technological advances formerly unstructured data will be stored and recorded in semantic context in order to **enable machines and specifically AI applications to process and understand the data** without the need of human intervention or supervision. This iteration will enable the next generation of AI and transform user experience and services entirely.

The metaverse

Defined by a completely new way of interacting and engaging with the content on the internet through **virtual and augmented reality** hardware this next iteration changes the way we interact with each other and consume content on the internet. This iteration will allow companies and content producers to address their target audience in entirely new ways and accelerate digital value creation and ownership through **tokenization** and across **interoperable platforms**, while some traditional distribution channels may become obsolete.

At Solactive we pride ourselves with identifying future trends early and jointly with our clients provide investors an opportunity to participate through thematic baskets. Even if a trend is not yet clearly defined, we can use the considerations above to collect the right companies into our thematic baskets and adjust them as we learn more about where the Web 3.0 journey takes us.

Currently we are focusing on companies from four fields to cover all the options described above: **NFT & Tokenization, Blockchain Technology, Metaverse, and Big Data & Artificial Intelligence**. We are, of course, also able to produce different blends of the topic depending on our clients views.

We view this approach as a starting point to the broad topic of Web 3.0. Many questions remain unanswered and over the next weeks we will continue to dive deeper into the various aspects of questions such as:

- Is the metaverse really a Web 3.0 component or just a facette of Web 2.0?
- Even if users take back ownership of their data in Web 3.0, will the need for convenience eventually drive revenue generation back to the same few big players that dominate Web 2.0?

Stay tuned for more commentary from Solactive on this theme!

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