

## Section 2 Progress in data flows and digital services

### 1. One-way data transmission (Web 1.0 era: 1990s to early 2000s)

With the launch of Windows 95 in 1995, the Internet rapidly spread in Japan, and since then data distribution and utilization has evolved through several stages.

In the early days of the Internet, websites were mostly text only and were built using html, with few images and videos. In addition, the senders and receivers of information were fixed, and usage was centered on the one-

way distribution of information and data from the provider to the user/receiver, such as users viewing websites created by companies and individuals and sending messages by e-mail, etc.

The period from the 1990s to the mid-2000s, when the distribution of information and data was static and one-way, is called Web 1.0.

### 2. Two-way data sharing (Web 2.0 era: late 2000s onward)

In the 2000s, the spread of high-speed, fixed-rate, constant connection brought about a serious change in the way people used the Internet, and the types of services provided on the Internet also diversified.

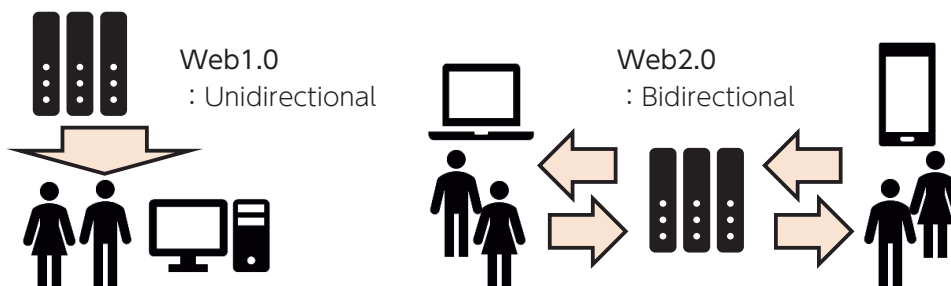
In the early days of the Internet, many portal websites were set up to consolidate information in one place. While information had continued to be consolidated on portal websites, from around 2005, against the background of an internet environment offering flat-rate fees and constant connection, communication services, such as blogs and social media<sup>1</sup> as well as video posting and sharing sites,<sup>2</sup> appeared one after another, creating a trend of "bidirectional" flow of information and data. In addition, after the launch of the iPhone in the U.S. in 2007, smartphones also spread rapidly in Japan, and the use of social media, video websites, and online social

games, etc. on mobile devices increased rapidly.

In this way, users began to post information on social media and video websites themselves. This period is called Web 2.0 in which the two-way flow of information between unspecified numbers of users advanced (**Figure 1-2-2-1**).

"Web2.0" is a term proposed by Tim O'Reilly in the United States in 2005. The "2.0" in this term refers to a new type of web, which is not an extension of the traditional websites that have been popularized and developed since around the mid-1990s. A common feature of many websites and services is that users without technical knowledge can easily transmit information, and the knowledge and information of various transmitters combine to form the "wisdom of crowds."

Figure 1-2-2-1 Changes from Web 1.0 to Web 2.0



	Web1.0	Web2.0
Flow of data and information	Unidirectional (Information disseminating centered on single websites)	Bidirectional (Information sharing centered on social media)
Devices	Computers	+ smartphones
Main services	Websites, email, etc.	+ social media, e-commerce, etc.

(Source) Based on Document 1-2 from the first meeting of the MIC Study Group on the Utilization of Metaverse Toward Web 3 Era

<sup>1</sup> In Japan, the blogging services cocolog and Ameba Blog were launched in 2003 and 2004, respectively, and by mid-2004, they had about one million contributors. Regarding social media services, mixi and GREE launched in 2004, and Facebook and Twitter launched in Japan in 2008.

<sup>2</sup> For example, niconico video was launched in 2006, and the Japanese version of YouTube was launched in 2007.