



TECHNOLOGY AND DEMOCRACY

Why the Internet Needs a Data Portability Ecosystem

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The internet powers nearly every aspect of our daily lives. Every day, digital services collect and generate data about what we like and dislike, who we are connected to, and how we interact with the world around us. Personal data is the [lifeblood](#) of this ecosystem—it powers industries, enables new innovative features, and (most importantly) comprises the substance of our digital identities. As users engage over time, their personal data represents an important record of their digital experiences. But presently, users have little control over this record.

Users spend years, even decades, interacting with particular services by providing and generating data about themselves, resulting in innovative and highly personalized experiences. Consider, for example, how music streaming platforms have fundamentally changed modern music listening. Streaming platforms empower users to forge social connections, curate new musical experiences, and share the fruits of their exploration with others.

This is made possible in part by the enormous amount of time and energy users put into creating playlists. While this personal data enhances user experiences on a particular platform, the difficulty of moving playlists across services makes switching to an alternative less attractive. Users are less willing to switch to new services that may better satisfy their needs if it means losing their playlists. As a result, users can feel locked into an incumbent platform due to barriers that disincentivize switching.

Historically, this phenomenon of vendor lock-in has been widespread among digital services. Vendor lock-in places the burden on users to configure workarounds that assist with transferring their data to other services. For instance, the average user stores over 500 gigabytes of personal data (including photos) in the cloud. Under conditions of lock-in, this data can be difficult to transfer between services, forcing users to think carefully about whether they have the time or patience to switch. In this situation, vendor lock-in generates switching costs that limit the agency of users to control their personal data.

When users switch between digital services, they should be able to take the data they care about with them. This ability to transfer personal data between services is called "data portability," (which is distinct from the closely related concept of protocol interoperability). Data portability can empower listeners to keep control of their playlists; families to hold onto cherished photos of loved ones; and friends to save conversations from the past. Data portability can tighten the link between these users and their data, and it can enable them to freely and easily switch between services without leaving their virtual selves behind.

It is technically feasible for services to enable data portability. When data is made portable, it comes packaged in a format that can be exported via an interface and downloaded or shared directly with another service. (The European Union, for instance, requires platforms to make personal data available in a "structured, commonly used and machine-readable format.") This ability to transfer data expands the control users possess over their information and helps prevent conditions of lock-in, with significant benefits for digital agency.

Data portability also boosts market competition. When switching costs are high, users are less likely to try new services, even if those alternative services may better suit their needs. High switching costs contribute to an environment in which only a few services dominate and users are relegated to distinct silos. As a result, smaller companies face barriers to entry because they are unable to attract new users who choose to remain with incumbent services. Economically, the ability to switch represents a precondition for the emergence of deeper competition in digital markets.

Absent switching costs, smaller entrants are able to deliver on the unmet needs of users. Incumbent services, in turn, must proactively compete on the merits for the patronage of their users. The result is greater innovation and the development of higher quality services. It also empowers users with greater choice, enabling them to leave services for bad conduct such as harms to their privacy—or simply to use multiple competing services simultaneously, a concept known as multi-homing. In addition, lower switching costs facilitates the reuse of valuable data, which can stimulate the development of secondary markets. (For instance, the United Kingdom's Open Banking Initiative has catalyzed significant innovation in fintech.) In this way, data portability enhances user power as well as the collective vitality of digital markets.

These benefits naturally raise questions about how the internet could become more portable. At the Data Transfer Initiative, we envision the rise of a "data portability ecosystem" where users can freely and easily move their data across the web. We imagine the creation of interoperable interfaces where users can direct and consent to the sharing of their data with multiple services.

This ecosystem can be realized through service-to-service data portability, where technology acts as connective tissue that orchestrates how disparate services work together to support the movement of personal data. Importantly, service-to-service data portability is *direct*: it enables transfer between services without the complicated process of

downloading data and re-uploading it to a new service (especially beneficial for those without high speed internet or who can only access the internet via mobile phones with limited data plans). Through this infrastructure, users—including more vulnerable populations—should be able to reap the benefits of seamless data transfers between services.

We call this version of data portability an “ecosystem” because it will have to evolve and strengthen over time. Essentially, data portability stimulates flows of information between services that would not otherwise interconnect. Such an ecosystem can take many forms and, due to its sensitivity, must be carefully governed. For it to succeed, it should be designed to reflect four principles centered on empowering users and facilitating competition:

- First, services should build for users. The data portability ecosystem should equip users with robust tools that bolster their control of personal data. These tools should be easy to use and accessible via interoperable interfaces.
- Second, services should guarantee privacy and security. Ensuring these values is crucial to fostering trust among users that their data will be protected. User trust is a prerequisite for widespread adoption of data portability tools.
- Third, data portability should be reciprocal between importers and exporters. Absent reciprocity, the flow of information would be one-sided, and conditions of lock-in could resurface after users switch to a new service.
- Fourth, data portability should focus on personal data. The scope of data made portable should extend to all the information a user has provided or generated while interacting with a service. This scope should not extend to data that is synthesized by the service, or other proprietary information.

At the Data Transfer Initiative, we are shepherding the open-source Data Transfer Project to be a cornerstone of the vibrant data portability ecosystem. We believe this ecosystem can and must continue to expand. Appetite is growing for greater user empowerment and competition in digital markets. By augmenting users' ability to transfer their data, data portability helps them enjoy greater control of the information they care about and switch between services. A vibrant data portability ecosystem will power the future of a vibrant internet.



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