ENGELBERG CENTER
on Innovation Law & Policy
NYU School of Law

The New Portability

Designing Portability with Competition in Mind

Gabriel Nicholas
August 2020

The New Portability: Designing Portability with Competition in Mind

Gabriel Nicholas
Joint Researcher at the NYU Information Law Institute and Center for Cybersecurity
Fellow at the Engelberg Center on Innovation Law and Policy

Executive Summary

Technologists originally conceived of data portability as a tool to rein in an overcrowded software services market. Today, policy makers look to data portability to do the opposite — that is, lower barriers of entry to encourage competition in software markets where too few options exist. However under this new purpose, dominant firms are not incentivized to implement data portability in ways that meaningfully increase competition. Existing data portability laws like the General Data Protection Regulation and the California Consumer Privacy Act fail to address this concern since they focus more on data ownership and oversight, relegating competition to a sort of free, bonus benefit. In order to effectively improve competition, any guidelines or regulation the FTC issues on data portability should encourage implementations that a) offer useful data to new market entrants in a convenient manner, and b) provide enough utility and a frictionless enough experience for consumers to take advantage of them. To these ends, I propose four best practices of portability regime design that the FTC should require or encourage:

- **Documentation:** data senders should document the structure and content of data they allow consumers to port to make it practical for other software services to integrate.
- **Unique identifiers:** data senders should include available unique identifiers, used to organize and differentiate individual data points, so as to allow data receivers to connect shared data uploaded by multiple consumers.
- **Direct transfers:** data portability implementations should allow consumers to transfer their data directly from one service to another without having to act as an intermediary.
- **Collective portability:** groups of consumers who share data should be able to transfer that data together to alleviate collective action barriers to switching services.

These recommendations are based on interviews with technologists, qualitative research on existing implementations of data portability, and five years of industry experience as a software engineer. Data portability is an exciting yet experimentally untested mechanism for improving competition in the tech industry. By adopting these recommendations and focusing on the needs of consumers and potential competitors, the experiment has the greatest chance of seeing success.

Introduction[1]

When LiveJournal founder and renowned programmer Brad Fitzpatrick popularized the concept of data portability in 2007, the Internet was a different place.[2] Fitzpatrick wanted to address the problem of too many social networks. "LiveJournal, Digg, Twitter, Zooomr, Pownce, Friendster, Plaxo, the list goes on...people are getting sick of registering and re-declaring their friends on every site."[3] His solution: create a system that would allow users to bring their personal data and connections with them from one social network to another. Within a year, the idea gained momentum. Yahoo, MySpace, Google, Microsoft, and Facebook all joined the Dataportability Workgroup.[4] OpenSocial, another industry group led by Google and MySpace, released a set of standards that would allow for the near-realization of Fitzpatrick's vision.[5] As old school hackers say, information, it seemed, wanted to be free.[6]

But it was not to be. The Dataportability Workgroup quietly fizzled out. OpenSocial was revealed to be wildly insecure, and the few social networks that adopted it were unable to compete with Facebook's walled garden.[7] A World Wide Web Consortium working group tried to pick up where the industry groups left off but few adopted the standards they created.[8] For close to a decade, data portability went largely dormant.

When data portability returned to popular American discourse in 2018, a radically changed tech sector had found a new use case for it. A few dominant industry players were looking to combat popular and political sentiment that they had become too powerful and anti-competitive.[9] Data portability offered a more palatable alternative to break ups, and tech companies, particularly social media companies, embraced it. Mark Zuckerberg included data portability as one of his

---

[1] I wish to thank Carrie Brown, Katherine Strandburg and, Michael Weinberg for all their help.

[2] Brad Fitzpatrick, *Thoughts on the Social Graph*, bradfitz.com (Aug. 17, 2007), http://bradfitz.com/social-graph-problem/.

[3] *Id.*

[4] *See generally* dataportabilty.org [https://web.archive.org/web/20110217041737/http://dataportability.org/]; Erick Schonfeld, *Data Portability Gains Another Convert in Microsoft*, TechCrunch (Jan. 24, 2008), https://techcrunch.com/2008/01/24/dataportability-gains-another-convert-in-microsoft/.

[5] *See* Juan Carlos Perez, *MySpace Joins Google's OpenSocial Project*, Macworld, https://www.macworld.com/article/1060860/myspace.html.

[6] The original quote comes from Whole Earth Catalog founder Stewart Brand: "On the one hand information wants to be expensive, because it's so valuable. The right information in the right place just changes your life. On the other hand, information wants to be free, because the cost of getting it out is getting lower and lower all the time." *See* Roger Clarke, "*Information Wants to be Free…"* (Feb. 24, 2000), https://www.rogerclarke.com/II/IWtbF.html; *see generally* R. Polk Wagner, *Information Wants to Be Free: Intellectual Property and the Mythologies of Control*, 103 Colum. L. Rev. 995 (2003).

[7] *See* Michael Arrington, *OpenSocial Hacked Again*, TechCrunch (Nov. 6, 2007), https://techcrunch.com/2007/11/05/opensocial-hacked-again/.

[8] *See generally* The World Wide Web Consortium, *Social Web Working Group Charter* (Feb. 13, 2018), https://www.w3.org/2013/socialweb/social-wg-charter.

[9] *See* Jack Nicas et al., *How Each Big Tech Company May Be Targeted by Regulators*, N.Y. Times (Sept. 8, 2019), https://www.nytimes.com/2019/09/08/technology/antitrust-amazon-apple-facebook-google.html.

2019 "Four Ideas to Regulate the Internet", saying that it "gives people choice and enables developers to innovate and compete."[10] The Data Transfer Project, a collaboration between Apple, Facebook, Google, Microsoft, and Twitter, is taking things one step further by building an open source framework to help users move their data between platforms.[11]

Unfortunately, approaches to data portability have not changed to accommodate its new purpose. In the old, more competitive tech landscape, data portability was implicitly *quid pro quo*. Software services that allowed consumers to move their data out could expect other consumers to move their data in. This is not true in today's tech landscape, where data and users are concentrated on a few platforms for whom effective portability would likely mean more flowing out than in. Dominant tech players in the current market are not incentivized to make data portable in ways that could be used to build meaningful competitors. Nonetheless, large tech firms have dominated recent conversations about portability, leaving out the small businesses and consumers who would benefit from truly pro-competitive implementations.

In this comment, I offer recommendations to the FTC on how it could refocus data portability rules and guidelines to support these overlooked groups. The first part of this comment addresses the needs of potential competitors and the second addresses those of consumers. Interspersed throughout are complementary asides that explain different ways data portability can be implemented and how those implementations are best suited to improving different kinds of competition.

What Is Data Portability?

The International Organization for Standardization defines *data portability* as the "ability to easily transfer data from one system to another without being required to re-enter data."[12] Today, there are two common ways technologists implement data portability. The first is *one-off exports*, which allow consumers to download a snapshot of their information in a computer-readable format that they can later upload to another service. This approach does not require a direct connection between the data sender and the data receiver. Rather, the consumer usually acts as an intermediary, passing data between the two.[13] One-off exports are slow; however, they are effective at moving data to a new service and deleting data from the old.

[10] Mark Zuckerberg, *The Internet needs new rules. Let's start in these four areas.*, Wash. Post (Mar. 30, 2019), https://www.washingtonpost.com/opinions/mark-zuckerberg-the-internet-needs-new-rules-lets-start-in-these-four-areas/2019/03/29/9e6f0504-521a-11e9-a3f7-78b7525a8d5f_story.html.

[11] *See generally* Data Transfer Project, https://datatransferproject.dev/.

[12] Int'l Standards Org., ISO Standard No. 18101-1:2019 Automation systems and integration — Oil and gas interoperability, 3.23 (2019), https://www.iso.org/obp/ui/#iso:std:iso:ts:18101:-1:ed-1:v1:en:term:3.23 [hereinafter ISO].

[13] *See generally* Erin Egan, Data Portability and Privacy, Facebook Newsroom 11 (Sept. 2019), https://about.fb.com/news/2019/09/privacy-and-data-portability/ [hereinafter Facebook Portability White Paper]. Refers to this relationship as an "open transfer."

The second approach is *interoperability*, whereby a user allows one service to directly request information from another.[14] Consumers authenticate a continuous connection between the services, allowing the data receiver to repeatedly request up-to-date information from the data sender. This direct connection is often made through what is called an application programming interface or API. To avoid confusion with definitions of "interoperability" in other contexts, I will refer to this type of data portability as *API portability*. While APIs are fast and convenient for data receivers, they do not necessarily allow consumers to delete their data from the data sending service and can be costly for data senders to build and maintain.[15]

Making Portability Work for Competitors

In theory, data portability increases competition by reducing consumer switching costs, thus lowering barriers to entry for potential competitors. However, current laws that mandate data portability, such as Europe's General Data Protection Regulation (GDPR)[16] and the California Consumer Privacy Act (CCPA),[17] have failed to realize this vision of competition. Studies on data that existing portability tools make available suggest an explanation for this failure: under current implementations of data portability, even if competitors were interested in incorporating portable data into their products, there are technical limitations preventing them from doing so effectively.[18] In this section, I recommend two specific technical directives the FTC should consider issuing to improve the situation: first, data senders should provide documentation for data they make available; second, data senders should provide unique identifiers associated with individual data points when available.

This kind of competition measure is largely overlooked by existing data portability laws, which are aimed not at reducing switching costs but at giving users ownership over their data and ensuring accountability from service providers for how data is used. By treating competition as a cherry-on-top, laws like the GDPR and CCPA fail to encourage incumbents to build data portability tools that can be leveraged effectively by competitors. For example, the GDPR's broad rights to deletion and privacy can in some cases severely limit the data available to competitors (more later on how to mitigate this while protecting consumer privacy.) The CCPA

[14] "The ability of two or more systems or applications to exchange information and to mutually use the information that has been exchanged." Int'l Standards Org., & Int'l Electrotechnical Comm'n., ISO/IEC Standard No. 19941:2017 Information technology — Cloud computing — Interoperability and portability, International Standards Organization 3.1.1 (2017), https://www.iso.org/obp/ui/#iso:std:iso-iec:19941:ed-1:v1:en.

[15] Facebook Portability White Paper, *supra* note 13, at 12. Refers to this relationship as a "partnership transfer."

[16] GDPR Article 20

[17] Cal. Civ. Code §§ 1798.105, .110, .115

[18] Gabriel Nicholas & Michael Weinberg, *Data Portability and Platform Competition: Is User Data Exported From Facebook Actually Useful to Competitors?*, Engelberg Center on Innovation Law and Policy (November, 2019). Nicholas & Weinberg, 2019; Gabriel Nicholas, *Taking It With You: Platform Barriers to Entry and the Limits of Data Portability*, Mich. Telecomm. & Tech. L. Rev. (Forthcoming), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3550870.

does not even require data be made available in a machine readable format, allowing dominant firms to implement portability solely via mail or toll-free number.[19]

Singapore's Personal Data Protection Act (PDPA) shows a way forward. It divides portability into two separate rights — the Access Obligation, which allows users to verify and control their data, and the Data Portability Obligation, which is meant to "facilitate movement of consumer data from one service provider to another, so that consumers are better empowered to try out or move to new or competing service offerings."[20] By addressing these concerns separately, Singapore can legislate portability in a way more narrowly targeted at lowering barriers to entry. The FTC should similarly consider separating its portability guidelines aimed at improving competition from those aimed at data ownership.

Documentation

To comply with GDPR, many large multinational software services have built data portability tools, but almost none of them provide documentation for the data their tools make available. Indeed, as of January 2020, my own analysis of the portability offerings of seven different major software services — Facebook, Google, iCloud, Instagram, Snapchat, Spotify, and Twitter — none one offered any documentation for their one-off export portability tools. This lack of documentation makes the data practically useless to new market entrants hoping to use it to build new products, even if it is in a machine readable format. New market entrants can in theory reverse engineer the structure of the exported data, but this may be a futile exercise. Without documentation, data receivers have no way of knowing whether they are missing data or whether the format or the content of data made available has changed without warning.

If the FTC adopts data portability rules to improve competition, it should require data senders to document what data they make portable and how it is formatted. Data senders that offer one-off exports should also include version numbers and be required to keep documentation for older versions of the data available to data receivers. That way, if a consumer downloads their data and uploads it to a new platform say a year later, the data receiver can still ingest that data even if the data sender has updated their portability implementation in that time.

Documentation is a particularly low-hanging fruit for improving the competitive utility of data portability because software services often already internally document their data. Documentation is a standard practice for software engineers and it is the primary way

---

[19] Cal. Civ. Code § 1798.130.

[20] Personal Data Protection Committee Singapore, *Response to Feedback on the Public Consultation on Proposed Data Portability and Data Innovation Provisions* 1, 5 (Jan. 20, 2020), https://www.pdpc.gov.sg/-/media/Files/PDPC/PDF-Files/Legislation-and-Guidelines/Response-to-Feedback-for-3rd-Public-Consultation-on-Data-Portability-Innovation-200120.pdf; *see generally* Ashurt, *Significant Changes Proposed to Singapore's Data Privacy Law* (May 28, 2020), https://www.ashurst.com/en/news-and-insights/legal-updates/significant-changes-proposed-to-singapores-data-privacy-law/.

technology companies store institutional knowledge.[21] To meet documentation requirements, software services will by in large only need to clean up what they already have internally to make it presentable to the public.

For sectors that like finance and energy, where software services use similar data to each other and only vary slightly in how they format it, the FTC can work with industry players to unify and document those standards. A similar approach was taken by the UK Department for Business Innovation & Skills with Midata, an initiative that required banks to allow users to download their historical bank transaction data in a standardized format.[22] The goal was to allow third parties to build price comparison tools to help consumers decide which bank's offerings would save them the most money. Transaction data is nearly identical between banks, but prior to the Midata initiative, only some banks allowed consumers to download it. Those that did varied in their file and data formats, thus making comparison tools unwieldy to build.[23] Midata convinced the UK's "big five" banks to adopt their standard. Since then, at least one company has released a tool to allow consumers to compare prices between banks.[24] It is too early to tell how effective the program has been for improving competition.

Unique Identifiers

In a series of interviews about data portability that Michael Weinberg and I conducted with technologists, interviewees repeatedly said that ported data would need to include unique identifiers to be useful for building potential competitors. This emphasis is unsurprising. Unique identifiers allow engineers to disambiguate repeated data, connect two pieces of data about the same individual uploaded from different users, and recreate connections as they exist on the data sender's system.

To understand the importance of unique identifiers, consider ported data associated with Facebook events. Facebook users can use the platform to invite each other to events in the physical or virtual world. As it currently exists, Facebook's Download Your Information (DYI) tool allows users to download the name of every event they have ever attended and when each event started and ended.[25] This data, however, would likely be insufficient to help a new market entrant bootstrap a competing events platform. Individual events could not be recreated on the new platform in full because data ambiguity would lead to difficulty connecting data that multiple users uploaded about the same event. For example, if a user attended event called "birthday" on January 10th, 2020 at 7:00 PM, it would be nearly impossible to recreate the

---

[21] *See generally* Thomas T. Barker, Writing Software Documentation (2nd ed. 2003).

[22] *See generally* Dep't for Bus. Innovation & Skills, *Review of the Midata Voluntary Programme*, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/327845/bis-14-941-review-of-the-midata-voluntary-programme-revision-1.pdf.

[23] *Id.*

[24] See Midata: Which? First look, Which? (Mar. 26, 2015), https://www.which.co.uk/news/2015/03/midata-which-first-look-399235/

[25] *See generally* gajeam, *Portability Project*, GitHub (June 30, 2019), https://github.com/gajeam/Portability-Project/tree/master/facebook-data-examples/events.

attendee list or any comments left on the event page because many other events like share the same name and time.

A unique identifier would solve this problem, and software services, including Facebook, internally assign such identifiers to pieces of data that would otherwise get entangled in this fashion. Data receivers also need unique identifiers, both to make sense of data obtained from a single sender and to marry data from different sources. Therefore, the FTC should require data senders to provide unique identifiers for any data for which they maintain them internally. Data senders could comply with such a requirement relatively easily, since the information is already in their possession and security could be ensured using well-known basic cryptographic techniques.

APIs vs. One-Off Exports

The two different approaches to portability — one-off exports and APIs — are best suited to promoting different forms of competition. In general, one-off exports better allow consumers to move their data from one service to another, similar service, thereby allowing new market entrants to compete on price or improve market segmentation. This dynamic can be seen in the market for vehicle dealership inventory software, or Dealer Management Systems (DMS). Prior to legislation enacted in 2019, the two largest DMS providers in the United States, CDK Global and The Reynolds & Reynolds Company, had a combined market share of over 90% of vehicles sold.[26] Both companies prevented third parties from accessing data used by their DMSs. Preventing access also prevented dealerships from transferring their data to alternative DMS providers, thus increasing switching costs.[27] These terms led to claims of market exclusion, and in response, multiple states passed legislation to encourage competition between DMS providers by prohibiting them from charging fees or otherwise preventing auto dealers from accessing and moving their data.[28] While these laws still leave loopholes for various technical barriers to portability including the kind mentioned in the previous two sections, they highlight the market-improving potential of one-off export laws.

However, the research I conducted with Michael Weinberg suggests that one-off exports may not help new market entrants build entirely novel products. When we gave technologists data from Facebook's DYI export and asked them what products they would and could build with it, most of their ideas largely copied Facebook in its features (e.g. creating events, messaging) and business model (advertising).[29] APIs are better suited to helping new market entrants create

[26] *See* Dealer Mgmt. Sys. Antitrust Litig. v. CDK Glob., No. 18-cv-864, 2018 U.S. Dist. LEXIS 214398, at *21 (N.D. Ill. Oct. 22, 2018) ("Defendants CDK and Reynolds control close to 80 percent of the United States market by number of dealers and approximately 90 percent of the United States market by vehicles sold.").
[27] Authenticom, Inc. v. CDK Glob., LLC (In re Dealer Mgmt. Sys. Antitrust Litig.), 313 F. Supp. 3d 931, 937 (N.D. Ill. 2018).
[28] *See* David Muller & Jackie Charniga, *Dealers to States: Let Us Control Data*, Automotive News (July 1, 2019), https://www.autonews.com/dealers/dealers-states-let-us-control-data.
[29] *See* Nicholas & Weinberg, *supra* note 18.

innovative products with existing data. Legislation such as Australia's Consumer Data Right,[30] which targets the banking industry, and the UK's Midata energy project, which targets smart meters,[31] have sought to encourage new products to be built on top of this live, existing data. Since the data required to encourage innovation varies per industry, governments that take this approach tend to focus on one industry at a time.

Notably, interoperability efforts analogous to API portability have failed in the past to realize non-innovative benefits, such as lowering prices or improving the quality of service. The Telecommunications Act of 1996 for example made such an attempt by requiring local exchange carriers (aka the dominant "Baby Bells") to unbundle their services and sell access to them at cost to competitors.[32] In practice, few consumers switched to the new services because they offered nearly identical products at nearly equal prices.[33]

Making Portability Work for Consumers

For data portability to meaningfully improve competition in the tech sector, it is not enough for ported data to be easy for competitors to use. The process of porting data must be easy and appealing for consumers as well. To this end, I put forth two more suggestions for FTC guidance: first, software services should give users the option to request their data be sent directly to another service; second, software services should make it reasonably easy for groups of users who have overlapping data to coordinate moving their shared data to a new service. Adopting these guidelines not only would make the process of data portability less cumbersome for users, but would also mitigate barriers to entry beyond switching costs.

Direct Transfers

Some data portability laws, in an effort to lower switching costs, give consumers the right to have their data "directly transferred" from one software service to another. The GDPR, for example, gives data subjects "the right to personal data transmitted directly from one controller to another, where technically feasible."[34] Brazil's Lei Geral de Proteção de Dados similarly allows data subjects "portability of the data to another service or product provider, by means of an express request".[35]

---

[30] *See generally* Australian Competition & Consumer Commission, Consumer Data Right Project Overview (2018), https://www.accc.gov.au/focus-areas/consumer-data-right-cdr-0.

[31] *See generally* Office of Gas and Electricity Markets, *Midata in Energy Project*, https://www.ofgem.gov.uk/gas/retail-market/market-review-and-reform/midata-energy-project.

[32] *See generally* Telecomm. Act of 1996, 110 Stat. 56 (1996).

[33] *See* Jerry A. Hausman & Gregory J. Sikand, *Did Mandatory Unbundling Achieve Its Purpose? Empirical Evidence from Five Countries* (Dec. 14, 2004), https://papers.ssrn.com/abstract=623221.

[34] GDPR, *supra* note 16, art. 20.

[35] Lei No. 13.709, de 14 de Agosto de 2018, Diário Oficial Da União [D.O.U.] de 15.8.2018 (Braz.), *translated in* Ronaldo Lemos et al., Pereira Neto, https://iapp.org/media/pdf/resource_center/Brazilian_General_Data_Protection_Law.pdf.

Scholars have noted that these direct transfer laws are vague in their definitions of the term "direct",[36] and case law has done little to clarify.[37] As a result, few software services allow direct transfers in a way that meaningfully lowers switching costs further. None of the seven software services I researched seems to offer any means, at least on their websites or apps, of letting a consumer send all their data directly to another service, instead only offering one-off exports and limited APIs. Yet these services may still be able to comply with the letter of the law by, for example, sending requested data via email. Although this data would technically be transferred in a machine-readable format, it would be impractical for data receivers to build a pipeline to integrate data in this way (especially if the data sender put other difficulties in their way). This sort of nominally "direct" transfer thus does not effectively to lower switching costs.

To overcome this difficulty, the FTC should direct software services to create mechanisms that allow users to directly transfer their personal data in an easily manner ingestible. Making direct transfer a requirement for data senders rather than only a right of consumers would enlist potential data receivers, who understand the technical details of individual data portability regimes, to monitor and report bad behavior by data senders. This kind of direct transfer requirement would also circumvent some of the issues mentioned earlier about versioning, since data receivers could be guaranteed the latest, most up to date format of the transfer.

The overarching goal here would be to create a one-click personal data transfer from one service to another. For large software companies at least, this kind of transfer is not only "technically feasible" as the GDPR requires, but even uncomplicated. A widely accepted technical standard called OAuth already exists for letting users securely share data they have on one software service with other legitimate third-party services.[38] Furthermore, most large software services already offer some kind API portability, meaning they have the infrastructure necessary to offer direct transfers. And as the costs of computing drop over time, direct transfers will only become cheaper to data senders.

Collective Portability

Existing data portability laws, in so far as they are meant to address issues of competition, are mostly aimed at reducing consumer switching costs. However, new entrants into software markets face other barriers to entry as well, including network efforts.[39] Many software services act as platforms that connect multiple users together and are designed so that the more users on the platform, the more valuable the platform is to each user, a classic network effect.[40] New

[36] *See* Ruth Janal, *Data Portability — A Tale of Two Concepts*, JIPITEC, 59, 63 (2017).
[37] In the European context, the only two clarifications on the matter are from *Lindqvist*, which ruled that a data sender making something available on the Internet is insufficient to constitute "direct transfer", and Article 20's "without hindrance" requirement, which prevents data senders from putting legal, technical, or financial obstacles in the way of data access, transfer, or re-use. Case C-101/01, Lindqvist, EU:C:2003:596; Info. Comm'rs Off., Right to Data Portability.
[38] *See generally* Oauth 2.0, https://oauth.net/2/.
[39] Maurice E. Stucke & Allen P. Grunes, Big Data and Competition Policy 162 (2016).
[40] Michael Katz & Carl Shapiro, Systems Competition and Network Effects, 8 J. of Econ. Persps. 93, (1994).

platforms are thus at an inherent disadvantage to those that already have many users. Network effects are particularly strong for social media platforms. As evidence every year or so, a new privacy-promoting social media platform gets a lot of buzz (e.g. Ello, WikiTribune, Vero, Mastodon) but fails to accumulate the critical mass of users necessary to thrive.

To make data portability more appealing for consumers and to help platforms overcome network effects, the FTC should direct software services to implement what I call collective portability[41] — that is, the FTC should require software services to make it relatively easy for consumers to coordinate the transfer of data they share. For example, if four people are in a shared thread on a messaging app, that app should allow them to coordinate to move the data from their thread to a new messaging app.

Existing data protection laws such as the GDPR do not require collective portability but also do not preclude it. Under the GDPR, data that is shared between two users often cannot be ported unilaterally by one user without impinging on the other's right to privacy and right to be forgotten.[42] This means data that may be critical to new market entrants can fall through the gaps. Requiring data senders to create mechanisms for groups of users to give joint permission to port their data together resolves this problem.

Group portability mechanisms could also ameliorate network effects by making it easier for users to overcome collective action problems. Often, and especially for services that are two-sided marketplaces, new software market entrants face a chicken and egg problem of needing to improve their service to attract users and needing users to improve their service. Group portability can act as a catalyst to overcome these problems by bringing multiple users, who already are connected to each other, to a new software service all at once.[43]

Conclusion

Data portability has enormous unrealized potential to improve competition in the tech sector. It can create opportunities for new market entrants to compete with existing hegemonic software services and build their own innovative products on top of existing data. To realize this potential, data portability rules and guidelines must ensure that users can easily port their data and competitors can integrate that data into their products. Technically speaking, the problem is uncomplicated — software services have long had to transfer data among themselves and have built the standards and infrastructure to do so securely and privately. But dominant platforms are unlikely to voluntarily implement data portability so as to give competitors an edge. Thus, regulations and guidelines specifying that those systems should be designed for more effective data portability are necessary. By focusing on ease of transfer and utility to competitors, the FTC can use data portability to help do what it does best — protect consumers from anti-competitive behavior and encourage American innovation.

---

[41] Nicholas, *supra* note 18.
[42] GDPR, *supra* note 16, art. 20.
[43] David Evans et al., Platform Economics: Essays on Multi-Sided Businesses 58-62 (2011).