

Get Ready for the New Personal Data Economy

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Highlights

3

Signs and symptoms of
a transition

6

A short history of big
data economics

8

A new personal data
economy

10

Conclusion:
Putting the customer
into customer
experience

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Executive Summary

Since recovering from the dot-com crash at the beginning of the millennium – and especially in the last ten years of big data excitement and hype – the economics of the internet and of digital business have followed Tim O’Reilly’s simple dictum: “The guy with the most data wins.”¹

This maxim drives the decisions of the internet platform giants.² It has fueled the explosive growth of a massive ad-tech ecosystem.³ It has informed and shaped an entire industry dedicated to customer experience management (CEM), which primarily has meant data-driven digital marketing practices.⁴

And it’s about to come to an end – or at least to be radically transformed. Social, economic, and regulatory dynamics, some of which have been at work and gaining momentum for decades, are about to force and enforce a fundamental shift. From a free-for-all environment of data *collection and exploitation* we are moving to a world in which *protecting and respecting* personal data and privacy is both a legal obligation and a winning competitive strategy.

This shift will require companies to rethink not only their data policies and practices but also the basic nature of their relationship with prospects and customers – and how they encourage the former to become the latter. It means collecting, processing, managing, storing, and disposing of personal data in fundamentally different ways, which will require new technology designs and components, new alliances between CIOs, CMOs, and others, and a new slogan for business success: “The one who’s most trusted with data wins.”

In this report, we examine the signs and symptoms of this transition, analyze how it changes established business practices, and explore the deep and wide-ranging implications of putting people (back) in charge of their own data.

Signs and Symptoms of the Transition to a New Economy

The shift from big data economics to a personal data economy is an incredibly disruptive change – perhaps the most significant transition since the beginning of online business.⁵ To grasp the significance of the shift, note the following points:

- We are moving from business practices that reward “maximum data” to a regulatory environment that specifically mandates “data minimization.”⁶
- Whereas we now treat data as a raw material that can be gathered at will and treated as a corporate asset – to be used, reused, sold, and traded to squeeze out its full value – consumers and regulators increasingly insist that companies should treat personal data like an individual’s *personal property*, with all of the social, cultural, and legal restrictions that this implies.⁷
- And while brands tend to think of data as a lubricant that minimizes friction in the sales funnel, buyers are looking more critically for the “improved customer experience” they are supposed to get in return.

The signs and symptoms of this shift are evident among all of the actors concerned with the use and abuse of personal data: individuals, companies, and governments.

Consumer awareness of data collection and abuse is growing

From so-called ad blocking to declining trust, consumers are expressing their dissatisfaction with current data practices.

The adoption of ad-blocking software and browsers is increasing so rapidly it’s been dubbed a “tsunami.”⁸ PageFair reports that usage has grown 90% since early 2015, with nearly 419 million people worldwide deploying blockers on their mobile devices alone (and at least 200 million on desktops or laptops).⁹

To be sure, people use ad blockers for a variety of reasons, including avoiding distracting ads and accelerating page loads, especially on mobile devices. (Indeed, the use of mobile ad blocking is highest in Asia, where data plans are typically relatively more expensive.¹⁰) But for many, the primary aim is not to block ads but to block *tracking software* – and, thus, the collection of their personal data. For example, a 2014 study by the Interactive Advertising Bureau (IAB) found that 77% of U.S. adults agreed that “ad tracking makes me uncomfortable.”¹¹

Ad and tracking blockers may be seen as an expression of a more widespread dissatisfaction with how businesses use (or abuse) data. In a 2014 report on European consumers, mobile provider Orange found that 78% felt it is “hard to trust

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companies when it comes to their use of personal data.” An equal percentage agreed that “service providers hold too much information about consumer behavior and preferences.”¹²

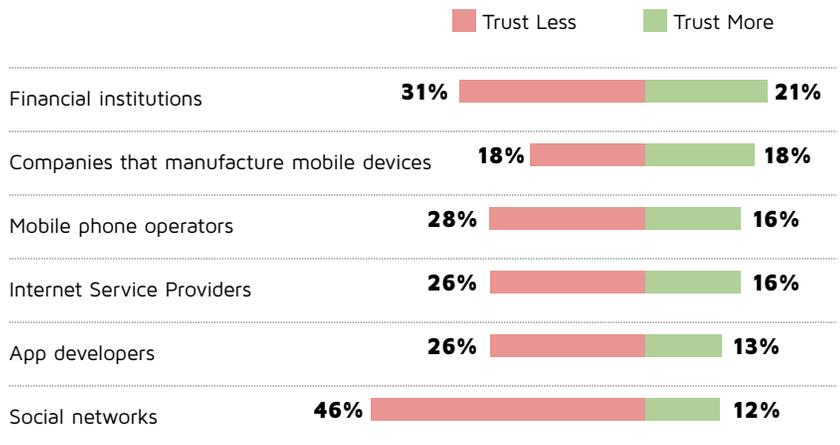
You might call it the “Snowden Effect.” Edward Snowden’s revelations of mass surveillance by the U.S. and other governments – as well as the complicity of many telecommunications, technology, and internet firms – came to light in the summer of 2013. At the end of 2013, the Orange survey found that consumer trust in a range of vertical sectors suffered a substantial net decline compared to late 2012. (See Figure 1.)

Businesses discover the dark side of data

With big data comes big responsibility, beginning with the obligation to keep it secure.¹³ Of course, data breaches are nothing new. But, as data practices create bigger and richer accumulations, they become ever more attractive targets for increasingly sophisticated hackers, organized crime rings – and government surveillance.

Although data breaches usually do not lead to significant fines – so far – the business impact can be immense. At the department store chain Target, retail sales fell 46% year-on-year in the quarter after their 2013 breach. In the UK, over 86% of surveyed

Figure 1
Change in European Consumer Trust in Various Verticals, late 2012 to late 2013



Source: Orange/Loudhouse. See note 11.

consumers said they were unlikely to do business with a company that suffered a known loss of credit card data. And a 2014 study by the Ponemon Institute determined that data breaches rank with poor customer service and environmental disasters for negative impact on brand reputation.¹⁴

The exposure of data to infiltration, whether by hackers, government surveillance, or a court subpoena, is also behind a remarkable reversal among Silicon Valley start-ups. After years in which the massive collection of personal data was virtually a requisite part of any attractive business plan, some firms now set out to do precisely the

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opposite: collect as little data as possible, or dispose of it quickly, in order to avoid holding a cache of valuable information.¹⁵

Finally, a major new study titled “A New Paradigm for Personal Data” asks how we can use data in ways that “positively engage users and truly deliver trust, transparency and user control.” The report’s sponsor and lead is none other than – are you sitting down? – *Facebook*.¹⁶ Predictably, some have responded that Facebook is “privacy washing,” and it is easy to be cynical about its ultimate goals.¹⁷ Still, the report presents a well-researched and cogently argued case for shifting attention and control to “the people whose data it is.”

Regulators insist on the primacy of privacy

The European Union’s new General Data Protection Regulation (GDPR), set to become law in May 2018, imposes significant new restrictions on the collection and processing of personal data by virtually *any* company that has *anything* to do with *any* EU resident.¹⁸ What is most important about the GDPR in this context is not this global reach, nor any specific provision, nor the life-threatening fines. (Up to 20 million euros or 4% of global turnover, whichever is higher.¹⁹) It is rather that the GDPR for the first time *codifies into law* principles about collection and use of personal data that have been circulating in various programs, manifestos, and proposals since – well, since the advent of the public internet. For example, Ann Cavoukian’s concept of *privacy by design*, first formulated in the mid-1990s, is explicitly written into the GDPR.²⁰ The regulation also embodies central principles of *The Cluetrain Manifesto* (1999) and Sandy Pentland’s *New Deal on Data* (2008).²¹

In effect, when regulations such as the GDPR stipulate that individuals should have more control over their personal data, it is neither a revolutionary idea nor a Luddite rejection of the digital age. It is, rather, a return to Tim Berners-Lee’s original vision of a data-driven yet distributed and democratic web.²²

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A Short History of Internet Economics

In order to understand the dimensions of the shift implied by these symptoms and trends, we need to review the basic structure of the internet economy and the business models that have flourished or floundered during its development.

Stage 1: Max eyeballs

As the World Wide Web emerged from the internet in the 1990s, its non-commercial nature was both its greatest blessing – complete equality for all players! – and its greatest curse – no evident monetization strategy! The poster child start-ups of the dot-com era (pets.com, Webvan, Amazon) basically ported existing commerce models (pet shops, groceries, bookstores) to the new medium of electronic commerce. Entrepreneurs understood the low marginal costs of adding new customers (hence, the race to acquire eyeballs) and the tremendous costs savings of avoiding “bricks.” But whereas traditional retailers had cleverly trained shoppers to take home their own purchases, e-commerce inherited the burden of transportation. As a result, pets.com infamously offered free delivery on 50-pound bags of dog food, and Webvan floundered with the expense of building out a delivery fleet and a network of warehouses.²³ (Meanwhile, Amazon’s headstart – it IPO’d in 1997 – and extreme financial discipline allowed it to survive.²⁴)

Stage 2: Max data

With the advent of Web 2.0, consumers began to provide immeasurably more input online. Whereas previously this input was restricted to search terms, (mostly anonymous) web visits, and the occasional email address, consumers were now blogging, writing reviews, and (eventually) flooding the internet with social posts, photos, instant

messages, updates, check-ins, and millimeter-exact locations via their smart phones.

It didn’t take long for some (like Google) to recognize that this input could be captured, stored, and used to provide unprecedented insights into consumers’ wants, desires, and psyches. The business analyst Horace Dediu refers to this process as “harvesting users.”²⁵ In a more positive light, this shift amounted to discovering a way to monetize and sustain the web at scale, so that consumers received the benefit of free services such as mail, search, news, and commerce in exchange for allowing others to observe their online behavior.

The point is that once companies realized that personal data could be monetized, their appetite for it inevitably and necessarily became insatiable.²⁶ Writing in 2007, venture capitalist Brad Burnham described how this could work for Google:

Data has this really weird quality. In economic terms, data has an increasing marginal utility. [. . .] Each incremental point of data adds value to the ones you already have. It is easy to see this in the context of an advertising network. If the ad network knows that a user is female, it can show more relevant ads. But, if the ad network knows that female’s age, it can do even better, and data about location, household income, and recent web sites visited all add value to the existing data points, making it possible to show more and more relevant ads. Google’s services all benefit from additional data albeit in different ways.²⁷

This “weird quality” is the inherent logic of data. In the absence of countervailing forces, it always makes more data better than less. “The guy with the most data wins.”

What if we launched a customer-centric era – but didn't invite the customers?

The advent of big data – i.e., the development of tools and practices that make it possible to process massive amounts of personal data at scale – vastly expanded this surveillance-based approach into large, complex digital-marketing and ad-technology ecosystems.

Business models have adapted to the medium of the web – especially in the case of so-called “full stack start-ups” such as Uber and Airbnb that have built complete, end-to-end products or services on the internet.²⁸ But marketing practices remain largely stuck in a previous era. In the name of customer experience management, marketers have digitally supercharged marketing while hardly questioning, let alone transforming, the underlying assumptions about the goals, purpose, and key performance indicators of marketing, such as managing the brand, generating leads, and moving prospects down the funnel.

The logic of max data creates incentives for marketers, vendors, and ad-tech ecosystems to devise ever more clever ways to collect and apply data. Most of this is done in the name of “improving customer experiences.” But there is no role for customers in the max data equation. Publishers, advertisers and marketers, platform owners, vendors, services providers – all of these have identifiable (financial) interests in expanding the collection, storage, and application of personal

data. Yet the only role for the “persons” from whom this personal data is harvested is to be the alleged beneficiary of some dubious and usually indescribable “improved experience.”

In practice, these improved customer experiences are, rather, desired outcomes for the seller: more efficient acquisition, faster time to conversion, bigger share of wallet, higher lifetime value. There's nothing wrong with these business outcomes, but they have precious little to do with the customer and nothing to do with the customer's experience.

What consumer has ever said, “I can't wait to get efficiently acquired and quickly converted at the mall this weekend!”?²⁹

In short, the combination of pre-internet conversion-centric marketing practices and internet-based big data capabilities has created a network of relationships between marketers, publishers, and the broad ad-tech ecosystem that excludes the interests of consumers and provides virtually no incentive for them to actively and happily share their personal data.

Is it any wonder that, despite all of the time, effort, and money expended on customer experience management, customer satisfaction and loyalty are not improving? Since 2014, three major international consumer surveys show that satisfaction with the experiences offered by brands is declining.³⁰ Customer-centricity will never succeed as long as it leaves the customer on the outside looking in.

The “improved customer experiences” offered in exchange for personal data are usually desired business outcomes. What consumer has ever said, “I can't wait to get efficiently acquired and quickly converted at the mall this weekend!”?

A New Personal Data Economy

If “data is the new oil,” then (as we should have known all along) it is accompanied by significant collateral “environmental impacts” – resistance from consumers, regulatory restrictions, an increasing exposure to breaches, fines, government snooping – and a demonstrable failure to meaningfully improve customer experiences.³¹ (See Figure 2.)

At this juncture, there are only two ways forward. The first would be to retreat to an earlier – and dumber – era, when print ads, for example, could not track behavior, capture personal data, or report on viewership. This approach would certainly address any fears about privacy, surveillance, or intrusive marketing tactics. But it would also effectively erect a wall between buyers and sellers, between marketers and consumer needs. It would rob consumers of the ability to benefit, or even quite literally profit, from their personal data,

and rob sellers of the opportunity to compete on the basis of meeting individual buyers’ unique requirements or desires.

The alternative is to create for the first time a genuine personal data marketplace, in which individuals and companies can exchange data for goods and services in a series of transparent, equal, fully empowered, and mutually beneficial interactions. Data becomes a renewable resource that circulates between buyers and sellers to produce value for each. (See Figure 3.)

In this approach, individuals, as the “producers” of personal data, are rewarded for their efforts – namely for *being alive*, and thereby developing attributes, characteristics, and desires that define the *personality* that is expressed in their personal data, and which allow sellers to shape and present their “best fit” offer for the buyer’s needs.

Figure 2
Data Is the New Oil

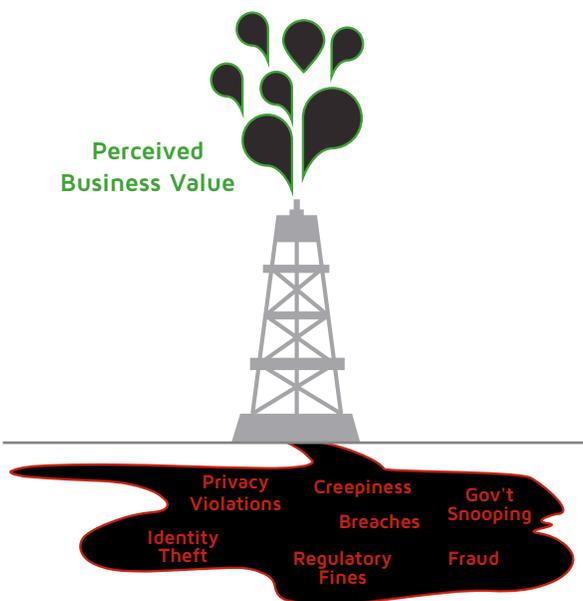
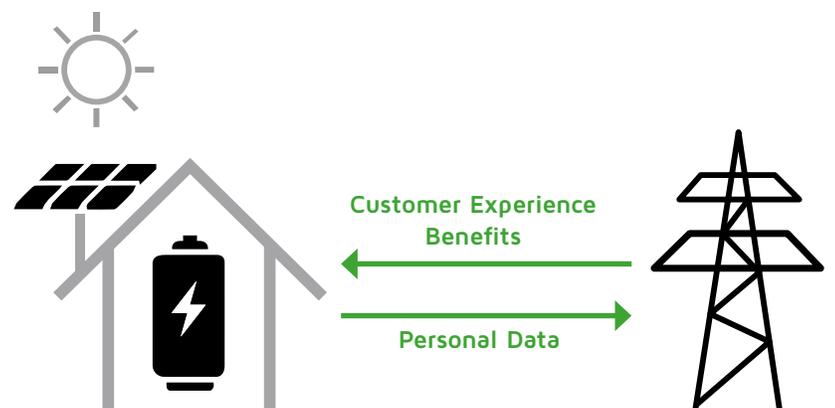


Figure 3
Data Is the New Renewable Resource



The future is already here; it's just not enforced yet

If such a personal data marketplace sounds like a utopian ideal that no right-thinking business leader or marketer would ever wish for, let alone embrace, think again. In fact, it corresponds in its central features with the EU's GDPR, which will regulate the use of personal data by *any* organization *anywhere* in the world that a) offers goods or services to EU residents or b) monitors their behavior.³² In fact, contrary to widespread belief, the GDPR *has already taken effect* – but enforcement of the regulation has been suspended until May 25, 2018.³³

Similar personal data legislation is in place in many other jurisdictions, including Singapore, Hong Kong, Canada, Australia, and New Zealand. The core principles of all of these laws (and of the GDPR) can be conveniently summarized by reference to the “New Deal on Data” by MIT’s Sandy Pentland.

According to Pentland, the New Deal aims for “a rebalancing of the ownership of data in favor of the individual whose data is collected.”³⁴ Specifically, the text states:

- You have a right to possess your data. Companies should adopt the role of a Swiss bank account for your data. You open an account (anonymously, if possible), and you can remove your data whenever you'd like.

- You, the data owner, must have full control over the *use* of your data. If you're not happy with the way a company uses your data, you can remove it. All of it. Everything must be opt-in, clearly explained in plain language, with regular reminders that you may opt out.
- You have a right to *dispose of or distribute* your data. If you want to destroy it or remove it and redeploy it elsewhere, it is your call.

Here's a thought experiment: If you want to borrow your neighbor's car, you're bound by a number of explicit or implicit social mores and expectations. You ought to tell your neighbor what you propose to do with the car, how far you will drive it, and when you will give it back. Moreover, you'll probably be anxious while you have it, treat it more carefully than you would your own car, and be eager to be rid of it as soon as possible.

Likewise, the GDPR and similar legislation require any organization that wants to “borrow” personal data to state *precisely* what they intend to do with it, use it for *only* that stated purpose, and get rid of it (e.g., dispose of it) *as soon as possible*. Moreover, any processing of personal data has to use as little of it as possible for the briefest time possible – again, similar to being extra-careful with someone else's property.³⁵

In short, we're shifting from personal *data*, where the term designates a specific type of information, to *personal data*, where it designates the possession of and control over the information.

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Conclusion: Putting the Customer Into Customer Experience – At Last

It is critical to realize the new data regulations are not just another regulatory burden that has to be met in order to get on with business as usual. Rather, the personal data marketplaces that they encourage (or require) create the opportunity for fundamentally new services, business models, and customer relations. Companies have an incentive to compete not just for a consumer's wallet but for his or her data – which is potentially even more valuable. For the first time, business dynamics, interests, and incentives will be aligned to truly put the customer at the center of commercial exchanges.

From a marketing and customer experience perspective, this could mean the following:

- When a consumer provides personal data, he should receive a *specific and identifiable* value in return. Rather than a vague assurance that the exchange will “improve your customer experience,” the consumer should be able to understand and confirm the value he receives in the exchange.
- The focus turns from “providing customer experiences” – i.e., building apps and sites that help convert buyers – to *assisting the customer's experience*. What is this customer trying to achieve? How can we help them do it (better than the competition)? What data could we use to do that, and what data is superfluous? Do we have the necessary data, do we have permission to use it in that way,

how do we get it to the people that need to act on it for the customer's benefit, etc.?

- Soon, we might approach a practice of *on-demand personalization*. That is, given the context and the job the consumer is trying to achieve, what data do we need from them *just now* in order to deliver what specific outcome? (After which, the data can/may be deleted.) This is the practical effect of the shift from *data maximization* (“Grab all the data you can!”) to *data minimization* (ask for and use *just* the data that you need for a mutual exchange of value – and then get rid of it). In this way, a company's ability to deliver the same or greater benefit with a smaller amount of personal data becomes a competitive advantage.

These or similar kinds of personal data-driven interactions will enable a *reliable* way of creating and maintaining *trust relationships* between buyers and sellers, as the sellers are in a position to demonstrate that they can deliver on the data-driven promises they make to consumers. As Nathan Kinch has noted, earning trust “means that you, the brand, set a transparent context for the purpose of the proposed relationship you would like to have with a customer. From there, you deliver consistent increments of value that either align (with) or exceed the expectation you have set.”³⁶

Under the new personal data economy, business interests and incentives will finally be aligned to truly put the customer at the center.

Designing and delivering these kinds of customer exchanges and experiences will require the closest possible alignment of the CMO and the CIO – and, by extension, of the customer experience teams and IT. Even the simplest marketing campaign or offer, let alone a complex multichannel customer experience, will require identifying in advance what kinds of personal data are required; whether they are available (with the proper permissions); how new data will be collected, stored, and processed; what third parties will touch it; how it will be identified and located if the consumer asks to retract it; and how soon it will be deleted. (All of this information also has to be communicated when initially requesting consent to use personal data.) If it wasn't obvious before, customer experience in the personal data economy means that marketing and IT are inseparable.

The technical challenge: From data storage to data awareness

For companies practicing “max data,” the technical and infrastructure challenge is relatively simple, involving the storage of (very) large amounts of consumer data (which is treated as the firm's own property) and the ability to identify and aggregate it in order to create a profile or segment for marketing purposes.

The next, profitable, era of customer experience requires minute tracking and management of the customer's data: their permissions, uses, applications, and effects. How can a firm design *data processing systems* that process the *minimum* amount of personal data, share it with *precisely* the right people within the firm to achieve the desired outcome, and ensure that the data can be *identified*

and erased at the consumer's request?

At a minimum, such systems should be:

- **Open**, to allow the easiest integration with multiple internal and partner systems that handle customer data.
- **Flexible and adaptable**, so they can be rapidly reconfigured for changes in consumer demand, business conditions, or regulatory decisions.
- **Standards-based**, to provide consistency across data processes (thus lowering the burden of proving compliance with the regulations).
- **Intelligent**, in the sense that they can help to identify where a given consumer's data is stored in order to use it for their benefit and/or to extract it on request.
- **Granular**, in order to track personal data and associated permissions on an individual basis.

The personal data economy is coming, and soon. Consumers want it, and businesses should value it – if they can think beyond today's “max data” paradigms. But the trump card is that governments will enforce it. Many firms will resist, complaining of over-regulation, the stifling of innovation, and digitally ignorant bureaucracies.

In the meantime, tomorrow's winners will aggressively adapt their business processes, technologies, and customer experience strategies to fit a world in which personal data finally, and fittingly, belongs to the people.

Endnotes

- 1 Tim O'Reilly made this pronouncement in 2012, specifically in the context of an interview about digital mapping. More broadly, it is an expression of his 2007 claim that data is the "Intel inside" of web services. For the 2012 interview, see <http://www.forbes.com/sites/jonbruner/2012/04/04/timoreilly-on-the-future-of-location-the-guy-with-the-most-data-wins/#63faa7f328b4>. For O'Reilly's 2007 Web 2.0 "manifesto," see <http://www.oreilly.com/pub/a/web2/archive/what-is-web-20.html>.
- 2 For example, Google+, Google Buzz, and Google Friend Connect were all ill-fated attempts to expand Google's access to social data.
- 3 See Scott Brinker's infamous marketing technology landscape supergraphic. The 2016 edition contains 3,874 technology solutions. Available at <http://chiefmartec.com/2016/03/marketing-technology-landscape-supergraphic-2016/>.
- 4 Digital Clarity Group has discussed the limitation of a marketing-centric response to consumer empowerment and digital disruption in a number of reports. See for example Tim Walters, "Beyond Marketing: Why Digital Disruption Requires a Deeper Transformation," at <http://www.digitalclaritygroup.com/beyond-marketing/>. Also, Connie Moore, "Transform Customer Experience and Operational Excellence by Going Digital Inside and Outside," at <http://www.digitalclaritygroup.com/transform-customer-experience-and-operational-excellence-by-going-digital-outside-and-inside/>.
- 5 For the purposes of this report we are concerned exclusively with *personal data* – that is, any information that can be used to identify an individual, from names and addresses to device IDs and browser settings. We leave aside important but "impersonal" big data sets concerning inventory levels, equipment status and efficiency, etc.
- 6 The core principles of the European Union's General Data Protection Regulation (GDPR) specifically call for personal data to be used in a way that is "limited to what is necessary for the purposes for which they are processed ('data minimisation')." (Citing Article 5 (1).) The full text of the GDPR is available in English at <http://data.consilium.europa.eu/doc/document/ST-5419-2016-INIT/en/pdf>.
- 7 For a discussion of the positions in this debate, see the *Los Angeles Times* editorial, "Consumers Need a New Legal Right to Control Personal Data," at <http://www.latimes.com/opinion/op-ed/la-oe-rule-data-privacy-agencies-20150730-story.html>. See also the discussion of the MIT Media Lab's "New Deal for Data" in this report.
- 8 For example, "Media Companies Beware, the Ad-Blocking Tsunami Is Coming for You," at <http://fortune.com/2016/05/31/ad-blocking-tsunami/>.
- 9 PageFair's May 2016 report on worldwide mobile ad blocking is at <https://pagefair.com/blog/2016/mobile-adblocking-report/>. The prevalence of desktop ad blockers is discussed at <http://www.businessinsider.de/ad-blocking-software-has-200-million-users-2016-4-27>.
- 10 See PageFair in note 9.
- 11 The IAB and Vision Critical surveyed 617 U.S. adults in September 2014. See <http://www.iab.com/wp-content/uploads/2015/11/AD-BLOCKING-2014.pdf>.
- 12 On behalf of Orange, Loudhouse surveyed 2,028 mobile phone users in the UK, France, Spain, and Poland in late 2013 and early 2014. See <http://www.orange.com/en/content/download/21358/412063/version/5/file/Orange+Future+of+Digital+Trust+Report.pdf>.
- 13 "With big data comes big responsibility" was the title of a piece in the November 2014 issue of *Harvard Business Review*. It consists of an interview with Alex "Sandy" Pentland of the MIT Media Lab about his call for a "New Deal for Data" (more about this below). See <https://hbr.org/2014/11/with-big-data-comes-big-responsibility>.
- 14 These data points are contained in an article from CSO Online. See <http://www.csoonline.com/article/3019283/data-breach/does-a-data-breach-really-affect-your-firm-s-reputation.html>. The Ponemon Institute report is available (with registration) at <http://www.experian.com/data-breach/2014-aftermath-study-consumer-sentiment.html>.

- 15 See the Washington Post, "What's Driving Silicon Valley to Become Radicalized?" at <https://www.washingtonpost.com/news/the-switch/wp/2016/05/24/what-is-driving-silicon-valley-to-become-radicalized/>.
- 16 These quotations are taken from an article introducing the report by Stephen Deadman, the global chief privacy officer at Facebook. See <https://www.euractiv.com/section/digital/opinion/refocus-the-data-debate-around-individuals/>. The report is available at <https://www.dropbox.com/s/2mpczioqti3h47m/Report%203%20A%20new%20paradigm%20for%20personal%20data.pdf>.
- 17 Regarding the charge that Facebook is "privacy washing" – embracing personal privacy only in pursuit of its commercial interests – see <http://dataethics.eu/en/privacy-washing/>.
- 18 See note 6.
- 19 A 2015 Forbes article discusses the "shockingly low" costs of data breaches for big U.S. companies such as Sony, Home Depot, and Target. For example, Home Depot reported that the total cost of the 2014 breach that exposed about 50 million customer credit card numbers and email addresses was about \$28 million. The article notes that this was less than 0.01% of Home Depot's 2014 revenue. See <http://fortune.com/2015/03/27/how-much-do-data-breaches-actually-cost-big-companies-shockingly-little/>. In contrast, the GDPR authorizes regulators to impose fines of up to 4% of global turnover. In the case of Home Depot in 2014, that would have been approximately \$3.15 billion.
- 20 The seven foundation principles of privacy by design are available at <https://www.ipc.on.ca/images/resources/7foundationalprinciples.pdf>.
- 21 For the complete 1999 text of the *Clue Train Manifesto*, see <http://www.cluetrain.com/book/>. The *New Deal on Data* is available at http://hd.media.mit.edu/wef_globalit.pdf.
- 22 For a recent articulation of how Tim Berners-Lee thinks the internet can and should return to its open and democratic roots, see <http://www.information-age.com/technology/mobile-and-networking/123458533/sir-tim-berners-lee-outlines-his-2050-vision-web>.
- 23 For an informative and entertaining history of pets.com, see <https://www.brainmates.com.au/brainrants/pets-com-%E2%80%93-a-classic-example-of-product-development-failure>. On Webvan, see <https://techcrunch.com/2013/09/27/why-webvan-failed-and-how-home-delivery-2-0-is-addressing-the-problems/>.
- 24 See "How Amazon Survived the Dot-Com Crash to Rule the Cloud," at <http://www.eweek.com/cloud/eweeek-at-30-how-amazon-survived-the-dot-com-crash-to-rule-the-cloud.html>.
- 25 See Horace Dediu's Critical Path podcast, episode 100, at <http://5by5.tv/criticalpath/100>. The discussion on privacy, data processing, and "getting to know you" begins at approximately 26:00 in the podcast. In a similar vein (but with an extended analysis), Professor Shoshana Zuboff characterizes this process as monetizing the "behavioral surplus" of consumers in online environments. See Zuboff's recent "Secrets of Surveillance Capitalism" at <http://www.faz.net/aktuell/feuilleton/debatten/the-digital-debate/shoshana-zuboff-secrets-of-surveillance-capitalism-14103616.html>.
- 26 Maciej Ceglowski has noted "We started out collecting this information by accident, as part of our project to automate everything, but soon realized that it had economic value. We could use it to make the process self-funding. And so mechanized surveillance has become the economic basis of the modern tech industry." See http://idlewords.com/talks/sase_panel.htm.
- 27 Brad Burnham's 2007 blog post is available at <https://www.usv.com/blog/2007>.
- 28 For an explanation of the nature and benefits of the full stack startup, see A16Z, <http://a16z.com/2015/01/22/the-full-stack-startup/>.
- 29 Insofar as people still shop in malls. See for example, <http://www.independent.co.uk/news/business/comment/shopping-malls-face-a-mauling-as-even-the-big-brands-give-up-the-struggle-a6899486.html>.

- 30 Between late 2014 and September 2015, Capgemini, Accenture, and Forrester Research conducted large-scale consumer surveys, all of which showed little if any progress on designated customer experience metrics. See for Capgemini, <https://www.worldretailbankingreport.com/download>; for Accenture https://www.accenture.com/t20151012T060803_w_usen_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Global/PDF/Dualpub_6/Accenture-Customer-2020-Future-Ready-Reliving-Past.pdf#zoom=50; for Forrester http://blogs.forrester.com/michael_gazala/15-10-06-forresters_customer_experience_index_q3_2015_its_hard_being_an_optimist.
- 31 For a discussion of who should be credited with the first use of the expression “data is the new oil,” see <https://www.quora.com/Who-should-get-credit-for-the-quote-data-is-the-new-oil>.
- 32 Recital 24 of the GDPR states that monitoring occurs when “natural persons are tracked on the internet [. . .] particularly in order to take decisions concerning her or him or for analysing or predicting her or his personal preferences, behaviours and attitudes.”
- 33 In the language of the GDPR, May 25, 2016 is the “date of entry into force of this Regulation,” and its “application” begins two years from said date, on May 25, 2018. See Article 99.
- 34 For the text of the New Deal on Data, see note 20. For an interview with Alex “Sandy” Pentland about the New Deal, see <https://hbr.org/2014/11/with-big-data-comes-big-responsibility>.
- 35 It is important to stress that the GDPR does not *literally* grant personal data the legal status of personal property. But the center principles of the regulation – such as consent, minimum use, and rapid return/disposal – mean that it is *practically* treated as such.
- 36 See Nathan Kinch, “Trust as a Strategy,” at <https://pdtm.org/trust-as-a-strategy/>.

About Digital Clarity Group



Digital Clarity Group is a research-based advisory firm focused on the content, technologies, and practices that drive world-class customer experience. Global organizations depend on our insight, reports, and consulting services to help them turn digital disruption into digital advantage. As analysts, we cover the customer experience management (CEM) footprint - those organizational capabilities and competencies that impact the experience delivered to customers and prospects. In our view, the CEM footprint overlays content management, marketing automation, e-commerce, social media management, collaboration, customer relationship management, localization, and search. As consultants, we believe that education and advice leading to successful CEM is only possible by actively engaging with all participants in the CEM solutions ecosystem. In keeping with this philosophy, we work with enterprise adopters of CEM solutions, technology vendors that develop and market CEM systems and tools, and service providers who implement solutions, including systems integrators and digital agencies.

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