SOARING THROUGH “THE CLOUD”: WHY IT IS NECESSARY TO ADOPT THE CLOUD IN LAW FIRMS.

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I. Introduction

The emphasis on the way students approach problems is a pillar of legal education, which is why law schools work hard to ensure students develop the skills to solve a diverse range of disputes.¹ While lawyers are generally known for their creative problem-solving skills, they often fail to keep pace with and adapt to technological

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¹ See The Case Studies, HARV. L. SCH. (Mar. 24, 2023), archived at https://perma.cc/DJR2-GRUT (displaying Harvard Law School’s dedication to teach their students problem solving techniques, the goals are to under practices, and gain a foundational knowledge of skills throughout the modules). See also Mark Neal Aaronson & Stefan H. Krieger, Teaching Problem-Solving Lawyering: An Exchange of Ideas, 11 CLINICAL L. REV. 485, 486 (2004) (arguing that an “emphasis is on a law student’s development of substantive legal expertise. The refreshing aspect is his ably developed argument about the centrality of legal doctrine in shaping how lawyers spot issues, organize information, and reason.”); Legal Methods II: Problem Solving for Lawyers, COLUM. L. SCH. (Mar. 25, 2023), archived at https://perma.cc/RDV9-QQ6K (listing the description for a course at Columbia Law School that focuses on helping student “become the kind of thoughtful practicing lawyer who can see the theoretical issues lurking behind everyday events.”).
advancements in comparison to other professions. Over the past
decade, cloud technology (“the Cloud”) has established itself as an
invaluable asset to all businesses, including law firms. However, the
919 pandemic transformed the way lawyers and law firms view remote
work and has encouraged the transition to offsite data storage. With
such rapid advancements in technological security, privacy, and
access, the Cloud has debuted its strengths for the legal industry,
changing past perceptions about potential weaknesses in data
digitalization. Cloud technologies have become more reliable for

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2 See Sofia Gymer, 7 qualities every good lawyer should have, ALLABOUT (Mar. 16, 2022), archived at https://perma.cc/7XPT-3Y5P (listing creativity as one of 7 qualities a lawyer should have). See also Why is the legal industry so resistant to tech? Or is it?, REGPAC REVOLUTION (Oct. 21, 2022), archived at https://perma.cc/7Z9Q-VBT8 (agreeing that the legal industry is famously slow for adopting technology); Why Are Lawyers Slow to Adopt Technology?, VXT (Mar. 28, 2022), archived at https://perma.cc/P4EB-QX78 (stating that “slow technology uptake has also become part of the legal profession’s reputation. The traditional industry does not necessarily celebrate or encourage innovation.”).

3 See Why the cloud is critical to your firm’s success, THOMSON REUTERS (Dec. 14, 2021), archived at https://perma.cc/72RV-G93L (giving reasons of how the cloud is the best option for law firms); Dmitry Koshkin, 9 Reasons Why Cloud Computing Is Important for Business Growth, SAM SOLS. (Mar. 25, 2023), archived at https://perma.cc/UQ3D-9M9W (listing 9 different reasons on how the cloud has put all business at an advantage. Those reasons being: scalability, innovation, cost-effectiveness, improved DevOps, enhanced compliance & security, flexibility, etc.).

4 See Why the cloud is critical to your firm’s success, supra note 3 (postulating that “[l]aw firms were forced to rethink how they worked — and how they were going to get things done — in a work-from-home environment. For many of them, the solution was a move to the cloud.”).

5 See 3 Ways Cloud Computing Is Transforming the Legal Industry, BLUE TECHS. (Oct. 11, 2021), archived at https://perma.cc/6HWB-DRV2 (affirming that the “[c]loud Computing Debuts Its Strength for Law Firms”). See also 5 ways your law firm can benefit from cloud computing, TECH. SOLUTIONS.NET (Aug. 19, 2022), archived at https://perma.cc/CV9N-8R4D (stating reasons why the cloud is
security purposes due to advancements in encryption techniques, and data storage through the Cloud has also proven to be more cost-effective than that of traditional storage facilities. Most importantly, the Cloud significantly reduces the amount of time law firms spend on daily tasks.

Although most law firms have accepted a Cloud vendor in one form or another, they still face many problems. First and foremost is beneficial for law firms. “It is a valuable option for companies as it does not require heavy investments in on-premise hardware, software, and other infrastructure that can take time and space to manage.” Id.

6 See 3 Ways Cloud Computing is Transforming the Legal Industry, supra note 5 (listing the benefits of the cloud as (1) increase reliability, (2) measurable cost savings, and (3) targeted efficiency). See also Suhas Hegde, Cloud Cryptography: A Reliable Solution to Secure your Cloud, ANALYTICS VIDHYA (Oct. 18, 2022), archived at https://perma.cc/3NG3-BETQ (stating that data used in the cloud is protected by using encryption mechanisms and all data stored in the cloud is encrypted); How secure is data stored in the cloud?, NAT'L ACAD. SCIENCES (Mar. 26, 2023), archived at https://perma.cc/S67S-PAL8 (writing that, data stored in the cloud is more secure than on a home computer).

7 See 3 Ways Cloud Computing is Transforming the Legal Industry, supra note 5 (asserting that law firms can “reduce focus on necessary, yet time-consuming tasks such as invoicing and billing, scheduling appointments, managing files, and creating the vast number of legal documents necessary to business operation.”). See also 4 Ways Cloud Storage Helps Increase Workplace Productivity, KERFON (Mar. 26, 2023), archived at https://perma.cc/73US-K9QN (including the fact that the cloud help make decisions faster and cut down times spent on tasks); How the Cloud Can Save Your Enterprise Time and Money, TRICOSTAR (Mar. 26, 2023), archived at https://perma.cc/2QHS-AX5J (recognizing that “[w]ith cloud computing, substantially less time is spent maintaining and patching software, deploying client solutions to end users and on other more mundane IT tasks.”).

8 See Many Law Firms Are Moving To Cloud Solutions – Should Yours?, ABACUSNEXT (Oct. 26, 2022), archived at https://perma.cc/DL4B-75D5 (stating that “[i]f you’re considering moving your law firm to the cloud, you’re not alone. The COVID-19 pandemic likely forced most of your employees to work remotely in some capacity.”). See What is vendor lock-in? | Vendor lock-in and cloud computing, CLOUDFLARE (Oct. 14, 2022), archived at https://perma.cc/86BZ-VZLE (defining what vendor lock-in is); Vagisha Arora, What’s Vendor Lock-In And How To Avoid It?, PLANET CRUST (Aug. 31, 2022), archived at https://perma.cc/2YUF-
the potential for “vendor lock-in,” which occurs when a company continues to use an insufficient Cloud computing provider because the company cannot afford to halt their business to update the software.\footnote{9}{See What is vendor lock-in? | Vendor lock-in and cloud computing, supra note 8 (discussing what happens when a company gets locked in).}

Another ongoing issue is that litigation attorneys receive more guidance on Cloud computing than transactional lawyers because more issues arise during litigation practices then in contract review, and navigating technology around the competence standard has been more challenging to define.\footnote{10}{See Lori D. Johnson, Navigating Technology Competence in Transactional Practice, 65 VILL. L. REV. 159, 159 (2020) (referencing how only scholarship on litigation-orientated has been produced). “This body of scholarship, however, is almost exclusively focused on specific, litigation-oriented technologies such as e-Discovery, electronic filing, voir dire, and the use of artificial intelligence to predict litigation outcomes. . .” Id. at 179. See also John O. McGinnis & Russell G. Pearce, The Great Disruption: How Machine Intelligence Will Transform the Role of Lawyers in the Delivery of Legal Services, 82 FORDHAM L. REV. 3041, 3046 (2014) (naming five ways that machine learning will disrupt the way lawyers carry out work now as: discovery, legal search, document generation, brief and memoranda generation and prediction of case outcomes).}

Lastly, to keep pace with their competitors, law firms must keep stay up to date with current Cloud
technologies, but unfortunately, swift adaptation to modernized equipment has proven to be a weakness for law firms.¹¹

This note addresses the use of Cloud technologies in law firms. This note begins by discussing the historical operations of law firms prior to the technological boom, then focuses on their gradual adoption of various technologies over time. This note then examines the initial scholarship available for litigation attorneys when adopting technology in their practice, which teaches them how to navigate this technological influx into their practice and ways to stay updated with the competency standard. Subsequently, this note will provide some literature on why transactional lawyers must delve deeper into handling technological advancements in their practice. Lastly, this note will argue that law firms must embrace the Cloud, especially in privacy automation, that way they can stay aligned with their competitors and provide their clients with more streamlined services.

¹¹ See Staying competitive in today’s legal market: 4 problems cloud solves, Doherty Assoc. (Jan. 28, 2023), archived at https://perma.cc/Q7S7-682H (naming ways the cloud helps a firm stay competitive against other firms); 6 ways leading law firms stay competitive, Thomson Reuters (Jan. 26, 2023), archived at https://perma.cc/8W7Z-Z53K (naming six ways that some of the top leading law firms are getting ahead and staying ahead of the competition). See also Artificial Intelligence for Lawyers Explained, Bloomberg L. (Jan. 28, 2021), archived at https://perma.cc/Z78H-6S4S (stating that “AI can help lawyers make informed, data-driven decisions and improve their efficiency”).
II. History
   A. Law Firms’ Evolving Practices Throughout The Digital Age

It is no secret that the legal sector lags far behind other industries when it comes to adopting new technologies. The legal industry’s hesitancy to capitalize on the emergence of groundbreaking technologies stems from their apprehensions surrounding the privacy and security measures embedded in these tools, a concern that is paramount for attorneys to uphold client confidentiality. In the 1950’s, technology companies began marketing their products to law firms by advertising products that effectively address everyday needs in litigation. The first major technological machinery designed specifically for lawyers was the dictation machine, which recorded

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12 See Why is the legal industry so resistant to tech. Or is it?, supra note 2 (explaining that the legal industry is slow to change).
   It is traditionally very conservative and also famously very slow to adopt new technology. This industry-wide hesitance to develop and integrate new tech is still very prevalent today and can be observed with the cautious approach of the industry to emerging LegalTech such as AI, Blockchain, and Big Data analytics.
   Id. See also Sanjoli Jain, Prominent Barrier in Legal Tech Adoption and How to Overcome Them, CRMJETTY (July 19, 2021), archived at https://perma.cc/9C26-X6H3 (stating “[w]hen it comes to tech adoption, the legal industry is far behind other industries.”).
13 See Jain, supra note 12 (addressing how law firms are entrusted with private and sensitive information and clients want their information protected at all times).
14 See Patrick Davis, A (Very) Brief History of Legal Technology, SMOKEBALL (Jan. 29, 2020), archived at https://perma.cc/43QD-EDYX (discussing how technology helped the legal sector evolved). “However, in the early 1950s, technological industries began to market directly to law firms. Taking a (quick) look at the history of how legal technology has evolved helps us to better understand the problems and needs that drive the adoption of today’s legaltech.” Id.
meetings and court hearings so attorneys could refer back to the
discussions later on.\(^\text{15}\) Shortly thereafter, it became evident that law
firms could benefit from a wider range of assistance from technology
to help with research and case management systems, and so the
“UBIQ” terminal was born.\(^\text{16}\) Similar to a personal computer, the
UBIQ terminal was specifically made to assist lawyers in locating case
law as opposed to dedicating countless hours searching through law
libraries.\(^\text{17}\)

Between the 1950’s and 1980’s, most attorneys and firms
relied on mail carriers and courier services to deliver and serve

\(^{15}\) See Jo Hunter, *The History of Law Firm Automation*, ACCESS GROUP (Aug. 18, 2022), archived at https://perma.cc/Q4NR-D563 (providing that Dictaphones were used primarily “so that they could record their thoughts, instructions, and correspondence when convenient, on-the-go, for typing up later by their secretaries.”). *See also* Davis, supra note 14 (detailing how dictation machines were marketed to target lawyers).

\(^{16}\) See Davis, supra note 14 (setting forth “[b]efore the 1970s, lawyers spent an enormous amount of time researching case law by poring over law books, but the ability to research cases on a computer changed everything.”). Introducing that during “1973, Lexis created the ‘UBIQ’ terminal to let lawyers search case law online, which significantly reduced the amount of time lawyers needed to spend researching case law and allowed them to spend more time on their clients.” *Id.* *See also* Hans Paul Pizzinini & Bhavi Shah, *History of Tech in Law: A Revisit at How Far Technology Has Come*, SPEEDLEGAL (Dec. 17, 2020), archived at https://perma.cc/97AP-UPKS (expanding on how the UBIQ terminal “allowed lawyers to search case law online and thereafter changed everything for the legal sector.”).

\(^{17}\) See Hunter, supra note 15 (noting that the larger law firms used the UBIQ terminal to find case law quicker than they would in the law library). *See also* Zapproved-Ediscovery 101, *A History of How Technology Has Transformed the Legal Field*, ZAPPROVED (Sept. 9, 2021), archived at https://perma.cc/E4NM-MBHX (acknowledging how “before case law was available on databases accessible from any internet-enabled device, law research was cumbersome and time-consuming.”).
important documents to clients, rather than utilizing facsimile machines like other businesses.\textsuperscript{18} However, once law firms began utilizing facsimile machines into their daily practices, communication with other firms and clients became more efficient.\textsuperscript{19} A major shift in lawyers’ communication methods occurred in the 1990’s with the advent of networking computer systems, enabling instantaneous communication through the now well-known process of electronic mail (“e-mail”).\textsuperscript{20} The utilization of e-mail put pressure on tech companies to develop a better case management system for firms to organize and archive their documentation, billing, tasks, and important dates online.\textsuperscript{21} Before e-mail, law firms used a system called “red

\textsuperscript{18} See Davis, supra note 14 (highlighting “[b]efore the 1980s most law firms were dependent on mail or courier services to deliver important documents to clients.”). See also Pizzinini & Shah, supra note 16 (detailing how law firms were dependent on courier services until the fax machine entered the scene).

\textsuperscript{19} See Pizzinini & Shah, supra note 16 (explaining that the fax machine “significantly shortened the time taken, between creating a document and sending it to a client, from days to minutes.”). See also Hunter, supra note 15 (reiterating that the fax machine was “enabling lawyers, third-parties and clients at opposite ends of the country to exchange sheets of paper in seconds.”).

\textsuperscript{20} See Hunter, supra note 15 (tracing the history of the emergence of emails did not happen in law firms until the 1990s although email was created before that). See also Davis, supra note 14 (acknowledging that emails on networked computers “saved a tremendous amount of time because they allowed lawyers to communicate with others in a matter of minutes and get immediate responses.”).

\textsuperscript{21} See Davis, supra note 14 (arguing that “[c]ase management software existed during the late 1990s but failed to offer comprehensive, reliable services that included both document management and communication capabilities.”); Pizzinini & Shah, supra note 16 (explaining how “[t]he early versions of the case management system were flawed because they were not easily accessible and many law firms were still using DOS.”).
wells,” which was a three-tier filing system that helped businesses stay organized.\textsuperscript{22}

By the early 2000’s, a technology boom occurred, which revolutionized online filings, documentation review, and automated systems for case management.\textsuperscript{23} Advancements in case management systems during this time was crucial for law firms, commanding them to develop creative strategies to implement different platforms such as word, excel, and e-mails to help structure an efficient business model.\textsuperscript{24} As a result, a myriad of companies attempted to burst into

\textsuperscript{22} See Cary McGovern, \textit{Law firms and records management}, INSIDE SELF-STORAGE (June 1, 1998), \textit{archived at} https://perma.cc/TDK7-SBHW (detailing the system law firms used as a three-level filing system of (1) current files at the legal secretaries’ workstations in red-wells, (2) central file rooms in red-wells, and (3) off-site storage; red-wells in boxes). Defining red-wells as a four-inch filing media in which folders are inserted and how legal records are typically set up in file folders and have file pockets. \textit{Id.} Red wells contain many subfiles that are standard components to make up the case. \textit{Id.}

\textsuperscript{23} See Pizzinini & Shah, \textit{supra} note 16 (asserting that “[i]n the early 2000s, for the first time ever, virtual legal offices opened, a technology that allows individuals to work remotely without the need for physical office space.”). \textit{See also} Ron Friedmann, \textit{Back to the Future: A History of Legal Technology}, PRISM LEGAL (Dec. 2004), \textit{archived at} https://perma.cc/33QY-RGT8 (declaring that “[b]y early in the new century, it seemed that for the first time, many firms had infrastructure comparable to their corporate clients. Firms had learned that upgrades and tech support were a way of life, not onetime decisions.”).

\textsuperscript{24} See Zapproved-Ediscovery 101, \textit{supra} note 17 (describing what automated case management is used for).

Automated case management helps keep open cases moving, with progress regularly updated for all involved parties to see. It also helps document the statutes, charges, and sentences of closed cases and stores them in databases with names and contact info for ease of searching. Automated case management is especially useful in the public sector where large caseloads can be streamlined and accessed by police, prosecutors, and judges. \textit{Id.}
the automated case management trend by perfecting an all-in-one system for law firms.\textsuperscript{25} However, it was not until the advent of the internet in the early 2000’s that the rest of the world was able to access these online technologies, which led to the production of workflow automation.\textsuperscript{26}

Once the internet became widely accessible for all members of society, clients began to demand more communication from their lawyers through e-mails and shared drives to help with documentation.\textsuperscript{27} As Cloud technology began to grow, law firms were more hesitant than others to accept this software, akin to their late

\textsuperscript{25} See Davis, supra note 14 (explaining how “case management systems became completely revamped, leveraging many of today’s modern tech tools in ways that help lawyers get the information they need when they need it and to easily manage client matters no matter where they are.”). See also Pizzinini & Shah, supra note 16 (emphasizing “[c]ase management systems had a complete makeover in the later era, leveraging many of today’s modern tech tools in multiple ways that help lawyers get the information they need and by easily managing client matters.”).

\textsuperscript{26} See Hunter, supra note 15 (advancing the point that “workflow automation for law firms has progressed immensely with the improvements in access to the internet and improved broadband speeds in the 2010-2020 decade.”). See Friedmann, supra note 23 (reaffirming that the Internet and Browser were adopted quicker than other technologies and the surfing the web became a common thing around many workplaces).

\textsuperscript{27} See Friedmann, supra note 23 (noting that there was a “combination of client demands to deal with e-mail and rapidly growing awareness of the Web caused most law firms to connect.”). See also Daniel Farrar, Practically Every Industry Has Accepted The Cloud, So Why Not Legal?, FORBES (Apr. 28, 2022), archived at https://perma.cc/UT7M-2FYF [hereinafter Farrar, Practically Every Industry Has Accepted The Cloud] (explaining that law firms had a difficult time accepting emails but eventually clients demanded them to adapt).
adoption of the facsimile machine.28 Many solo practitioners and small law firms alike were resistant to Cloud computing due to the fear that they would waste billable hours trying to learn how to use the Cloud.29 Other fears concerning the adoption of the Cloud included the dangers of security breaches regarding private client information.30

B. The Emergence Of The Cloud And The Varying Degrees Of Law Firm Adaptation

Lawyers have always been held to a high standard of professionalism, and as of recently, this standard includes a requirement that lawyers stay abreast with recent technology.

28 See Yara Nardi, Use of the cloud is on the rise in law firms, THOMSON REUTERS (Nov. 15, 2019), archived at https://perma.cc/C9TV-JY5X (reasoning that “[w]hen the cloud was first pitched to law firms, most deemed it unworkable… Now, legal organisations [sic] have gone from cautiously reconsidering the cloud to embracing its many possibilities.”).

29 See 3 reasons why law firms are resistant to technology, THOMSON REUTERS (Sept. 5, 2019), archived at https://perma.cc/C848-H273 (addressing some reasons why law firms were hesitant to adopt the cloud such as the fear of giving up billable hours to get familiar with the technology); Why are many firms still reluctant to implement legal technology, ABA J. (Nov. 10, 2021), archived at https://perma.cc/DD4K-X6L8 (focusing on how the legal profession is based off “billable hours” and how firms are not inclined to justify the use of time to learning the new technology).

30 See Why are many firms still reluctant to implement legal technology, supra note 29 (citing that the ethical consideration of competence plays a role because a lawyer must safeguard client’s personal data); Why Are Some Law Firms Reluctant To Embrace Cloud Technology?, LAWFUEL (May 25, 2016), archived at https://perma.cc/KW5K-SV66 (stating that “many law firms remain reluctant to migrate to the cloud due to continued concerns about the security of client data, the reliability of mission-critical applications, and potential legal liabilities stemming from data privacy regulations.”).
practices.\textsuperscript{31} The American Bar Association released the 2021 ABA Legal Technology Survey Report, which exposed lawyers inability to adapt to current technology devices after the COVID-19 pandemic forced non-essential industries to shift to remote work.\textsuperscript{32} The Cloud is not just one single entity, but rather multiple different tools, servers, and networks that are kept on the internet.\textsuperscript{33} What sets the Cloud apart from other technological devices is its level of access; it can be checked anytime, anywhere, and delivered by an all-encompassing

\textsuperscript{31} See MODEL RULES OF PRO. CONDUCT r. 1.1 cmt. 8 (AM. BAR ASS’N 1983) (stating that “[t]o maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology, engage in continuing study and education and comply with all continuing legal education requirements to which the lawyer is subject.”). See also Johnson, supra note 10, at 163 (addressing comment 8 and suggesting that “the technology needs of clients should drive the definition of what constitutes ‘relevant technology’ under Comment 8 . . . ”).

\textsuperscript{32} See Dennis Kennedy, 2021 Cloud Computing, AM. BAR ASS’N L. TECH. SURV. REP. (Nov. 10, 2021), archived at https://perma.cc/6XYY-QZW4 (reporting that “the 2021 results might be interpreted as another example of lawyers being late arrivals to technologies widely in use in other professions and businesses.”).

\textsuperscript{33} See What is Cloud Computing & why is it Important, ACCENTURE (Oct. 14, 2022), archived at https://perma.cc/CC3S-YWSK (examining “[c]loud is a model of computing where servers, networks, storage, development tools, and even applications (apps) are enabled through the internet.”). The cloud is comprised of five major characteristics: (1) Internet Access, (2) Measured Service, (3) On-Demand Self Service, (4) Shared Resource Pooling and (5) Rapid Elasticity. Id. See also Joshua Lenon & Sam Rosenthal, How Cloud Computing is Making Law More Efficient and Profitable, CLIO (Sept. 24, 2022), archived at https://perma.cc/5ABB-7K8Q (defining cloud computing as “a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.”).
service.⁴ Many companies, including Amazon and Google, began to operate and sell public and private Cloud services.⁵ These companies paved a way for businesses to save all their documents in one place and access it through other terminals.⁶ Firms and businesses alike began to utilize software as a service (“SaaS”) providers, which employs multiple Cloud vendors for specific tools to avoid vendor lock-in.⁷

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⁴ See Maximilliano Destefani Neto, *A brief history of cloud computing*, IBM (Aug. 23, 2016), archived at https://perma.cc/K8UL-ATSV (concluding that cloud computing is access to IT resources at any time in any location delivered as a service).


⁶ See id. (listing the first mainstream cloud computing services as “[a]mazon launched Amazon Web Services, which offers online services to other websites or clients . . . Google purchased Writely, which allows renters the ability to save documents, edit documents, and transfer them into blogging systems.”). See also Kurt Marko, *The history of cloud computing explained*, WHATIS.COM (June 18, 2021), archived at https://perma.cc/4SEF-A4N3 (reiterating that many technologies companies were coming out with their own cloud technology). “The decade saw an explosion of new business and consumer cloud services along with construction of the hyperscale data centers required to operate them, with Apple iCloud, IBM Cloud and Oracle Cloud all launching.” Id.

⁷ See Foote, supra note 35 (addressing that “SaaS providers is still quite popular, a philosophy of using multiple clouds for their specific services and advantages has developed. This philosophy includes not becoming trapped into using a specific cloud because of ‘interoperability problems.’”). See also Kennedy, supra note 32 (naming the three most common cloud forms are Software as a Service, Platform as a Service, and Infrastructure as a Service).
1. The Benefits And Risks Of Working In The Cloud

To understand the Cloud, it is essential to be familiar with the various options of Cloud services that have been released throughout the years, such as the private Cloud and the public Cloud. The difference between these two services is that private Clouds are owned and hosted by a consumer, with the option for information to be stored on-site or with a third-party service provider, whereas public Clouds are what most people think when talking about Cloud computing, it is based off of time, storage, and network capacity. Many firms are cautiously approaching the Cloud by adopting a multi-secular approach that contracts with different vendors to meet a variety of needs, addressing security, usability, and automation. Furthermore,

38 See Colleen Scimeca, Changing the mid-sized law firm’s leadership mindset to accelerate cloud adoption, THOMAS REUTERS (Sept. 23, 2022), archived at https://perma.cc/SKW6-NJCQ (acknowledging the different types of clouds, such as public cloud, private cloud, on-premises, hybrid cloud, software as a service (SaaS), single-tenant SaaS, and multi-tenancy SaaS).
39 See id. (explaining “[w]hen a business uses a private cloud, the technology infrastructure is not shared publicly as it is held by a single party. Private clouds can be hosted by consumers or businesses on site or in data centers owned by third-party service providers.”).
40 See id. (suggesting that firms have begun to “adopt an agile, modular approach, primarily due to budget and resource constraints. A slow move allows them to control costs while balancing the process against the firm’s overall appetite for change, and a menu that may or may not reflect their needs.”). See also Sharon D. Nelson & John W. Simek, Technology; Hot Buttons: Is Cloud Computing Inevitable for Lawyers?, 41 L. PRAC., 24, 26 (2015) (summarizing different law firm approaches).
firms have learned that Cloud services can actually cut costs because they can outsource the management of the Cloud by taking advantage of the SaaS platform. As firms began to research Cloud services, many debated whether they should use a program like Java where they can build and store documents, or use a SaaS service like Google where they are equipped with a software that is designed to perform specific tasks.

Law firms have been apprehensive about using Cloud-based technologies due to their concerns with private information about their

A lot of law firms will opt to keep the data within their own walls and control. Others will readily give the data to a cloud provider, encrypting it before transmission. Others will just trust the security and proper operation of the cloud vendor. No matter which approaches you take, cloud computing is here to stay.

Id. See Farrar, Practically Every Industry Has Accepted The Cloud, supra note 27 (debunking the myth of increased costs of cloud servers). The beauty of the cloud is that organizations can outsource ownership and management of computing infrastructure to experts whose business is to keep networks, servers and other systems running securely and at peak performance. This removes the staffing and financial burdens of refreshing hardware and maintaining the latest software from the firm, lowering overhead and focusing internal teams on building business value.

Id. See also The Cloud vs. On-Premise Cost: Which One is Cheaper?, EXECUTECH (Nov. 11, 2022), archived at https://perma.cc/9465-9BA5 (claiming that one of the benefits in using the cloud is “that you may not need as large of an IT department or that their time can be used more efficiently and effectively for your business.”).

42 See Peter M. Lefkowitz, Contracting in the Cloud: A Primer, Bos. B.J., Summer 2010, 9, 10 (explaining that platform services such as Java provide an environment where customers can build their own programming inside of the cloud to store and compute information, whereas software as a service vendor, such as Google, provides software already designed to perform a specific function).
clients being stored outside of their immediate purview. Firms viewed Cloud software as unstable and unreliable due to the potential of security and privacy breaches, an issue that was further compounded by software malfunctions and complex management. When Cloud software first reached the market, implementation was costly because the services provided were primarily a one-size-fits-all standard, with security measures failing to be at the forefront of the providers' goals. As the internet became more widespread, the general public became tech-savvy, and subsequently, clients began demanding more from lawyers. Addressing client needs became more difficult for smaller

43 See Nelson & Simek, supra note 40, at 24 (defining cloud computing as “where your data is not on your premises and you access it via a network, typically the Internet. The cloud services could include such things as a case management application, document management or file storage.”). See also Nardi, supra note 28 (emphasizing “since the cloud no longer requires you to store programs and data on-premises, you can save on expenses such as hardware, cooling, and real estate.”).

44 See Scimeca, supra note 38 (stating that lawyers “would have voiced concerns of potential security risks and the perceived cost of transitioning to the cloud” in the early days of cloud computing). See also Nardi, supra note 28 (supporting that “the concern for the security of cloud services are high-profile breaches such as Microsoft in 2010, which was traced back to a configuration issue.”). See also Dan Rafter, Cloud Security: How Secure is Cloud Data?, NORTON (Mar. 23, 2023), archived at https://perma.cc/P9TE-QEEU (providing reassurance against earlier cloud computing claims, that the cloud is actually safer for data because more cybersecurity measures are taken for cloud companies than those using traditional methods).

45 See Nardi, supra note 28 (announcing that today “[t]he cloud is also by nature highly scalable and flexible, meaning that its size can easily be adjusted, so that you only pay for what you use”). The authors also acknowledged that although security of the cloud has always been addressed, breaches were not an initial concern for business. Id.

46 See The Great Law Firm Cloud Migration: In the Next Five Years, Most Law Firms Will be Using Someone Else’s Servers even for Critical Systems, ADERANT (Sept. 23, 2022), archived at https://perma.cc/3QAZ-6CVN [hereinafter The Great
law firms as they would need to give up billable hours to adapt to new technology had the possibility to hurt business, whereas larger law firms had the time and younger lawyers who were willing and able to adapt to new technology.\footnote{See 3 reasons why law firms are resistant to technology, supra note 29 (addressing some reasons why law firms have been hesitant to adopt the cloud such as the fear of sacrificing billable hours in order to get familiar with the technology). See also Why are many firms still reluctant to implement legal technology, supra note 29 (focusing on how the legal profession is based off “billable hours” and how firms are not inclined to justify the use of one’s time to learning a new technology). See also Young Lawyers are Eager to Embrace Technology – And So Are Our Clients, Alice Namuli Blazevic, CTR. FOR LEGAL INNOVATION (Dec. 9, 2021), archived at https://perma.cc/T3XX-ZRRA (quoting Alice Namuli Blazevic, Head of Technology and Innovation “we are getting more lawyers on board, but it’s the younger lawyers who are really enthusiastic.”). See also David McAfee, Big Law Firm's Spending More on Technology, Experts Say, BLOOMBERG L. (June 24, 2015), archived at https://perma.cc/W5B7-DP4B (stating that “legal software companies have reported an increase in business from big law firms”).}

C. Ethical Considerations

Confidentiality is pivotal to the legal profession, as lawyers are trusted with valuable personal and financial information pertaining to their clients, therefore, new technologies, such as the Cloud, raised concerns in the event of data breaches and cyber-attacks.\footnote{See Roland L. Trope et al., Contemporary Issues in Cyberlaw: Red Skies In Morning - Professional Ethics at the Dawn of Cloud Computing, 38 Wm. Mitchell L. Rev. 111, 124 (2011) (reasoning that “[n]ew technologies often create new and unsuspected technical problems as well as new and unanticipated ethical challenges.”). See also Jain, supra note 12 (detailing that “[l]egal firms are regularly entrusted with private and sensitive information. Clients want their information, data, and documents protected at all times.”).} A lawyer’s
professional responsibility entails taking safety precautions to protect against unauthorized access to their client’s information.\footnote{See Model Rules of Prof. Conduct r. 1.6 (Am. Bar Ass’n 1983) (holding that Rule 1.6(c) requires that “[a] lawyer shall make reasonable efforts to prevent the inadvertent or unauthorized disclosure of, or unauthorized access to, information relating to the representation of a client.”). See also Model Rules of Prof. Conduct r. 1.15(a) (Am. Bar Ass’n 1983) (detailing that “[c]omplete records of such account funds and other property shall be kept by the lawyer and shall be preserved for a period of [five years] after termination of the representation.”).} Additionally, lawyers are tasked with keeping records and maintaining client files for years after a case has closed.\footnote{See NYSBA Comm. On Prof. Ethics, Formal Op. 1192 (2020) (answering the question of “[w]hat are a lawyer’s obligations in dealing with closed client files?”).} The legal profession was hesitant to adopt Cloud technologies because of the potential for data breaches, but in reality, most breaches were due to insufficient handling of Cloud services by the vendors themselves, which have since been resolved by upgrading the vendor security systems.\footnote{See Trope et al., supra note 48, at 121-22 (eluding to “Amazon’s explanation of the four-day outage of its cloud services in April 2011. . .”). See also Nardi, supra note 28 (supporting that “the concern for the security of cloud services are high-profile breaches such as Microsoft in 2010, which was traced back to a configuration issue.”).} As a result, many state bar ethic committees across the country began to
address these concerns regarding Cloud handling by issuing opinions detailing whether firms should move to the Cloud.⁵²

In 2010, the Legal Cloud Computing Association (“LCCA”) was formed.⁵³ The LCCA’s goal was to benefit lawyers on the front of Cloud computing by issuing opinions and recommendations to the ABA and lawyers as to why Cloud technologies should be adopted and how to draw guidelines.⁵⁴ Ultimately, for lawyers to maintain their ethical duties while utilizing Cloud computing, they must do one of the following: educate themselves on the Cloud, hire people to deal with the Cloud, or both.⁵⁵ If a lawyer decides to educate themselves on the Cloud, they must also fulfill their ethical duty of competency by educating themselves and their firm on data/file encryption,

⁵² See Joshua Lenon, A List of All Ethics Opinions on Cloud Computing for Lawyers, CLIO (Oct. 24, 2022), archived at https://perma.cc/83K9-ST3P (listing all the State Bar Ethic Committees that have issued opinions on cloud computing).
⁵³ See About, LEGAL CLOUD COMPUTING ASS’N (Oct. 24, 2022), archived at https://perma.cc/32PZ-USUS (stating the LCCA is composed of security standards that lawyers should use in order to help integrate the cloud into their law firms). The Security guidelines of cloud computing give structure to physical and environmental measures, data integrity measures, users and access control, terms of service and privacy policy. Id.
⁵⁴ See Robert Ambrogi, Vendors form ‘Legal Cloud Computing Association’, LAWSTES (Dec. 17, 2010), archived at https://perma.cc/XX98-HMPZ (establishing the reason for the LCCA “is to promote standards for cloud computing that are responsive to the needs of the legal profession and to enable lawyers to become aware of the benefits of computing technology through the development and distribution of education and informational resources.”).
⁵⁵ See Matthew Cody, The Ethics of Cloud Computing Require Attorney’s to Learn or Hire, or Both, CONTRA COST CNTY BAR ASS’N (July 2019), archived at https://perma.cc/ZWV2-EEY6 (recognizing that lawyers must adjust to cloud computing by learning about the technology or hiring people who know about it).
encryption of wireless transmission, and personal firewalls.\textsuperscript{56} Although the Cloud has been the center of many ethical concerns, it has proven to stand strong against any arguments made by its opponents.\textsuperscript{57}

The E-Government Act of 2002 was passed to assist federal agencies in staying up to date with technological advances.\textsuperscript{58} A Privacy Impact Assessment (“PIA”) is required under Section 208 of this act for any technology that stored personally identifiable information.\textsuperscript{59} After witnessing how technology impacted the 21\textsuperscript{st} century, the United States Government decided to pass State Breach

\textsuperscript{56} See THE STATE BAR OF CALIFORNIA STANDING COMMITTEE ON PROFESSIONAL RESPONSIBILITY AND CONDUCT, Formal Op 179, (2010) (holding that lawyers must take “appropriate precautions, such as using a combination of file encryption, encryption of wireless transmissions and a personal firewall.”).

\textsuperscript{57} See Lenon, supra note 52 (listing many ethical opinions written in the United States that give guidance on how lawyers should be keeping up with technology). See also About, supra note 53 (detailing that the LCCA was created for collaborating “with Bar Associations and Law Societies to define industry-leading best practices. We’re proud of the positive impact cloud computing is having on the practice of law, and we’re here to help it grow.”).

\textsuperscript{58} See History of Privacy Timeline, UNIV. OF MICH. (Apr. 23, 2023), archived at https://perma.cc/B9J5-L6KD (reporting that the E-Government Act of 2002 was passed to bring the federal government into the 21\textsuperscript{st} century). The Act required all federal government agencies to perform a Privacy Impact Assessment for any new technology that collects personally identifiable information. \textit{Id.} See also E-Government Act, Pub. L. No. 107–347, 116 Stat. 2899 (implementing the act which address the need for enhancements and improvements to the government sector regarding the use of technology to help effectiveness and efficiency).

\textsuperscript{59} See History of Privacy Timeline, supra note 58 (detailing how agencies must now perform a Privacy Impact Assessment). See also E-Government Act § 101 (the act states that “[a]n agency shall take actions described under subparagraph (B) before—(i) developing or procuring information technology that collects, maintains, or disseminates information that is in an identifiable form. . .”).
Notification laws, which required businesses to disclose when there was a breach in security and if their clients’ personal information was exposed.\textsuperscript{60} In 2018, the European Union enacted the General Data Protection Regulation (“GDPR”), which mandates compliance from any United States business dealing with data pertaining to EU citizens.\textsuperscript{61} Following the enactment of the GDPR, the California Consumer Protection Privacy Act (“CPRA”) was passed in attempts to give California residents more control over their personal information online.\textsuperscript{62}

\textsuperscript{60} See History of Privacy Timeline, supra note 58 (stating the legislation “required businesses and state agencies to disclose when Californian’s personal information was exposed in a security breach. Most other states in the U.S. and some jurisdictions abroad have modeled their data breach disclosure laws after this legislation.”). See also Data Breach Notification Laws by State, IT GOVERNANCE (Apr. 23, 2023), archived at https://perma.cc/7XAT-7BLV (listing all 50 states data breach notification laws).

\textsuperscript{61} See History of Privacy Timeline, supra note 58 (explaining the GDPR as a “law dealing with data protection and privacy that went into effect in the European Union (EU) and the European Economic Area (EEA) on May 25, 2018. It also applies to the transfer of personal data outside of the EU and EEA.”). See also GDPR in the USA | GDPR compliance in US | GDPR and PIIE, COOKIEBOT (July 7, 2020), archived at https://perma.cc/7945-XUHH (stating that the “GDPR has extra-territorial scope, which means that websites outside the EU that process data of people inside the EU are obligated to comply with the GDPR. So, if you have a website in the US and you have visitors from the EU, the GDPR applies to your domain.”).

\textsuperscript{62} See History of Privacy Timeline, supra note 58 (detailing the CCPA is a “state statute intended to regulate how businesses handle the personal information of residents of the state of California.”). See also California Consumer Privacy Act, CA Civ. Code § 1798.100 (2023) (holding that “[t]he California Consumer Privacy Act of 2018 (CCPA) gives consumers more control over the personal information that businesses collect about them and the CCPA regulations provide guidance on how to implement the law.”).
III. Facts/Premise

A. Guidance For Cloud Usage In Litigation Practices Versus Transactional Practices

The American Bar Association updated the Model Rules of Professional Conduct to assist lawyers in how they should regulate technology within the workplace.63 Many lawyers have argued that these guidelines only apply to litigation attorneys, leaving transactional attorneys in a gray area as they try to incorporate technology into their practices.64 This ambiguity is due to the multitude of issues that arise during the discovery process that arise in the Cloud, such as subpoena issues, and online data being used as

63 See Model Rules of Pro. Conduct r. 1.1 cmt. 8 (AM. BAR ASS'N 1983) (giving guidance on how lawyers must adhere to technological advancements to be competent in the profession). See also Alan E. Brown, Ensuring Lawyer Competence in a Digital Age: A Primer on Massachusetts Rule of Professional Conduct 1.1, Morrison Mahoney (Feb. 27, 2017), archived at https://perma.cc/5XPD-XR4Y (holding that “all lawyers now have not only a practical reason but a professional obligation to stay current with emerging technologies relevant to the practice of law and their individual areas of practice.”).
64 See Johnson, supra note 10, at 161 (acknowledging that there is very little scholarship on Comment 8 requirements for transactional lawyers). See also Lisa Z. Rosenof, The Fate of Comment 8: Analyzing a Lawyer’s Ethical Obligation of Technological Competence, 90 Univ. Cin. L. Rev. 1321, 1321 (2022) (recognizing that Comment 8 of the Model Rules of Professional Conduct discusses a “vagueness” that poses an underappreciated risk to lawyers to be disciplined not in their own study of the law but their inability to keep up with the evolution of technology). See also Catherine Garner, Chasing the Duty of Competency in Legal Technology, Vand. J. Ent. Tech. L. (Jan. 6, 2023), archived at https://perma.cc/R86L-WYWS (proposing that “[d]espite the vague language in the Model Rules and state rules, or even lack of technology competency in some states, there are many steps that lawyers can take to stay ahead of the curve and maintain the requisite level of competency.”). See also Mike Robinson, Rules of Professional Conduct for Lawyers, CLIO (Oct. 4, 2023), archived at https://perma.cc/3EYF-AX7Y (reminding attorneys they must keep the professional rules of conduct in mind).
evidence at trials. In contrast, transactional lawyers do not come across these glaringly obvious issues while drafting agreements and negotiating. As artificial intelligence begins to make its entrance into the transactional world, it is apparent that more guidelines will soon surface to help guide lawyers in handling Cloud computing.

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66 See Johnson, supra note 10, at 180 (stating both the Model Rules and ABA code of Professional Responsibility focus on problems that litigation is commonly associated with, not transactional work). The early scholarship revolving around technology in the legal field focuses primarily on competence for transactional lawyer and details on it should be based on client goals. Id. at 181. See also Top 5 Mistakes Lawyers Commit while Contract Drafting!, Legal Support World (June 23, 2020), archived at https://perma.cc/JUX2-T9J3 (listing the issues the transactional lawyers experience when drafting agreements such as: non-inclusion of complete deals and terms, incorrect times frames/dates, non-inclusion of termination clause, last minute inclusions, not proofreading enough).

67 See Louise Lark Hill, Symposium on Legal Ethics for the Transactional Lawyer: Technology - A Motivation Behind Recent Model Rule Revisions, 40 N. Ky. L. Rev. 315, 315 (2013) (detailing that in 2012 the ABA committee, Ethics 20/20, established in 2009, made recommendations to revamp the policies and principles around competency in technology). See also Dan Sharp, How Artificial Intelligence Increases Law Firm Productivity, InfoWare (Aug. 24, 2018), archived at https://perma.cc/B9LS-YM CB (listing some ways that AI can increase a law firms’ productivity and if they don’t take advantage they will lose to their competition); Sterling Miller, Artificial intelligence and its impact on legal technology: to boldly go where no legal department has gone before, Thomson Reuters (Mar. 11, 2023), archived at https://perma.cc/ZE35-E6TF (detailing how AI will affect, specifically, in-house legal departments); Matthew Stepka, Law Bots: How AI Is Reshaping the Legal Profession, Am. Bar Ass’n (Feb. 21, 2022), archived at https://perma.cc/GE8V-PGQN (asserting what AI has to offer).
1. Litigation And Transactional Practices

Litigation firms have taken advantage of the efficient tools offered by the Cloud when dealing with case management or discovery. A 2021 survey found that 60% of law firms have adopted some form of the Cloud, and 62% of lawyers have stated they use Dropbox for litigation matters. In recent years, federal courts have been forced to rule on where responsibility lies for the collection and preservation of electronically stored information, as well as who has

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68 See What is cloud-based litigation management and how does it benefit law firms?, THOMSON REUTERS (June 6, 2022), archived at https://perma.cc/YGT5-UPX6 (explaining the cloud’s practice management systems help litigation be more efficient and less stressful for lawyers and clients). See also Making the Move to Cloud-Based Discovery: How One Firm Revolutionized Its Discovery Process, LOGIKCULL (Mar. 22, 2023), archived at https://perma.cc/A7VN-6UKF (explaining that in “the Age of Discovery 3.0 mean that all firms can handle more of their discovery needs in house, lowering their costs and increasing their billable hours while delivering faster and more accurate results for their clients.”). See also How a Case Management System Helps Your Business Provide Top-Notch Customer Service, SALESFORCE (Apr. 2021), archived at https://perma.cc/CNY8-4J7W (detailing the benefits of cloud-based case management systems of giving every user the same view no matter where they are viewing it from).

69 See Kennedy, supra note 32 (citing ABA’s survey that reported cloud usage in law firms is at 60% and addressing the discrepancy that 62% of lawyers use drop box and may not understand what cloud services are). See also Dave Johnson, ‘What Is Dropbox?’: How to use the cloud-based file-storage service for collaboration, INSIDER (Feb. 18, 2021), archived at https://perma.cc/3Q48-X6TW (stating that “[d]ropbox is a file hosting service, often referred to as a ‘cloud storage’ service. Dropbox is one of the oldest and most popular cloud storage services in use today, though there are many alternatives, including Microsoft OneDrive, Box, Sync, and Google Drive.”).

When you subscribe to Dropbox, you are allotted a certain amount of storage space in an online server known as "the cloud." After installing the Dropbox app on your PC, mobile device, or both, any files that you store in your Dropbox locally will be copied to the Dropbox server as well.

Id.
“control” over this data.70 Litigation firms often deal with an enormous amount of paperwork, however, firms could be more effective in managing these documents by uploading them into the

70 See Cindy Pham, E-Discovery in the Cloud Era: What’s a Litigant To Do?, HASTINGS SCI. & TECH. L.J. 139, 141 (2013) (giving examples of situations litigants may find themselves in).

Litigants may find themselves liable for data loss when they encounter problems gaining access to analyze potentially relevant data stored on a third-party cloud server and difficulties preserving and retrieving data. Litigants may also find themselves in a situation where the court has issued a subpoena to the cloud provider ordering production of the litigant's information, without the litigant's consent, review, or even knowledge.

Id. See also Victor Stanley, Inc. v. Creative Pipe Inc., 269 F.R.D. 497, 523 (D. Md. 2010) (holding that FRCP 26 (b)(2)(B) permits a party to deny discovery requests if there is undue burden and/or very costly); Cache La Poudre Feeds, LLC v. Land O’Lakes, Inc., 244 F.R.D. 614, 620 (D. Colo. 2007) (holding that if litigation is imminent or pending, there is a duty to preserve ESI according to Rule 26(b)(1)); Columbia Pictures Industries v. Bunnell, 2007 WL 2080419 1, 6 (C.D. Cal. Sept. 21, 2007) (stating “[f]ederal courts have consistently held that documents are deemed to be within a party’s possession, custody or control for purposes of Rule 34 if the party has actual possession, custody or control, or has the legal right to obtain the documents on demand.”); Flagg v. Detroit, 252 F.R.D. 346, 347 (E.D. Mich. 2008) (holding that if a third party holds ESI this does not release the obligation to preserve and produced documents in discovery). See also Commonwealth v. Equifax, Inc., 35 Mass. L. Rep. 106, 2 (2018) (defining a distinction between maintaining and storing data under Massachusetts Data Breach Notification Law, Mass. Gen. Laws ch. 93H).

An entity that creates and owns proprietary databases containing consumers’ personal information would appear to “own” that information with the meaning of G.L.c. 93H . . . The statute distinguishes entities that merely "maintain" or "store" personal information from those that have an ownership interest in the data. Companies that offer cloud storage services, for example, may and probably do maintain and store personal information that they cannot sell or otherwise control as owners.

Id. See also Skyhop Technologies, Inc. v. Narra, 58 F.4th 1211, 1227 (2023) (holding that it makes no difference that Amazon owns the servers because cloud-based servers permit users to access their data and information from anywhere via the internet and having a password withheld from there diminishes their rights to access the programs).
Cloud-based litigation management services have simplified many tasks such as billing, meeting deadlines, and scheduling, thus giving lawyers the ability to be more efficient in meeting their clients’ needs. This is necessary for litigation firms because it allows them to maintain client demands as well as eliminate competition from other firms. From a business perspective, it is important for law firms to

See Teresa Matich, 9 Reasons Law Firm IT Professionals Are Moving To The Cloud, Clio (Sept. 1, 2022), archived at https://perma.cc/4GNN-5T37 [hereinafter Matich, 9 Reasons Law Firm IT Professionals Are Moving To The Cloud] (expounding that the cloud is better for the client experience and also firms that use the cloud receive 11% more casework then other firms). See also John C. Eustice, Understand the intersection between data privacy laws and cloud computing, Thomson Reuters (Mar. 22, 2023), archived at https://perma.cc/G2UD-4FSE (stating that the cloud “[v]astly improves network storage capabilities by allowing on-demand access to a shared pool of configurable computing resources . . . that can be rapidly provisioned and released with minimal management effort or service provider interaction.”). See also 12 Benefits of Cloud Computing, Salesforce (Mar. 22, 2023), archived at https://perma.cc/9ER7-LHVE (naming another benefit of the cloud is to have users (clients) be able to access and upload to the cloud without having the infrastructure in their own home).

See What is cloud-based litigation management and how does it benefit law firms?, supra note 68 (outlining the moving parts of litigation are easier to handle while in the cloud and not in binders). See also How to Evaluate Your Legal Practice's Need for Cloud-Based Law Firm Software, Giva (Dec. 15, 2022), archived at https://perma.cc/36YF-2QSP (reiterating that cloud-based case management services benefit the lawyers by tracking time and billing, accordingly, creating managing and sharing schedules, document management, and conflict management). See also What are the Benefits of Cloud Services for Law Firms?, New Charter Techs. (Mar. 22, 2023), archived at https://perma.cc/KD54-LA2N (naming easy collaboration and efficiency as top reasons law firms must move to the cloud).

See John S. Dzienkowski & Robert J. Peroni, The Decline in Lawyer Independence: Lawyer Equity Investments in Clients, 81 Tex. L. Rev. 405, 437 (2002) (recognizing that “permitting alternative means of paying for legal services improves competition in the legal services market. This competition will result in a wider range of products being offered, including diverse methods of payment for legal services, and thereby give clients greater choice.”). See also Timothy Peterson, Cloudy with a Chance of Waiver: How Cloud Computing Complicates the Attorney-Client Privilege, 46 J. Marshall L. Rev. 383, 387 (2015) (explaining that in the cloud “[c]lient information, research, notes, and pictures can be organized and
stay up to date with current technologies, such as the Cloud, because they can stay better organized under one comprehensive system that files and stores all business needs like finances and case management.74 In regards to client demands and case management, the Cloud helps lawyers interact with clients more effectively because it cuts the amount of time that lawyers spend on tedious tasks in half.75

74 See Why the cloud is critical to your firm’s success, supra note 3 (detailing that the cloud is essential to unlock maximum effectiveness and speed within the firm, and having an in-depth system is important to the business from finance to practice management); Stephanie Erbesfield, The Good Times for Firms Continue; Cloud Adoption and Billing Efficiency Help Firms Stay Competitive, ADERANT (Aug. 7, 2019), archived at https://perma.cc/5PRD-EZ2L (explaining that when a firm uses the cloud, they are able to process invoices quicker and are more likely to view the competitive landscape differently). See also Mid-sized law firms recognize a key benefit of cloud adoption: attracting more clients, THOMSON REUTERS (June 3, 2020), archived at https://perma.cc/CN82-VA3D (demanding that clients expect the cloud in their law firms).

These clients expect their law firms to drive improvements in the legal service delivery model. This includes offering cloud-based solutions for collaboration and efficiency. Most requests for proposals or invitations to bid on partnering programs include a detailed analysis of the type of legal systems a firm has and some even ask whether the technology can be shared.

75 See Importance of Automated Discovery in Cloud Transformation, NETSUITE BLOG | SATUROTECH (May 27, 2022), archived at https://perma.cc/7ZPL-JGYX (reasoning that by automating the discovery process, the firm can reduce its time from gathering the information). See also Shelley Bougnague, 6 Things To Know About Cloud eDiscovery, CLOUDIFICIENT (July, 14, 2022), archived at https://perma.cc/3JH2-R2QU (listing some key takeaways from the cloud that are useful during the discovery process). “Cloud eDiscovery solutions offer greater accessibility and collaboration, as it can be accessed from anywhere and on any device, and allows for real-time file sharing and collaboration.” Id. See also Ryan M. Anderson, Features: The Marketing Issue: Relationship Marketing: Cultivate Referrals with Legal Technology, 46 L. PRAC. 50, 50 (2020) (explaining that legal service automation helps boost transparency and collaboration between lawyer and client).
During the discovery period of litigation, lawyers have begun to use the Cloud to help display information more effectively, although they should approach this with caution to ensure the privacy of their clients’ data. The risks posed by the Cloud can include issues surrounding data security, privacy, cross-border legality, compliance, and business continuity. The discovery process itself highlights when Cloud technologies demonstrates to be the most efficient and the most problematic for attorneys. The Cloud helps attorneys sort

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76 See Discovery Shifts to the Cloud: Rewards and Perils for Your IT and Legal Teams, FTI Consulting (Nov. 11, 2022), archived at https://perma.cc/CA73-LYQJ (stating “[t]he risks associated with Cloud computing can be especially apparent during e-discovery (identifying and securing electronic data as part of a legal action), an area of peak vulnerability for both law firms and clients. This single process can encompass security, data privacy, cross-border legality, compliance and business continuity.”). See also Pham, supra note 70, at 155 (setting forth the main issues with discovery in the cloud are dealing with the responding parties’ duties under FRCP and compliance issues).

77 See Discovery Shifts to the Cloud: Rewards and Perils for Your IT and Legal Teams, supra note 76 (detailing the risks associated with discovery are: “security, data privacy, cross-border legality, compliance and business continuity.”). But see Bougnague, supra note 75 (stating that the cloud computing is more secure in the cloud for eDiscovery despite this common misconceptions). See also Joel Jacob, Risks And Rewards When Moving E-Discovery To The Cloud, Corp. Couns. Bus. J. (Mar. 22, 2023), archived at https://perma.cc/6QDX-QE9C (talking about the risks of eDiscovery in the cloud is managing access to control lists, defending your cloud against possible third-party attacks, and preservation and collection of data in the cloud).

78 See What is cloud-based litigation management and how does it benefit law firms?, supra note 68 (acknowledging that “[c]loud-based litigation management simplifies discovery and trial processes”). But see Cloud Computing: Litigation, Founders Workbench (July 24, 2015), archived at https://perma.cc/9Q4H-NPEU (presuming that the legal issues that surround cloud computing often involve electronic evidence and the rules of e-discovery). See also Kenneth Spencer, Cloud-Based Discovery Is at Critical Mass: Here’s Why, Law.com (July 18, 2022), archived at https://perma.cc/PX8E-ZECM (summarizing “momentum behind the rise of cloud-based discovery and the business reasons why companies will have to embrace it.”).
through discovery paperwork quicker and with less hassle, and also allows clients to have the ability to upload their documents independently to the Cloud to help streamline the process. However, issues may arise when using the Cloud during the discovery process because there is an inherent risk that storing any personal information in an online forum may result in a data breach. To address this concern, the American Bar Association has given litigation attorneys more guidance on how to deal with Cloud computing in their profession, but often leaves transactional lawyers grappling with technological issues.

Although transactional lawyers have received less guidance on how to handle technology in their practice, the Cloud offers much of the same benefits to attorneys in transactional practice just as it does

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79 See How E-Discovery Tools Can Benefit the Legal Industry, IFour (Sept. 27, 2022), archived at https://perma.cc/RW6Q-QLJT (listing ways the cloud can help benefit the legal industry with one of them being gathering essential information quickly for discovery and save considerable time and money in the discovery process).

80 See Gary Audin, The Cloud and E-discovery: A Complex Challenge, INFORMATECH (June 28, 2012), archived at https://perma.cc/8YNV-N5FN (questioning that one issue that still arises “is that the organization does not know where the data is stored. Further, the organization may be unaware of the data format stored and the data format required.”). See also Jacob, supra note 77 (contesting that two risks associated with cloud computing during discovery are “data privacy, specifically the ability to secure client data – adherence to your jurisdiction’s data privacy rules and regulations is critical . . . and most important is maintaining and protecting client data and privileged information.”).

81 See Johnson, supra note 10, at 161 (acknowledging that there is very little scholarship on Comment 8 requirements for transactional lawyers). See also Rosenof, supra note 64, at 1321 (publishing in the Cincinnati Law review a comment about the fate of Comment 8 implemented by the American Bar Association).
for litigation.\textsuperscript{82} In addition, the COVID-19 pandemic spurred a remote workforce trend that required companies to take a step back and learn how to use modernized devices to make work more efficient.\textsuperscript{83} As a result, transactional lawyers began taking different approaches to automation depending on the size of their firm and their clients’ demands.\textsuperscript{84}

\textsuperscript{82} See Johnson, supra note 10, at 163 (discussing how technology will help transactional lawyers by being more time efficient to help enhance client service just as the cloud does for litigators). See also Kate Jansons Johns, Top Technology Trends for Transactional Lawyers, LAW TECH. TODAY (Feb. 1, 2022), archived at https://perma.cc/VW99-2V7T (listing four trends that transactional workers can take advantage of in the cloud); 3 Ways Cloud Computing is Transforming the Legal Industry, supra note 5 (asserting that law firms can “reduce focus on necessary, yet time-consuming tasks such as invoicing and billing, scheduling appointments, managing files, and creating the vast number of legal documents necessary to business operation.”); How a Case Management System Helps Your Business Provide Top-Notch Customer Service, supra note 68 (detailing the benefits of cloud-based case management systems of giving every user the same view no matter where they are viewing it from).

\textsuperscript{83} See Victoria Hudgins, The Pandemic Accelerated Small Firms’ Cloud Adoption. Client Pressure Could Solidify It, LAW.COM (Aug. 2, 2021), archived at https://perma.cc/NT2F-BH2B (observing that even if lawyers go back into the office, demands for technology will continue to accelerate to meet different needs). “While some solo practitioners and boutiques were previously licensing and leveraging cloud-based services, the necessity of remote working during the pandemic spurred adoption, tech consultants said.” Id. See also Madaser Yousaf, Ambika Kapur & Sonali Verghese, How the COVID-19 Pandemic Is Accelerating Digital Transformation, INTAPP (Jan. 26, 2023), archived at https://perma.cc/YGR8-44GP (discussing “[o]n a positive note, the pandemic has altered long-held perceptions of technology and removed long-standing barriers — both cultural and change-related — to technology adoption. Firms can now fully leverage new technologies by embedding an organic change model driven by continuous learning.”).

\textsuperscript{84} See Johnson, supra note 10, at 183 (noting the difference from big law to solo practitioners by interviewing attorneys at different sized firms for research). See also Andrea Foot, Guest post: No cloud on the horizon for mid-tier law firms, LEGALIT INSIDER (Nov. 8, 2022), archived at https://perma.cc/Q9ER-C4CG (summarizing the different choices in cloud platforms small, mid or large law firms should take and why). See also Meeting Customer Demands with the Cloud, WHOA.COM (Mar. 22, 2023), archived at https://perma.cc/V5K6-JMKP (addressing how customers’ needs
B. What Law Firms Need To Know When Adopting The Cloud

To begin Cloud computing, all law firms must learn to integrate the Cloud into their practices in three ways: Infrastructure as a Service, Platform as a Service, and Software as a Service. The size of the firm will dictate the optimal use of the Cloud in order to create a streamlined business. Cloud computing provides a service that stores and transmits data, and uses the internet to access and move the stored must be met in order for the business to succeed). “Using a cloud service provider for your infrastructure needs can give you a flexible solution that can be adapted to the needs of your customers faster and more easily than an on-premises infrastructure could be.” Id. See also Travis Leon, AI in Transactional Law: Letting Technology Manage the Trees So Attorneys Can Tend to the Forest, YAHOOFINANCE (Jan. 8, 2019), archived at https://perma.cc/T3ZN-8QVV (stating that AI is “taking over for lawyers is, so far, mostly rote ‘search and find’ work, assisting rather than replacing humans. AI, like the dream intern, will allow transactional lawyers to ‘stop doing repetitive, repeatable and mundane legal work.’”).

See Lefkowitz, supra note 42, at 9 (listing the three types of cloud computing as “‘infrastructure as a service,’ ‘platform as a service’ and ‘software as a service.’”).

See also Foot, supra note 84 (emphasizing a law firm with fewer then 25 people should use SaaS). See also Daniel Farrar, Cloud Adoption Can Boost The Bottom Line For Legal Firms, Too, FORBES (Jan. 19, 2023), archived at https://perma.cc/S8N9-KYJH [hereinafter Farrar, Cloud Adoption Can Boost The Bottom Line For Legal Firms, Too] (stating that software-as-a-service revenue jumped dramatically by 78% in 2020 and 32% in 2021). See also Kennedy, supra note 32 (reporting that “[t]he 2021 Survey focused on the basic concept of a ‘web-based software service or solution,’ including Software as a Service (SaaS). In practical terms, you can understand cloud computing as software or services that can be accessed and used over the internet using a browser. . . .”).

See Cloud Computing for Law Firms: Everything You Need to Know, FORUM INFO-TECH (Jan. 26, 2022), archived at https://perma.cc/RD9W-ZT3U (describing the ways the cloud can support law forums and how it can adjust to any size law firm). “As your firm grows, your private cloud server and service can easily match, in some cases, with the click of a button. Additionally, the inverse is true; if your firm gets smaller, so do the computational needs of it.” Id.
Software as a Service is the most frequently used option for businesses. This process involves a third-party vendor that uses the internet to deliver applications, meaning everything runs directly through the web browser. Comparatively, Platform as a Service does not operate through the internet, but instead this third-party vendor provides a platform to create more freedom and customization with special software components for consumers. Lastly, Infrastructure

87 See Lefkowitz, supra note 42, at 9 (defining the cloud as involving “the use of a service to store, transmit and process information and employs the internet as the means to access and move that information.”). See also Moving to Cloud Servers for Small Law Firms, FORUM INFO-TECH (Jan. 25, 2022), archived at https://perma.cc/2SMR-DQ28 (alludes that “storing and accessing data is just one part of cloud computing.

88 See Stephen Watts & Muhammad Raza, SaaS vs PaaS vs IaaS: What's The Difference & How To Choose, BMC (June 15, 2019), archived at https://perma.cc/Y2YL-DLWR (naming common cloud vendors that most everyone uses such as Google and Dropbox). See also Dillon Horne, Cloud Computing, Virtual Law Firms, and the Legal Profession, CORNELL L. SCH. GRADUATE PAPERS 1, 3 (2014) (writing that using SaaS streamlines the customer experience and SaaS is more flexible by adding users and upgrading to more data storage if needed).

89 See Watts & Raza, supra note 88 (defining what “Software as a Service” means and how it works).

Software as a Service, also known as cloud application services, represents the most commonly utilized option for businesses in the cloud market. SaaS utilizes the internet to deliver applications, which are managed by a third-party vendor, to its users. A majority of SaaS applications run directly through your web browser, which means they do not require any downloads or installations on the client side.

Id.

90 See Watts & Raza, supra note 88 (recognizing that “PaaS provides a platform for software creation. . . PaaS allows businesses to design and create applications that are built into the PaaS with special software components. These applications, sometimes called middleware, are scalable and highly available as they take on certain cloud characteristics.”). See also Sophia Bernazzani, IaaS vs. PaaS vs. SaaS: Here's What You Need to Know About Each, HUBSPOT (July 4, 2022), archived at https://perma.cc/GF2S-ATTV (noting that platform as a service product allows
as a Service delivers the entire infrastructure of Cloud computing, including servers, networks, operating systems, and storage through virtualization technology.91

Regardless of the size, law firms are taking advantage of the Cloud’s feature permitting attorneys to work from any location, not just the office.92 With that being said, the number of employees at a firm is a determining factor when selecting the type of Cloud computing service that would be most beneficial.93 A smaller law firm

consumers to build their own application online without having to worry about storage, management and data serving).

91 See Watts & Raza, supra note 88 (stating that “IaaS is fully self-service for accessing and monitoring computers, networking, storage, and other services. IaaS allows businesses to purchase resources on-demand and as-needed instead of having to buy hardware outright.”).

IaaS delivers cloud computing infrastructure, including servers, network, operating systems, and storage, through virtualization technology. These cloud servers are typically provided to the organization through a dashboard or an API, giving IaaS clients complete control over the entire infrastructure. IaaS provides the same technologies and capabilities as a traditional data center without having to physically maintain or manage all of it. IaaS clients can still access their servers and storage directly, but it is all outsourced through a “virtual data center” in the cloud.

Id.

92 See Matich, 9 Reasons Law Firm IT Professionals Are Moving To The Cloud, supra note 71 (summarizing nine reasons why law firms are moving to the cloud and one of them being that the flexibility to work from anywhere with an internet connection is enticing to law firms).

93 See Foot, supra note 84 (suggesting if the firm employs 25 or fewer people the firm should move toward Software-as-a-service cloud adoption and if the firm employs 500 or more people, then infrastructure-as-a-service will be the best option to use more innovative strategies). See also Teresa Matich, SaaS and Cloud Technology For Lawyers, Clio (Mar. 23, 2023), archived at https://perma.cc/362H-GPGR [hereinafter Matich, SaaS and Cloud Technology For Lawyers] (claiming that in a study done in 2014, 35% of solo or small lawyer firms (2-9 people) say they have adopted SaaS). See also Cloud Solutions and SaaS for Small Business Law
would likely benefit from a SaaS product because the firm can outsource its IT and will not have to keep any hardware on the premises of the office. In contrast, a larger law firm may wish to utilize an Infrastructure or Platform as a Service because of the presence of IT on-site and the ability to customize Cloud products to fit the needs of the firm. Due to the COVID-19 pandemic, law firms were forced to make a quick decision regarding the type of Cloud computing service they wanted.

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Firms, Toss C3 (Aug. 7, 2017), archived at https://perma.cc/5D4B-M343 (recommending that SaaS is among the best cloud infrastructure for solo practitioners and mid-sized law firms). See also Cody, supra note 55 (concluding that it is “[u]ltimately, an attorney is required to take ‘appropriate steps to ensure [the] use of technology in conjunction with a client’s representation does not subject confidential client information to an undue risk of unauthorized disclosure.’”).

See Moving to Cloud Servers for Small Law Firms, supra note 87 (explaining that it is easier for a small law firm to move to the cloud because “[i]t’s a cost-effective way to get the power and flexibility you need to run your business without sacrificing security or reliability.”). See also Watts & Raza, supra note 88 (giving guidance that SaaS is best used for “[s]tartups or small companies that need to launch ecommerce quickly or don’t have time for server issues or software[,]”). In addition, it notes that IT employees don’t need to be employed by a small company because everything is controlled by the cloud vendor. Id.

See Watts & Raza, supra note 88 (noting that “[l]arger companies may prefer to retain complete control over their applications and infrastructure, but they want to purchase only what they actually consume or need.”). See also Team Litify, What’s Ahead for Legal Tech? Experts Share 7 Predictions for 2020, Litify (Mar. 23, 2023), archived at https://perma.cc/L3LQ-DD9J (predicting that PaaS will make a greater impact in legal technology through the example of Salesforce). “Increased PaaS adoption can be evidenced by the growth of legal solutions on the Salesforce.com platform, as well as the emergence of dedicated legal PaaS providers, like Reynen Court.” Id.

See Hudgins, supra note 83 (claiming that the COVID-19 pandemic accelerated cloud adoption for small law firms).
1. The Post-COVID-19 Pandemic Shift To The Cloud

The COVID-19 pandemic accelerated the need for law firms to transfer over to Cloud technologies because they could not meet their clients face to face, and the work from home movement spurred the need for their information to be easily accessible. Nonetheless, it was still difficult for some firms to make the leap due to the many options that Cloud services had to offer. Small law firms faced many challenges moving to the Cloud due to the high cost of adopting Cloud technologies, which was often attributed to the firm’s election for a public or private Cloud. For example, a smaller law firm may have

97 See Yousaf, Kapur & Verghese, supra note 83 (making predictions that stem from five different phases that professional firms are experiencing post COVID-19 pandemic). “Although these tactics have addressed the immediate need for financial resilience, firms are now beginning to prioritize strategic investments that will deliver a seamless experience for partners and lawyers to better engage with clients.” Id. See also Sarah R. Boonin & Luz E. Herrera, From Pandemic to Pedagogy: Teaching the Technology of Lawyering in Law Clinics, TEX. A&M L. SCHOLARSHIP 109, 111 (2022) (understanding how the pandemic played a vital role in changing the way technology was used in clinical programs). This article offers an overview of many of the different ways technology is used in the practice of law. Id.

98 See Moving to Cloud Servers for Small Firms, supra note 87 (giving reasons as to why firms were hesitant in moving towards the cloud, because their workflows would be altered and therefore, the business of the firm would change); Watts & Raza, supra note 88 (explaining the difference of SaaS, PaaS, IaaS as different types of models that cloud service providers offer to a business); Cody, supra note 55 (exclaiming that it is essential that a business can either learn how to work the cloud software or hire people to help implement the cloud software in the business).

99 See Lefkowitz, supra note 42, at 10 (defining the private cloud as needing to manage its facilities, hardware, software, networks, and business functions and the public cloud as when a customer pays set fees based upon usage and the cloud providers makes decisions and manages the hardware and software upgrades). See
data security and costs at the top of their needs in adopting the Cloud, so investing in a private Cloud server would be ideal; however the firm would either have to employ more people to manage the on-premise private Cloud or would need to take time away for their work to teach themselves how to manage the system.\textsuperscript{100}

C. Privacy Automation Considerations

Firms are beginning to adopt privacy automation systems while still using elements of the Cloud in their work flows.\textsuperscript{101} Privacy automation is the practice of facilitating tasks within a business that

\textit{also Discovery Shifts to the Cloud: Rewards and Perils for Your IT and Legal Teams, supra note 76} (giving background on the questions a firm must ask before adopting the cloud networks).

The first question to ask is whether the Cloud will involve unique dedicated storage area networks (private cloud) or shared pools of storage capacity (public cloud) that may be dispersed to different geographical locations throughout the world. The latter approach can mean that a law firm’s client data is shifted to various parts of the globe at the convenience of the data-hosting provider to manage their own internal capacity.

\textit{Id.} See \textit{Moving to Cloud Servers for Small Firms, supra note 87} (observing that for a small law firm the adoption of a private cloud server will be more expensive initially, but it is also the more secure route). Also stating that this is not practical for a small law firm and a public cloud service provider is more likely within the budget. \textit{Id. See also Foot, supra note 84} (agreeing that a firm with fewer than 25 people will most likely transition to a public cloud option (SaaS) because they are “designed to fit your small firm, with no/low service implementation costs . . . ”).

\textit{100} See Tom Orbach, \textit{Privacy Automation 101: Control User Data and Increase ROI}, G2 (Oct. 17, 2022), archived at https://perma.cc/M2NE-CPLA (stating that many companies are working on integrating privacy automation in their businesses due to massive amounts of personal data that is now being accessed); \textit{Data Privacy Automation, CLARIP} (Apr. 19, 2023), archived at https://perma.cc/G7FP-MACC (recalling that after many organizations realized that privacy automation was necessary, they chose to outsource their privacy software to a third-party).
include a client’s personal data. The word automation, in this sense, refers to the ability to connect with different platforms to integrate private data. Adopting a workflow automation system within the Cloud is helpful when dealing with the governing data laws at a firm. Having a workflow software makes handling data privacy laws much easier and many different Cloud vendors have worked on perfecting the workflow automation to protect data and privacy in the

102 See Orbach, supra note 101 (defining what privacy automation is). “Privacy automation automatically facilitates all tasks involving your customers’ personal data. Essentially, it means performing privacy tasks without any or little human involvement, which saves time and energy.” Id. See also What is Privacy Automation, TRUYO (Apr. 23, 2023), archived at https://perma.cc/G488-ESPM (defining automation not as one consistent thing but saying it is efficient, scalable data subject rights compliance software). “While automation is positioned as a key component of data subject request software, there’s a significant difference between the products with respect to what functions are actually automated.” Id.

103 See Chris Babel, The Problem with Automating Data Privacy Technology, DARKREADING (May 13, 2020), archived at https://perma.cc/M8RW-YY2S (defining privacy automation as the “privacy compliance world specifically, ‘automation’ often refers to the ability to connect different platforms via APIs to integrate data sources and enterprise systems.”). See also Data Privacy Automation, supra note 101 (stating that there is a new need to remain compliant with privacy regulations and that privacy automation helps with this).

104 See Safeguard Confidential Data with Legal Workflow Automation, CFLOW (June 19, 2020), archived at https://perma.cc/G6YN-CYUM (confiding that huge companies such as Amazon, Facebook and Google rely on user habits to provide services that are compliant with GDPR laws). See also Data Privacy Automation, supra note 101 (declaring that “[a]s more governments adopt comprehensive privacy regulations and individuals become more aware of their new rights, there will be an even greater need for the use of software and technology to keep up with the world of big data.”). See also Michelle Wong, A Beginners Guide to Legal Workflow Automation, CLIO (Mar. 23, 2023), archived at https://perma.cc/U2BK-EVQ6 (listing the advantages of why adopting a workflow automation in the law firms can be beneficial to the law firm and their clients).
Cloud. For example, Microsoft Cloud computing programs takes an approach of committing to data privacy practices that follow the guidelines of Generally Accepted Privacy Practices and Commitments to the EU Model Clauses.

The European Union has implemented the GDPR, which gives individuals the right to control their personal data by regulating how companies process, protect, and use their personal data. The GDPR has an extra territorial scope so United States companies that process

105 See Microsoft, Protecting Data and Privacy in the Cloud, 03 (2014) (giving an example of how Microsoft provides privacy and data protection in their cloud services by making strong commitments to their consumers and following a “privacy by design principles”). See also Safeguard Confidential Data with Legal Workflow Automation, supra note 104 (explaining that companies usually don’t choose a “vague legal route” and instead find a reliable cloud vendor that will help them adopt a workflow management solution that helps govern strict data policies, so they don’t have to).

106 See Microsoft, Protecting Data and Privacy in the Cloud, supra note 105 (explaining how Microsoft works to remain compliant).

Microsoft was one of the first organizations to sign European Model Clauses, documenting our commitments to protect the data of our customers who do business in E.U. countries. Commitments to the E.U. Model Clauses, along with standards like the Generally Accepted Privacy Practices (GAPP) and the Fair Information Practice Principles (FIPPs) guided the creation of Microsoft’s own privacy principles used to manage customer and partner information.

107 See Thomas O’Neil, New Data Privacy Laws – Workflow Burden or Competitive Opportunity?, WORKFLOW (Nov. 2018), archived at https://perma.cc/9TMC-7PFD (stating “[t]he purpose of the GDPR is to give EU individuals control over their personal data by regulating how a company or organization may process, protect and use that data.”). See also What is GDPR, the EU’s new data protection law?, GDPR.EU (Apr. 23, 2023), archived at https://perma.cc/STF7-JYAJ (giving a broad overview of the history, scope, penalties and key definitions about the GDPR). It also explains the regulatory point of the GDPR such as the data protection principles, accountability, data security, data protection by design and default and when your allowed to process data. Id.
data on EU citizens must comply with the regulations.\textsuperscript{108} Similarly to the GDPR is the California Consumer Privacy Act (“CCPA”), which gives California residents more rights on how businesses handle their personal information.\textsuperscript{109} While the United States does not have a federal privacy law that applies to all states, many have adopted their own data privacy and security laws in addition to federal acts that have more of a narrow reach, such as “HIPPA.” “COPPA,” and “GLBA.”\textsuperscript{110} An example of privacy laws under the CCPA is that of a consumer

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\textsuperscript{108} See GDPR in the USA | GDPR compliance in US | GDPR and PII, supra note 61 (stating that “[t]he GDPR has extra-territorial scope, which means that websites outside the EU that process data of people inside the EU are obligated to comply with the GDPR.”). “So, if you have a website in the US and you have visitors from the EU, the GDPR applies to your domain.” Id. See also What is GDPR, the EU’s new data protection law?, supra note 107 (acknowledging “[t]hough it was drafted and passed by the European Union (EU), it imposes obligations onto organizations anywhere, so long as they target or collect data related to people in the EU.”).

\textsuperscript{109} See Danielle Kucera, CCPA vs. GDPR: Similarities and Differences Explained, OKTA (Apr. 13, 2021), archived at https://perma.cc/9ADY-9GD6 (summarizing the CCPA as giving California residents more control and transparency over how business collect their data, and stating that it applies to organizations that do business in California who those business that handle information of California residents). See also California Consumer Privacy Act, CA Civ. Code § 1798.100 (2023) (holding that “[t]he California Consumer Privacy Act of 2018 (CCPA) gives consumers more control over the personal information that businesses collect about them and the CCPA regulations provide guidance on how to implement the law.”).

\textsuperscript{110} See David Harrington, U.S. Privacy Laws: The Complete Guide | Varonis, VARONIS (Mar. 10, 2023), archived at https://perma.cc/ER47-QRUN (reminding that the United States has no comprehensive federal privacy decree, there are still several laws that focus only on data or situations regarding privacy). Mentioning the U.S. privacy laws that have a vertical focus are HIPPA, COPPA, and GLBA. Id. See also Thorin Klosowski, The State of Consumer Data Privacy Laws in the US (And Why It Matters), WIRECUTTER (Sept. 6, 2021), archived at https://perma.cc/M4ML-XUGL (stating that “[t]he United States doesn’t have a singular law that covers the privacy of all types of data. Instead, it has a mix of laws that go by acronyms like HIPAA, FCRA, FERPA, GLBA, ECPA, COPPA, and VPPA.”).
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request, this is when a consumer has the right to ask the business what personal data the business has collected about them.\textsuperscript{111}

Cloud companies have begun automating their privacy measures in order to remain compliant with the rules and regulations.\textsuperscript{112} Automating privacy involves many different benefits to the consumers and clients of the consumers.\textsuperscript{113} First and foremost, it exposes less humans to the private information.\textsuperscript{114} Additionally, it also cuts down on manual processing times and allows for an

\begin{footnotesize}
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\item See Babel, supra note 103 (stating that under the CCPA “[c]onsumers may also submit a number of other requests pertaining to how companies collect and handle their data. Other privacy laws contain similar stipulations.”). \textit{See also California Consumer Privacy Act}, CA Civ. Code § 1798.100 (2023) (holding consumers have the right to request that a business that collects a consumer’s personal information disclose to that consumer the categories and specific pieces of personal information the business has collected).
\item See \textit{Enabling Privacy Automation}, SECURITI (Apr. 19, 2023), archived at https://perma.cc/F82H-U9WS (explaining how their cloud systems help automate and simplify compliance with privacy regulations). \textit{See also Data Privacy Automation}, supra note 101 (stating that there is a new need to remain compliant with privacy regulations and privacy automation helps with this). \textit{See also Safeguard Confidential Data with Legal Workflow Automation}, supra note 104 (claiming that adopting a workflow management solution from a reliable brand will be the easiest way to remain compliant with the strict data policies requirements).
\item See \textit{Data Privacy Automation}, supra note 101 (declaring that “organizations find it more efficient to buy from a third-party who will maintain and improve the product over time according to the needs of the organization to meet shifting regulatory requirements.”). \textit{See also Safeguard Confidential Data with Legal Workflow Automation}, supra note 104 (stating five reasons as to why privacy automation will help companies and consumers as 1) it helps keep customer data private, 2) quick data retrieval, 3) easy to monitor and audit, 4) segregating data access based on roles and 5) provides customers and clients total control over their information).
\item See Orbach, supra note 101 (stating that “performing privacy tasks without any or little human involvement … saves time and energy.”). Also, with more artificial intelligence in the process of privacy automation it significantly reduces human errors at all stages. \textit{Id. See also Data Privacy Automation}, supra note 101 (writing that automating privacy forms eliminate the need for manual entry which allows compliance in recordkeeping and data protection authority inquiries).
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employee’s time to be used on other tasks. Privacy Automation also helps the business with consent management and privacy audits. Law firms are often tasked with transferring private information during the discovery period to other lawyers, and by automating this process of obtaining data through the Cloud, it helps cut back time that would be sent printing and shipping the documents. Another benefit of adopting privacy automation is to lessen the risk of data privacy breach or error.

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115 See Data Privacy Automation, supra note 101 (detailing ways data privacy automation helps with data mapping by cutting processing time and costs down). In addition, for data protection impact assessments it cuts time on manually entry for inputting forms and recordkeeping. Id. Also, for data subject access rights it cuts time on manual process by automating these resources teams can perform other duties rather than try and respond to all data retrieval demands. Id.

116 See Data Privacy Automation, supra note 101 (explaining that most organizations track consents individually and automating consent and preferences forms for their clients cuts down on confusion and time to accept requests).

117 See Orbach, supra note 101 (expounding that “[t]hose who use an automated privacy management platform can respond to large amounts of DSRs quickly and more efficiently, as well as with more certainty of precision. This, in turn, allows for faster processing and cost savings.”). See also Rob Robinson, Automating eDiscovery: A Strategic Framework, COMPLEX DISCOVERY (Mar. 11, 2019), archived at https://perma.cc/4B4P-RQRP (listing the key to mastering discovery automation is automating an index that will provide an arrangement of data and can be searched easily). In addition, “[i]ngestion and processing automation allow users to upload data into a secure online repository in a private and protected cloud environment and have that data automatically converted into a usable format for review.” Id.

118 See Data Breach Reporting, BRYTER (Apr. 23, 2023), archived at https://perma.cc/V7N4-QLYE (detailing a tool that comes with privacy automation of Bryter).

BRYTER Data Breach assistant helps companies assess, document and report suspected data breaches in line with major data breach notification and privacy laws across the globe, including GDPR and NIS Directive in the EU, as well as the
IV. Analysis

A. Guidance That Transactional Lawyers Should Consider

As technology advances, firms must adopt the Cloud and tailor business models around Cloud technologies to keep up with the competition.\textsuperscript{119} For transactional lawyers or litigation lawyers, it is mandatory that all members of American the Bar Association “keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology.”\textsuperscript{120} Comment 8 of Rule 1.1 of the Model Rules of Professional Conduct has been viewed through a narrow lens, but there are different ways to interpret the language in the comment.\textsuperscript{121} However, this alternative interpretation

\hspace{1cm} SHIELD, CCPA and CPRA in the US. The tool saves valuable hours for companies by simplifying their complex obligations. 
\textit{Id.} See also Timothy J. Toohey, \textit{Beyond Technophobia: Lawyers’ Ethical and Legal Obligations to Monitor Evolving Technology and Security Risks}, 21 \textit{RICHL. J.L. \\ & TECH.} 9, 2 (2015) (stating that “[i]n the world of growing security risks, ignorance of technology may lead to violations of lawyers’ fundamental ethical duties of competence and confidentiality.”).

\textsuperscript{119} See Lenon & Rosenthal, \textit{supra} note 33 (listing three reasons all law firms should adopt cloud technologies are the mobility of the cloud, how the cloud cuts costs and how the cloud provides enhanced security).

\textsuperscript{120} See \textsc{Model Rules of Pro. Conduct} r. 1.1 cmt. 8 (quoting that “[t]o maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology, engage in continuing study and education and comply with all continuing legal education requirements to which the lawyer is subject.”).

\textsuperscript{121} See Johnson, \textit{supra} note 10, at 181 (addressing that the “early framing of the competence duty in the transactional context implicitly requires that the transactional lawyer use the law in the way most beneficial to achieving such client goals.”). See
of adopting technology as a competence requirement, has raised questions for transactional lawyers who are grappling with what is necessary to maintain competency in technological advancements in the field. At the forefront, it is important to keep client goals as a primary focus when dealing with technology issues or adaptations. Ideally, there would be more rulings or scholarship on how Cloud technologies fit into transactional work, but this should not deter transactional firms from adopting the Cloud as it will prove beneficial for the business itself. The Cloud has tremendous benefits for the business side of firms, and a firm’s failure to adopt the Cloud would

also Why the cloud is critical to your firm’s success, supra note 3 (asserting that “[l]aw firms across the globe are migrating to cloud-based legal software and remotely accessible technologies in order to improve efficiencies, stay ahead of the competition, and meet client demands.”).

122 See Cody, supra note 55 (giving examples of California’s formal opinions on technology).

Collectively, these opinions make clear that cloud computing triggers due diligence obligations in fulfilling an attorney’s duty of confidentiality, the duty of competence, and the duty to supervise. Ultimately, an attorney is required to take “appropriate steps to ensure [the] use of technology in conjunction with a client’s representation does not subject confidential client information to an undue risk of unauthorized disclosure.

123 See Johnson, supra note 10, at 180 (acknowledging that there is very little scholarship on Comment 8 requirements for transactional lawyers). Providing insights on how both the Model Rules and ABA Code of Professional Responsibility focus on problems that litigation is commonly associated with, not transactional work. Id.

124 See Johnson, supra note 10, at 163 (discussing how technology will help transactional lawyers by being more time efficient to help enhance client service just as the cloud does for litigators). But see Hill, supra note 67, at 316 (stating that in 2012, Ethics 20/20 attempted to give the ABA some guidance that later was applied as amendments to the 2012 Model Rules of Professional Conduct which address technology additions towards the transactional lawyer).
be harmful to the business and to their clients. For example, a firm’s failure to adopt the Cloud could result in dramatic downturns in its business and could put lawyers at risk of breaking their commitment to competence in the profession.

The 2019 Legal Technology Survey by ILTA estimates that “69% of firms indicated their firm would be more likely to adopt Cloud solutions over the next 12 months.” Not only will this prove beneficial for the firm’s business, but employees will also be able to tend to tasks more efficiently. Through discovery issues such as the collection of private data and the adoption of Cloud case management systems, litigators have been forced to answer difficult questions

125 See Match, 9 Reasons Law Firm IT Professionals Are Moving To The Cloud, supra note 71 (stating some of the benefits that accompany adoption of the cloud within law firms). See also Erbesfield, supra note 74 (honoring in on one huge benefit law firms have seen who have adopted cloud technologies is that “an efficient billing process is more likely to be part of an overall law firm innovation strategy to promote efficiencies.”). See also 12 Benefits of Cloud Computing, supra note 71 (stating 12 business advantages that come from cloud computing).

126 See How to Evaluate Your Legal Practice’s Need for Cloud-Based Law Firm Software, supra note 72 (highlighting now is the time for law firms to make the jump to the cloud and explaining that independent legal practices jumped from adopting the cloud between 2021 and 2022 from 52% to 84%). “The benefits include but are not limited to, reduced downtime, up-front pricing, eliminate costs involved with repairing physical infrastructure, and provide world-class security that can work seamlessly across desktop, mobile or tablet devices.” Id.

127 See The Great Law Firm Cloud Migration, supra note 46 (stating statistics “69% of respondents indicated their firm would be more likely to adopt cloud solutions over the next 12 months – a six-point leap from the year prior, according to the 2018 Legal Technology Survey by ILTA.”).

128 See id. (revealing that lawyers think the cloud can provide greater security). See also Lenon & Rosenthal, supra note 33 (holding that “[h]ow cloud-based legal software helps law firms save money, enhance productivity, and increase security while providing a better experience for legal clients.”).
regarding ownership of data once it is in the Cloud and how the Cloud can be used to achieve the needs of their clients.\textsuperscript{129} Transactional attorneys must adopt this same mindset when utilizing the Cloud by focusing on the needs for both their clients and business.\textsuperscript{130}

The Model Rules of Professional Conduct govern as an ethics guide for most jurisdictions on how lawyers need to perform for the profession.\textsuperscript{131} “Keeping abreast” with relevant technology comes with

\textsuperscript{129} See Pham, supra note 70, at 141 (offering that “[t]o best serve the needs of clients, attorneys must fully understand how cloud computing differs from other document storage methods and how cloud computing works.”). See also Columbia Pictures Industries v. Bunnell, 2007 WL 2080419 at *1 (C.D. Cal. 2007) (stating “[f]ederal courts have consistently held that documents are deemed to be within a party’s possession, custody or control for purposes of Rule 34 if the party has actual possession, custody or control, or has the legal right to obtain the documents on demand.”).

\textsuperscript{130} See MODEL RULES OF PRO. CONDUCT r. 1.1 cmt. 8 (quoting that “[t]o maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology, engage in continuing study and education and comply with all continuing legal education requirements to which the lawyer is subject.”). See also Johns, supra note 82 (predicting that the technological trends will bring transformational change that will benefit both transactional lawyers and their clients both short and long term). See also Why the cloud is critical to your firm’s success, supra note 3 (expounding that “[l]aw firms across the globe are migrating to cloud-based legal software and remotely accessible technologies in order to improve efficiencies, stay ahead of the competition, and meet client demands.”).

\textsuperscript{131} See MODEL RULES OF PRO. CONDUCT, ABOUT THE MODEL RULES (AM. BAR ASS’N 1983) (holding that “[t]hey serve as models for the ethics rules of most jurisdictions.”). But see Rosenof, supra note 64, at 1322 (arguing that the “ABA delete the offending portion of Comment 8 and urge state bar organizations to mandate continuing education on technology.”). See also Robinson, supra note 64 (reminding attorneys they must keep the professional rules of conduct in mind).

The practice of law is demanding in many ways, one of which is the need to comply with the rules of professional conduct for lawyers. These ethics rules are intended to protect the public and maintain the integrity of the legal profession. Accordingly, attorneys must be familiar with the applicable ethics rules and guide their professional conduct with them in mind.

\textit{Id.}
meeting clients' demands, which will include quicker communication, cost savings, and a quicker turnaround period for their transactional needs. Early framing of how transactional lawyers should adopt technology to follow the Model Rules of Professional Conduct was very limited in scope. Rule 1.1 discusses attorney competency, which mostly focuses on client goals. The rule further details that in a lawyer-client relationship, the lawyer must retain a prerequisite of

132 See Why the cloud is critical to your firm’s success, supra note 3 (noting that adopting cloud technology will help a firm stay ahead of competition and meet client demands). See also Lenon & Rosenthal, supra note 33 (emphasizing that the cloud can save a firm money and that it cuts costs by 30% or more). “One thing that makes this savings possible is that the majority of cloud applications are so-called ‘turnkey’ solutions—all you have to do to implement cloud software at your firm is visit a website, download an app, and start using it.” Id. See also The Cloud vs. On-Premise Cost: Which One is Cheaper?, supra note 41 (justifying that most organization will learn that cloud computing will cost them less than keeping on premise data storage devices). That factors that help with the cost reduction of cloud software are no upfront hardware, no software license costs, no hardware replacements and only pay for what you use. Id.

133 See MODEL RULES OF PRO. CONDUCT (AM. BAR ASS’N 1983) (holding that “[t]hey serve as models for the ethics rules of most jurisdictions.”).

134 See MODEL RULES OF PRO. CONDUCT r. 1.1 (AM. BAR ASS’N 2023) (stating that in the client-lawyer relationship “[a] lawyer shall provide competent representation to a client. Competent representation requires the legal knowledge, skill, thoroughness and preparation reasonably necessary for the representation.”). See Johnson, supra note 10, at 181 (addressing that the “early framing of the competence duty in the transactional context implicitly requires that the transactional lawyer use the law in the way most beneficial to achieving such client goals.”). See also Garner, supra note 64 (focusing on Mary Grace Guzman’s, who is a practicing California attorney, 11 steps of guidance on how to stay compliant with the Model Professional Rule of Conduct, Competency). A few of the steps she lists are:

1. Have established protocols regarding the use of firm-owned technology. 2. Have and keep antivirus, spyware, and malware software up to date . . . . 9. Upgrade your technology regularly to avoid the loss of data — meaning, if possible, don’t wait until your computer crashes to buy a new one. 10. Back up your data regularly.

Id.
legal knowledge in that area that would be reasonably necessary to represent their client. As the world delves deeper into the age of technology, clients will likely value speedy communication over face-to-face contact, making it absolutely essential for businesses to run through the Cloud in order to gain and keep their clients. Although it may seem like litigation firms and transactional firms have different sets of needs in their businesses, both focus on doing right by the client and fortunately, adopting the Cloud furthers this goal.

135 See MODEL RULES OF PRO. CONDUCT r. 1.1 (AM. BAR ASS’N 2023) (stating that in the client-lawyer relationship “[a] lawyer shall provide competent representation to a client. Competent representation requires the legal knowledge, skill, thoroughness and preparation reasonably necessary for the representation.”). See also Brown, supra note 63 (discussing factors that are considered in asking whether a lawyer is competent to take on representation of a client).

Relevant factors in determining whether a lawyer has the knowledge and skill to handle a particular matter include the complexity and specialized nature of the issue, the lawyer's general experience, the lawyer's training and experience in the field in question, the preparation and study the lawyer is able to give the matter, and whether it is feasible to refer the matter to or consult or associate with a lawyer of "established competence" in the field in question.

Id.

136 See What are the Benefits of Cloud Services for Law Firms?, supra note 72 (setting forth the reason as to why law firms’ usage of cloud computing is essential moving forward to have their employees be more responsive and keep pace with the needs of clients in areas such as document management and data accessibility). “Accepting technical innovations is also a factor in the success of businesses, not just customer demand. Law companies are expanding, and the legal industry is becoming more fast-paced; therefore, businesses need to remain on top of emerging technologies like cloud computing.” Id.

137 See Pizzinini & Shah, supra note 16 (reassuring that the cloud structure of case management tools helped manage client needs easier). See also Farrar, Practically Every Industry Has Accepted The Cloud, supra note 27 (explaining that “[m]any law firms had a hard time accepting email, but they had to adapt because clients demanded to communicate through email.”).
B. Different-Sized Firms And The Detriment Of Using Technology Incorrectly

It is no secret that larger law firms are heavily investing in technology and have access to many different software applications that will make their businesses successful.\(^\text{138}\) Identifying the Cloud system that fits a firm’s needs or using multiple computing systems to achieve the firm’s goals will be what sets them apart from their competitors.\(^\text{139}\) Previously, mid-sized and small law firms were originally more hesitant to make the jump to Cloud computing because of the initial high costs and the risk associated with working in the Cloud.\(^\text{140}\) Firms must either adopt the Cloud or risk falling behind to

\(^{138}\) See McAfee, supra note 47 (citing a study that confirmed that legal software companies have reported an increase in business from big law firms). The article also goes into interviewing a managing director that gives an example of how they are trying to simplify technology for their staff. \textit{Id.} \\
As a result, the firm has tried to make things simple for its lawyers and created a single internal firm platform, called omni, where lawyer [sic] can access more than 100 technologies O’Melveny utilizes. These include “not only technologies for the practice of law, but also tools to track budgets and fee proposals, assess staffing needs, and delegate tasks,” said Rovner. \textit{Id.}

\(^{139}\) See Why the cloud is critical to your firm’s success, supra note 3 (stating that adopting the cloud is critical to stay ahead of the competition). \textit{See also} Erbesfield, supra note 74 (citing study that states “[e]ven more interestingly, is how many firms are open to the possibility of moving a critical system to the cloud. . . ”).

\(^{140}\) See Scimeca, supra note 38 (detailing how quickly technology changed the legal field).

Five years ago, if you asked mid-sized law firm leaders to discuss emerging legal technologies, many would say their firm would not now—or in the future—buy any cloud-based legal solutions.
their competitors. This shift is attributable to client demands, which are at the forefront of business in the growing world of technology, and those firms that are adopting Cloud technologies are seeing greater results with their clientele. Small law firms must be more cautious and conduct extensive research to find the right provider for their office; but the benefits of cutting costs, increased workflows and efficiency, and better data storage outweigh the risk of going out of business because the firm is unable to meet the clients’ needs that the Cloud can provide.

They would have voiced concerns of potential security risks and the perceived cost of transitioning to the cloud.

Id. See also Farrar, Practically Every Industry Has Accepted The Cloud, supra note 27 (debunking the myth of why law firms were hesitant to move to the cloud but stating the hesitancies to move to the cloud were: “increased costs, uncertainty about security and concerns about the possible negative business impact of a cloud migration. They also worry about maintaining control over and access to the firm's and clients' data.”).

See Why is the legal industry so resistant to tech. Or is it?, supra note 2 (agreeing that if the firm can’t meet the expectations of the clients, another firm will).

A 2015 PwC report demonstrated that increasing and improving the use of technology was the top priority in 94% of law firms for the following year, yet in 2019 it still appeared that law firms are still not adequately budgeting for technology. Clients are increasingly demanding for greater efficiency and more personalised [sic] customer service.

Id.

See Meeting Customer Demands with the Cloud, supra note 84 (asserting that if a business does not meet the needs of their customers another business will, and this is why it is essential to adopt the cloud). “Using a cloud service provider for your infrastructure needs can give you a flexible solution that can be adapted to the needs of your customers faster and more easily than an on-premises infrastructure could be.” Id.

See Moving to Cloud Servers for Small Law Firms, supra note 87 (concluding why is it more productive for small law firms to move toward the cloud).
Litigation firms, no matter the size, must adopt Cloud technologies to keep pace with the changing justice system in the courts.\textsuperscript{144} Cloud computing is changing the way litigation matters such as discovery and document production are performed.\textsuperscript{145} This provides for more collaboration between different firms and attorneys to work on a case and move the process along quicker.\textsuperscript{146}

Moving to cloud servers is a smart move for small law firms as it can have a number of benefits – cost-cutting, increased efficiency, and better data storage. The main reason that most law firms are hesitant about moving to the cloud is the perceived security risk. But thanks to improvements in cybersecurity, the cloud can actually provide stronger security than in-house data storage.\textsuperscript{144}

\textit{Id.}

\textsuperscript{144} See Rashbaum, Borden & Beaumont, \textit{supra} note 65, at 101 (stating that moving information to the cloud will be beneficial for organizations but the challenges are still addressed by reference to traditional principles of law through the lens of evolving technology). \textit{See also} \textit{Importance of Automated Discovery in Cloud Transformation, supra} note 75 (detailing the importance of a discovery tool in the cloud to help maintain which documents should remain in-house and which ones are shareable).

\textsuperscript{145} See Zapproved-Ediscovery 101, \textit{supra} note 17 (highlighting that in 2005 the e-discovery process made its way to litigation and the federal rules were updated in 2020 to reflect digital documentation). \textit{See also} Nelson & Simek, \textit{supra} note 40, at 25 (offering that “[w]hen attorneys want to try cloud computing, they usually start with one of the file-sharing or file-storage services. Box.net and SpiderOak are two secure file-sharing services. Many attorneys also use Dropbox to share files”). “When attorneys begin with cloud file-sharing services, they begin to gain confidence in what cloud computing can provide.” \textit{Id.}

\textsuperscript{146} See Spencer, \textit{supra} note 78 (stating that one of the positive aspects to the cloud is how collaboration has been booming from cloud computing architecture). \textit{See also} Pham, \textit{supra} note 70, at 187 (giving advice on how to handle the cloud and discovery by ensuring you know the cloud provider’s terms ahead of litigation matters). [C]lients and their counsel should (1) be aware of the difficulties litigating in the cloud era and plan accordingly with specific service agreements; (2) ensure their cloud provider has tools equipped to handle discovery or can accommodate another third party’s discovery management application; and (3) be prepared to demonstrate reasonable discovery compliance in worst-case scenarios.

\textit{Id.}
Transactional firms should focus on a different issue: why the Cloud is necessary for their firms, and the answer is that it will help beat out the competition.147 Making a law firm competitive in this field is centered around key aspects that the Cloud certainly provides.148 Transactional attorneys need the Cloud to improve their workflows, which means that the time spent on a task for one client can be cut down and the attorney can have more time to work on another task.149 The Cloud also provides quicker communication and collaboration

147 See Johns, supra note 82 (listing trends where transactional lawyers can optimize technology as document review tools, automation, a technology support team, and legal process improvement); Why the cloud is critical to your firm’s success, supra note 3 (expounding that “[l]aw firms across the globe are migrating to cloud-based legal software and remotely accessible technologies in order to improve efficiencies [and] stay ahead of the competition . . . ”).
148 See Staying competitive in today’s legal market: 4 problems cloud solves, supra note 11 (naming ways the cloud helps a firm stay competitive against other firms). See also 6 ways leading law firms stay competitive, supra note 11 (naming six ways that some of the top leading law firms are getting ahead and staying ahead of the competition).
149 See Hill, supra note 67, at 319–20 (explaining how the use of computers became an integral part of communication in the legal practice paired with the concept of cloud computing, which is instantaneous remote access, has helped lawyers communicate more efficiently). See also 6 ways leading law firms stay competitive, supra note 11 (detailing that efficiency in a law firm is critical to cut costs and gives an example of how Westlaw Edge helps cut client fees). See also Staying competitive in today’s legal market: 4 problems cloud solves, supra note 11 (giving an example of cutting costs).

The cloud enables a move to a paperless office system where relevant documentation can be gathered at the click of a button, meaning court bundles can be easily prepared and the relevant information can be attached quickly to advice or negotiation correspondence. This helps reduce administration costs, enabling smaller legal businesses to remain competitive on costs.

Id.
tools for clients and lawyers to work on tasks together, allowing ideas
to bounce back and forth instead of playing phone tag.150

C. How Privacy Automation Will Elevate The Cloud.

The Cloud will be an essential feature that clients will soon
demand to keep their information safe.151 In addition, this adoption
will also be essential for lawyers to maintain their fundamental ethical
duties of confidentiality and competency to the profession.152 Clients
are demanding more from their lawyers, and law firms can begin to
address their demands by automating their workflow and privacy
standards.153 For example, building a client communication portal

150 See Staying competitive in today’s legal market: 4 problems cloud solves, supra
note 11 (finding that technology can appreciably reduce the time it takes to respond
to inquiries). See also Nelson & Simek, supra note 40, at 25 (giving an example of
how clients have their own portal where they can easily access their information and
collaborate with their counsel). “We’ve also seen situations in which attorneys from
other firms use a portal to work on a case when they are co-counsel.” Id.
151 See Safeguard Confidential Data with Legal Workflow Automation, supra note
104 (acknowledging that “[W]ith workflow automation in place, you can not only
manage workflow better with increased communication between employees but also
manage data leading to better customer support and boost your brand value.”). See
also Toohey, supra note 118, at 2 (detailing how lawyers are challenged to maintain
the security of their client’s private information).
152 See Toohey, supra note 118, at 1 (claiming that “[b]ut this technophobic attitude
may no longer just be harmless conservatism. In the world of growing security risks,
ignorance of technology may lead to violations of lawyers’ fundamental ethical
duties of competence and confidentiality.”). In addition, the article argues that
lawyers need to develop a greater awareness of the risks posed by technology
because there are rapidly escalating security threats. Id. See also Trope et al., supra
note 48, at 124 (reasoning that “[n]ew technologies often create new and unsuspected
technical problems as well as new and unanticipated ethical challenges.”).
153 See Wong, supra note 104 (stating that adopting a workflow automation can
“[c]reate a better client experience when processes they interact with directly are
automated or self-service (such as filling out forms).”). In addition, attorneys will
where the client can upload and fill out their documents, and every time an attorney works on the client’s case it will notify the client. This automated workflow accomplishes two things: 1) the clients private information is more secure by allowing them to input it themselves; and 2) it streamlines the process for lawyers and builds a strong client-lawyer relationship through trust and easy communication.

As privacy automation tools take on the responsibility to conform to the rules and regulations surrounding client’s private information, there may be an opening for the United States to take more of a stance on privacy laws. Currently, the United States has have increased satisfaction because they can spend this time they would normally spend on filling out forms on other tasks. Id.

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154 See Anderson, supra note 75, at 51 (detailing workflow automation). In addition, you can build client communication directly into your automated workflow. One successful attorney created a workflow where staff members inform clients every time they touch the case. The staff member who completes the task is also instructed to text the client to update them (with the client phone number automatically included). With this frequent, proactive outreach, they’ve not only increased their client satisfaction--they’ve also seen a marked decrease in incoming calls from clients, which means fewer interruptions.

Id.

155 See Wong, supra note 104 (stating that workflow automation can improve transparency and communication between law firm staff and clients). See also Anderson, supra note 75, at 51 (explaining that “[t]o take the next step, build an automated workflow that prioritizes communication. Created through your practice management software, automated workflows efficiently guide lawyers and staff through routine tasks.”).

156 See Enabling Privacy Automation, supra note 112 (exampling how their cloud systems help automate and simplify compliance with privacy regulations). See also
no overarching federal regulation regarding client information forcing states to adopt individualized privacy regulation. More narrow security laws such as “HIPPA,” “COPPA,” and “GLBA,” essentially leave many privacy laws to conform to California’s or the EU’s regulations. By having the United States look to a more comprehensive regulation on how private and confidential information of consumers and clients are handled, this will make it easier for this privacy automation software to be more adaptable in all different work settings, especially in law firms. This could help courts make more definitive decisions regarding information stored in the Cloud, what to

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Data Privacy Automation, supra note 101 (stating that there is a new need to remain compliant with privacy regulations and privacy automation helps with this). See also Safeguard Confidential Data with Legal Workflow Automation, supra note 104 (claiming that adopting a workflow management solution from a reliable brand with be the easiest way to remain compliant with the strict date policies requirements).

157 See Which States Have Consumer Data Privacy Laws, BL (Nov. 7, 2023), archived at https://perma.cc/DHM5-FVCW (listing all the states that have adopted their own privacy laws and regulations).

158 See Harrington, supra note 110 (reminding that the United States has no comprehensive federal privacy decree, there are still several laws that focus only on data or situations regarding privacy). In addition, the article mentions that the U.S. privacy laws that have a vertical focus are HIPPA, COPPA, and GLBA. Id.

159 See Klosowski, supra note 110 (quoting a privacy attorney as well as data protection officer Whitney Merrill saying “[w]e need a federal law that thinks about things in a much more consistent approach . . . to make sure that consumers understand and have the right expectation over rights that they have in their data.”). Also, there is a risk that all the individual state laws generate confusion for both companies and its consumers. Id.
do if a breach occurs, and who exactly owns the information in the Cloud.\textsuperscript{160}

1. Post - COVID-19 Pandemic Adoption

This shift to the Cloud, also forced Cloud vendors to implement stronger security measures.\textsuperscript{161} One common misconception surrounding Cloud services is they are too costly and are not worth the expense, however, this is far from true.\textsuperscript{162} The Cloud is extremely cost

\textsuperscript{160} See Commonwealth v. Equifax, Inc., 35 Mass. L. Rep. 106, 111 (2018) (holding that under Massachusetts Data Breach Notification Law, Mass. Gen. Laws ch. 93H there is a distinction). “The statute distinguishes entities that merely ‘maintain’ or ‘store’ personal information from those that have an ownership interest in the data. Companies that offer cloud storage services, for example, may and probably do maintain and store personal information that they cannot sell or otherwise control as owners.” \textit{Id.} Also holding that “an entity that creates and owns proprietary databases containing consumers’ personal information would appear to ‘own’ that information within the meaning of G.L.c. 93H.” \textit{Id. See also} Skyhop Technologies, Inc. v. Narra, 58 F.4th 1211, 1227 (2023) (holding that it makes no difference that Amazon owns the servers because cloud-based servers permit users to access their data and information from anywhere via the internet and having a password withheld from them diminishes their rights to access the programs).

\textsuperscript{161} See Matich, 9 Reasons Law Firm IT Professionals Are Moving To The Cloud, \textit{supra} note 71 (expounding that security in the cloud is much stronger than on-premises servers and debunking the myth that “[e]xaggerated fears can result in lost opportunity and inappropriate spending.”). \textit{See also} Yousaf, Kapur & Verghese, \textit{supra} note 83 (debunking the myth the cloud isn’t secure but contradicting that in reality data that is stored on premises in more susceptible to cybercrime). \textit{See also} Rafter, \textit{supra} note 44 (explaining that files on the cloud are usually encrypted which makes it way harder for cybercriminals to unscramble and break into).

\textsuperscript{162} See Farrar, Practically Every Industry Has Accepted The Cloud, \textit{supra} note 27 (reasoning that it is cheaper to adopt the cloud then must deal with managing hardware).

Talk to vendors about costs, and then add up the costs to own, maintain and secure your own servers or data center—plus to buy and maintain software and provide anywhere access to data and applications. If you want to drive productivity and profitability, for example, look for SaaS automation that improves margins by helping you onboard and close cases faster.

\textit{Id.}
effective because less time is spent performing tedious tasks and less money is spent on expensive software on-site and extra staff.\(^{163}\)

2. Getting Ahead Of The Technological Curve In Preparation For Artificial Intelligence

Transactional attorneys who are more adaptable to current Cloud technologies will be ahead of the curve as the use of artificial intelligence increases.\(^{164}\) The Cloud has the capability to transform transactional work by cutting billable hours down by replacing hands-on work with faster machine technology for drafting and reviewing documents.\(^{165}\) The potential benefits of using artificial intelligence in

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\(^{163}\) See Cloud Computing for Law Firms: Everything You Need to Know, supra note 86 (writing that the one of the benefits of the cloud is cost savings, by having less staff and spending less on hardware storage); The Cloud vs. On-Premise Cost: Which One is Cheaper?, supra note 41 (expounding that most businesses find costs savings from taking advantage of cloud technologies). See also Cloud Adoption Can Boost The Bottom Line For Legal Firms, Too, supra note 85 (naming the most practical reason to jump to the cloud is cutting business costs). “Cloud-based technology can help firms automate time-consuming tasks, improve data security and governance and provide employees with better tools and flexibility.” Id.

\(^{164}\) See Leon, supra note 84 (explaining this is exactly the environment where AI systems flourish). “What AI is taking over for lawyers is, so far, mostly rote ‘search and find’ work, assisting rather than replacing humans. AI, like the dream intern, will allow transactional lawyers to ‘stop doing repetitive, repeatable and mundane legal work.’” Id. See also Stepka, supra note 67 (introducing the fact that Artificial intelligence is disrupting many professions and “[m]ore recently, AI has begun to be used to help draft contracts, predict legal outcomes, and even recommend judicial decisions about sentencing or bail.”).

\(^{165}\) See also Stepka, supra note 67 (stating that machine learning is already used to review contracts more quickly and consistently).

As a way to make the process of law faster and more free from errors or omissions, AI is a welcome tool in the cause of justice. AI may be a more efficient way to resolve civil cases, while at the
the legal profession are tremendous, but many opponents of the tool hold that artificial intelligence should not replace human judgment.\textsuperscript{166} As artificial intelligence is predicted to change the field of law, lawyers must join the technological movement and get comfortable with using the Cloud to prepare for future advancements.\textsuperscript{167}

V. Conclusion

Since making its entrance into the legal profession, the Cloud has withstood the test of time. Although some lawyers question the security and integrity of the Cloud, its implementation during the COVID-19 pandemic has demonstrated that it is an asset to the profession. Transactional attorneys and litigation attorneys will benefit from the Cloud’s services by streamlining workflows, increasing productivity, and improving client communications. The business side of law firms will achieve high-cost savings and more flexibility by controlling their servers and outsourcing different

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\textsuperscript{166} See id. (reasoning that “[w]here it becomes more problematic is when AI is used to replace human judgment, especially in the criminal law context. AI is not ready for this for a number of reasons.”). \textit{But see Artificial Intelligence for Lawyers Explained}, supra note 11 (stating “[y]et without human expertise ensuring the quality and accuracy of that data, AI can do more harm than good.”). \textit{See also} McGinnis & Pearce, supra note 10, at 3046 (naming five ways that machine learning will disrupt the way lawyers work now, such as: discovery, legal search, document generation, brief and memoranda generation and prediction of case outcomes).

\textsuperscript{167} See Leon, supra note 84 (indicating that technology and artificial intelligence will continue to grow and in turn transform and revitalize the legal profession).
technical problems that arise. In addition, automating private information of their clients will help attorneys gain trust with their clients and assist them in complying with the Model Rules of Professional Responsibility. Transactional attorneys must pay attention to their duty of competence while operating in the Cloud and keep their clients’ needs at the forefront of their work. While it is not surprising that the legal profession has been one of the slowest to integrate new technologies, law firms must accept the Cloud to avoid falling behind and acquire and retain clients.