

Resistance is Futile: DevOps as a Model for Ushering Forth the Digitally-Transformed Lawyer (DTL)

By Rachel Casseus and Sasha Biberman

As Star Trek fans, we couldn't resist using the famous and often overused line from the hive mind Borg: "Resistance is futile" for the title of this article. We can all agree that the legal community and law firms have been resistant to the implementation of automation software and technology, not because they do not want to use the technologies, but because a true digital transformation is difficult. There are many examples of proven transformation-enabling technologies, such as cloud computing, virtualization, Big Data analytics, take your pick of cloud-enabled XaaS (anything-as-a-service) solutions, mobility solutions, and even eSignatures, which are already empowering many companies in virtually every industry by keeping them agile, competitive, and relevant long term with the evolution of customer and employee needs. The adoption economics of these technologies are very compelling as they have enjoyed years of increasing maturity that has reduced the barrier of adoption and enabled high security, stability, and reliability. As we look into more recent transformation advances, there are many more enabling technologies in the pipeline to get excited about, such as artificial intelligence (AI), and more specifically, machine learning (ML) using deep learning, blockchain, and even intelligent personal assistants and chatbots.

Law Firm Digital Transformation

Digital transformation offers many unique benefits for the legal community, including the ability to satisfy larger and more diverse client bases, having technology-driven automated processes for inter and intra-firm actions, firm-client interfaces, fast and accurate validation of new business models and other processes. The digital transformation of the law firm produces an agile firm, with firm-wide alignment on business objectives, converged firm-wide data repositories and analytics insights. Transformation will also provide unique ways of delivering legal services with flexible business models and allow for the potential of employee work location flexibility.

The American Bar Association (ABA) provides guidance and policies on technology usage in law firms. They acknowledge the compelling business cases for leveraging cloud computing, and summarize the ethics opinions on cloud computing, concluding that cloud computing is permitted in at least 20 states as long as practitioners use reasonable care in safeguarding their clients' personal information [1].

Growing Pains in Adopting a Full Digital Transformation

Before a digital transformation, many law firms will experience growing pains in integrating their new processes, solutions, software, and platforms. During the initial transformation, key business requirements identified by people in the firm may slowly translate into homegrown projects that ultimately do not even meet the goals of the firm itself. The most concerning aspect of an uninformed digital transformation is that many firms will not be able to leverage the solutions available to them because there is no one at the firm who has the skills to identify the best and most efficient tools. Failure to digitally transform can afflict any firm size ranging from the overwhelmed solo or small practice that is unable to afford or create their own systems all the way up to siloed technology leadership and information technology (IT) departments at big firms, who are often tasked to be the sole stakeholders of the firm's technology and innovation, and are oftentimes asked to be the sole drivers of digital transformation. Their ability to

deliver fast, accurate, efficient, scalable, repeatable solutions can be bottlenecked by organizational processes both internal and external to the IT department. Furthermore, there is no ability to prioritize, take advantage of, or interface with, the myriad of validated, existing external tools, secure mobility support, and cloud-enabled XaaS solutions.

Digital transformation must be seen as not just a project, but as a firm-wide cultural shift and enabler of ongoing strategic transformation, enabled capacity for fast evolution to satisfy the objectives of the firm and the needs of its clients to ultimately provide a competitive advantage.

Why the Digital Transformation is Necessary for Lawyers

The lawyers and firms who fail to innovate will lose customers to the firms that are able to deliver optimized services. One of the top complaints that clients have concerning attorneys is the failure of attorneys to maintain communication. Failure to communicate results in the cause of numerous attorney disciplinary matters reported to state bar associations [2]. Communication is central to the ability of a lawyer to provide legal services and is a requirement in every state rules of professional conduct. Smart systems can help lawyers enhance communication with clients by coordinating calendars to schedule calls, emails, and meetings while hopefully preventing legal disputes.

No company or even entire industries are immune from disruption, and every company has an opportunity to be the disruptor. Successful companies go through many transformations, sometimes caused by disruptions from within the company or industry itself. For example, Amazon, which started off as a website that only sold books disrupted the massive book sales industry, then went on to disrupt its own physical book sales business with its digital book reader Kindle. The Kindle in turn generated a new business opportunity of selling digital books through Amazon's Kindle Store. Similarly, AWS (Amazon Web Services), Amazon's massive cloud infrastructure-as-a-service (IaaS) business was born when its hypergrowth scalability problems of its e-commerce business forced Amazon's internal teams to require a set of common infrastructure services that everyone could access without reinventing the wheel every time. AWS evolved to a technology infrastructure platform used by any company or person to run their own applications on top of Amazon's infrastructure.

Is there a Model for Successful Digital Transformation that We Can Explore?

Let us turn to the software companies that are already leading their own digital transformations using the DevOps movement as a blueprint for how lawyers can enable their own transformation. DevOps was a response to problems of siloed team functionality, namely the development (Dev) and operations (Ops) teams. In DevOps, these teams are integrated into to a cross-functional, collaborative, agile super-team that is able to execute in line with business objectives.

DevOps advocates automation and monitoring at all steps of software construction, the reduction of development cycles, and increased deployment frequency, leading to more dependable releases. DevOps uses linked sets of multiple tools (toolchains) for collaboration processes and an ultra-tight feedback loop between different teams and parts of the company that is completely automated. Companies that take advantage of automation, such as Amazon, Netflix, and Google, are able to deploy/deliver software many of times per day (sometimes thousands of times), with world-class security, stability, and reliability.

Successful digital transformation is not just limited to software companies. Many non-software companies that have transformed successfully include Starbucks, who was able to execute and boost sales from digital transformation with mobile and digital experiences for their customers, and Nike, who are uniting physical and digital retail, an initiative supported by Nike's new internal structure, and JetBlue,

whose CIO believes that it makes a big difference if you start embracing IT as a toolkit as opposed to a skill set isolated to a small group of people.

This close coupling of technical and non-technical teams in the company, and close coupling of those teams with clients, using technology-driven automation rather than manual human processes, is critical for creating the DTL.

The use of DevOps-inspired, technology-enabled transformation in the legal field will be a game changer. Technology-automated, linked tools, similar to those used by DevOps experts, will free the individual lawyer and client from costly mistakes, duplicated effort, and lost time associated with the consistent recreating the wheel with every new case. This model for the legal field provides a win-win: time savings while adding greater value to the entire firm and the client.

The Onramp to the Digitally-Transformed Lawyer Starts with Data

You cannot enable company-wide technology-driven automation without data, particularly digitizing, collecting, organizing, indexing, and analyzing data. This includes:

- **Data that is generated by clients.** Both manually, for example when clients prove some particular information, and automatically, for example the statistical distribution of time that it takes clients to complete a step of a process.
- **Data that is generated for internal process support.** For example, well-indexed, intelligently- and automatically-linked historical references of all the past casework, as well as all available research materials.
- **Data from performance tracking.** For example, the statistics for client acquisition, revenue and profit by various categories, and case wins.
- **External data sources.** For example, existing/new case law, regulations, news, and client behavior metrics.

Processes Enabled by Data Analytics

Using all of this data, standard processes can then be developed, refined, and linked together with existing and new process technology tools, similar to the myriad of interweaved tools available in the DevOps community. These linked processes are both for internal purposes (intra-firm) external (firm-client interface, or processing of external data sources).

This opens up many opportunities for the firm. These processes can be used to validate:

- **Unique ways for delivering the legal services.** For example, delivering legal services in smaller, more incremental chunks rather than larger projects. Or, integration with other existing processes outside of the firm. Or third-party partnerships and other channel opportunities for broader delivery of the firm's legal services. A lot of the new opportunities for delivering legal services will be in the form of fully-automated or partially-assisted, client-self-served or third-party-served type of delivery. Think *Do Not Pay*, a chatbot that lets users sue Equifax, without having to hire a lawyer and pay thousands of dollars in small claims court [3], or LegalZoom, which lets users create legal documents [4].
- **Flexible business models.** For example, client pays per each incremental chunk of the legal services, only for the work that they need to be done. Or, shared revenue from third-party integration partnerships and other channel opportunities for broader delivery of the firm's legal services.

- **Scalability opportunities (more clients).**
- **New business opportunities (different types of clients).**

Furthermore, using data, existing processes can be optimized, and new (especially non-obvious) processes and opportunities can be discovered and validated, with the assistance of up-and-coming technologies such as AI, and ML using deep learning. ML can also assist in research, helping to find a needles or relevant information in haystacks of documentation, saving the DTL a lot of time and enabling a model of more predictable costs for the clients. The firm should have the flexibility to efficiently incorporate and validate new processes, solutions, software, and platforms using any combination of nascent to validated technologies, leverage existing external tools, secure mobility support, and cloud-enabled XaaS solutions.

Value Comes from Doing Business Differently Because Technology Makes it Possible

Adopting technology for the sake of adopting technology is not the point, and by itself doesn't add real value. Technology is just the enabler of the transformation. As George Westermann points out, the value of technology comes from doing business differently because technology makes it possible. "E-commerce is not about the internet — it's about selling differently. [5] Analytics is not about databases and machine language algorithms — it's about understanding customers better, or optimizing maintenance processes, or helping doctors diagnose cancer more accurately. IoT is not about RFID tags — it's about radically synchronizing operations or changing business models."

The Partners Set the Firm Culture and Drive Positive Change Top-Down

Digital transformation works best as a top-down management movement. Just like other visionary leaders of companies that have mastered and benefited from digital transformation in virtually every industry, the vision and push to full transformation must begin with your firm's leadership, namely the partners. It is the duty of these leaders to set the firm-wide culture of technology-enabled transformation, and having a clear vision for it that every employee in the firm can help execute. As you begin to transform the firm, the more efficiency and opportunities you gain will make it easier to find and adopt even more efficiency and opportunities, creating a positive feedback loop that accelerates this change.

Less Email, More Transformation

Using automation and agility, opportunities will open up to the digitally-transformed firm allowing the DTL to spend less time dealing with email, documents, and manual cataloging, and more time on new business and growth opportunities, figuring out unique ways of delivering legal services with flexible business models, and coming up with and validating newer and better processes that benefit the firm and its clients: classic win-win.

A Brief Case Study: The Dire Need for Digital Transformation in Immigration Law from Rachel Casseus

In order to send a case to US immigration (USCIS) to process any one of the many visas and permanent resident applications, the case must first be physically printed and sent off to a physical processing center. Once the case is received by USCIS at any of its numerous facilities (Texas, California, Nebraska, Chicago, New Hampshire, the list goes on) the case is fed through an industrialized scanner (simplex) and is then routed to an appropriate officer to review the paper file. Having done a simple poll of my attorney colleagues, most everyone is compiling their final cases in .pdf formats to share with their clients once the final case is compiled. Imagine a world in which immigration practitioners and individuals could merely upload their cases and supporting documents to a cloud-based portal. Wouldn't it be wonderful to have

the ability to just upload the case into the USCIS cloud so that officers could review the case without the need for costly printing, mailing, and storage of physical paper?

I implemented a paperless system from the first day that I started my practice in 2011 based on the early realization that I wanted to be able to access client files without needing to pull a physical case. Using a cloud-based system, I am able to have my clients upload their documents to their folders. Clients are able to see what they have already uploaded, and my staff is able to organize and compile the cases. My next goal is to enable an automated tracking system to let clients know exactly where we are with their case, and a back end to provide my staff with data on client actions.

One of the biggest time sinks that I identified in my practice was the time spent labeling exhibits. I had gone through many iterations on how to best label documents including exhibit stickers, tabs and header and footers within Adobe. It became apparent to me that I needed an automated solution, so I worked with Sasha Biberman to create a Python script to automatically label each individual exhibit because I was concerned about USCIS officers not having the ability to see which document they were referencing during their case review (most immigration officer only have 40 minutes maximum to review a case). Sasha and I created a Python script that saves me four to five hours per case. Using this script, I just select the documents, and the script intelligently labels them in seconds. Casseus Law has also implemented a cloud-based form automation system using intelligent technology-linked software to generate case documents, and we look forward to leading the immigration digital transformation.

Sasha and I are currently brainstorming a system to integrate a fully-automated process for immigration attorneys and a proposed cloud-based portal for USCIS, both of which will be seamlessly integrated and able to communicate with each other and other tools using standard APIs (application programming interfaces). We look forward to engaging with the innovation community on this topic and creating a blueprint for moving forward.

References

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