The 2018 Technology Survey reports the input of 481 firms representing more than 92,000 attorneys and 188,000 total users.
Crowdsourcing our Future

RESULTS OF THE 2018 ILTA TECH SURVEY

by Todd Corham, Chief Information Officer at Saul Ewing Arnstein & Lehr LLP

As technology is driven ever deeper into the legal practice, there is an increasing pressure on attorneys to master technical skills and adopt new and powerful tools to the benefit of clients. This imperative sets a high bar: many attorneys who worked hard in law school (and have worked even harder in their practice in order to become excellent lawyers), feel a bit behind the eight-ball, as they’re now also expected to be excellent technologists. For many, it can be a frustrating time in their careers. Some industry watchers are describing this moment as a “tipping point” in legal tech, and indicate that technology adoption at law firms and legal departments is moving so fast that many lawyers and practices are being left behind, even if they excel at their craft. But in fact this is the new normal for us all.
Technology is changing just as fast – arguably faster – than the legal industry, and it behooves those of us working in Legal Tech to pay attention to all the “markers” in order to identify the direction in which this industry is moving. Knowing this trajectory will allow us to “upskill” so that we can equip ourselves for new demands. In a May 2018 report from McKinsey & Company, the authors tell us that the cultural change ranked highest as that most needed for developing the workforce of the future is instilling a culture of “lifelong learning.” Within these pages you will find quite an interesting collection of markers that can be data points in identifying the direction legal technology is moving and hopefully offer clues as to how we can prepare for this evolution.

When the ILTA Technology Survey team (Jim McCue, Phil Graybeal and I,) set out to build this year’s survey, we looked closely at the comments our respondents wrote last year (just as we do every year,) and did our best to find new questions that are responsive to certain issues our readers care about. Due to a highly active threat landscape (and understanding that compelling data can sometimes secure technology funding,) our respondents have been asking for more information on trends in security. Similar concerns, including interests in mobility, collaboration and efficiency, may be behind requests for more information around cloud computing. This year’s survey attempts to addresses both of those concerns, but what also emerges (in the markers mentioned above,) is a growing picture of where our profession is headed. The best example may be around a field that has taken on new importance in the age of big data, powerful algorithms and exploding computing power: Analytics. This is in evidence in a number of questions regarding such applications as Business Intelligence (which was an area that was exhibiting a slow decline for the last few years, but this year saw a nine point increase in adoption,) and in the use of analytical dashboards, which saw a more modest increase of three points.

Most telling, however, was a new question added regarding full-time equivalent positions (FTEs) dedicated to analytics. Although we don’t yet have trending data to tell us when this kind of staffing began, it is very interesting to see that firms are, as we suspected, adding resources to support analytics. This may come as no surprise to many, but what was particularly interesting

was how Analytics staffing matched up with staffing for security, which has traditionally landed higher on the IT governance priority list, and especially the priority lists of our clients, who are very concerned about our security profiles.

What’s most striking in these two charts is not that the largest firms average (looking at the “mean”) more than four FTEs dedicated to analytics, as that may be expected. What stands out is that staffing in analytics closely parallels, and in some instances surpasses, the number for FTEs dedicated to security. At “Large” firms (the next step down,) staffing looks to be roughly double for security, but still analytics positions appear robust when one considers how recently the discipline has gained prominence in legal. Mid-sized firms, again, seem to be staffing both

## Analytics Staffing by Firm Size

<table>
<thead>
<tr>
<th>How many full-time equivalent (FTE) positions you have dedicated to data analytics?</th>
<th>UNDER 50 ATTYS</th>
<th>50-149 ATTYS</th>
<th>150-349 ATTYS</th>
<th>350-699 ATTYS</th>
<th>700 + ATTYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents</td>
<td>70</td>
<td>67</td>
<td>50</td>
<td>28</td>
<td>17</td>
</tr>
<tr>
<td>Median</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Mean</td>
<td>.5</td>
<td>.82</td>
<td>1.48</td>
<td>1.68</td>
<td>4.41</td>
</tr>
</tbody>
</table>

## Security Staffing by Firm Size

<table>
<thead>
<tr>
<th>How many full-time equivalent (FTE) positions you have dedicated to information security?</th>
<th>UNDER 50 ATTYS</th>
<th>50-149 ATTYS</th>
<th>150-349 ATTYS</th>
<th>350-699 ATTYS</th>
<th>700 + ATTYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents</td>
<td>86</td>
<td>92</td>
<td>56</td>
<td>40</td>
<td>25</td>
</tr>
<tr>
<td>Median</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Mean</td>
<td>.6</td>
<td>.71</td>
<td>1.27</td>
<td>2.65</td>
<td>4.32</td>
</tr>
</tbody>
</table>

CROWDSOURCING OUR FUTURE
areas similarly. Even at the far left in the charts we see staffing (on average) close to even. This is an indication that firms are recognizing that investments in analytics and data science are not just strategic but possibly existential, as are investments in security.

Again, we can’t say this is a trend, because the question appears on the survey this year for the first time, but this finding is in line with what staffing and management consulting firms are predicting as the future in all industries. In the above-referenced McKinsey report, the authors stated that demand for “technological skills” in the workplace will increase significantly by 2030 (no surprise,) but also that demand for “social and emotional skills” will increase, as will “higher cognitive skills.” On the other hand, “basic cognitive skills” (such as basic literacy, numeracy or data input,) will decline in need during that period. This, according to the authors, is due to the rise of “automation” and particularly the adoption of Artificial Intelligence technologies, which diminish the need for basic cognitive skills in the workforce.

In a Deloitte study entitled “2017 Global Human Capital Trends,” the authors refer to this as a shift toward the “Augmented Workforce,” in which “AI systems, robotics, and cognitive tools grow in sophistication [and] almost every job is being reinvented…” This change is not happening overnight, but rather is occurring slowly, relentlessly even, and across all disciplines (just as the evolution is occurring in the legal practice – but more of that in a minute.) I was recently a co-presenter in an ILTA analytics Webinar titled, “What will Business Intelligence and Data Analytics look like in 2025?” When I reviewed the list of approximately 100 registrants, it quickly became apparent that 1) the growth in this discipline is happening across all firm sizes (as well as with our clients,) and 2) it’s taking place across many different law firm departments, not just in IT. There were titles that indicated affiliation with Information Technology, Finance, KM, Business Development & Marketing, Governance & Risk, Pricing, Litigation Support and LPM. There were many titles that one would expect, such as “Business Analyst” and “Knowledge Services,” but also such titles as “Innovation and Digital Business Analysis”, “Client Intelligence and Economics Analyst,” and “Manager of Innovation and Client Value.” There were attorneys, in-house counsel, firm leadership and all manner of administrative support. This spectrum of interest is indicative of

a discipline in transition and finding its way into disparate aspects of the law firm machine. I think it’s safe to say we will see a great deal of activity around Analytics and Data Science in surveys to come.

On the subject of an “AI-augmented workforce,” a telling statistic is the question regarding firm strategies around Artificial Intelligence and Machine Learning (AI/ML.) It comes as no surprise that larger firms are investing more in this area, as their return on investment will be greater due to the larger data stores with which to mine. They also tend to have resources that permit greater latitude to explore these new opportunities. The tools of choice in this category tend to be Kira for automated contract analysis, Lex Machina for Litigation strategy, and RAVN (now iManage “Insight”) as a Machine Learning Platform. Although 57% of all firms responded that they “are not presently pursuing AI/ML options,” only 27% of “Medium-sized” firms (150 to 349 attorneys,) and 13% of firms in the “Large” category (350 to 699 attorneys,) indicated they were not exploring these technologies. And in fact 100% of the largest firms (above 700) indicated they are pursuing AI/ML projects, and more than a third said they had “one or more AI/ML tools in production.” But even at firms of more modest size (Under 150) there is some activity. More than a quarter of firms between 50 and 149 attorneys are “researching” this area – as are 12% of firms under 50. There was a question, toward the end of the survey, aimed at discovering what our respondents felt was “a technology or trend you believe will create significant change or be a major factor in the legal technology profession.”

Almost a third of responses cited “Artificial Intelligence and Machine Learning,” so there is definitely a recognition that these disciplines will play a significant part in legal strategy.

100% of the largest firms (over 700 attorneys) indicated they are pursuing AI/ML projects, and more than a third said they had “one or more AI/ML tools in production.”
This shift in technology emphasis is taking place at a time when there is downward pressure on staffing at law firms. With only minor exceptions, the ratio of staff to attorneys has been falling steadily since the advent of this survey. In 2002 the ratio was 1.4 to 1. For the first time in the history of this survey, the median ratio has hit 1:1. The average, at 1.16 to 1, is not the lowest we've seen, but it's within one hundredth of a point of the lowest. This makes the importance of ensuring that every technologist’s value to the enterprise is clear, future-oriented and business-focused. This includes honing our skills in advanced communication, leadership, entrepreneurial and innovative thinking (all part of the above-mentioned definition of “social and emotional skills.”) We’ll obviously need technical skills (basic and advanced,) as well as those referred to as “higher cognitive skills,” such as creativity, critical thinking, decision making, and complex information processing.
Security is likely one of those areas that meets all three skills criteria: higher cognitive (problem solving, such as threat analysis,) technical skills (configuring and deploying security solutions,) and social and emotional skills (developing and delivering security awareness programs and working to prevent social engineering.) We saw significant advances in the adoption of security tools and processes, which is a trend in evidence for a number of years. Core security controls continue to gain ground, such as Mobile Device Management ("MDM" - gaining eight points this year,) and security awareness training (now at more than three-quarters of firms.) The MDM arena is up eight points this year with two entrants from Microsoft gaining ground: Intune and MDM for Office 365. On the email security front, Mimecast continues its dominance as the primary scanner of inbound messages (for malware and spam,) and is now the first line of defense at two-thirds of all responding firms. In the area of encryption, every category advanced except "None." "User initiated email encryption (such as Mimecast Secure Send or RPost,) was up dramatically (a 26 point jump,) as was hard drive encryption (up ten points to 43%).
The question on “next-generation endpoint security” demonstrates the heightened level of interest in this particular control across the industry. There are a lot of offerings in this space and the movers on this year’s survey are solutions such as CarbonBlack/Bit9, Webroot and Cylance. Other security initiatives are appearing, including the removal of desktop administrative rights (now reported at 73% of firms,) Intrusion Detection Systems (74%), use of multi-factor authentication for remote access (63%) and phishing/social engineering tests of users (now at 61% of firms.) These controls are becoming the standard at law firms throughout the industry. (One interesting footnote: 12% of firms now conduct a third-party security audit more than annually.)
With increasing resources focused on a robust security portfolio, on the burgeoning analytics field (although not always a function within IT,) and even with ongoing management of email history (still the #1 concern on the email front,) how do IT departments juggle the workload? Two answers that seem to bubble up in every iteration of this survey are simplification and efficiency. One example would be purchasing a security awareness training program, rather than building it every year. The need to keep this material interesting and relevant necessitates an annual refresh and some significant creativity, which can consume cycles in the training department. The obvious solution is to tap into one of the many security and training vendors for material, signage, creative ideas and even online content that can be delivered individually or via a Learning Management System (use of these LMS platforms jumped 4 points this year.) Although the number of firms reporting that they develop training content in-house jumped eight points on this survey, the number of firms developing security awareness content in particular has fallen 49 points over the last four years! The biggest winner in packaged security awareness content is KnowBe4, which jumped 15 points since last year and 35 points over four years.
EXECUTIVE SUMMARY

OPERATING SYSTEMS

COMPUTER HARDWARE

OFFICE APPLICATION SOFTWARE

RECORDS/PRACTICE MANAGEMENT

EMAIL/MESSAGING

MANAGING EMAIL STORAGE/HISTORY

MOBILE DEVICES

NETWORK/SOFTWARE MANAGEMENT

REMOTE ACCESS /INTERNET/TELECOM

BUSINESS CONTINUITY AND SECURITY

TECHNOLOGY SPENDING

TRENDS AND ANNOYANCES

VENDORS

ILTA’S 2018 TECHNOLOGY SURVEY: EXECUTIVE SUMMARY

Becoming more efficient can take lots of forms, and sometimes it’s just about enforcing a standard. The browser wars continued this year, but the larger the firm, the more likely they are to have a standard browser (rather than “user’s choice.”) At smaller firms, more than a quarter allow the user to choose their browser, while at the largest, only 4% of firms have decided not to establish a standard. This holds true for mobile email platforms as well. The trend is clearly indicating that firms are moving toward support for a single platform only, and ActiveSync is emerging as the winner in that category. When looking for ways to be more efficient, automation is an obvious direction, and there are lots of options in the current offerings. It is interesting to note that, in terms of opportunities to offload the management of Microsoft Office installs and updates, smaller firms are much more likely to say they’ll be on Office 365 a year from now. With regard to managing mailbox size (still the leading challenge in the email world, with 38% of firms citing that as a concern,) smaller firms are more likely to limit mailbox size while larger firms are more likely to “age” email (delete it after a defined period of time.) Other solutions, such as automated workflow or application integration (think IntApp,) are gaining ground as well, and print management as a solution for simplifying the upkeep of printers and toner replacement is up dramatically (17 points!)

One significant trend we’re seeing, when they look for simplification (although it’s probably just as much about economics,) is that many firms are getting out of the business of supplementing the monthly fees for mobile data and voice plans. There was a double digit drop across all firm roles (staff, associates and partners,) in contributions to or reimbursements for data and voice plans. The drop in support for mobile hardware is also evident, but not as dramatic. The gradual acceptance of cloud computing in the industry is also a change that could simplify IT governance and management, with the goal of moving platform, infrastructure and even applications to an “as-a-service” model. When respondents were asked the question, “For the upcoming year, how do you predict your firm’s adoption of cloud-based solutions will change?”, there was a six point jump (to 69%) in those firms responding that it will be increasing. The biggest barrier continues to be cost (cited by 47% of firms), while security is now falling (down 3 points to 35%).
Reliability, performance and "client restrictions" are all in third place as barriers (at 28%).

That being said, cloud-based document management is getting traction at firms of all sizes (up 8 points overall), although it’s currently 8 to 10 points more popular at larger firms. Responses are showing that cloud-based email “high availability” solutions are gaining popularity as well. Offerings in that category are up 13 points over four years. This is also true with archive repositories, which are increasingly cloud-based. Although we have no trending data for hosted SharePoint platforms, 16% say their instance is hosted, while another 8% indicates it is a “hybrid” platform (hosted and on-premises.) Even backups are migrating away from disk and tape-based to cloud-based. The trend is gradual (one to four points per year,) but a trend nonetheless.
Our industry is most certainly experiencing a shift in both the importance of technology in the legal practice and in the specific technologies required to support the business of law. To the first point, on October 15 of this year, Vermont became the thirty-second state to adopt a Rule of Professional Conduct (RPC) first laid out by the ABA in 2012, stating that lawyers have an ethical duty to “keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology...” (emphasis mine.) Why is it important for legal technologists to know and understand this admonition in legal ethics and responsibility? Because our industry too is undergoing an evolution that, if not recognized, understood and adapted to, this changing set of requirements and technology skills may render us incompetent - or worse, unemployed.

All of the above may seem rather academic, but at the risk of seeming preachy, this year’s ILTA Technology survey, more than any prior year, lays bare the changes in technology that are rapidly moving us toward new skill requirements, and also reflect (or maybe underpin,) the changes we’re seeing in the legal market. The “critical mass” we’re perceiving in Legal Technology is being driven by huge changes in the greater technology arena. Hopefully there are data points, markers, clues in this survey that can guide us as we use our “higher cognitive skills” in our decision making.

According to our questions on IT spending, investment in technology is not generally decreasing, and in regard to operating expenses, we’ve been given some room to grow. This is good news for most and, as Analytics, AI and Machine Learning demonstrate their value to our business - and to our clients - perhaps we’ll see that reflected to a greater degree in both spending categories.

Thanks go out to the survey team of Jim McCue, Phil Graybeal and June Rangone, as well as the incredibly talented ILTA staff that infuses the graphics, the layout and actually makes these numbers digestible. A final thanks to all members who contributed their time, effort and experiences in responding to the survey – without you, there would be no value at all!