

Discussion Paper

## In the zone: Is technology helping or hindering lawyers' decision making?

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A lawyer's success could be said to rest on a bedrock of good decisions. Equally, a successful law firm is one that is adept at good decision making across all facets of its business, whether it is picking the right argument for a matter, selecting the right law to support an argument, choosing the correct precedent, recruiting a good team, providing clients with information which is useful, ensuring your client base is made up of profitable clients, or accepting profitable matters to work on.

When examining these facets, three essential decision making areas stand out:

- The law;
- The lawyer's workload, that is, the matters that they are working across;
- The firm's clients.

Today, it is universally agreed that our world is becoming more complex, more dynamic and more demanding<sup>1</sup>. Technology, as we are frequently told, provides the key to navigating this complexity and dynamism by giving us better tools to make better decisions<sup>2</sup>. The technology of the Twenty-first century has given us innumerable buzzwords and technical wonders, engendering the birth of the internet, email, mobile computing, mobile applications, social media, instant messaging, online search, applications "in the cloud", push/pull communication, mashups, spatially aware computing, and big data. Instant data, instant communications, anytime, anywhere – the potential seems limitless.

In essence, there are five key steps to good decision making. Every decision made, whether about the law, a client or workload, passes through these steps. Inherently, the more complex the decision, the more explicit these steps become:

1. Identify your goal;
2. Gather information for weighing options;
3. Consider consequences;
4. Make your decision;
5. Evaluate.

This leads us to the question: has the great promise of these technological advancements actually delivered better decisions about the law and your clients?

Intuitively, the answer should be a resounding, yes! Surely, all that computing power and data at your fingertips – anywhere, anytime – should aid in every step in the decision making process. In reality, however, despite the clear benefits that technology has provided us, there is the emergence of strong indicators suggesting that perhaps all this technology is just exacerbating age-old problems rather than eliminating them.

1 Rita McGrath, "The World Is More Complex than It Used to Be", 2011, <http://blogs.hbr.org/hbr/mcgrath/2011/08/the-world-really-is-more-compl.html>; Brink Lindsey, Jonathan Wai, "The Growing Complexity of Everyday Life", 2012, <http://www.psychologytoday.com/blog/finding-the-next-einstein/201211/the-growing-complexity-everyday-life>; Linda S. Gottfredson, "The World Grows More Complex", 2012, <http://www.nytimes.com/roomfordebate/2012/02/26/are-people-getting-dumber/the-world-grows-more-complex>

2 Wayne Thompson, Neil Stolovitsky, "How IT can Help Companies Make Better, Faster Decisions", [http://fm.sap.com/pdf/WPSUB\\_Nov/How%20IT%20Can%20Help%20Companies%20Make%20Better%20Faster%20Decisions.pdf](http://fm.sap.com/pdf/WPSUB_Nov/How%20IT%20Can%20Help%20Companies%20Make%20Better%20Faster%20Decisions.pdf); Randy Bean, "Big Data's Holy Grail: Better, Faster Decisions", 2013, <http://www.informationweek.com/big-data/commentary/big-data-analytics/big-datas-holy-grail-better-faster-de/240158328>; Frances Hauge Fabian, dt Ogilvie, 2002, "Using Technology to Enhance Creative Actions in Decision Making", [http://www.hicss.hawaii.edu/HICSS\\_35/HICSSpapers/PDFdocuments/OSCIS01.pdf](http://www.hicss.hawaii.edu/HICSS_35/HICSSpapers/PDFdocuments/OSCIS01.pdf)

## The Paradox of Technology

Among workplace research, there is a growing body of evidence suggesting that technology, in many cases, may actually be hindering our decision making capabilities, causing stress and leading to suboptimal outcomes<sup>3</sup>. And while we have found that the legal profession has been quick to explore and adopt new technologies in their work practices, 44% of lawyers said these technology wasn't making their working life any easier, according to a recent survey by Lawyers Weekly (August 2013)<sup>4</sup>.

One of the paradoxes of technology is that "simplification complicates", that is, the more technology you throw at the problem in order to simplify it, the more complex it actually becomes<sup>5</sup>.

At its core, humans are both the strength and the weakness of technology. On one side of the equation, humans have an adaptability and cognitive reasoning that computers just can't match. On the other side, computers clearly have prodigious processing and data storage capabilities that humans simply can't compete with. When these elements are combined with skill, we are able to achieve impressive paradigm shifts, such as the internet and genome mapping. When not skilfully combined, it is all too common to encounter waste, failure and stress.

Specific to the legal industry, it is clear that while many law firms have successfully implemented technological solutions around areas of simple decision making, such as the automation of many transactional processes, when it comes to automating and improving complex decision processes, the application of effective technologies have a patchier record.

In particular, if we focus upon the aforementioned 'five step process' for decision making as an underlying framework, law firms need to take two important questions into consideration when deliberating on how to apply technology in complex decision making:

- (1) Does the lawyer have the right content-in-context? Does the technology provide the lawyer with the most appropriate, comprehensive, accurate and relevant information to formulate and process options?
- (2) Is the lawyer making the decision 'in the zone'? Is the lawyer being accorded the opportunity to be in the correct mental state to sift through the data, uncover and consider consequences, and make an informed, well-reasoned choice?

## The Importance of Content-in-Context

There are numerous studies pointing to the negative effects of technology, and namely, the tendency for 'information overload'. This can result in a struggle to contain, triage, comprehend and act on the "fire hose" of information forced at us every day. It is apparent that many people use two main strategies to deal with this cavalcade of information:

- (1) Working longer hours to sift, process, and respond to it. The emergence of mobile technologies have meant that practitioners now attempt to triage and respond to the daily mountain of emails, industry news, judgments and legislative updates from the time they get out of bed (or even while still in it) until they turn out the light last thing at night. They are "always on" and even then, key information is often missed in the deluge of data.
- (2) Skim the surface or even ignore it, delete and hope it wasn't important.

3 N Kelk, G Luscombe, S Medlow and I Hickie, 'Courting the Blues: Attitudes towards depression in Australian law students and legal practitioners', Brain and Mind Research Institute, University of Sydney, 2009; J Riley, 'Mental Health and Employment: Issues for Lawyers' (2007) University of New South Wales Faculty of Law Research Series; P Verkuil, M Seligman and T Kang, 'Why Lawyers are Unhappy' (2005) Deakin Law Review.

4 <http://www.lawyersweekly.com.au/opinion/fter-working-in-a-corporate-law-firm-for-only-a>

5 Donald Norman, "Living with Complexity", 2010.; Andrew Feenberg, "Ten paradoxes of technology", 2009; <http://www.sfu.ca/~andrewf/paradoxes.pdf>

Research indicates that neither of these strategies is working. A 2010 LexisNexis international study of workplace productivity indicated that<sup>6</sup>

- 49% of Australian professionals felt demoralised as they can't manage all the information coming their way;
- Australian workers were the most likely to agree that the quality of their work suffers at times because they can't sort through the information that they need fast enough (70%);
- 81% of legal workers say they've deleted or discarded work information without fully reading it;
- Almost a quarter (24%) delivered incomplete documents, email or other communications because the necessary information or materials could not be found on time.

It is clear that this is a challenge too great for lawyers to solve by themselves. As the needs of the legal profession are unique, it is paramount for law firms, legal information and technology providers to continue to work together to look for ways to use technology smarter to provide relevant content-in-context for their lawyers and clients.

### In the Zone: Fostering a climate for better decision making

The more complex a decision, the more important it is to focus all your cognitive ability on it. This echoes a concept within field of psychology called "the flow". It is also commonly known as, being "in the zone", "in the pocket" or "in the groove".

First proposed by Hungarian psychologist Mihaly Csikszentmihalyi in 1975, "flow" is described as a mental state of operation in which a person performing an activity is fully immersed and engaged. "The ego falls away. Time flies. Every action, movement, and thought follows inevitably from the previous one, like playing jazz. Your whole being is involved, and you're using your skills to the utmost."<sup>7</sup> We have all been there: when you find yourself so involved in a task and you look up after what seems like a mere 10 minutes only to realise several hours have actually passed, darkness has fallen outside, and all of a sudden you discover physical feelings of hunger and thirst. That is being "in the flow".

There is a biological explanation for this – according to Csikszentmihalyi, our nervous system can process only about 110 bits of information per second. Hearing and understanding speech requires 60 bits per second, which is why you can't listen to more than two people talking to you at once. Being in flow tends to use up all processing power of the brain, such that physical sensations including thirst, hunger or pain, may go unnoticed. Performance becomes effortless.

This concept of being in the flow has been closely linked to better decision making, the ability to deal with complexity, increased performance, reduced stress and increased enjoyment. Conversely, not being able to achieve the flow leads to lesser performance and increased stress<sup>8</sup>.

<sup>6</sup> LexisNexis Workplace Productivity Study 2010

<sup>7</sup> Flow: The Psychology of Optimal Experience, 1990, Csikszentmihalyi, M. New York: Harper and Row

<sup>8</sup> The Science & Psychology of Music Performance: Creative Strategies for Teaching and Learning Book, 2002, Parncutt, Richard & McPherson, Gary E. Oxford University Press US.; "The psychophysiology of flow during piano playing". de Manzano, Orjan, Theorell, Harmat, Laszlo, Ullen & Fredrik, psycARTICLES.; "The Zone: Evidence of a Universal Phenomenon for Athletes Across Sports". Young, Janet A. & Pain, Michelle D., Athletic Insight.

Usability expert Owen Schaffer (2013) has built upon Csikszentmihalyi's work, and outlined seven conditions required to get into the flow<sup>9</sup>.

1. Knowing what to do: Do you know what the objective is?
2. Knowing how to do it: Do you have the necessary skills?
3. Knowing how well you are doing: Immediate feedback;
4. Knowing where to go: Do you know what the next steps are, from moment to moment?
5. High perceived challenge in the task;
6. High perceived skills: Feeling capable of completing the task;
7. Freedom from distractions.

The impact and importance of flow has been incorporated across a range of fields, as an essential element of workplace design, team structure and even in guiding how you should live your life. In particular, its impact on workplace design and its effects on decision making is a fascinating body of work. Is the open plan office really the best design for knowledge workers? How can the physical environment be created to support the oft conflicting goals of collaboration, deep thought and efficiency? However for purposes of this paper, we will focus the concept on technological design and implementation, and how this can affect a lawyer's decision quality.

It can be said that the way in which technology is currently developed and implemented is often counterproductive to staying in the zone. Research by software engineers DeMarco and Lister (1999) indicates that getting into the zone is akin to a slow descent into a subject and takes at least 15 minutes to 'lock in'<sup>10</sup>. Another study by Michigan State University (2012) has found that if task is suddenly interrupted for just 2.8 seconds, your error rates doubles<sup>11</sup>. This doesn't bode well for the average lawyer's day, which by nature is full of incoming requests and urgent demands, all competing for attention. It also often means that a lawyer is constantly switching from one application to another (or even several others) to find information, then shifting gears to answer an email pop-up or that instant message, all activities which break the flow and increase error rates. And how many lawyers are afforded the luxury of 15 minutes of uninterrupted work to get back into the zone?

How do we maximise a lawyer's time within the flow? From a technological perspective, it is critical for lawyers, law firms, and especially IT departments within firms, to examine application workflows, work habits and application configurations. This may involve simple steps, such as configuring email popups in Microsoft Outlook to 'off' by default, to the more complex, such as conducting a comprehensive review of core legal processes.

Within this process, legal information and technology providers also have an important role in truly understanding the way lawyers work in order to design their software to maximise a lawyer's time in the zone.

### Staying in the zone: Designing for focus

There are three fundamental elements that need to be considered when designing software solutions to assist lawyers in staying in the zone when making decisions:

1. **Ease of use:** User Experience design should focus on taking the complexity out of the software and make it intuitive to use.
2. **Putting content in context:** It is critical to ensure that the relevant information is brought to the lawyer. This not only increases efficiency but also means they do not have to leave the application and risk breaking the flow.
3. **Build in guidance and instant feedback**

<sup>9</sup> Schaffer (2013) (<http://humanfactors.com/funexperiences.asp>)

<sup>10</sup> T DeMarco and T Lister, *PeopleWare: Productive Projects and Teams*, 2nd Ed, Dorset House Publishing, New York, 1999.

<sup>11</sup> E Altmann, "Brief interruptions spawn errors", 2013, <http://msutoday.msu.edu/news/2013/brief-interruptions-spawn-errors/>

At LexisNexis, these design elements form the cornerstones of our product development and design processes. For example, in examining how we could harness technology to assist lawyers in critical, everyday activities, such as drafting legal documents, we first spent months observing how lawyers draft documents and correspondences in common applications such as Microsoft Outlook and Word. This was a critical component in the development of our new legal drafting tool for lawyers, Lexis® for Microsoft® Office<sup>12</sup>. Through our observations we identified three iterative stages in drafting:

1. **Review/Triage:** For new documents or correspondences: ‘Do I have clarity on all the legal and company references? Should I handle myself or forward to a colleague?’ For drafts under review: ‘Do I agree with the position taken? Are there any errors?’
2. **Thinking:** ‘What position will I take in my reply? What law will I reference? What precedent will I use?’
3. **Composition:** ‘Are there any errors in structure or errors in formatting of case and legislation references?’

We also observed that lawyers who were able to stay ‘in the zone’ during all three stages of drafting were more efficient and had fewer errors. With these key insights we then set about designing a legal drafting application with features focused on keeping lawyers in the zone by providing tools that increased the efficiency and confidence in the documents they drafted.

For example:

- **Ease of use:** Developing an intuitive left screen/right screen layout within the programs lawyers were primarily using – Outlook and Word, with a focus on ‘one click’ functionality, such as our “Background” tool, which highlights all the legal entities and terms within a document, or our “PDF converter”, which converts PDF to Word documents. Our focus on ease of use also meant incorporating instant access to LexisNexis forms and precedents.
- **Content-in-context:** Ensuring that with one click all the relevant legal reference content is surfaced based on the text within the document, without having to leave Outlook or Word.
- **Built-in guidance and instant feedback:** Knowing how important it is to be able to quickly determine the relevance and value of legal references, we were able to build LexisNexis Casebase® and LawNow® signals into the drafting screen provide users with instant feedback on the status of cases and legislation cited; our “Pinning” feature allows lets you save your own and colleagues guidance notes, suggested documents and links within a draft; and our History Map provides a visual representation of the steps taken and documents accessed during research.

At LexisNexis, we understand that by collaborating with experts and practitioners across the legal profession to develop and create smart, intuitive software solutions we help lawyers to overcome the paradox of technology, maximise their time spent in the zone, allowing them to make better decisions and deliver better outcomes for their clients.

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<sup>12</sup> <http://www.lexisnexis.com.au/lexisformicrosoftoffice/>

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