

# Legal Technology **FUTURE HORIZONS**

———— Strategic Imperatives for the Law Firm of the Future ————



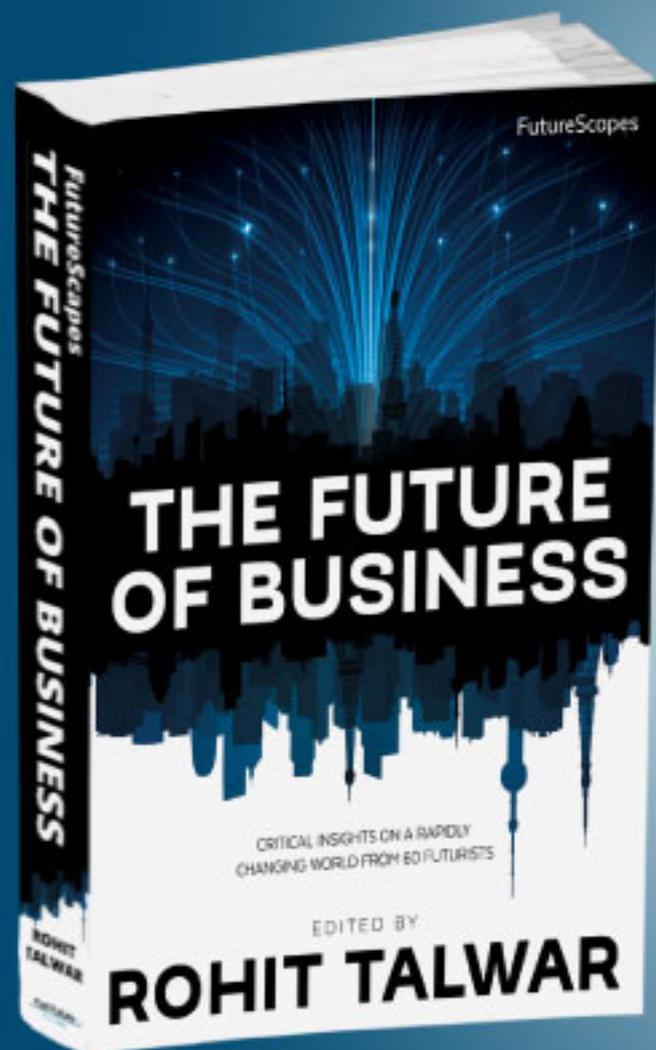
International  
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LEGAL TECHNOLOGY  
**FUTURE HORIZONS**  
TRANSFORMATIONAL FORCES



# THE FUTURE OF BUSINESS

Critical insights on a rapidly changing world



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## FROM THE DIRECTOR



*There's no shortage of quotes about the future, and as I was immersed in the narrative of this report, Yogi Berra's witticism, "The future ain't what it used to be," kept coming to mind. Fasten your seatbelts, kids . . . or better yet, please allow the robotic driving assistant to fasten your seatbelts. We're in for an exhilarating ride.*

ILTA has long been interested in the future; and our own Law2020 and LegalSEC initiatives are substantive steps toward a bright future for risk-aware, business-savvy, tech-competent, agile law firms. The successful law firm of the future must have its eyes looking ever over the horizon and must open its mind to a rapidly shifting world.

Our Legal Technology Future Horizons study, begun in January 2013, tapped the collective knowledge of our community of law firm executive leadership, technologists, thought leaders, futurists and the many stakeholders who shape our tomorrows. The information published here paints a picture that is at times frightening (I'm a little unsettled with the notion of uploading my brain to the Internet), often jolting (I must innovate or perish) and always future-focused. Alongside the statistical analysis of how we view technology's role in shaping our future, there are insightful commentaries on possible outcomes — the potential effects of embracing or resisting innovative approaches. The report speaks to the progression of change — the intrinsic rise and fall of ideologies, technologies, mindsets, institutions and cultures. Horizons are, after all, where all the beautiful sunrises and sunsets occur.

Many thanks to Rohit Talwar and his team at Fast Future Research. His assimilation of expansive sources of input is masterful. We deeply appreciate the underwriting of our sponsors, as their financial backing paved the way for the project; and finally, we are grateful for the input of hundreds of ILTA members, technology providers, alliance partners and industry thought leaders. Their willingness to share provides the body of knowledge culminating in this forward-looking report.

Let's prepare for the future, as we have all along, armed with information and tremendous peer support. Tell a friend about the future!

A handwritten signature in black ink that reads "Randi Mayes".

**Randi Mayes**  
Executive Director  
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### ABOUT ILTA

*Technology solutions to law firms and legal departments gets more complex every day. Connecting with your peers to exchange ideas with those who have "been there done that" has never been more valuable. For over three decades, the International Legal Technology Association has led the way in sharing knowledge and experience for those faced with challenges in their firms and legal departments. ILTA members include firms of all sizes and all areas of practice, all sharing a common need to have access to the latest information about products and support services that impact the legal profession.*

### STATEMENT OF PURPOSE

*ILTA is the premier peer networking organization, providing information to members to maximize the value of technology in support of the legal profession.*

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International  
Legal Technology  
Association

## ABOUT ROHIT TALWAR

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Rohit is a global futurist, strategy advisor and award-winning speaker noted for his humor, inspirational style and provocative content. He leads Fast Future Research and advises global firms on how to survive, thrive and develop innovative growth strategies in the decade ahead. Rohit helps clients understand how mega-trends, emerging developments, new business models and disruptive technologies could impact society, business, industries and government. He specializes in emerging markets and sectors, such as technology, science, media, aviation, travel and retail. He currently leads studies on the future science and technology landscape, human enhancement and the future of the various business sectors. Rohit authored “Designing Your Future — Key Trends, Challenges and Choices” and contributes regularly to books and journals on emerging trends and technologies, futures and strategic change.

### DISCLAIMER

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### ABOUT FAST FUTURE RESEARCH LIMITED

*Fast Future is a research and consulting firm that works with clients around the world to help them understand, anticipate and respond to the trends, forces and ideas that could shape the competitive landscape over the next five to 20 years. Their work draws on a range of foresight, strategy and creative processes to help clients develop deep insight into a changing world. These insights are used to help clients define innovative strategies and practical actions to implement them.*

# EXECUTIVE SUMMARY

*A set of inevitable economic forces is driving clients to consolidate the number of law firms they use. If you look at the history of professional services: accounting, architecture, advertising, business consulting — everyone who sells ideas for a living — you can usually pinpoint the time where there was a dramatic consolidation. Clients are driving consolidation because they believe there is an economic incentive. They also believe that they get higher quality services. The more work they consolidate into law firms, the better the lawyers in those firms understand their company. In addition, clients want to have lawyers who understand the business culture of where the deal transpires to ensure a successful transaction or a favorable dispute resolution. Finally, consolidation pressures are further increased by technology, which challenges firms to capitalize on automation efficiencies while never losing sight of the importance of building relationships and recognizing how to deliver the most value.*

— Joseph Andrew, Global Chair, Dentons

## BACKGROUND

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This report presents the critical findings and implications emerging from the Legal Technology Future Horizons foresight research study. The study was commissioned by the International Legal Technology Association (ILTA) and undertaken by Fast Future Research between January 2013 and March 2014. We gratefully acknowledge underwriting by AccessData, BigHand, BillBLAST, Microsoft, Mimecast and Thomson Reuters Elite.

The project's charter was to provide the first forward-looking global study exploring how advances in information technology (IT) could impact the legal profession over the next decade. The study used a combination of desk research, interviews, workshops and two global surveys — one explored the business applications of IT in the legal sector, and the other provided input to create an emerging technology timeline.

Interviews were conducted and contributions were received from over 40 law firms. Those consulted include the global chair of SNR Denton and the managing partner of King & Wood Mallesons and CIOs from organizations as diverse as Toyota, Allen & Overy, Baker Donelson, Berwin Leighton Paisner, Bryan Cave, Norton Rose Fulbright, Perkins Coie, Riverview Law, Ropes & Gray and Seyfarth Shaw. In addition, to provide a truly global and “outside in” perspective, we sought the views of external futurists, vendors and experts on technology and legal innovation from organizations such as Stanford University.

## SHAPING THE FUTURE OF LAW FIRMS

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This is a study aimed at managing partners and/or CEOs and their CIOs. For law firm leaders, it highlights how information technology (IT) is becoming absolutely critical to strategic survival and future growth in a rapidly changing and highly competitive business environment. For CIOs, it highlights key technologies breaking the horizon and the role IT can play in helping law firms respond to change and create new sources of value.

## THE NEW LANDSCAPE: THE REALITY OF CONSTANT CHANGE

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The research highlights how the decade ahead will be shaped by powerful economic, political, technological, environmental and socio-demographic global forces impacting individuals, societies, organizations and governments. Collectively these forces are driving the need to review many of our governance institutions and systems and highlighting the necessity for new thinking and large-scale change to serve a rapidly changing world. At the global level, six key factors were identified as having a major impact on future law firm strategies:

- The rapid and continuous evolution of the client agenda in the face of disruptive innovation, shortening business cycles and accelerating the pace of change
- The continued globalization of business and rising global mobility of people, ideas, money and organizations
- A continuing shift of wealth, power and opportunity from mature to evolving economies and ongoing uncertainty about the prospects for growth and the stability of the global economy
- Political instability as citizens demand a greater voice and governments struggle to exercise their mandate and fulfill their obligations in a rapidly changing world
- An increasing focus on environmental sustainability, resource shortages and energy prices

- Diversity management challenges arising from key socio-demographic trends such as global population growth, rising life expectancy, greater female participation in the workforce, continued migration and the needs of an increasingly multi-generational, multi-cultural employee base

At the legal industry level, six critical issues were highlighted:

- An accelerating pace of technology disruption and diffusion with the associated challenges of learning to manage rapid systems change and embrace the strategic potential of IT
- Responsiveness to client needs around value, speed, innovation and security
- Industry level forces such as intensifying competition, changing firm structures, business models, new entrants and a heightened talent agenda
- The impacts of consumerization, commoditization, automation and the pursuit of optimal firm scale
- Responsiveness to the opportunity and competitive challenges presented by emerging economies
- The pursuit of differentiation in the face of continuous change

# THE TRANSFORMATIVE ROLE OF IT

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While IT advances are expected to permeate and transform every aspect of law firm activity, four core themes emerge:

## *The Client Is the Priority*

We must focus IT investments on securing and enhancing customer relationships. Strategic priorities must include quality of insight and advice, speed, responsiveness, flexibility, enhancing the capability and efficiency of professional staff and the capacity for innovation. Operationally, client demand is expected to focus on clarity of progress and budget reporting, providing real-time visibility of legal workflow, improving collaboration, integrating with client systems and building intelligence into systems to add insight and value and reduce the level of human involvement required.

## *Leverage Lawyers*

We must enhance the productivity, strategic insight and impact of lawyers. At the most basic level, they need to perform from anywhere at any time on a range of personal devices that could emerge over time. Next, we must build intelligence into lawyer support to anticipate and provide the content they need when they need it — from analyzing critical information to presenting in court. Artificial Intelligence will play a major role in learning how lawyers work, personalizing the support and gradually automating many of the tasks historically performed by professionals.

## *Re-Engineer Processes*

We must take a process- and project-management approach to all work undertaken. Workflows must be streamlined, broken down to discrete tasks to be allocated to the lowest cost resource that can complete them — a lawyer, outsourced service partner or intelligent system. This will accelerate the commoditization of many tasks and could reshape the legal value chain as more low value tasks are parceled out to external providers. This in turn will drive the firm to focus on developing new, value-adding higher-fee services.

## *Innovate to Differentiate*

As a greater scope and volume of work is automated and the price gets driven down, firms must focus on using IT to generate and support client-focused innovation. This may be the development of new products and services, taking on activities traditionally performed in-house by the client and moving up the value chain into areas such as new product development. For example, as clients enter new markets with technology solutions like driverless cars, these will be highly disruptive and will require new thinking in areas such as risk and liability. Increasingly intelligent products might even have laws embedded; for example, cars could fine us for exceeding the speed limit. Law firms will need to use IT to help develop early warning systems that alert them to the emergence of such new ideas. Leaders will seek to gain a “first mover advantage” by approaching the innovators and becoming involved from the product design stage.

## KEY TECHNOLOGY IMPACTS

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Responses to our survey on the application and impact of IT on the legal profession included these notable findings:

- 73% agree or strongly agree that the capacity for rapid IT-enabled innovation will be a critical differentiator for law firms in the future.
- Despite the importance placed on the role of IT in delivering law firm innovation, only 15% agree strongly with the view that in the next decade the role of the CIO will evolve from Chief Information Officer to Chief Innovation Officer.
- Given the scale of the opportunity, 77% agree to some extent that technology firms will increasingly enter the

legal industry, using disruptive innovations to provide direct legal service delivery.

- 91% expect the transparency of the legal process to increase as a result of client demands.
- 88% expect emerging technologies to become an integral part of courts in developed countries.
- Artificial Intelligence (AI) is seen as a potential long-term game changer for the legal sector, with 88% agreeing that AI advisers and helper apps will structure legal documents and check the content generated by lawyers.

## CRITICAL TECHNOLOGIES

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The research shows a clear expectation that the decade ahead in legal will be shaped in part by developments that enhance mobility, personalization and ease of use. Hence, supporting technologies expected to be adopted by the pioneers in the sector include cloud solutions, use of social media tools and analytics, personalized displays, collaborative document and knowledge management environments and courtroom dashboards. Enablers of these solutions will include gesture recognition, finger tracking, the intelligent Web, remote presence and 5G communications. While there is much talk of AI penetrating the legal environment in the longer term, few expect rapid take-off. Natural language interfaces, machine vision and machine learning are expected to be the most commonly adopted applications in the near to medium term.

## TECHNOLOGY – FIRST AMONG EQUALS?

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Out of all the forces of change shaping the operating environment for businesses and law firms alike over the next decade, the research suggests that advances in science and technology (S&T) could have the most revolutionary impacts. Breakthroughs in many fields — IT in particular — will drive radical, socially challenging and operationally disruptive change. Individuals, societies, businesses, governments and the institutions that surround us will all feel the transformative force of these developments. For some law firms and in-house legal departments, it is clear that IT innovation is already a strategic priority. For the rest, it is becoming clear that their future survival and growth depends on making the intellectual and emotional shift to accepting that they simply won't have a viable business without mastery of IT.

## FROM “IT IN THE BUSINESS” TO ‘NO BUSINESS WITHOUT IT’?

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By its own admission, the legal sector has historically seen itself as a slow mover and cautious adopter of IT innovations. In the main, legal has followed rather than led clients and other professional service sectors in driving IT-enabled innovation. That situation is changing, not least because clients are demanding it — they are making their expectations clear to all of their professional services partners. Clients need these key partners to equip themselves to provide

effective and flexible service offerings that reflect the constantly changing reality shaping the business landscape. In this turbulent environment, IT is seen as a critical enabler of the delivery proposition for the 21st century law firm. A simple choice is emerging — to either embrace and invest in the opportunity, or to suffer the consequences of a lack of commitment.

## CROSSING THE CHASM: LEARNING TO LOVE IT

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For law firms and in-house counsel alike, learning to love IT could be the biggest and most difficult emotional shift asked of them over the next decade. This might also be the change for which leaders are least well prepared. Commercial experience, business skills and legal expertise will always be important. However, right now, a deep and continuously updated understanding of the capabilities and potential of IT is emerging as a core priority. These insights are critical when determining how to respond to client demands,

competitor actions, regulatory changes and the needs of new generations of “born-digital” attorneys. Leaders need to understand the investment in management, staff skills, IT systems and infrastructure required to maximize the strategic value and impact of technology. The message is clear — IT is vital to helping firms address increasingly sophisticated, rapidly evolving and complex customer and staff demands and to innovating in pursuit of competitive advantage.

## IT MANAGEMENT IMPERATIVES

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Given the transformational impact IT could have on the legal sector, a set of strategic imperatives emerge at three levels for IT management:

- **Strategic:** establishing a close alignment with the business, developing a highly strategic approach to management of IT and building a radar / sense-making function to spot and evaluate potentially disruptive developments coming over the horizon.
- **Value-Adding:** providing a strong focus on enabling innovation, value creation, communication, collaboration and greater employee mobility.
- **Operational:** evolving an appropriate IT staff profile to support a more strategic role; helping deliver cost and efficiency gains across the practice; learning to master data and knowledge; strategic management of external partners; and ensuring a flexible technology infrastructure.

# FUTURE SCENARIOS FOR IT IN LEGAL

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Given the speed and scale of change in technology over the next decade, four possible scenarios emerge for how IT could be positioned in tomorrow's law firm:

- **Business Innovators:** These firms have transformed their relationships with clients through the effective use of IT. They are highly IT-literate, and this is seen as a powerful source of competitive advantage and differentiation. A high level of experimentation and innovation is characteristic of the firm's culture, and clients see it as a first port of call to try out new approaches and ideas. The IT function has built a strong reputation for delivery of effective business solutions and has close alignment to key client-facing practice areas. IT's role and innovation potential is well understood and supported and is encouraged to play a central role in creating new opportunities and value.
- **Survivors:** For these firms, little has changed in material terms from the world as they knew it in 2014. Competition has eroded their competitive position in all but a few key opportunity areas. Survivors typically have relatively low expectations beyond basic service provision, and they minimize investment in IT. The IT function is run with lowest cost as a prime directive.
- **Seat Warmers:** Firms understand the potential for competitive advantage and innovation presented by IT. Ambitions are frustrated by a limited IT function that is not up to the job and is effectively keeping seats warm for a more proactive replacement team that are being recruited. Funding is increasingly being channeled to third-party innovators who can create disruptive new solutions which the next round if IT leadership will be asked to deploy. Clients are demanding ever-firmer commitments of when the firm will upgrade its technology capability and orientation.
- **Frustrated Superheroes:** IT has a highly capable team, strong business orientation and excellent delivery skills. The business though is unwilling to seize the opportunity and is reluctant to embrace an enhanced role for IT beyond delivery of a core set of services. IT is increasingly trying to secure internal alliances with more forward thinking lawyers and using small amounts of budget to pilot more innovative ways of working and delivering client solutions. IT invests a significant amount of effort in trying to help the business get maximum value from existing investments and to encourage the sharing of successful ideas across practice areas.

## SEIZING THE OPPORTUNITY – THE LEADERSHIP IMPERATIVE

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*To seize the full opportunity presented by the disruptive potential of IT, firms will require radically new thinking about how to survive and thrive in the new era of business. This will extend well beyond technology to cover every aspect of their strategy, services, structure, staffing, funding and core values. Ten key imperatives emerge, each of which can be enabled and enhanced through IT:*

- **Build a global mindset.** A universal business challenge facing firms of all sizes is the need to gear up to support clients' globalization efforts and the impact of emerging markets. Even firms that don't have ambitions to extend their own footprint will have to be capable of supporting clients as they venture into new geographies.
- **Develop comfort in chaos.** Firms must learn to manage and thrive in a volatile, uncertain, complex, ambiguous (VUCA) and rapidly changing reality. Developing a "rapid response" mindset becomes a core competence.
- **Pursue process excellence.** In an era of commoditization, intense scrutiny and rising client service expectations, process excellence is essential.
- **Differentiate the brand.** In a sector where standards are already high and competition increasingly intense, the search for differentiation is vital for those that want to consolidate or enhance their positioning. Firms must develop insight and strategic wisdom as core sources of advantage with the potential to enhance revenues and profit margins.
- **Redefine risk.** An uncertain environment creates risks both in terms of the firm's preferred strategies and the cost of inaction. Both types of risk must be evaluated in any assessment of strategic options.
- **Create magnetism:** Leaders increasingly appreciate the value of encouraging the flow of ideas and opportunities into the firm — particularly as a means of speeding up the innovation process.
- **Acknowledge disruptors:** The legal sector is now a prime target for potentially disruptive new entrants, often coming from outside the sector. This reality calls for a systematic approach to scan for such potential developments and identify, embrace and pre-empt new entrants through collaboration and competition.
- **Rethink talent:** Firms need to prepare for radical changes in staffing profiles, recruitment, retention, graduate education and continuous development.
- **Embrace IT opportunity:** To address changing client demands and respond to the other strategic imperatives outlined here, firms have to invest in and unleash the transformational potential of IT.
- **Nurture excellence.** To ensure the technology function delivers on expectations, firms need to demand and invest in best in class IT leadership.

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- *A summary of the critical insights presented;*
- *A more detailed analysis of the core issues and ideas;*
- *Key questions on each topic of analysis;*
- *An assessment of the critical impacts for law firms; and*
- *A concluding set of strategic, IT and operational management questions to be addressed.*

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# STUDY METHODOLOGY

The study was undertaken by Fast Future Research between January 2013 and March 2014. This report sets out the critical findings and implications emerging from the research. The methodology was deliberately designed to challenge current thinking and to provide insights and practical ideas to inform the development of future business and IT strategies for law firms, law departments and legal technology vendors. In particular, we sought to identify:

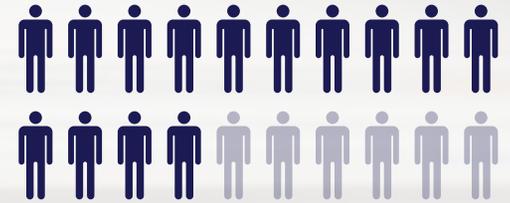
- Key trends in the broader environment affecting the legal sector
- A likely timeline of IT developments and the key technologies that could impact tomorrow's legal enterprise
- The role technology could play in future legal sector business models and as a critical differentiator in a changing business environment
- Strategic business and IT imperatives for law firms and critical implications for the management of IT in the legal sector

## SURVEYS

The survey on the business applications of IT in the legal sector received a total of 499 responses. 72% of the respondents were from the legal sector and included lawyers as well as professional staff from finance, HR, IT and other support functions. Responses were received from 29 countries, with the two largest groups coming from North America (78%) and Europe (15%), followed by Australasia, Asia and the Middle East.

The survey from which an emerging technology timeline was derived received 223 responses, 61% of which came from the legal industry. Responses were received from 22 countries, predominantly from North America (76%) and Europe (14%). Additional responses were received from Australasia, Asia, Africa and the Middle East.

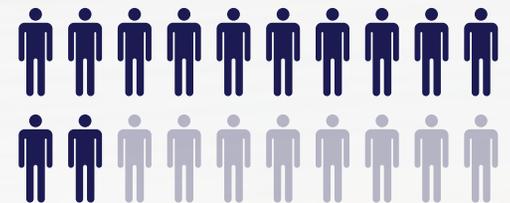
## Business Applications of IT Survey



499 responses | 72% from legal



## Emerging Technologies Survey



223 responses | 61% from legal







# GLOBAL DRIVERS OF CHANGE

The critical forces expected to shape the operating environment for clients over the next decade.

## CRITICAL INSIGHTS

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**Constantly Changing Reality:** A combination of economic turbulence, industry transformation and social upheaval will drive rapid and continuous change for law firms over the next decade.

**New Horizons:** Economic shifts, uneven growth and systemic uncertainties will transform the world in the decade ahead. Business is expanding in emerging economies, particularly in Asia.

**Governance and Instability:** National regimes, global institutions and regulatory systems will struggle to tackle complex emerging challenges. Political instabilities and legal complexity will almost certainly rise, driving the pressure to simplify and reinvent the legal system.

**Resource Challenges:** Energy, environmental and sustainability concerns will increasingly shape business behavior and regulatory actions.

**Workplace Transformation:** Workforce composition, characteristics, and expectations will change radically as new generations and cultural perspectives enter the workplace.

**Innovation Imperative:** Clients are accelerating the rate of internal change, automating and trying to simplify their organizations. They are expecting their law firms to respond accordingly and increase the scale and pace of innovation.

## A WORLD IN TRANSITION

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**Identifying the drivers of change:** In this section we explore the nature and resulting legal sector impact of key global “future factors” — trends, forces, ideas, developments and emerging issues — that are shaping the economic, social and business landscape. These are influencing client strategies and their expectations of the law firms with which they work. Indeed, the last decade has shown how closely the fortunes of the legal sector are tied to those of this broader operating environment.

**Converging systemic challenges:** There is a clear sense that we are seeing a convergence of challenges. Many analysts believe that we have pushed key systems to or beyond critical thresholds (the notion of “peak everything”). This can be seen in everything from economic, financial and political governance to banking, education, policing, environmental stewardship, energy and resource management. As a consequence, governments’ ability to respond effectively appears to be eroding; there is an expectation that nations may increasingly turn to legal solutions to achieve or enforce desired social, behavioral, economic and market outcomes.

**Legal sector evolution:** Business and the global economy are increasingly interlinked as countries, customers and suppliers become part of an ever more networked society. The research suggests the interrelationship will deepen and have significant impacts for the legal sector over the next decade. Research participants highlight how a “perfect storm” of these economic, political, socio-demographic, technological, environmental, legal, moral and ethical forces are expected to drive the agenda for business and create a constantly changing reality.

# ENDURING GLOBAL CHALLENGES

The analysis of drivers presented below focuses largely on forces directly shaping the business environment. However, we recognize that society also faces a broader set of global challenges that will shape the context in which political, economic and regulatory decision-making takes place. These, in turn, will have an impact on businesses and the law firms that serve them.

Here are 15 such challenges identified by The Millennium Project, a global future-watch initiative that draws on a network of contributors from over 80 countries:

- » *How can ethical market economies be encouraged to help reduce the gap between rich and poor?*
- » *How can the capacity to decide be improved as the nature of work and institutions change?*
- » *How can genuine democracy emerge from authoritarian regimes?*
- » *How can policymaking be made more sensitive to global long-term perspectives?*
- » *How can shared values and new security strategies reduce ethnic conflicts, terrorism and the use of weapons of mass destruction?*
- » *How can transnational organized crime networks be stopped from becoming more powerful and sophisticated global enterprises?*
- » *How can ethical considerations become more routinely incorporated into global decisions?*
- » *How can the threat of new and re-emerging diseases and immune micro-organisms be reduced?*
- » *How can the changing status of women help improve the human condition?*
- » *How can the global convergence of information and communications technologies work for everyone?*
- » *How can scientific and technological breakthroughs be accelerated to improve the human condition?*
- » *How can growing energy demands be met safely and efficiently?*
- » *How can everyone have sufficient clean water without conflict?*
- » *How can population growth and resources be brought into balance?*
- » *How can sustainable development be achieved for all while addressing global climate change?*

ECONOMIC

POLITICS AND GOVERNANCE

SOCIO-DEMOGRAPHIC

SCIENCE AND TECHNOLOGY

ENERGY, ENVIRONMENT AND SUSTAINABILITY

*Which of these challenges could have the greatest direct impact on regulation in key client sectors?*

*How might these challenges impact client strategies, behaviors and their expectations of law firms?*

Source: <http://www.millennium-project.org/millennium/challenges.htm>

## CRITICAL FORCES SHAPING THE BUSINESS ENVIRONMENT

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**Six dominant forces:** Six key global forces were highlighted through the research, and they are expected to have the greatest impact on business operations over the next decade. They will drive the expectations placed on law firms both in terms of their global footprint and the core markets they serve. These forces are also shaping demands around the services provided and the way in which legal practices are organized to offer seamless global delivery. The resulting choices made by law firms are driving their expectations of the quality and capabilities of the talent pool and the underlying technology infrastructure. Described in detail in subsequent paragraphs, these six forces are: The New Client Agenda, Globalization and Global Mobility, Economic Shifts and Uncertainty, Political Instability, Environmental Responsibility and Socio-Demographic Changes.

**The value of foresight:** In a volatile operating environment, an important potential role for IT emerges in supporting the development of foresight — tracking emerging developments and providing early warning systems. These scanning mechanisms need to highlight relevant trends, developments and emerging ideas at both the global level and for the specific sectors in which clients operate.

## THE NEW CLIENT AGENDA

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*What client demands are being expressed or anticipated around globalization of service delivery models, transparency, integration of systems and process redesign?*

*What client expectations are emerging regarding innovation in everything from management of the client interface to billing approaches?*

Clients are pressuring law firms to evolve, both pre-emptively and in response to a changing global landscape. Hypercompetitive markets are driving the need for speed. Shorter and faster business cycles are forcing businesses to make decisions and implement them much more quickly. At the same time, emerging players in almost every sector will continue to disrupt and challenge the dominance of global firms. These new entrants are overturning old orthodoxies and ignoring accepted “rules of the game.” Their strategy is to disrupt by offering innovative solutions, pioneering new technologies, introducing alternative business models and adopting more nimble management approaches. This pressure is driving existing players to respond with their own innovations and to accelerate their adoption of new and emerging technologies.

**Complexity, competitive intensity and pervasive IT:** In the face of growing complexity and intense competition, clients are already trying to accelerate, eliminate, outsource and rationalize. We are entering an era of tough performance

cultures where longer working hours could become increasingly common. Collaboration across business ecosystems will be common as players seek to partner and reduce the time to market for new initiatives, particularly in developing economies. In the quest for new opportunities and short-term advantage, many firms are expected to push the law to its limits.

Leaders will turn to technology to help identify and exploit potentially short-lived windows of opportunity. At the same time, businesses may find that complexity and constant change reduces their “span of control,” creating a greater focus on the role of IT in monitoring and sense-making of the evolving landscape. IT will sit at the heart of new operating models, with a particular emphasis on the use of artificial intelligence (AI) and robotics to automate tasks previously performed by skilled workers. Clients will expect their professional service partners to respond to these pressures with equally rapid and fundamental innovations.

**CASE STUDY:** Weightmans LLP

# Driving Client Innovation Through Collaborative Conversations

Weightmans LLP is a U.K.-based law firm covering a number of practice areas with a strong reputation and heritage in insurance. Weightmans' goal is to leverage IT to encourage cross-departmental conversations and collaborations that drive client-facing innovation. For example, several years ago, the firm started exploring how electronic dashboards would enable clients to draw conclusions from information in a visual way. Building on work undertaken in the personal injury practice, lawyers in the employment practice developed a claims dashboard — a visual map of the U.K. with dots illustrating the number and size of claims per branch.

Weightmans property group also adopted the dashboard approach to manage clients' property portfolios. The firm used its case management system to build a workflow that captures relevant information to feed the dashboard. Clients are now able to look at an individual property or the entire portfolio. The U.K. map shows where properties are located and provides information about each property. Weightmans LLP's experience suggests that one key to innovation is to leverage the role of IT in encouraging conversations and sharing great ideas across practice areas and departments.

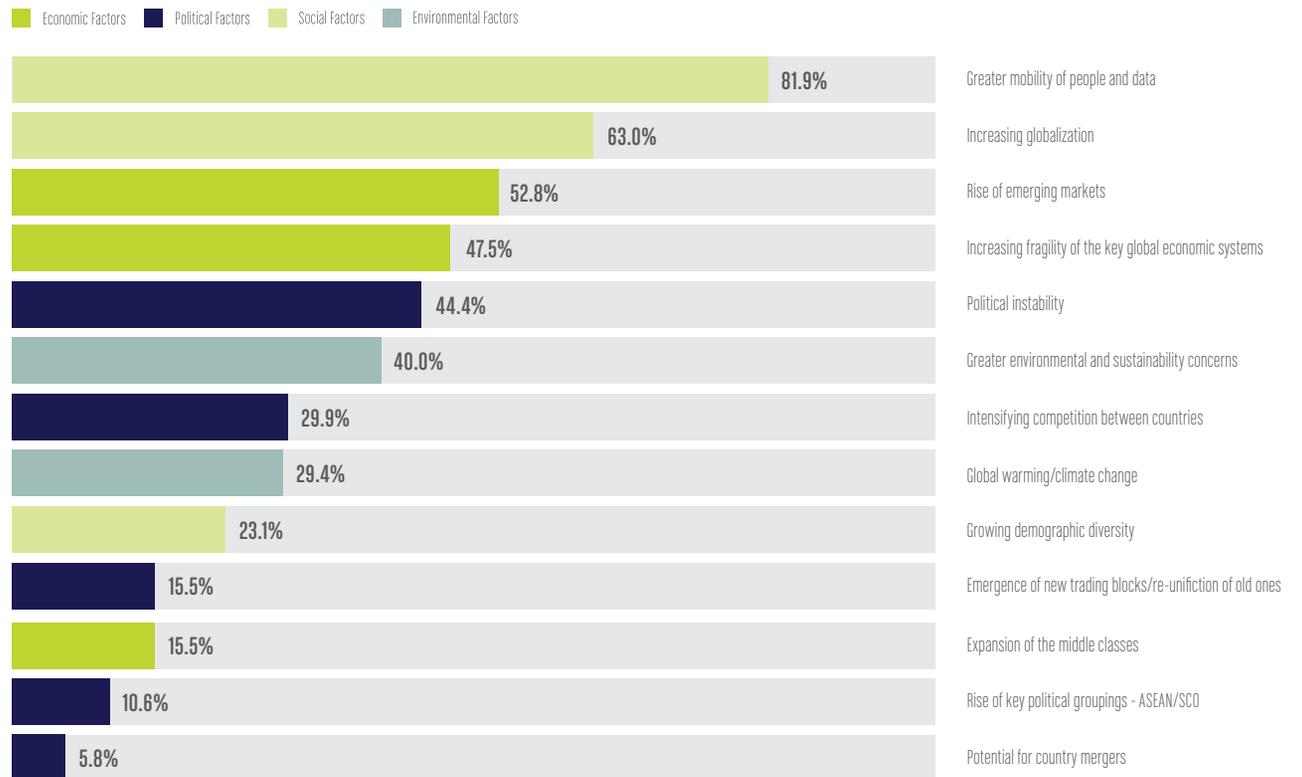
# GLOBALIZATION AND GLOBAL MOBILITY

There is strong expectation that business will be done in more countries, with Asia remaining a prime focus. Latin American and African markets are already becoming increasingly important for corporations. The Internet is seen as a “game changer” here, allowing even the smallest of local firms to participate in global markets and serve customers around the world. Underpinning these shifts is a combination of regulatory changes, technology advances and transport efficiencies. These are eliminating barriers to the movements of ideas, physical, financial, intellectual and digital assets and — perhaps most important — human capital. Greater mobility

of people and data (selected by 81.9% of respondents) and Increasing globalization (63%) were the two options ranked highest of all factors that would drive business over the next decade.

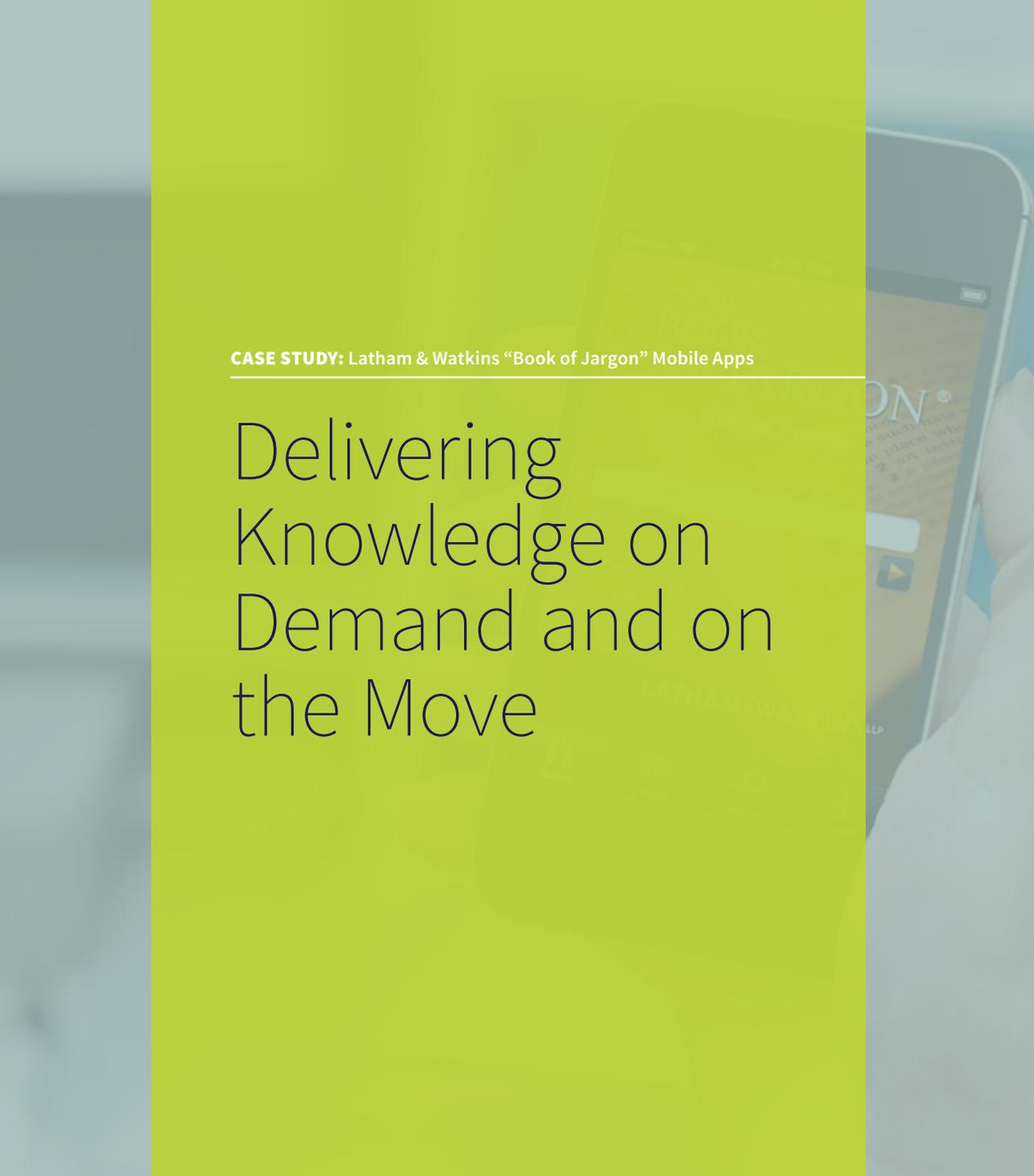
Global expansion creates complex jurisdictional challenges as firms need to understand how to move data around the world and be compliant with local law. This becomes particularly challenging when firms send data to the cloud and the data center sits in a different jurisdiction from where it was created or where it is being used.

Over the next decade, what are the key economic, political, social and environmental drivers that could have the greatest impact on how businesses operate?



*How are law firms of all sizes planning to respond to greater business mobility and the demands of clients for legal support in an increasingly diverse set of global markets?*

*What is the firm’s policy on the use of the cloud and accommodating jurisdictional differences; what advice is being offered to clients on these matters?*



**CASE STUDY:** Latham & Watkins “Book of Jargon” Mobile Apps

# Delivering Knowledge on Demand and on the Move

Latham & Watkins LLP, headquartered in Los Angeles, is a full service international law firm handling complex business transactions, litigation, and regulatory matters. The firm wanted to help demystify sector-specific terminology and legal / business jargon for staff and clients. To address this need, it launched a series of “Book of Jargon” mobile apps for business and legal executives. The apps cover topics such as European capital markets and bank finance, hedge funds, project finance, merger regimes, and bribery and corruption rules in multiple jurisdictions. For example, the Book of Jargon – Hedge Funds app was developed by Latham’s Hedge Fund Task Force to respond to the need for a comprehensive glossary for novices and industry experts. The very popular apps are considered particularly useful for busy executives who can access an encyclopedia of information on the go.

# ECONOMIC SHIFTS AND UNCERTAINTY

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As many law firms seek to enlarge their global footprint, a key consideration is the outlook for the global economy as a whole and key markets within it. Emerging markets — Asia in particular — have become a natural focal point as they are or will become the primary source of growth in almost every industrial sector. However, uncertainty shrouds the future at both the global and local level. In particular, the overhang from the Global Financial Crisis (GFC) remains in evidence, encompassing factors such as:

- Concerns over the level of sovereign debt;
- The robustness of key elements of the banking and financial governance infrastructure;
- Prospects for growth;
- Continued inequalities in wealth distribution;
- The rise of the informal / shadow economy; and
- The challenges faced by many slowly developing countries to change their trajectory.

Our survey respondents cited the two highest ranked economic factors driving business as the Rise of emerging markets (52.8%) and Increasing fragility of the key global economic systems (47.5%).

The informal or shadow economy is becoming a growing issue for many nations, and law firms may increasingly be drawn in to discussions on preventing, policing and accommodating it. The shadow economy is defined as “the market-based legal production of goods and services that are deliberately concealed from public authorities for tax and regulatory purposes.” This excludes trade in illegal activities such as narcotics, human trafficking, weapons and counterfeiting. In some countries, it is estimated that 90-95% of the workforce operate in the shadow economy. As governments look to exercise control, law firms will find potential opportunities to develop new monitoring and control systems, perhaps in partnership with technology companies.

## Economic Factors Driving Business

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*How does the firm track and analyze key indicators in the domestic and global economy that would help spot early warning signals of potential turning or tipping points?*

*How robust are our strategies in the face of a range of different possible economic scenarios?*



Rise of emerging markets



Increasing fragility of the key global economic systems



Expansion of the middle classes

## POLITICAL INSTABILITY

*Could mounting economic, political and commercial issues, tensions and conflicts see greater use being made of legal systems to resolve disputes at the global, national and firm level?*

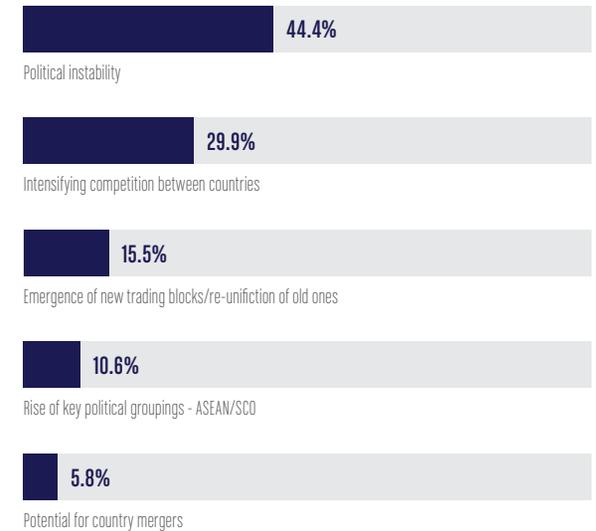
*Could we see growing recourse to conflict management and alternative dispute resolution approaches?*

*How is IT being used to track the evolution of emerging issues and provide an early warning system on their potential to escalate into legal disputes?*

People clearly recognize that many national political systems, global governance institutions and regulatory frameworks will need to evolve or be totally revamped. Economic turbulence, technological developments and social pressures are driving these changes, as evidenced by the Arab Spring, the “Occupy” movement and unrest in many countries as citizens struggle to adjust to a changing world order. The resulting reforms could create major opportunities and challenges for law firms.

**Decline and reinvention of political systems:** In the survey, Political instability (44.4%), Intensifying competition between countries (29.9%) and the Potential for emergence of new trading blocs or re-unification of old ones (15.5%) were all highlighted as having increasing impact on business. However, only a small proportion of respondents acknowledged the potential impact of the growing political power and influence of Asia and China in particular and the resulting Rise of key political groupings such as ASEAN and the Shanghai Co-operation Organization (SCO) (10.6%). Despite growing doubts about the ability of many nations to manage their debt and compete effectively in the modern era, only 5.8% saw the Potential for country mergers as a possible solution over the next decade.

### Political Factors Driving Business

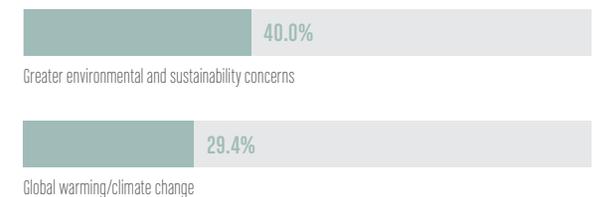


## ENVIRONMENTAL RESPONSIBILITY

*What new IT demands could arise from the need to track and report on the firm’s environmental footprint?*

Environmental responsibility is high on the agenda in most corporations, and the legal sector is beginning to prioritize the issue. Greater environmental and sustainability concerns (40%) and Global warming/climate change (29.4%) were highlighted by survey participants as critical factors shaping business behavior in the years ahead. Environmental responsibility is expected to become a growing focal point for law firms and their clients in many markets and may increasingly be enforced through regulation. New markets are also emerging in environmental goods and services and an increase is expected in the level of legal work arising from environmental issues resulting from corporate activities.

### Environmental Factors Driving Business



# SOCIO-DEMOGRAPHIC CHANGES

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*How might law firms need to rethink their policies, processes, reporting and support mechanisms for everything from recruitment, retention and rewards to diversity and managing a multi-generational workforce?*

Four core demographic trends are expected to have a major impact over the next decade:

- Global population growth
- Growing female participation in the workforce
- An aging population in both developed and developing countries
- Expectations of continued migration

**An aging society:** An older population will all affect the composition and expectations of the workforce over the next decade. Improvements in health and life expectancy continue unabated and are starting to impact developing economies. At the same time, radical life extension is becoming a major focus for scientific research with experiments demonstrating the potential to extend life expectancy of different species by up to a factor of 10. Many researchers in the field are predicting that by 2025, humans could routinely be living to 120 and beyond. Such developments will have significant impacts across society from pensions to housing and the workplace. Given a pension system that wasn't designed for people to live to 90 and beyond, workers may want to stay in the workplace long past the traditional retirement age.

**Generational diversity:** Firms will need to determine whether and how to accommodate five or six generations in the workplace. A multi-generational workforce brings with it the challenges of differing needs and beliefs around everything from access to opportunity and the role of hierarchy to communication styles and skepticism towards the use of technology. For Generations Y (born between the early 1980's and mid-1990's) and Z (mid-1990's to the present day), work plays a different the role in their lives compared to Generation X (mid-1960's to early 1980's) and the Baby Boomers (1946-1964).

Overlay on these generational factors the issues of gender, sexuality and cultural differences, and accommodating diversity in all its forms could be one of the biggest HR challenges of the next decade.

There is a growing recognition that Generations Y and Z in particular are far more likely to launch a start-up venture straight out of university than their predecessor generations. These firms are typically "born-digital" and expect to do everything in the online environment from sales and service to back office tasks such as accounting and legal. Law firms are being forced to innovate around how to deliver services to these new digital ventures.

**Expectations and education of tomorrow's workforce:** For those entering law firms, the concept of quality of life is becoming ever more important. For example, it is increasingly clear that young lawyers do not necessarily want to become partners and may prefer greater leisure time and a more flexible portfolio career. Accommodating such demands will require an investment in the IT enablers of flexibility, such as project management tools and multi-party document assembly applications. The born-digital generation might have different expectations as to how work should be done and will be increasingly less tolerant of the need to invest manual effort in searching for and compiling information when they know that technology can do it far more rapidly, efficiently and reliably.

Alongside diversity, the advent of free education to degree level and beyond via the Internet has potentially massive ramifications for how the future legal workforce is educated and from where it will be recruited. The combination of these factors led 23.1% of our survey respondents to highlight Growing demographic diversity as an important force in business, alongside Expansion of the middle classes (15.5%). These factors will impact the nature and expectations of the workforce and expand potentially important markets for end clients.

**CASE STUDY:** Perkins Coie's StartupPerColator

# Using the Web To Deliver Low-Cost Advice to Start-Ups

Perkins Coie is an international law firm headquartered in Seattle, providing corporate, commercial litigation and intellectual property legal services to Fortune 500 companies and small independent start-ups. In an effort to create innovative ways to support the needs of emerging companies, Perkins Coie's Emerging Companies & Venture Capital practice developed StartupPerColator.com. The goal was to create a user-friendly interactive website that enables entrepreneurs to generate the legal documents needed to form a Delaware "C" corporation and term sheets easily and free of charge. Launched in March 2012, the purpose of the site is to educate entrepreneurs on legal challenges and trade-offs related to forming and operating a business.

The site allows Perkins Coie to contribute back to the startup ecosystem and highlight its innovative way of doing business. In addition to the document generator, the website features the Founder Tip of the Week — a blog that consistently garners media attention from publications such as *Forbes*, *Inc.com* and *Bloomberg*. Melanie Rubocki, partner and co-chair of the firm's Emerging Companies & Venture Capital practice, says that "StartupPerColator is different from many of the legal document generator tools in that it encourages open dialogue between the lawyers and entrepreneurs who are typically focused on the next generation of technology." The practice is specifically targeting startups in high growth sectors such as software, information technology, mobile, e-commerce, clean tech and life sciences.

On average, startupPerColator receives more than 800 unique visitors per week from more than 100 countries. The firm has received a noticeable uptick in new conversations and many have led to new client engagements as a result of the visibility the website has created since launch.

# IMPACT ON LEGAL

*How might these **global drivers of change** affect law firms and the sector more broadly? These tables present the key factors and issues that need to be considered, as highlighted by the interviews, workshops and survey responses.*

## UNDERLYING TRENDS

### The New Client Agenda

- Rising client expectations
- Demands for “anytime/anywhere” access
- Cost and time pressures
- Clients with increasingly global ambitions

### Globalization and Global Mobility

- Growing number of clients and law firms looking to become international
- Increasing influence of the BRICS and Asia in particular
- Shift away from the U.S. as law firms look for more open investment locations

### Economic Shifts and Uncertainty

- Shift of economic wealth and influence to emerging markets
- Deepening sense of failure of the key economic systems to function properly
- Business system and the global economy increasingly networked

## KEY CONSIDERATIONS

### Law Firms

- How can firms differentiate in an era of cost-led competition?
- Will lawyers increasingly have to become strategic business advisors to differentiate themselves?
- Could 24/7 availability and longer hours become more common?
- Could a primary focus on cost work against sustainable efficiencies?
- Could the relationship model evolve so clients increasingly become partners — sharing risk and reward?

### The Legal Sector

- Could clients start to look outside the legal sector for legal solutions, particularly around issues such as e-discovery and the analysis of large data sets?
- How might the sector accommodate new entrants in its professional bodies?

### Law Firms

- Will all firms need to offer their clients a global level of support?
- How can firms deliver effective service in emerging markets without a presence on the ground?
- Could important new legal centers arise (e.g., South America, South Africa)?
- Will law firms see the untapped African market as an opportunity?

### The Legal Sector

- How might requirements for legal services grow and evolve in emerging markets?
- What new jurisdictional challenges might arise?
- Could this drive further M&A?
- Might four or five mega global practices dominate the global market and co-exist with smaller and niche practices?

### Law Firms

- How might law firms’ business models and strategies need to change to accommodate economic uncertainty?
- How might changes in business practices impact law firms?
- Will there be an increasing economic interdependence between companies / law firms and national economies?

### The Legal Sector

- Could on-going economic turbulence make continued high technology societies and a high tech legal sector impossible?
- For how much longer might the focus of economic growth continue to shift from western to developing economies?
- What new perspectives might emerge on “sustainable growth”?

# IMPACT ON LEGAL

How might these **global drivers of change** affect law firms and the sector more broadly? These tables present the key factors and issues that need to be considered, as highlighted by the interviews, workshops and survey responses.

## UNDERLYING TRENDS

### Political Instability

- Governments struggling to take on their traditional roles
- Governments having less capacity to enforce decisions
- Governance systems challenged to cope with 21st century demands
- Rising citizen expectations for political transparency and participation

### Environmental Responsibility

- Neglected environmental challenges
- Finite resources and potential limits on economic growth
- Trend towards transparency and sustainability

### Socio-Demographic Change

- Global population growth
- Continued migration
- Aging workforce
- Generational differences in motivation and work style
- Generational differences in attitudes toward technology

## KEY CONSIDERATIONS

### Law Firms

Could some nations outsource governance and regulatory roles to the legal sector?  
How might political instability influence the risk assessment on entering a new market?

### The Legal Sector

How might regulatory changes impact barriers to entry to the sector?  
Could the sector lose its monopoly?  
Could the South American model of routing invoices via tax authorities to ensure tax revenue is collected become more common world-wide?  
As data flows freely across borders, who will guarantee the security of data held in the cloud?

### Law Firms

How will potentially unsustainable use of resources impact law firms?  
How should law firms respond to the transparency trend impacting the business world (e.g., consumers wanting to know the origin of the products they buy)?  
What actions are being taken to drive down law firms' environmental footprints?

### The Legal Sector

Could future models of capitalism and economic management evolve to reflect broader, more socially and environmentally responsible success measures?  
Will industry-wide initiatives be required to drive down the sectors' environmental impact?

### Law Firms

Is there a generational divide within law firms and how is it impacting firms' output?  
What changes in approach are required to motivate younger lawyers?  
How can law firms serve young and "born-digital" tech-savvy clients effectively?  
How are firms adapting to the IT demands of young lawyers?

### The Legal Sector

Could the legal sector experience significant generational tensions?  
What might be their impact?

## KEY STRATEGIC QUESTIONS

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*How are we tracking and evaluating key global future factors impacting our clients and the legal sector?*

*What key economic and political assumptions, risk factors and possible scenarios are we preparing for in our future strategies and tactics?*

*What future time horizon should we be considering in developing our future strategy — one, three or four+ years?*

## IT CHALLENGES AND CHOICES

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*How can we use IT to help us track relevant future factors?*

*How can we integrate relevant future insights into our client management systems?*

*How can we include relevant future insights into our human resources and staffing systems?*

*How are we factoring the review of our environmental and social performance into our internal management reporting systems?*



# STRATEGIC CHALLENGES FOR THE LEGAL SECTOR

Sector-specific trends and developments that could drive future law firm business strategies and the resulting expectations of IT.

## CRITICAL INSIGHTS

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**IT Centrality:** Technological innovations are disrupting and transforming our world. Effective use of technology will be key both in responding to these strategic, structural and operational challenges and in creating new value.

**Rising Client Expectations:** Transparency, metrics, cost are key; in complex, increasingly competitive environments, deep client insight, collaboration and security are emphasized; expect less loyalty as new general counsels and tougher procurement approaches drive the search for innovation and value.

**Reworking the Model:** Law firms must automate; they must plan for commoditization and free online delivery; and they must experiment with new organization structures, funding sources, business models and alternative fee arrangements on a regular basis.

**New Delivery Models:** Lawyers can choose to be independent or intermittent partners in virtual firms; non-legal firms and AI will offer legal services.

**Scale Up or Down:** Bigger is seen to be better in globalized markets, and developing consistent global service may be a challenge; M&A may increase as firms seek to shorten “time to market” in new geographies; mid-sized firms may be squeezed; small firms may retaliate with high value technical specialties and local expertise.

**Pursuit of Differentiation:** Quality will be critical, with emphasis on the four “F’s” of service: fidelity (trust), fine (high quality), fast and flexible; emphasis on personal skills, deep client knowledge and business insight in the face of complex uncertainties.

**IT Investment:** Firms may require major increases in technology budgets over a long period of time if they are to remain competitive in their use of IT.

## A COMPLEX AND RAPIDLY EVOLVING AGENDA

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In this section we focus on the challenges identified as being specific and critical to the future of the legal sector. An unprecedented level of change and disruption is expected over the next decade. The sector will be driven by the global forces identified previously, coupled with the rapidly evolving industry-level future factors listed below and accelerating innovation. In response, law firms will come under pressure to rethink and redesign every aspect of their organizations. Already, firms are transforming strategies, service offerings and ownership models. Internally, new thinking is being embraced around future structures, global delivery models, performance reporting, workplace design, workflows, talent management of professional staff and the role and governance of IT.

The analysis of industry challenges presented here focuses on six key themes and the resulting Strategic Choices:

- » *Technology Disruption, Diffusion, Management and Embrace*
- » *Trends Driving Client Strategies and Operational Activities*
- » *Future Factors Shaping Legal Industry Firms*
- » *Future Structure of the Legal Industry*
- » *Impact of the Emerging Economies*
- » *Differentiation in the Face of Change*

**CASE STUDY:** Ogletree Deakins

# Driving New Revenues Through Effective Knowledge Management

Headquartered in Atlanta and Greenville, Ogletree Deakins is one of the largest U.S. labor and employment law firms representing management in all types of employment-related legal matters. Ogletree believes competition is driving firms to look beyond providing excellent legal service; and it continuously maintains a focus on consistency, effectiveness and innovation. The firm sees the growing use of alternate fee arrangements as a driving force for efficiency and financial sustainability. To meet these challenges, in 2013 the firm launched IntelliCase, a Web-based agency charge tool and O-D Comply, a subscription-based 50-state compliance tool.

Developed by the firm's Knowledge Management (KM) Department, IntelliCase enables clients to monitor and manage employment discrimination charges and view key analytics from aggregated charge data that could aid in reducing future charges. Custom built on SharePoint 2010 Enterprise using Handshake, IntelliCase supports several large clients, tracks hundreds of agency discrimination cases and has helped bring in new business —providing an instant return on the firm's KM investment.

Using a flat-fee subscription model, O-D Comply helps clients address the growing complexity of federal and state laws, regulations and court interpretations in a cost-effective manner. Attorneys provided the content, and the KM Department custom-built this innovative online tool using SharePoint 2010 Enterprise with Microsoft Web App integration. Current topics include background checks, state leave, wage and hour laws, employment applications, garnishments and electronic signatures. The firm feels O-D Comply is a great success, with more than 60 clients and 150 subscriptions.

# TECHNOLOGY DISRUPTION, DIFFUSION, MANAGEMENT AND EMBRACE

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The future technology timeline and its possible impacts are explored in detail in the subsequent sections. However, at the strategic level, it is increasingly clear that technology-enabled disruption could be the single biggest issue for the sector over the next decade. IT is expected to facilitate the emergence of new strategies, delivery approaches and business models; it will enable the transformation of existing firms and pave the way for new entrants. The physical and digital world are becoming interdependent, blending to create a new phenomenon, one we are just beginning to understand. Most accept that, in the future, neither the physical world nor the digital world will be sufficient by itself to fulfill our needs.

**Accelerating innovation:** The pace of technological diffusion is also expected to accelerate. Advances in IT and AI could bring about dramatic changes in the way cases are conducted and information is analyzed and presented back to clients. Everything from the management of client relationships to courtroom practices are expected to change because of advances in technology. Even legal firm infrastructure as basic as the office library and file room may become outmoded, and legal “real estate,” as one interviewee suggested, reduced to a foyer and a meeting room.

**Securing the asset:** The growing reliance on IT, and the sheer volumes of data involved, are creating strategic information management and security challenges. Client security requirements, the automation of regulation and compliance, data protection and data privacy are expected to become major issues for the boardroom as well as the CIO, particularly when working across and between different national and state jurisdictions.

**New IT approaches for a new generation:** There is a growing sense that we are experiencing a shift in mindset from viewing IT as a useful back office tool to embracing its potential as a critical enabler of future opportunity. For example, the preference of “digital natives,” both lawyers and clients, for virtual engagement over face-to-face interaction, coupled with the rise of AI, might result in radical new approaches to legal service delivery. Current expectations both for “how we do work around here” and for “what the client wants /

expects” could change as younger generations enter the system on both sides of the lawyer / client relationship.

**Rethinking IT investments:** A prolonged and significant increase in IT budgets will be required for many firms to face up to the emerging challenges and opportunities. The cost of the underlying infrastructure may not increase dramatically; however, spending on applications, devices, communications technology and collaboration tools could rise substantially. Attitudes will need to change from viewing IT as a cost to the business to seeing it as a strategic investment to secure customer loyalty, drive innovation and create the future. Firms will have to get used to a faster pace of change in technology and shorter time windows in which to achieve a return on investment. Some have voiced concern that the pressure to keep up with clients, competitors and new entrants could see firms enter a never-ending technology “arms race.”

**Embedding the law in tomorrow’s world:** Technology is also expected to change how the law manifests itself in society. Analysts such as futurist Marcel Bullinga argue that we will see a shift from the traditional model of the written law enforced by individuals to an environment where rules and laws will be incorporated into and enforced by expert systems and chips embedded in the cars, appliances, doors and buildings that make up our physical world. In this view, future governments will no longer write laws that are interpreted and enforced by people. Instead, “laws” will be open-standards software with authoritative algorithms that contain the appropriate regulatory information and protocols over the operation of all human activities.

In this vision of the world, intelligent devices will “know” what laws or regulations to apply and how to act upon them — making and enforcing decisions. They will resolve inter-device issues and legal conflicts without human intervention. What were once called “constitutions” will be composed of algorithms, describing processes by which they shall be distributed, protected, implemented, and revised, and new authoritative algorithms formulated. What were once “courts,” “judges” and “lawyers” will be algorithms as well. No unaugmented humans need be involved.

*How does the leadership ensure it is keeping up to date with advances in technology?*

*What executive level process is in place for regular exploration of the potential short-, medium- and longer-term opportunities and benefits of emerging IT developments and the associated investment requirements?*

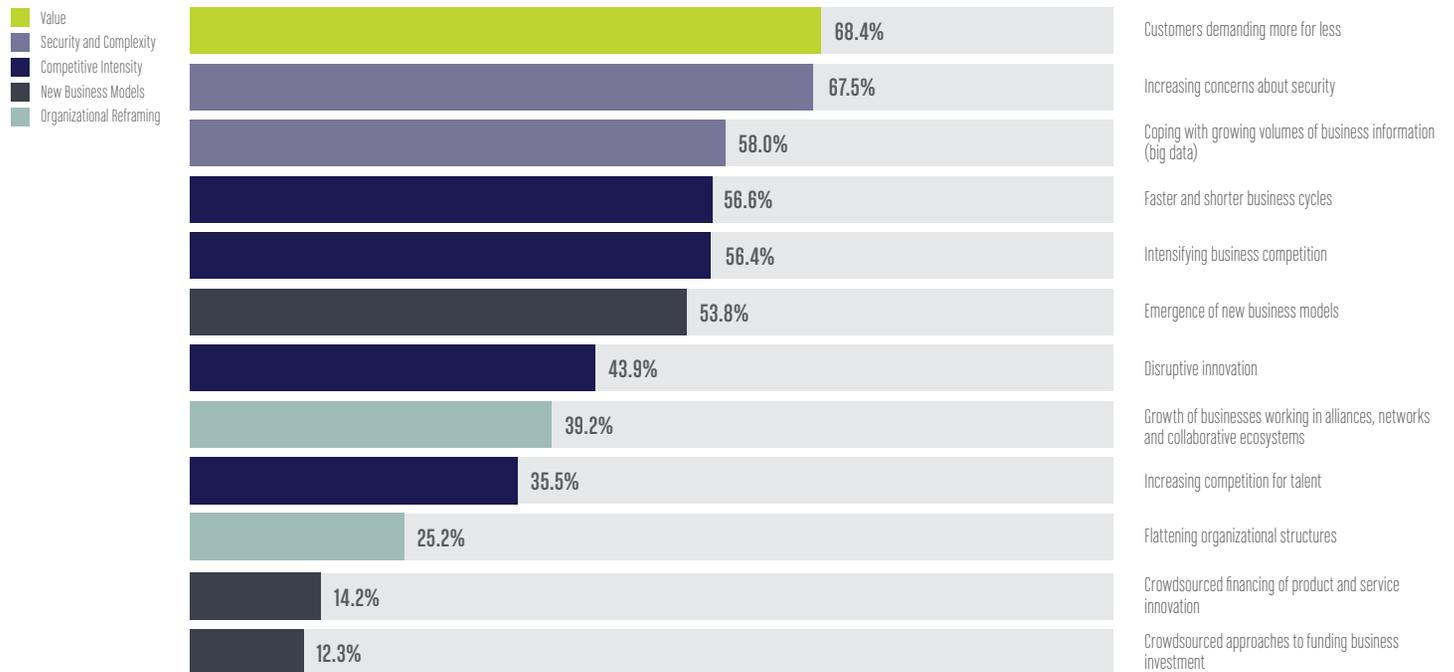
# TRENDS DRIVING CLIENT STRATEGIES AND OPERATIONAL ACTIVITIES

Interviewees and survey participants were asked to select the most critical business trends that could impact the strategies and operations of clients and their law firms over the next decade. Five key themes emerged around value, security and complexity, competitive intensity, new business models and organizational reframing. These are explored below:

**The search for value:** The Global Financial Crisis (GFC) has driven a new austerity across literally every sector that has resulted in clients looking for lower charges / greater value. For many in the legal sector, the downturn brought the first break in an almost uninterrupted 20-year growth phase. Survey respondents reported that customers demanding more for less (68.4%) will be a permanent backdrop.

**Reporting, metrics and analytics:** The need for regular progress and performance reporting to clients is expected to increase in importance and could be a short-term differentiator. Understanding key billable metrics will become more important in meeting clients' expectations about budget management and improving transparency and trust. Firms will need to focus on ensuring all staff understand the cost drivers on each matter. Many will invest in providing smart analytics to measure profitability, learn from cross-matter comparisons and use the insights to maximize lawyer fee generation time. Potential clients are increasingly expected to demand free access to performance data and analytical comparisons as part of the law firm selection process. New entrants may be increasingly interested in metrics and analytics underpinning revenue growth as well as cost reduction.

Over the next decade, what are the critical business trends that could impact the strategies and operations of clients and the law firms that support them?



*What efforts are in place to respond to this focus on value through the use of IT to streamline processes and cut operational costs?*

*Which metrics and analytical tools is the firm already sharing with clients; how can their provision be used as a competitive differentiator?*

# SECURITY AND COMPLEXITY

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While IT is now accepted as a central and critical enabler of modern business, it has introduced key issues that some are struggling to address. Reports suggest that firms are already losing business due to client concerns over system and data security. In particular, the challenge of exchanging large volumes of data between clients and their law firms and the need to allow lawyers to access corporate systems is expected to drive increasing concerns about security (67.5%), according to our survey responses. The need to capture, manage and exploit the sheer scale of data being generated in the enterprise is driving up complexity across the value chain. Another critical issue for the next decade is expected to be Coping with growing volumes of business information (big data) (58%).

The complexities of data and systems security is expected to increase in the short term as a result of firms seeking to make use of cloud-based solutions for applications, infrastructure, data storage and communications. Sectoral differences in legislation around data protection are expected to continue, creating an important internal monitoring role for IT. An opportunity arises to provide physical and online client advice and auditing to ensure they are compliant with cross-sectoral and cross-jurisdictional data security requirements.

## Key Security and Complexity Issues

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*What is being done to benchmark security processes and ensure best-in-class talent and practices in this arena?*

*What new service line opportunities emerge out of rising security concerns and the growing regulatory and environmental complexity of many client sectors?*



Increasing concerns about security



Coping with growing volumes of business information (big data)

## COMPETITIVE INTENSITY

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Historically, the strength of long-standing client relationships was seen as a potential buffer against competition. However, there is a growing awareness that “relationship decay” may be setting in. Firms risk losing long-standing client relationships as the relevant general counsels, key partners and rainmakers retire from their firms. Those replacing them must acknowledge the new competitive reality — the dynamics in every sector are being transformed by a variety of forces, with IT acting as a central enabler and disruptive force.

**Time compression, intense competition and disruptive innovation:** Faster and shorter business cycles (56.6%) are expected to further intensify competition and the pressure to act quickly. This includes accelerating the launch of new products and services and driving the extraction of business value from new activities in an ever-shortening timeframe. Time compression is seen as just one aspect of a trend towards Intensifying business competition (56.4%). The ability to respond to and harness Disruptive innovation (43.9%), often enabled by IT, is seen as a key future competitive differentiator. A growing potential oversupply of trained lawyers, coupled with the displacement effect of new technology, resulted in slightly less emphasis on Increasing competition for talent (35.5%) as a critical challenge.

**Standing out in a buyers’ market:** The changing landscape coupled with the growing role of the procurement function led many interviewees to suggest that legal service provision would become more of a buyers’ market with IT helping clients to compare, monitor and manage law firms in a more rigorous performance-orientated manner. While demand for legal input in some sectors is projected to grow as business gets more global and complex, we do not expect to see a shift in power back to law firms.

**Proof of value:** To win opportunity in rapidly evolving new markets, legal enterprises will increasingly need to demonstrate competence in knowledge acquisition, sense-making, creativity, and extracting insight from ubiquitous and unstructured data. The value of what lawyers bring to the table is also expected to come under increasing scrutiny

in the face of fundamental changes taking place elsewhere in society. For example, the open source movement is gaining popularity in domains as diverse as software development and automotive design. The pioneers reject the notion of patents and the ownership of IP, opting instead to share and develop their offerings with a like-minded community of developers. Though the volume of patent work may decline, opportunities may emerge for lawyers to develop new related services. Many argue that a fundamental shift is required in law firm strategies to focus increasingly in providing proactive services that pre-empt and prevent problems as well as dealing with them when they arise.

**Lawyer rating sites:** Intense competition means more choices for the client, and law firms are challenged to stand out in the comparison process. The idea of customers rating their providers is becoming increasingly common, encompassing everything from medical practitioners to consumer products, banks and insurance companies. Such services are now in regular use in the consumer law field through sites such as [www.legallybetter.com](http://www.legallybetter.com) and [www.icomparesolicitors.co.uk](http://www.icomparesolicitors.co.uk). There is growing potential for such offerings to extend to commercial law firms and individual lawyers. This service will be particularly attractive to start-ups and smaller clients.

*In the face of a constantly changing competitive environment, how frequently does the firm review its overall business strategy to ensure it remains relevant and is taking full advantage of the efficiency and innovation opportunities afforded by IT?*

*What data can the firm provide to show how its performance in servicing client requirements has improved over time?*

“While demand for legal input in some sectors is projected to grow as business gets more global and complex, we do not expect to see a shift in power back to law firms.”

## NEW BUSINESS MODELS

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*What efforts are in place to start developing technology tools that enable the firm to simulate and evaluate alternative possible billing approaches and respond quickly in the face of client demand or competitor actions?*

The rise of dotcom businesses in particular over the last 15 years has stimulated the search for new commercial management models. This has intensified through the quest for new sources of value in a more austere post-GFC business era. Alternative billing approaches, contingency fees, fixed price contracts and shared risk arrangements have already appeared on the legal landscape. A slight majority of respondents expect the Emergence of new business models (53.8%) to become common for both law firms and their clients. As clients adopt commercial approaches that contain more risk, they are expected to ask professional service partners to share some of that burden. However,

innovation is expected to have its limits in the shorter term. While new models are emerging, only a minority expect the currently popular “crowdsourced” funding approaches to have a significant impact on either the Financing of product and service innovation (14.2%) or the Funding business investments (12.3%).

## ORGANIZATIONAL REFRAMING

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*How does the firm track and review the new structural models that are being used in legal and a range of other professional service sectors?*

*How can we learn from these models when considering alternative possible future organizational designs?*

A new competitive era is driving clients and law firms alike to think about how they organize to deliver their offerings. Firm boundaries are expected to become more flexible, and a wide variety of different delivery partnerships from joint ventures to informal arrangements could emerge. There is an expectation that organizational and business structures may increasingly differentiate between back office, commodity law and value-added legal services. Change will be seen both in terms of geographic location of functions and the split between in-house and outsourced activity. While some may choose to establish on- or off-shore operations centers or subsidiary companies to provide a range of these services, others may opt to sell off the activity to generate revenue and then rent back the services. At the same time, there is an expected growth in virtual law firms with technology as the glue that enables a diverse group of professionals to deliver client requirements on an “as required” basis.

**New organizational models:** A constantly changing environment could see firms having to change their organizational design and business model on a regular basis; technology will be a critical enabler. In the nearer term, the expectation is that the trend towards a growing

business focus will continue with the professionalization of functions such as marketing, IT, HR and finance. The recruitment of external non-legal CEO’s may continue, particularly if firms change their ownership structure and external shareholders request such changes. Internally, organizational design priorities will include driving efficiency, speed and responsiveness through multi-disciplinary teams, collaboration and seamless working. Flexibility will be a priority, with the emphasis on letting staff work from home, on the move or wherever they can be most effective.

While many of these new models may have been slow to touch law firms in the past, the impact is becoming more visible. People expect the future Growth of businesses working in alliances, networks and collaborative ecosystems (39.2%). As firms automate, outsource and collaborate, the net effect is expected to be a reduction in overall headcount, with some suggesting that this will result in Flattening organizational structures (25.2%). Adoption of different resourcing models will require advanced processes and systems for demand management, resource planning and workflow coordination.

**CASE STUDY:** Virtual Law's Flexible Employment Model

# A New Model Law Firm

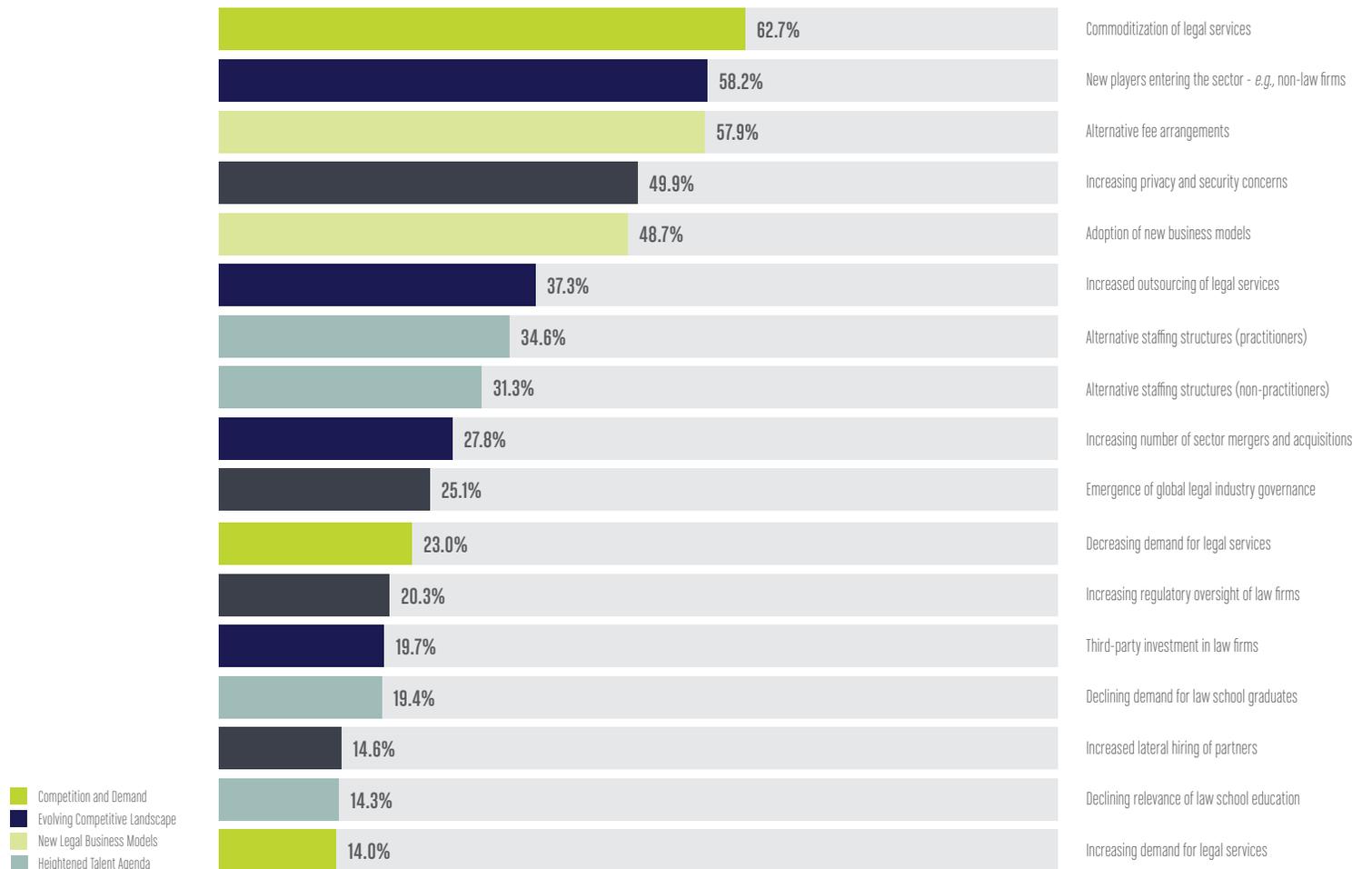
Virtual Law is a London-based full service commercial law firm offering advisory services to businesses and in-house locum services for clients requiring support or specialist expertise on a project-by-project basis. The firm follows three basic principles: its solicitors become part of the client's management team to work towards the same goal; its solutions are always tailored to the client's needs; it seeks to go the extra mile by offering free knowledge-sharing initiatives such as Virtual Seminars, Employment Matters Live! and the Virtual Law Innovation Hotline, a general IP advisory service for entrepreneurs and R&D professionals.

Virtual Law does not maintain a partnership structure, and it hires experienced practitioners from the major firms. All its lawyers are self-employed, working the hours of their choice and receiving up to 75% of their billings. This flexible, "virtual" business model removes most of the overhead associated with traditional law firms. This means the firm can deliver top-tier service and quality of advice for a fraction of the fees of a traditional firm. The firm's technology platforms are seen as a critical enabler of the success of this model.

# FUTURE FACTORS SHAPING LEGAL INDUSTRY FIRMS

Survey participants were asked to select the most applicable options from a list of future factors that could have the greatest impact on legal industry firms over the next decade. The list was derived from the interviews and desk research. Four key trends were emphasized: competition and demand, an evolving competitive landscape, new legal business models and a heightened talent agenda:

What future factors could have the greatest impact on legal industry firms over the next decade?



## COMPETITION AND DEMAND

Increased pressure on fees coupled with rapid advances in IT are expected to drive an ever-increasing scale of automation and the resulting Commoditization of legal services (62.7%). In the new competitive environment, some expect Decreasing demand for the provision of legal services (23.0%). Key drivers for this change include the growth in online provision of legal services, new firms which seek to minimize their recourse to traditional legal routes, simplification of legal regimes and a potentially less litigious environment. A smaller percentage of respondents expect to see Increasing demand for legal services (14.0%).

**Strategic product and service planning:** In the face of constantly changing client needs and increasingly aggressive competitors, law firms will need to adopt a more strategic and systematic approach to service planning and pricing. The

portfolio of offerings will need to be reviewed on a regular basis to determine which elements could be commoditized, delivered via the Web and / or eventually provided for free over time. Leaders will develop clear roadmaps showing the planned evolution of each offering, highlighting where gaps in paid and premium value service and product offerings might emerge. This may also drive a focus on identifying offerings which can be sold on an annual license basis, providing a continuing — though potentially declining — source of revenue over time. This more strategic approach to planning and pricing future offerings will drive the adoption of more sophisticated portfolio modelling and valuation tools. A clear understanding of the likely future mix of service offerings and the skills required to deliver them will also help with long-term workforce and capability planning.

*How will the firm evolve its competitive strategy over the next one, three and five years?*

*How often do we “rehearse the future” by considering how to respond to threats such as commoditization and new entrants?*

*How are we evaluating the role IT can play both defensively in helping to drive down costs and in creating new competitive propositions?*

Competitive Factors Impacting the Legal Industry



Commoditization of legal services



Decreasing demand for legal services



Increasing demand for legal services

# EVOLVING COMPETITIVE LANDSCAPE

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The boundaries and composition of the legal sector are expected to mimic the changes being seen in client sectors. As mentioned above, law firms must try to find suitable organizational and financial models to compete in a constantly evolving landscape. The window over which such models might be sustainable seems likely to decline given the pace of change and the shortening of business cycles. Opening up the regulatory framework will allow non-legal firms to capture legal work. For example, in the U.K. many licenses have been issued to non-law firms.

A range of companies are expected to explore the potential to leverage existing client relationships and extend their offerings into the legal sector. These could include management consultants, auditors, investment firms and technology providers. As the sector automates and the returns on efficiency and volume become apparent, the attraction is also expected to grow for external investors. This might take the form of buying into existing players, creating or buying into merger and acquisition deals (M&A), financing ventures by entrants from other sectors and funding start-ups. The next few years could also see a growth in the number of legal sector incubators supporting the creation, financing and growth of potentially disruptive new entrants.

**Alternative business structures:** Interviewees and survey respondents see the U.K. market as being more innovative than the U.S. in terms of business funding and ownership models. This is largely a result of the Legal Services Act 2007 which came into full effect at the beginning of 2012. The act allows for Alternative Business Structures (ABS) and private investment in and ownership of law firms. Many believe that this will see firms increasingly leaving the U.S. and other jurisdictions in favor of the U.K. in order to secure the growth funding they need, not least to finance increasing investment in IT.

**New entrants, delivery partners and investors:** A slight majority of respondents expect to see significant change with New players entering the sector, including non-law firms and virtual law firms (58.2%). Clients and law firms alike are expected to pursue Increased outsourcing of legal services (37.3%) and competitive pressures are also expected to drive an Increasing number of sector mergers and acquisitions (27.8%), with Third party investors (19.7%) expected to play a growing role.

## Evolving Landscape of the Legal Industry

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*What mechanisms are in place for early identification of new entrants with alternative services, delivery approaches and pricing models?*

*How do we undertake the assessment of both the competitive threat and the potential to collaborate, respond to or mimic the new offering?*



New players entering the sector  
- e.g., non-law firms



Increased outsourcing of legal services



Increasing number of sector mergers and acquisitions



Third-party investment in law firms

**CASE STUDY:** von Briesen & Roper's inGenious Bar

# Redesigning Technology Training for Lawyers

von Briesen & Roper is a Wisconsin-based law firm serving global clients. The firm realized that a major obstacle to the success of new technology adoption was getting users trained and comfortable with the systems. The firm decided to reinvent technology training from the ground up and launched the inGenious Bar as part of its von Briesen University relaunch in 2013. The central idea is that effective training can be delivered in short, one-on-one sessions lasting only 5-10 minutes. Working on the premise that scarcity breeds demand, the inGenious Bar opens once a week for 90 minutes to teach one pre-determined skill to attorneys and staff in a hands-on, high-energy setting. The firm has found that attorneys and staff can learn a lot in five minutes, with sessions such as: "Three Clicks to Installing a New Printer;" "Metadata Scrubbing Defaults and Settings;" "Dictating from the Terminal and Receiving Transcriptions When You Land;" "How To Send Secure Email;" and "How To Encrypt USB Drives Quickly and Easily."

The inGenious Bar showcases many different technologies to raise the level of awareness and adoption. The training model is having an impact, going from less than 10% of attorney participation in non-CLE training before the launch to over 60% afterwards. The five minutes multiplied by 52 weeks add up to four hours of training per year, which von Briesen believes is more than that provided by most firms. An additional benefit has been the increased level of interaction between attorneys, staff and the IT team. Now when people call the helpdesk, they know who they are talking to and have developed a personal rapport. von Briesen feels the inGenious Bar continues to be a great success and people often ask what topic will be next.

## NEW LEGAL BUSINESS MODELS

New financial models for investing in, running and charging for law firms' services are already in evidence. Technology will inevitably continue to shift value-adding activities to commodities, driving a continuous unbundling of cases and service offerings. The goal is to determine the high value components to be handled in-house and identify the commodities that can be delivered through lower cost options: automation, outsourcing, off-shoring or "rent-a-lawyer" arrangements.

**Pricing strategies:** Some argue that the focus on billable hours can lead to inefficiency and that more innovative pricing models are inevitable. To address this, firms are expected to increase the use of pricing groups using a range of software tools and analytics, comparing historical data and project characteristics to explore the impact of different pricing strategies. A key role here is using the tools and resulting outputs to communicate with and persuade clients that they are getting the best deal. A majority expect growth in the trend towards Alternative fee arrangements (57.9%) that has already been seen in many markets. More radical shifts in the Adoption of new business models (48.7%) are also anticipated as firms come under growing pressure to compete for business and share risk with their clients.

*What new billing approaches / models are clients asking for or adopting with other professional services providers? Who is responsible for the systematic review of such options on a pre-emptive basis?*

*Alongside the financial evaluation of alternative business funding and billing models, how is the firm conducting the deeper philosophical debate about the impact these might have on culture and operating style?*

### Pricing Strategies



Alternative fee arrangements



Adoption of new business models

## HEIGHTENED TALENT AGENDA

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While some expect competition for the best talent to remain intense, others believe that the sector could witness chronic oversupply. This could drive down fee rates as displaced lawyers pursue the independent route. Smaller firms and specialist providers in particular might find themselves in direct competition with talented individuals who operate as sole traders, carry little or no business overhead and form into larger ad hoc teams as the need arises. There is also growing understanding that the complexity of business, the growth of project management and increasing use of multi-disciplinary teams will drive the need to look beyond legal capability to recruit and develop individuals with management and leadership skills and aptitude.

**Alternative career paths:** Greater flexibility in how law firms work with their staff is seen as inevitable. Growth is expected in the use of alternative career paths, talent management approaches and reward models. For example, Orrick, Herrington & Sutcliffe LLP created a different talent model where not every associate is on partner track. The company now hires non-partner track “career associates” who receive lower salaries in return for a reduced demand on their time. Associates are promoted based on performance, and the firm can pass through lower costs into client fees.

**Staff technology and support expectations:** A key issue here is accommodating the technology and support expectations of new graduates coming into the workforce. New graduates typically arrive with a high level of IT literacy and familiarity with personalized tools through which they have run their lives and completed their education to date. The “born-digital” generation will increasingly judge firms on the quality of the IT support provided and the ease with which routine tasks can be conducted. Generation Z and those that follow them are used to applying their talents to problem solving and creative tasks, leveraging technology to find and present information. They may not be as willing to spend as much time or effort working on search and basic document review tasks that were traditionally seen as part of a junior lawyer’s training.

**Alternative staffing structures and impacts on legal education:** The adoption of alternative staffing structures is anticipated for both Practitioners (34.6%) and Non-practitioners (31.3%) alike. Despite concerns regarding an over-supply of graduates, only a minority (19.4) expect Declining demand for law school graduates. Although free online degree courses are now widely available from all the major universities, few expect this to lead to Declining relevance of law school education (14.3%).

**Workforce planning:** Competition and a complex operating outlook mean that longer-term workforce planning is becoming essential. For larger firms in particular it is becoming crucial to assess and model the range of likely demand for staff at every level over the next one, three and four-to-ten years. This needs to factor in views on the nature of products and services to be offered, how they will be delivered, the potential impact of technology and the use of partnering and outsourcing arrangements. A parallel exercise is also required to explore how to evolve policies and practices around retention, rewards and continuous development in a fast-changing environment where the individual wants greater choice and control.

*How is the firm assessing and responding to the career development and reward expectations of current and future employees?*

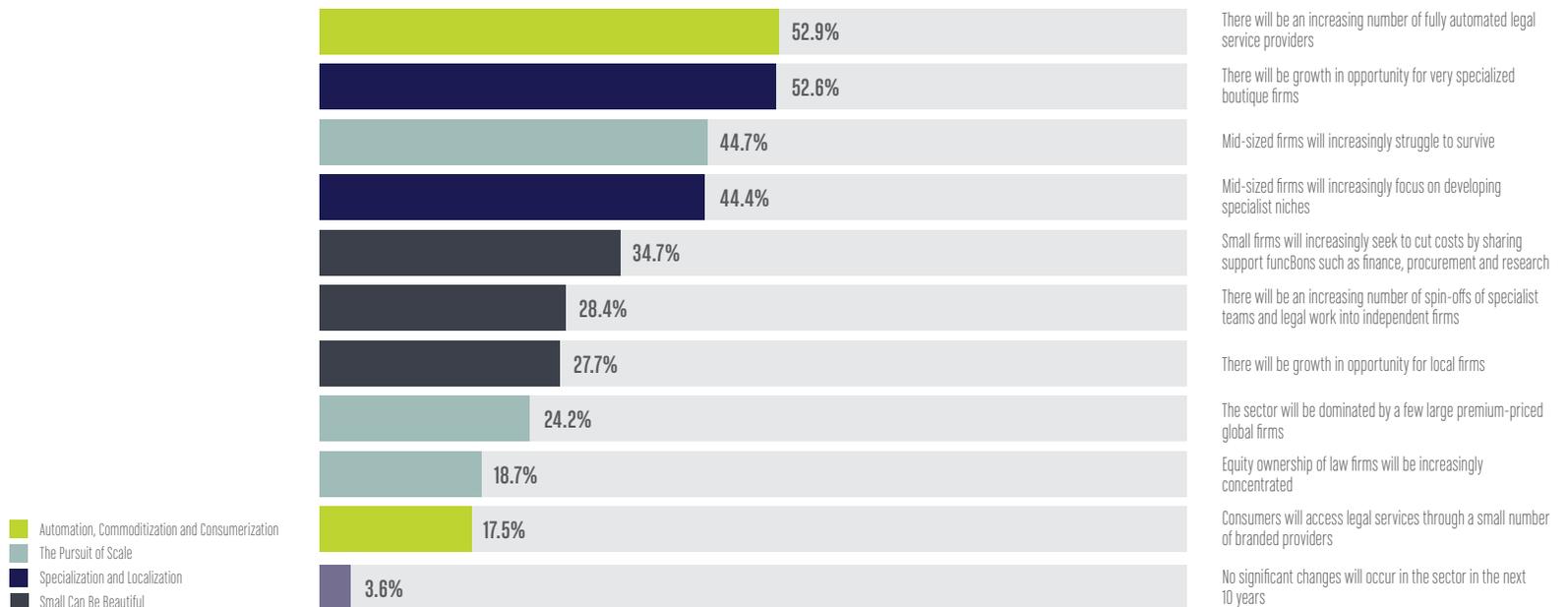
*What is the firm’s approach to long-term HR strategy and workforce planning?*

# FUTURE STRUCTURE OF THE LEGAL INDUSTRY

**Industry governance and geographic power distribution:** Continued disruption is now assumed, and most expect some level of structural reform. Only a minority believe that No significant changes will occur in the sector in the next 10 years (3.6%). Despite an increasingly globalized economy with international trade governance bodies in fields such as accountancy, few expect the emergence of a global governing body for the legal sector in the next decade, although it is seen as possible in the longer term. Globalization is expected to drive redistribution of power. The rise of Asian markets in particular and the search for more open investment locations (e.g., the U.K. and Australia), could portend a growing shift away from the U.S. for the headquarters of global firms.

**Industry composition:** The emergence of different types of legal providers is also expected to have some impact on who might be considered part of the sector. For example, there is an expected growth in “rent a lawyer” organizations, where the lawyers work as much time as they choose and the firms distribute tasks across teams. Some believe that in the future, high end firms will assemble the best and the brightest lawyers to work on complex litigation and corporate cases and then turn to the “commodity providers” to undertake the more routine work. Consumer-facing entities are expected to see major consolidation with a few national brands emerging to provide standardized and highly automated services for consumer transactions such as conveyancing. In the survey, participants were asked to select the most likely options from a range of possibilities. Four major structural themes were identified.

How do you see the structure of the legal industry evolving over the next decade?



# AUTOMATION, COMMODITIZATION AND CONSUMERIZATION

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The intensity of competition in the legal market is expected to continue increasing. The perception is that significant areas of activity have become or will be commoditized with downward pressure on fees. Market disruption is expected as a result of new strategies from existing firms and new entrants with different service propositions and business models.

**Online delivery:** The trend towards online provision of legal services in the consumer sector is expected to spread into the business market. This will drive commoditization, with an expectation that There will be an increasing number of fully automated legal service providers (52.9%). Small firms and technology-centric entities are expected to be among the early adopters of a range of online offerings coming to market over the next few years. As the online offerings prove themselves to be robust, there is an expectation that medium to large firms will shift at least a portion of their legal work to these transparent, low-cost providers. New clients and new relationships are expected to drive some of this new thinking. Many of the changes in the legal sector are expected to be dictated by the generational shifts within the corporate general counsel community, coupled with tougher procurement requirements and the push by many clients to place more of their activity online and encourage electronic supplier integration.

**Consumer solutions:** In the online consumer space, competition is expected to be fierce as barriers to entry and differentiators are hard to maintain in the public domain. Consolidation is expected to be a slow process, with relatively few believing that Consumers will access legal services through a small number of branded providers (17.5%).

*Has a systematic review been undertaken of all current and potential offerings to determine a roadmap for how the provision of such products and services might evolve over the next five years?*

*Are contingency plans in place to enable a faster response in the face of competitor initiatives?*

*What strategic choices should be made to gain first mover advantage by automating and commoditizing a service in advance of the competition?*

## Automation, Commoditization and Consumerization

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There will be an increasing number of fully automated legal service providers



Consumers will access legal services through a small number of branded providers

## THE PURSUIT OF SCALE

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*What are the costs of building and running the IT infrastructure required to fulfil the firm's medium- to long-term ambitions around structure, scale and global footprint?*

*What are the risks of inaction?*

Growth in business is expected for a select number of high-end firms and for small specialist law firms with distinct areas of expertise or local market knowledge. Pressure could grow on firms in the middle to merge, be acquired, break up into specialist entities or dissolve. A commonly held view among larger firms in particular is that they will need to mimic their counterparts in audit and management consultancy by growing in both scale and geographic footprint to service the needs of increasingly global and complex clients. The current strategies of these firms appears to be premised both on the importance of global growth and the need to build the underlying IT infrastructure required to enable them to operate in a global environment effectively.

**Emergence of a global elite:** Some suggest that, similar to the accounting world, a handful of four to six truly global legal powerhouses may emerge, establishing a differentiated and defensible position and truly international brand. The ability to deploy IT for competitive advantage is seen as a top three enabler alongside deep client engagement and a truly long-term and strategic approach to business and operational planning.

**Distribution of power:** While many believe that Mid-sized firms will increasingly struggle to survive (44.7%), less than a quarter believe The sector will be dominated by a few large premium-priced global firms (24.2%). Equally, despite the entry of third-party investors into the sector, relatively few believe that Equity ownership of law firms will be increasingly concentrated (18.7%), whether in the hands of external investors or internally via closer control by equity partners.

## SPECIALIZATION AND LOCALIZATION

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*How can IT, knowledge management tools, Web portals and thought leadership materials be used to reinforce the positioning of specialist and locally focused firms?*

In the face of competition from large and growing firms at the top end and automation of services to smaller companies, specialization is expected to increase. For example, the majority expect that There will be growth in opportunity for very specialized “boutique” firms (52.6%), and that, in parallel, Mid-sized firms will increasingly focus on developing specialist niches (44.4%) rather than pursuing growth across the board. Local economics will impact smaller (non-global) firms; corporations are already using third-party administrators to set guidelines on what should be paid in different markets.

### Specialization



There will be growth in opportunity for very specialized boutique firms



Mid-sized firms will increasingly focus on developing specialist niches

## SMALL CAN BE BEAUTIFUL

There will still be clients who value extensive local knowledge and deep personal relationships with their law firms. In order to compete, some expect that Small firms will increasingly seek to cut costs by sharing support functions such as finance, procurement and research (34.7%). There is also a view that There will be an increasing number of spin-offs of specialist teams and legal work into independent firms (28.4%) and that we could see Growth in opportunity for local firms (27.2%). For those adopting a local focus, effective use of technology, and particularly smart search functionality, could help the firm stay abreast of important developments and spot new entrants early. Such an early warning system will also help firms develop a brand differentiating position on critical local issues and developments.

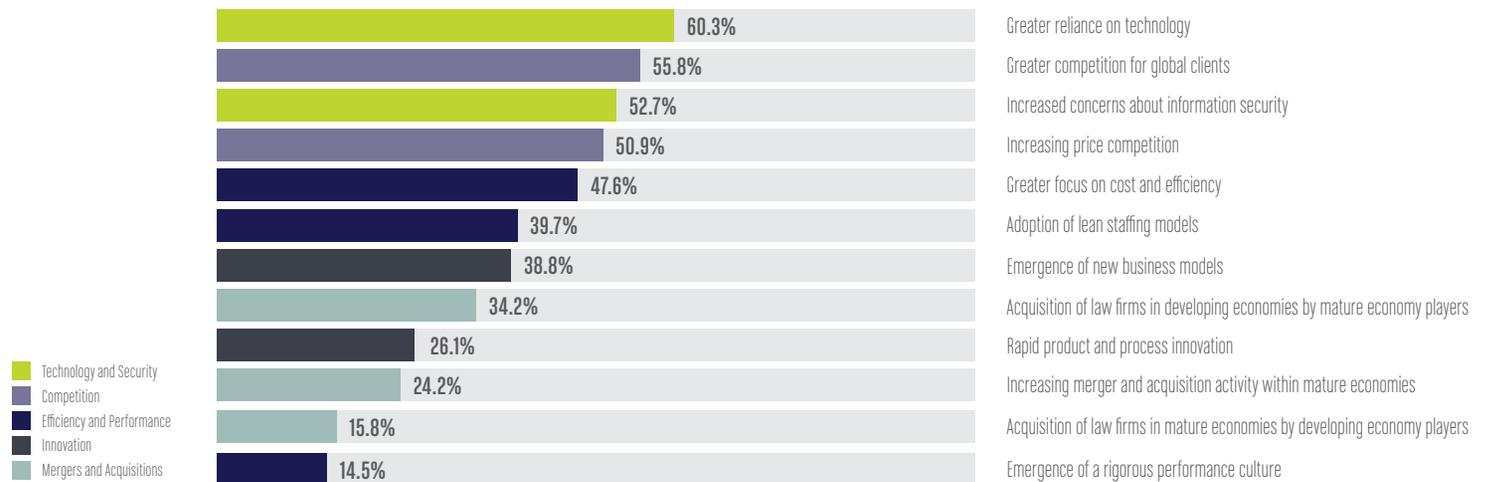
*How regularly does the firm talk to clients about their longer-term strategic priorities, their expectations of the type of legal services that could be required, the role of IT in service provision and the type of law firm partner they will want?*

*What is the firm's strategy for securing local insight and differentiating itself in key local markets?*

## IMPACT OF THE EMERGING ECONOMIES

The survey explored the possible impact on the legal industry of the rise of emerging economies. Five dimensions were examined: technology and security, competition, efficiency and performance, innovation and mergers and acquisitions.

What will be the impact on the legal industry of the rise of emerging economies and the BRIC nations?



## TECHNOLOGY AND SECURITY

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*How early are IT and security considerations evaluated when doing due diligence on entering a new territory?*

*How is IT being used to support this country- or market- level knowledge gathering and due diligence process?*

*What new product and service opportunities emerge as a result of clients' global expansion ambitions?*

The driver here is to offer clients a seamless global service as they enter relatively uncharted new markets and provide legal professionals with consistent support internationally. These needs are expected to drive Greater reliance on technology (60.3%) and lead to Increased concerns about information security (52.7%). The latter in particular is driven by concerns over the challenges around cyber-theft, protection of know-how and IP, the risks of counterfeiting and the difficulty of pursuing recourse in the local legal system. In many cases, clients are choosing to enter markets irrespective of these risks.

**Opportunities in risk:** Law firms are presented with opportunities to provide a range of IT-enabled advisory tools and services to help clients prepare for, protect against and stay up to date on key legal issues and security risks in each market. The level of complexity is increased by widely differing levels of security regulations that apply by industry across different countries. Smart Web-based technology solutions may offer the only realistic mechanism for law firms and their clients to stay up to date on developments across an increasingly diverse global footprint.



Greater reliance on technology



Increased concerns about information security

## COMPETITION

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*What strategic options does IT make possible for the competitive strategy to be pursued in each market under consideration?*

As Western firms seek to go global and come up against each other and local market players, there is an expectation of Greater competition for global clients (55.8%). Many expect fees to be a key battleground leading to Increasing price competition (50.9%). In key emerging markets, there is an expectation of increased competition from local players with domestic expertise, deep understanding of local business practices and extensive networks of business and government contacts. In other economies, there is a perception that governments may place explicit or implicit pressure on foreign entrants to work with local law firms in a bid to increase the strength of domestic capability. In many cases, local firms are younger, more agile than their foreign competitors and far more willing to adopt new technology in pursuit of efficiency and competitive advantage.

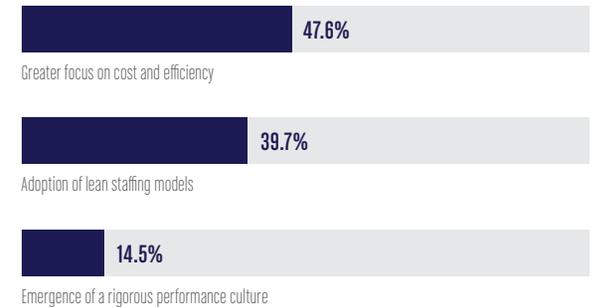
## EFFICIENCY AND PERFORMANCE

*What is the minimum level of IT infrastructure support required for effective operation in each country?*

*Where can IT and design thinking be leveraged to enhance efficiency and performance in overseas markets?*

A combination of intense competition and a desire to control the costs of global expansion are expected to drive a focus on efficiency and performance, with IT expected to play an enabling role. Key priorities are expected to be a Greater focus on cost and efficiency (47.6%), Adoption of lean staffing models (39.7%) and Emergence of a rigorous performance culture (14.5%). The pursuit of efficiency is expected to drive the adoption practices such as lean management, six sigma and legal project management. In addition, there is a growing interest in what can be learned from the field of design. Such thinking coupled with local market insights could become increasingly influential when designing the customer experience and operational processes in new markets.

### Key Performance Priorities



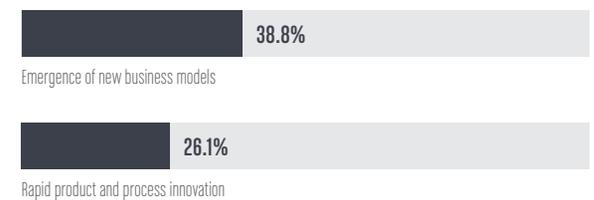
## INNOVATION

*What are the most innovative emerging market developments being pursued by global players and local firms in legal and other professional service sectors?*

*How is the potential for IT-enabled innovation and differentiation being explored and factored into the international development strategy?*

Many interviewees and survey respondents emphasized that law firms have traditionally been seen as late and cautious adopters of most forms of innovation, particularly IT-related innovations. However, the need to compete, differentiate service offerings and drive out cost in new markets are all factors that will increase the emphasis on innovation. IT is expected to play a major role in facilitating innovation throughout the legal value chain from customer engagement to the conduct of matters and the provision of management information. The impact is anticipated most in the Emergence of new business models (38.8%) and Rapid product and process innovation (26.1%).

### IT-related Innovations



# MERGERS AND ACQUISITIONS (M&A)

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The level of global M&A activity in the sector is expected to intensify. This is driven by the quest for scale, desire to expand into new regions and geographies internationally and a need to hit the ground running in key markets. M&A will also help firms broaden their portfolio with locally relevant expertise, products and services. Local ownership rules may act as a hindrance. Yet many still predict that one preferred globalization strategy will be Acquisition of law firms in developing economies by mature economy players (34.2%). Options considered less likely in the near term are Increasing merger and acquisition activity within mature economies (24.2%) and Acquisition of law firms in mature economies by developing economy players (15.8%).

**Increasing importance of IT in M&A decisions:** IT is seen as an increasingly important factor in the due diligence process. Deep integration with client systems, value adding and differentiating applications and a business focused IT-functions should become increasingly important contributors in the decision to target a particular firm. Equally, the relative ease or difficulty of integrating systems across law firms may act as an important determinant of how long it will take to complete a legal M&A transaction.

*What role does the evaluation of a target firm's IT capabilities play in the identification, due diligence and evaluation of M&A opportunities?*

*At what point does the IT function become involved in M&A discussions?*

## Mergers and Acquisitions As Globalization Strategies

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Acquisition of law firms in developing economies by mature economy players



Increasing merger and acquisition activity within mature economies



Acquisition of law firms in mature economies by developing economy players

# DIFFERENTIATION IN THE FACE OF CHANGE

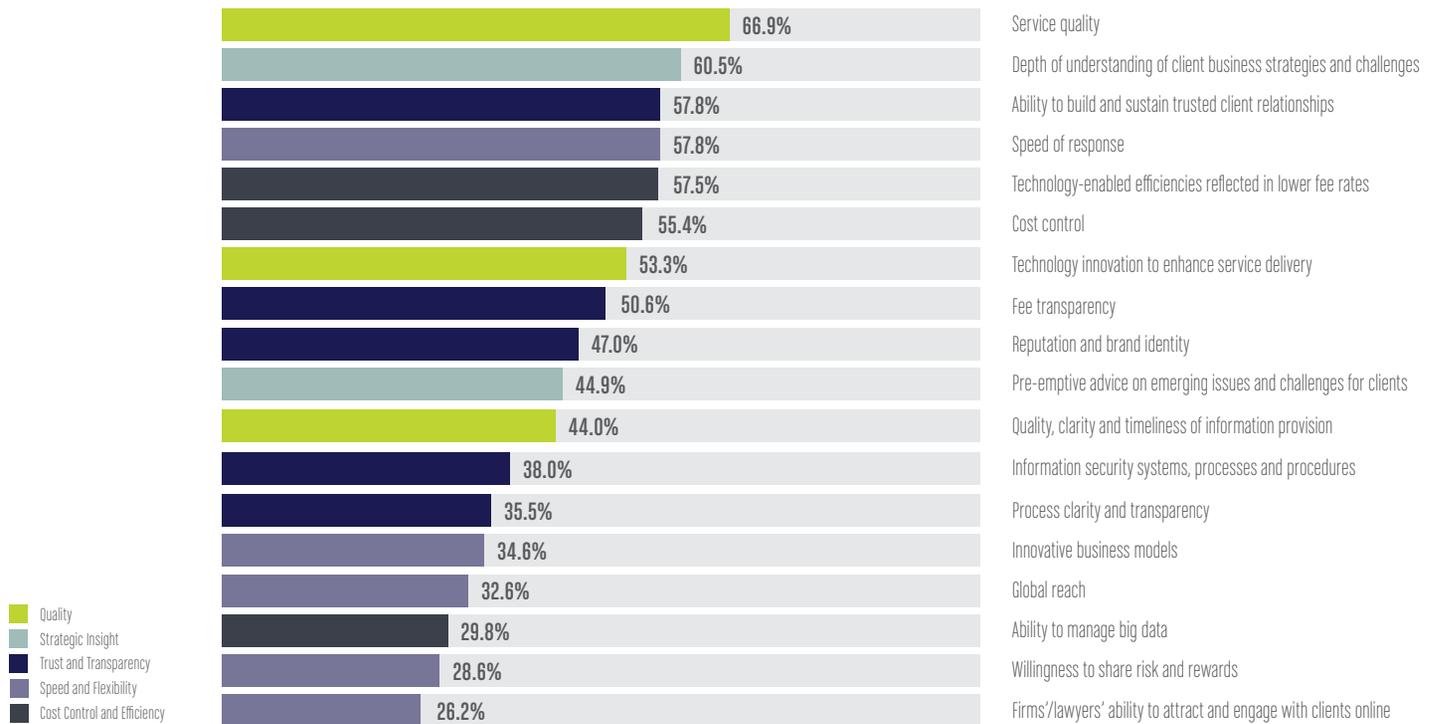
**Embracing the brand:** Differentiation is clearly identified as one of the biggest challenges for law firms in the future and a potential driver for the development of legal service brands. While many law firms now operate internationally and have strong name recognition in key markets such as New York and London, it was highlighted that no global legal brands exist today. The question arises as to whether development of a strong global brand identity could be a differentiator in a globalized economy?

**Marketing the brand:** Achieving greater brand identity would inevitably place a greater emphasis on activities such as thought leadership, relationship marketing, social media,

customer relationship management (CRM) and social CRM. Given the changing demographic profile, firms may also resort increasingly to the use of other potentially more radical approaches such as “guerrilla marketing” with an aim to capture the attention of new audiences. In each case, IT would play a critical role in delivering the message, handling responses and monitoring the results.

Survey participants were asked to select the factors that will most differentiate law firms in the eyes of tomorrow’s customer or client. Five key themes emerge: quality, strategic insight, trust and transparency, speed and flexibility, and cost control and efficiency:

Over the next decade, given the developments outlined above, what factors will most differentiate law firms in the eyes of the customer/client?



# QUALITY

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A number of factors are seen as contributing to legal quality including client insight, depth of expertise, innovative and effective advice, ease of working, IT systems capability, availability of a range of services, speed of response, transparency, progress reporting and value for money. Given this broad definition, it is perhaps no surprise that service quality (66.9%) was ranked as the most important single differentiating factor. This suggests that, ultimately, provision of best advice and effective execution of client matters are expected to remain the highest priority. However, with every firm pursuing these dimensions of quality as a differentiator, this may be hard to achieve in practice. Even high quality offerings may not be a differentiator for long, with a resulting trend towards commoditization and downward pressure on fees and profits.

**IT as a quality enabler:** IT is seen as playing an increasing role in service quality with the emphasis placed on Technology innovation to enhance service delivery (53.3%) and the Quality, clarity and timeliness of information provision (44%). The approach to relationship management is expected to be a critical underlying factor here. The priorities are making efficient use of client time, deploying collaboration tools effectively at the client interface and providing timely information.

## Quality As a Differentiator

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*What elements could reinforce the pursuit of quality service and advice as primary differentiators?*

*How is the use of IT being pursued to enhance quality across the value chain from client engagement to matter execution and performance reporting?*



Service quality



Technology innovation to enhance service delivery



Quality, clarity and timeliness of information provision

**CASE STUDY:** Littler Mendelson's Littler CaseSmart

# Re-Engineering the Delivery of Client Services

Littler Mendelson P.C. is the largest global employment and labor law practice with more than 60 offices around the world. To help reduce client legal costs and streamline the delivery of legal services, the firm developed Littler CaseSmart. The solution combines a re-engineered legal process built on a technology platform that allows for the strategic management of a high volume of administrative agency charges at a fixed, per-charge fee. The tool also provides real-time online access to the status of clients' legal matters as well as a dashboard of key performance indicators, visual graphics and reports. The firm reports that the solution supports its focus on transforming the efficient delivery of legal services to clients. The tool also maximizes the use of technology by anticipating attorney needs as they conduct research, prepare responsive documentation and perform legal and risks analysis.

## STRATEGIC INSIGHT

*Might the emotional intelligence of lawyers and effectiveness of multidisciplinary teamwork be key human factors that help law firms stand out in the future?*

*Can law firms gain a source of differentiated competitive advantage in the way in which they use IT and big data to drive insight and create thought leadership?*

The expectation is that clients will increasingly be looking for lawyers who can also act as strategic business advisors and help navigate a growing level of complexity. Greater emphasis is expected on the role of thought leadership, with a particular focus on emerging markets and industries. Providing IT-enabled, compelling and interactive delivery of distinctive research and opinion is seen as a key mechanism to demonstrate the firm's understanding of current and emerging issues in key client sectors and geographic markets. IT can also play a critical role in monitoring competitor thought leadership activities, scanning current issues for key clients and sectors and tracking relevant new ideas and emerging thinking.

**The value of business insight:** Survey respondents prioritized Depth of understanding of / insight into client business strategies and challenges (60.5%), ensuring that the advisors truly understand the evolving client context. IT can play a central role here in structuring and analyzing client-related content and in supporting Pre-emptive advice on emerging issues and challenges for clients (44.9%). Training is seen to play a vital role in using self-managed, IT-enabled tools to help ensure lawyers have an effective combination of legal competence, business insight, social skills and technology awareness.

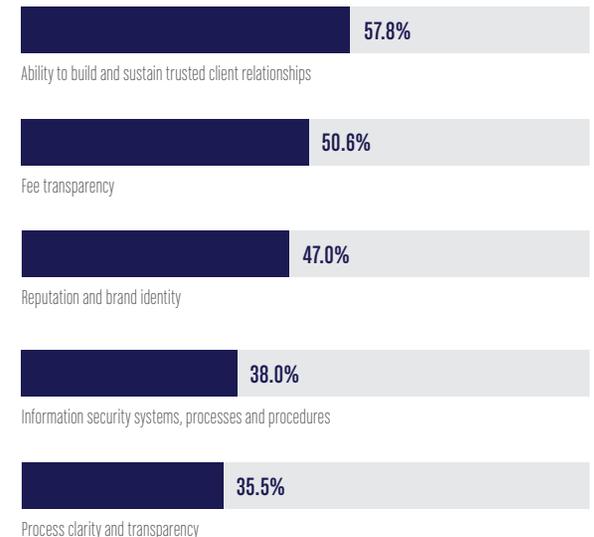
## TRUST AND TRANSPARENCY

*What brand strategies could law firms adopt to distinguish themselves around trust and transparency?*

*What is the firm's strategy for deploying IT solutions that provide clients with total transparency on-demand?*

A law firm's licence to operate and deliver quality service is thought to be predicated on the Ability to build and sustain trusted client relationships (57.8%). Key enablers of this are identified as Fee transparency (50.6%), Reputation and brand identity (47%), the reliability of Information security systems, processes and procedures (38%) and Process clarity and transparency (35.5%). Technology is seen as a vital enhancer of trust, transparency and visibility in the client relationship. Clients will increasingly expect to use on-demand technology to see the current status of documents, work products, court submissions, issues, time inventories and billing. Where clients are working with a panel of lawyers — for example, in processing environmental insurance claims — they will increasingly look to have a single portal that provides consistent and comparable information across all of their law firm partners.

### Trust As a Differentiator



**CASE STUDY:** Baker Donelson's Legal Project Management System

# Providing Clients with Access to the Legal Workflow

Headquartered in Memphis, Baker Donelson is one of the largest U.S. firms representing more than 30 practice areas. The firm wanted to provide clients with visibility into the legal process. In 2010, it decided to use its existing SharePoint 2010 extranet environment to expose as much as possible, including the budget and actual flow of the legal process. Alongside this, the firm developed a legal project management system called BakerManage. The system helps break down the phases and tasks of each matter, so that time is billed to specific phases. The process also helps the firm map out estimated costs. Clients have 24-hour access and are able to see what a typical phase or tasks will cost them and how much they will end up spending. Baker Donelson is now on the third implementation of the process. "Start simple and evolve" is the advice the firm gives to anyone who is planning to launch such an initiative.

## SPEED AND FLEXIBILITY

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*How important will speed, transparency, process efficiency and effective workflow management be as part of the future brand promise?*

*What steps are being taken to accelerate the speed and flexibility of IT responses in support of rapidly changing client and attorney requirements?*

The shortening and acceleration of business cycles is driving demand for Speed of response (57.8%). This is expected to grow as clients seek to fast-track decision-making, cut the “time to market” for launching their new offerings and complete transactions faster. Clients will initially value and then expect the ability to produce quick and error-free material whether in a legal brief, an analysis or a recommendation. This continued time compression means lawyers will have less time to provide a thoughtful response and will need to free up time for critical thinking and insight. They’ll rely increasingly on IT to mine news feeds, social media sites and big data very quickly to provide supporting information and deliver analytics on demand or on a pre-emptive basis. Predictive analytics could help anticipate what a client may ask for based on issues arising and their past patterns of inquiries.

Flexibility is seen as the capacity to adapt quickly and accommodate rapidly changing client needs. This might

include developing Innovative business models (34.6%), offering Global reach (32.6%), Willingness to share risk and rewards (28.6%) and Firms’ / lawyers’ ability to engage with and attract clients online (26.2%) Technology plays a vital role here, evolving from a back office support function to a value-adding enabler of rapid and flexible responses to client demands.

**IT-mediated flexibility:** The speed with which IT-mediated opportunities can be identified and realized is seen to be a critical future success factor. As clients seek to pursue complex new projects on accelerated timescales, they will look to build multi-disciplinary, multi-partner teams to create and deliver all aspects of the opportunity. Such initiatives will provide the potential for law firms to provide top talent at premium rates if they can respond rapidly and flexibly. Crucial to such responses will be to deliver the desired IT-support infrastructure and tools to enable professionals to work effectively from any location across the globe.

## COST CONTROL AND EFFICIENCY

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*Can cost advantage be a source of sustainable market advantage, and what role can IT play in delivering it?*

*How is the firm using historic data to evaluate the cost of serving clients and to identify the potential for greater efficiency and cost reduction?*

IT is seen as a core enabler of the key differentiator of Cost control (55.4%). The Ability to manage big data (29.8%) is also emphasized by our survey participants. This is a clear response to the growing emphasis being placed on the efficient acquisition, management and interpretation of the massive volumes of corporate data associated with legal matters.



Cost control



Ability to manage big data

**CASE STUDY:** Clearspire's Coral Virtual Workspace

# Transforming the Cost and Delivery of Legal Services

Clearspire is a next-generation law firm based in Washington, D.C. The firm was started in 2008 with the goal of “re-engineering legal practice by migrating away from the traditional business model, its attendant cost escalators and lack of transparency.” The firm decided to build a virtualized workspace and marketplace, called Coral. This platform enables Clearspire to deliver top law firm quality and talent at about half the cost. The firm is evaluating how to commercialize Coral into a Software as a Service (SaaS) model. This would allow corporations, law firms, individual lawyers and law schools to subscribe to the service and use it to manage their entire legal process supply chains. Clearspire believes that its progressive approach to leveraging IT to deliver streamlined and transparent solutions, and the business acumen of its founders create a unique opportunity. The firm has experienced strong growth over its first three years of operations.

# EMERGING CHOICES

*What impacts could all of these strategic challenges have on the sector as a whole and the strategies and operations of individual firms? The following table summarizes the research findings on key considerations arising from these industry levels trends.*

## TRENDS / FUTURE FACTORS

### Competitive Intensity, Demand and The Search for “Value”

- An increasingly dynamic business environment
- A culture of “more for less”
- Increasing commoditization
- Increasing pressures for effectiveness and efficiency
- Intense competition with prospect of flat or possibly decreasing demand for legal services in many markets
- Viable technology-centric alternative providers emerging

## KEY CONSIDERATIONS

### Law Firms

How might law firms seek to differentiate themselves if price becomes a more or less significant component of the overall value proposition?

Could competitors consolidate or outsource back office functions in search of efficiency?

How might relationship-led small firms survive in a globalized and price-sensitive future?

For law firms that haven't shrunk in the context of declining demand, how can they continue to support their operations?

How can traditional law firms respond to alternative providers who offer (online) services at a much lower price?

What strategies could help middle market firms to survive and thrive?

### The Legal Sector

How can the sector continue to prove its value?

How might accelerating client changes in supply chain management, lean business practices and strict procurement procedures impact the legal sector?

How could alternative delivery impact the legal sector models(e.g., services being offered through accounting firms)?

What might be the impact of technology-focused new entrants on the value chain in the legal sector?

### Security and Complexity

- Proliferation of data driving complexity
- Data security becoming a primary concern
- Evolving and potentially more complex regulatory environment

### Law Firms

What resources will be required to counter data security risks?

How could government regulations with regard to privacy and data security impact law firms?

How should legal professionals respond to increasing complexity?

What risks to legal firms are inherent in big data?

What kind of skills do legal professionals need to make sense of big data?

What smart technologies can law firms utilize to master big data?

### The Legal Sector

How might the needs for off-site storage and security concerns be balanced?

How could the legal requirements of different jurisdictions affect data security practices?

In a more collaborative business environment, with increased use of outsourcing and cloud-based services, what issues could arise over data ownership?

# EMERGING CHOICES

*What impacts could all of these **strategic challenges** have on the sector as a whole and the strategies and operations of individual firms? The following table summarizes the research findings on key considerations arising from these industry levels trends.*

## TRENDS / FUTURE FACTORS

## KEY CONSIDERATIONS

### New Business Models

- Internal consolidation driving efficiency and enabling pricing flexibility
- Price competitiveness leading to alternative fee arrangements / fixed price deals
- New entrants with new business models emerging
- Non-legal entities capturing business from law firms
- Technology playing a greater role in enabling new business models

### Law Firms

What alternative fee arrangements are being explored as alternatives to the billable hour?  
What impact could alternative fee structures have on revenue and profitability?  
How might the increasing sense of partnership and risk-sharing between firms and clients impact business models?  
How can technology tools such as predictive analytics help in creating new business models?  
How could the tension between human and automated service delivery be balanced?

### The Legal Sector

How could the transition from a sellers' to a buyers' market impact the legal sector?  
What legal constraints might be imposed on the business models adopted by law firms?

### Organizational Reframing

- New management structures emerging (e.g., "flat" organizations)
- Increasingly permeable law firm boundaries with greater use of outsourcing and specialist partners

### Law Firms

How might organizational structures evolve to differentiate between value added legal services, commodity law and back office functions?  
What organizational and infrastructural changes are required to enable firms to be more flexible, innovative and responsive?

### The Legal Sector

How might the sector redefine itself in the face of new entrants such as external investors, non-legal entities and technology companies?  
Could law firms increasingly shift from a partnership model to a more corporate equity structure?  
Could the sector part with traditional organizational models for law firms?  
What could drive that change?

# EMERGING CHOICES

*What impacts could all of these **strategic challenges** have on the sector as a whole and the strategies and operations of individual firms? The following table summarizes the research findings on key considerations arising from these industry levels trends.*

## TRENDS / FUTURE FACTORS

### Evolving Industry Structure and New Legal Business Models

- Expected segmentation in the market place based on firm's core competencies
- Increasing outsourcing of non-core activities
- Corporate general counsel dictating a shift in the sector
- Leaner and increasingly commoditized legal advice moving online
- Alternative ownership structures emerging

### A New Talent Agenda

- New talent models emerging (e.g., hiring associates who are not on a partner track, on lower salaries and with fewer demands on their time)
- Increasing popularity of remote / virtual working practices and alternative resourcing models
- Professional aims of younger lawyers changing (e.g., shorter employment tenure)
- Multi-generational working teams
- New balance of staff within law firms

## KEY CONSIDERATIONS

### Law Firms

How can firms become a "one-stop shop" for their clients offering everything from commodity online services to high-value-added advice?

How might intense competition and new business models impact decision making in the partnership model?

Could business ownership changes become the norm in the future (e.g., public floatation and third-party equity investment)?

### The Legal Sector

Could the sector see more mega-mergers in the future?

How might the dynamics of the sector evolve if a small number of big firms dominate?

What are the benefits of retaining the equity of law firms within a closely held partnership structure?

What might be the impact of more widespread adoption of the U.K. and Australian model permitting public ownership of firms?

### Law Firms

How could firms repurpose talent to support business units in their relationships with clients?

How could alternative resourcing models impact demand management systems and workflow processes?

How might multi-disciplinary legal teams better satisfy client needs?

How might the growing demand for analytics and analysts impact the prospect of traditional legal professionals?

How can law firms manage the change of emphasis with the deployment of new technologies?

How could law firms mitigate generational tensions?

How could virtual working practices impact the training of young lawyers?

### The Legal Sector

Could the sector experience generational tensions?

What could be their impact?

Could technology lead to a reduction in the number of practicing lawyers but increase the number of "legal technicians"?

If firms are reducing headcounts, where will the responsibility fall for the training of new lawyers?

# EMERGING CHOICES

What impacts could all of these **strategic challenges** have on the sector as a whole and the strategies and operations of individual firms? The following table summarizes the research findings on key considerations arising from these industry levels trends.

## TRENDS / FUTURE FACTORS

### Future Structure of the Legal Industry:

#### *Automation, Commoditization and Consumerization*

#### *The Pursuit of Scale*

#### *Specialization and Localization*

#### *Small can be Beautiful*

- Increasing consumerism and commoditization of legal services (e.g., LegalZoom)
- Legal advice increasingly moving online
- Shortening product cycles
- Increasing rates of consolidation

## KEY CONSIDERATIONS

### Law Firms

To what extent could technology alter what lawyers do and displace them?

Could the emotional intelligence of lawyers be a key differentiator for law firms in an increasingly commoditized sector?

What kind of resources and infrastructure will firms need to become a “one-stop shop” for their clients?

Could a regional / local speciality focus be a critical differentiator for smaller firms?

### The Legal Sector

Could the pace and scale of change in the sector accelerate the pace of M&A activity?

Could major disruption in the sector come from smaller and more adaptable law firms?

How might mid-sized firms adapt in the context of rapid consolidation in the sector?

### Impact of Emerging Economies

- Rise of emerging markets creating opportunities and new challenges
- Increasing amount of M&A activity to access opportunities in developing economies

### Law Firms

What strategies could law firms adopt in the context of emerging markets (e.g., licensing services that focus on specific markets)?

How could traditional firms respond to the disruptive power of nimble firms in emerging markets?

What are the most significant challenges that players from emerging markets pose to traditional law firms?

### The Legal Sector

Could the growth of opportunities in the emerging markets radically reshape the structure of the legal sector?

## KEY STRATEGIC QUESTIONS

*How do we stay up to date with the longer-term business strategies and priorities of our key clients?*

*What customer relationship management models have we been exploring for the future?*

*Which alternative equity ownership models and organizational structures are being considered?*

*What is our strategy for embedding innovation and flexibility across the firm; how can we keep*

*abreast of competitor developments?*

*What evaluation have we done of alternative billing models and their potential financial impact on revenue and profitability?*

*Who has responsibility for tracking and evaluating potentially competitive start-ups coming into the legal sector?*

## KEY OPERATIONAL QUESTIONS

*What steps are being taken to accelerate decision-making, agility and responsiveness internally?*

*What initiatives are in place to improve service quality, efficiency, effectiveness and operational costs?*

*How are we planning to increase the transparency, clarity and speed of workflow management?*

## KEY TECHNOLOGY QUESTIONS

*How are we ensuring that leaders and professional staff stay abreast of the strategic opportunities and challenges arising from advances in IT?*

*What is our strategy for working with clients to identify potential opportunities to deliver new IT based products and services?*

*Who has responsibility for the systematic evaluation of new and emerging technologies?*



# THE EMERGING TECHNOLOGY TIMELINE

Critical technologies and their potential future impact on how law firms create value, serve clients, run internal processes and manage their organizations.

## CRITICAL INSIGHTS

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**IT Architecture:** The emerging landscape will be increasingly mobile, decentralized cloud-based, social, and end-user-driven — individuals will wear their IT infrastructure.

**Data Are the New Oil:** Dramatic shifts are occurring in the scale, nature and complexity of the structured and unstructured data being managed. We are shifting from static to dynamic analytics and to using advanced scientific methods to extract predictive insights from big data.

**Up Next:** With embedded technologies, the Internet of Things, and augmented reality, the built environment will sense us, talk back, and track our activities — and tell us all about it in real time.

**AI on the Horizon:** In the medium term, AI could have dramatic impacts across legal activities. Telepresence robots and

immersive telepresence will further divorce action from location, and intelligent robotic assistants could become difficult to distinguish from robotically telepresent co-workers.

**Human Enhancement:** Emerging forms of augmentation, whether mechanical, digital, chemical or genetic, offer the prospect of raised productivity and reduced staff costs. Electronic augmentation may be the only way people can keep pace with accelerating IT and information flow.

**The Far Horizons:** In the longer term, digital pioneers will embed assistive computing directly into their brains; AI could automate all but the most complex and subtle legal tasks; and IT may need to be fed, not rebooted, in the age of biological computing.

## EXPANDING THE TECHNOLOGY HORIZON

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**An avalanche of new technologies:** In this section we discuss the technologies that have potential for the most disruptive impact over the next decade and beyond, explore how they might be deployed across three distinct time horizons and highlight key strategic questions that emerge for law firm leaders around the adoption of new technologies. **There is a clear and growing sense that, over the next decade, potentially disruptive science and technology developments will continue to emerge and have a deep impact on every aspect of law firms and the delivery of their services.** A primary focus of this study was to identify emerging technologies and related developments that could have a significant bearing on the sector. Through the desk research, interviews and workshops, a total of 192 emerging technologies and developments were identified with a subset of 122 being chosen for evaluation in a survey. These developments span ten categories:

» End User Devices, Tools and Trends

» Interfaces and Displays

» Internet and Social Media

» Communications, Collaboration and Networking Tools and Developments

» Software Tools, Techniques and Trends

» Artificial Intelligence (AI) and Intelligent Systems

» Computing Technology and Devices

» Management and Analysis of Data, Information and Knowledge

» Security Technology

» Disruptive Scientific Developments

CASE STUDY: King & Wood Mallesons

# Driving Efficiency and Thought Leadership with Social and Mobile

King & Wood Mallesons (KWM) is a multi-national law firm headquartered in Hong Kong with a strategic focus on the world's growth markets. As part of its strategy to create a more networked and cohesive law firm and deepen engagement with customers and staff, the firm has embarked on a series of critical technology-enabled social and mobile initiatives. In 2012, the firm developed and launched its Springboard social intranet. The platform integrates firm-wide content around clients, sectors, matters, people and communities. Springboard also supports "Google-like" search functionality across the firm's systems and incorporates social tools to allow communities of interest to engage, collaborate and share information. User feedback suggests the social messaging platform is helping to cultivate a more collaborative, participatory and real time knowledge culture.

To help facilitate mobility and agility, KWM launched Connect — a personalized mobile app for iPhones and iPads. The app delivers secure, highly personalized live data from the firm's internal systems to lawyers' mobile devices. Connect has been installed on 1,000 mobile devices to date and is already changing the way in which the firm's legal staff manage their work and prepare for client interactions.

To promote the firm's thought leadership, three blogs have been established: IP Whiteboard, In Competition and China Law Insight. The aim is to bring ideas to life, convey enthusiasm to readers and engage the firm's audience in dialogue. The blogs represent a significant departure from the firm's traditional alerts and newsletters. This was seen as an important step internally, paving the way strategically and culturally for more extensive use of social media channels. The response from clients and the broader community has been positive and demonstrates that there is clear value in having both regular and timely dialogue on key issues.

# KEY DEVELOPMENTS ON THE TECHNOLOGY TIMELINE

*A focus on pioneer adoption:* A description for each of the technologies and developments is provided at the end of this report. Our study focused on categories of technology and development (e.g., cloud computing and artificial intelligence) rather than specific legal applications such as e-discovery and predictive coding. Participants in the timeline survey were asked to select the earliest timeframe in which each of these technology advances might be adopted by pioneers within the legal sector. This table shows the most frequently cited “earliest pioneer adoption date” for each of the technologies and developments covered.

<b>End User Devices, Tools and Trends:</b>			
<b>Now – 12 Months</b> Bring your own device (handheld/phone) Bring your own device (computer) Mobile workforce	<b>2 – 5 Years</b> Augmented reality devices / applications Wearable technologies Smart watches Instantaneous automatic language translation Life-logging / quantification of self	<b>6 – 10 Years</b>	<b>10+ Years</b>
<b>Interfaces and Displays:</b>			
<b>Now – 12 Months</b>	<b>2 – 5 Years</b> Gesture recognition technology Eye tracking interfaces Haptic technology / Tactile user interfaces Finger tracking technology Personalized interactive displays Flexible electronics / displays Courtroom dashboards	<b>6 – 10 Years</b> Virtual retinal displays Holographic displays Volumetric displays Fabric / clothing embedded screen	<b>10+ Years</b> Mind control headsets Intelligent brain-computer interfaces Fingernail displays
<b>Internet and Social Media:</b>			
<b>Now – 12 Months</b> Cloud computing Hybrid cloud computing Personal cloud Social media Enterprise social networking Temporary social media Social analytics	<b>2 – 5 Years</b> Ubiquitous internet access Virtual worlds The Internet of Things / Everything Digital currencies Intelligent web Semantic web Collective blanket licenses Knowledge graphs	<b>6 – 10 Years</b> Immersive web	<b>10+ Years</b>

# KEY DEVELOPMENTS ON THE TECHNOLOGY TIMELINE

## Communications, Collaboration and Networking Tools and Developments:

<b>Now – 12 Months</b> Remote Presence / Telepresence Real time multi-party document editing Shared databases Shared knowledge bases	<b>2 – 5 Years</b> 5G phones / communications Pervasive video Mesh networking Mobile Ad-hoc Network (MANET)	<b>6 – 10 Years</b> 6G phones / communications Telepresence robots Immersive telepresence	<b>10+ Years</b> Touchable holographs
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## Software Tools, Techniques and Trends:

<b>Now – 12 Months</b> Open source development Grid computing Gamification Workflow optimization technologies Legal data collection technology Enterprise app stores	<b>2 – 5 Years</b> Automatic content recognition Context-aware computing Complex event processing Crash-proof code Procedural storytelling	<b>6 – 10 Years</b>	<b>10+ Years</b>
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## Artificial Intelligence (AI) and Intelligent Systems:

<b>Now – 12 Months</b>	<b>2 – 5 Years</b> Artificial intelligence Expert-level decision systems Intelligent speech understanding Natural language question answering Machine vision Machine learning Reality mining	<b>6 – 10 Years</b> Deep learning software Intelligent client assistants Collective intelligence tools Swarm intelligence	<b>10+ Years</b> Intelligent robots Intelligent personal assistants / avatars
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## Computing Technology and Devices:

<b>Now – 12 Months</b> RFID technologies	<b>2 – 5 Years</b> Pervasive computing Modular computers Machine-to-machine (M2M) technology Reprogrammable chips	<b>6 – 10 Years</b> Optical computers Quantum computers 3D spintronic microchips	<b>10+ Years</b> Biological computers Bio computers decrypting DNA-stored images
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# KEY DEVELOPMENTS ON THE TECHNOLOGY TIMELINE

<b>Management and Analysis of Data, Information and Knowledge:</b>			
<p><b>Now – 12 Months</b>            Big data tools            Data mining            Predictive analytics            Knowledge management (KM) tools            Virtual data centers            Converged infrastructure</p>	<p><b>2 – 5 Years</b>            Audio mining            Video mining            In-memory database management systems            In-memory analytics</p>	<p><b>6 – 10 Years</b></p>	<p><b>10+ Years</b>            Genetic / DNA storage technologies</p>
<b>Security Technology:</b>			
<p><b>Now – 12 Months</b>            Biometric identification</p>	<p><b>2 – 5 Years</b>            Genetic recognition technologies            Body language recognition            Homomorphic encryption            Anonymous E-mail identification            Secret data embedded in calls            Biometric sensors            Technology contradiction</p>	<p><b>6 – 10 Years</b>            Quantum cryptography</p>	<p><b>10+ Years</b></p>
<b>Disruptive Scientific Developments:</b>			
<p><b>Now – 12 Months</b>            3D printing / Additive manufacturing            3D scanners            Civilian and commercial unmanned aircraft vehicles (UAVs)</p>	<p><b>2 – 5 Years</b>            Next generation battery technology            Computational photography            Lab-on-a-chip devices            Nanotechnology</p>	<p><b>6 – 10 Years</b>            Human augmentation            Atomically Precise Manufacturing            Self-powered nano devices</p>	<p><b>10+ Years</b>            Skin-embedded screens            Brain mapping            Brain uploading            Brain transplant            Exocortex            Memory implants            iCyborg lawyers            New quantum materials and devices</p>

## END USER DEVICES, TOOLS AND TRENDS

**Device management challenges:** A proliferation of device types is expected, with a growth in both single function tools and multi-functional devices that could succeed today’s tablets and smartphones over the next decade. Delivery of content and applications to these devices is expected to have a transformative impact on the ability of professionals to be fully effective and productive anywhere and at any time. The process of convergence of device functions and the need to ensure efficient support arrangements are expected to remain as prominent challenges. Increasing emphasis will be placed on choosing the right base platforms and support systems to allow for continued evolution in devices without having to make expensive changes in the firm’s underlying enabling infrastructure.

**Device Miniaturization:** Opportunities and concerns are acknowledged around the continued miniaturization of devices. Reducing size offers convenience but also means that over time devices may become almost undetectable. They could be banned from courtrooms until usage can be monitored effectively.

**BYOD challenges:** Individuals increasingly want to use technologies that have been totally personalized to their own preferences. The accompanying trend of “Bring your Own Device” (BYOD) is already seen to be well established and accelerating as consumer technologies enter the workplace faster than ever before. An acknowledged benefit of BYOD is the potential to reduce both the total investment required and the level of device management and maintenance activity. However, many acknowledge struggling with the coordination, control and security implications of allowing their staff to purchase and use a wide range of communication and computing platforms. Concerns also remain over how to manage the risks related to managing client and internal data when stored on personal devices.

End User Devices, Tools and Trends	Now-12 Months	2-5 years	6-10 years	10+ years
Bring your own device (handheld/ phone)	76.4%	18.2%	4.1%	1.4%
Bring your own device (computer)	57.1%	33.6%	7.8%	1.4%
Mobile workforce	70.3%	27.9%	1.4%	0.5%
Augmented reality devices / applications	7.9%	49.5%	34.7%	7.9%
Wearable technologies	7.3%	47.3%	37.6%	7.8%
Smart watches	12.5%	62.0%	17.1%	8.3%
Instantaneous automatic language translation	10.6%	54.1%	27.5%	7.8%
Life-logging / quantification of self	13.8%	37.2%	24.3%	24.8%

## END USER DEVICES, TOOLS AND TRENDS

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The majority of respondents felt a Mobile workforce (70.3%) and BYOD were already a reality for pioneer firms or would be over the next 12 months for both handheld devices and phones (76.4% of respondents) and computers (57.1%). A clear decision point is emerging as to whether firms try to retain total control over end-user platforms or give employees some freedom.

**Anticipating the rise of wearable and embedded devices:** The situation is expected to become ever more complex with the imminent arrival of wearable devices and the emergence of a range of body-embedded technologies that are on the three-to-five-year horizon. Clearly, in the long run, law firms simply may not want to be in the business of choosing the technologies that are implanted in their staff. Already some are moving to a strategy of Choose Your Own Device (CYOD), adopting a policy where they allow staff to choose and buy their own devices from a pre-approved list of operating systems and platforms. Given the advent of wearable and embedded technologies, it seems likely that this could become a preferred direction for many in the sector. The alternative would be telling staff what to wear or have implanted or taking responsibility for the fitting of such devices.

A wide variety of applications are envisioned for near-body, on-body and in-body devices. For example, attorneys using wearable display devices such as watches or eyewear could have a constant feed of relevant information provided by their paralegals or intelligent software agents. While clients might welcome the added value of such developments, legal authorities maybe more reluctant to allow such developments into the courtroom in the near term. Data collected from wearable and embedded devices could transform the data collection and evidence process in a range of contexts such as medical litigation. Wearable monitoring devices would provide a stream of data that could show whether patients were following prescribed care regimens and highlight if medical professionals responded in a timely manner to alerts and incident reports generated by the devices. Operationally, every internal department could take advantage of such tools to deliver support and respond to attorney requirements.

**Auto-translation and augmented reality:** Wearable technologies (47.5%) and Smart Watches in particular (62.0%) are expected to be adopted by pioneers on a two-to-five-year timeframe, offering applications as diverse as critical information updates, telephony, social media, SMS, voice recording, image display, security and body monitoring. Over the same timeframe, the earliest adopters are also expected to start using applications such as Instantaneous automatic language translation (54.1%) and Augmented reality (AR) devices / applications (49.5%). While the potential of the former is more obvious, the expectation is that the latter could be used in training simulations, viewing multi-layered complex case information and presenting crime scene images.

In the courtroom setting, AR could assist with the three-dimensional visualization of crime scenes, re-enactment of critical incidents and building up complex data sets and storylines layer by layer in fraud cases. By combining the dashboard concept with AR and wearable technology, an attorney could view critical information about a client or prospective client on their electronic glasses or contact lenses during a conversation. Some concern was expressed that this might create a barrier to effective client interaction. From a training and development perspective, AR glasses could help guide lawyers in how to use key systems, alerting them to shortcuts, guiding them in how to save time with little used functionality and ensuring all stages of a task were completed in the correct order.

*How are IT and end user policies around the use of technology and social media being adapted to cater to the needs of the “digital natives” coming into the firm?*

*What is the position being taken on BYOD, CYOD, wearable devices and implanted / embedded technology?*

*“A clear decision point is emerging as to whether firms try to retain total control over end-user platforms or give employees some freedom.”*

# INTERFACES AND DISPLAYS

*Lagging adoption of advanced interfaces and displays:* While a number of the interface and display media mentioned are already emerging or expected in the next few years, there was a clear sense that the majority in the sector would be among the later adopters. Despite their use in gaming and a variety of other sectors, Courtroom dashboards (50%) and interface technologies such as Gesture recognition (58.9%), Finger tracking (51.5%), Tactile surfaces (44.7%) and Eye tracking (40.1%) are only expected among leading-edge users in the two-to-five-year timeframe. Novel display technologies are expected to take even longer to find acceptance, with six to ten years being the most frequently suggested timeframe for pioneer adoption of Holographic displays (50.5%), Virtual retinal displays (40.7%) and Fabric / clothing embedded screens (36.9%).

Interfaces and Displays	Now-12 Months	2-5 years	6-10 years	10+ years
Gesture recognition technology	22.2%	58.9%	15.0%	3.9%
Mind control headsets	2.5%	17.7%	34.3%	45.6%
Intelligent brain-computer interfaces	5.4%	16.7%	31.4%	46.6%
Eye tracking interfaces	17.9%	40.1%	30.9%	11.1%
Haptic technology / Tactile user interfaces	18.5%	44.7%	26.2%	10.7%
Finger tracking technology	27.7%	51.5%	15.1%	5.8%
Personalized interactive displays	22.7%	48.3%	23.7%	5.3%
Virtual retinal displays	6.4%	22.6%	40.7%	30.4%
Holographic displays	7.8%	17.0%	50.5%	24.8%
Volumetric displays	3.4%	32.8%	41.2%	22.6%
Flexible electronics / displays	14.5%	46.4%	29.5%	9.7%
Fabric / clothing embedded screen	6.3%	34.5%	36.9%	22.3%
Fingernail displays	2.0%	13.8%	30.1%	54.2%
Courtroom dashboards	18.9%	50.0%	25.2%	5.8%

*How systematic is the firm's approach to evaluating new and emerging interface and display technologies?*

*What evaluation is being done of how innovative interfaces and visualization tools such as mind-control headsets and holographic displays might change how information is presented and used internally, with clients and in the courtroom?*

## INTERFACES AND DISPLAYS

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The growth of natural user interfaces (NUI) is increasing the range of mechanisms, such as speech, gesture and touch, through which we can interact with computing systems. Some argue that the more natural the interaction, the better and deeper the understanding smart systems can develop of our actions, needs and intentions. A combination of sensors, AI, big data and machine learning will enhance the intelligence of the user interface over time.

Thought-controlled computer interface technology is already available in a basic form. This enables users to train the system to associate different thoughts with specific EEG patterns and then control a computer wirelessly via a headset. However, 10+ years is the most commonly selected adoption timescale for potentially transformative tools such as Mind control headsets (45.6%), with a similar expectation around Intelligent brain-computer interfaces (46.6%) that can learn and adapt over time.

A range of holographic applications are envisioned; these include the use of touchable holograms to enable clients and attorneys to have physical meetings without leaving their offices and the use of holographic displays in courtroom applications similar to those imagined for AR. Intelligent interactive displays could act as a personalized interface that sits over legacy systems and draws on a range of contextual information to provide situational analysis to support / automate decision making. For example, information from a range of Web sources could be combined with real-time stock market data and term sheet parameters to show the potential impact of different contract scenarios on the resulting outcomes for an M&A transaction.

## INTERNET AND SOCIAL MEDIA

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**The future of the Internet:** The Internet and social media are rapidly establishing themselves as a backbone for business and social interaction of all kinds and are seen as an ever-present feature of the next decade. Over the next 10 to 15 years, several rule changes are anticipated that will allow for greater sophistication in how law firms embrace the online environment. However, many concerns exist over issues such as the openness of the Internet and the World Wide Web of sites that sit above it. Some argue that the Internet as an information source will come under increasing government control. There is expected to be an associated growth in opportunities for lawyers around data privacy. Those who are harvesting and aggregating the data are expected to hold the balance of power in society, but there might be a backlash from people who feel that their privacy is not being respected.

**Dark Web dilemmas:** The rise of the so called “dark Web” is also seen as a major concern and security risk for companies and countries alike. This is the network of sites that do not have formally registered domain names. Hence they are not accessed via WWW addresses and are frequently used for illicit activities such as the sale of narcotics and counterfeit goods. Based on the destination paths of traffic carried by the Internet service providers, some estimate that these “dark Web” sites account for as much as 70% of all Internet activity.

**Cloud computing goes mainstream:** Two clear waves of pioneer adoption are anticipated for technologies in this space. The majority expect leaders to be adopting Cloud computing (77.6%), Personal cloud (70.3%) and Hybrid cloud (62.2%) within the 12-month timeframe, if they are not already doing so. Despite continued skepticism over the security, functionality and cost of moving to Web-based services, there is a growing expectation of continued devolution of activities to the cloud by many firms. This may start with archival and disaster recovery services before extending to core business applications and data.

## INTERNET AND SOCIAL MEDIA

The adoption of industry-wide standards could help drive adoption and counter firms' concerns over being locked in to individual cloud services vendors' proprietary solutions. Firms considering these moves are expected to undertake rigorous due diligence of cloud providers based on capability, vendor service portfolio, security environment, cost and long-term commercial viability of the business. Concerns over security and constant functionality changes in the public cloud could drive the adoption of private cloud solutions. Internally, law firms will need to acquire new skills and capabilities to administer the use of a cloud environment. Another key challenge that arises is determining the extent to which applications that are to be run in the cloud would need to be rewritten so that lawyers can access them and the associated client data on multiple devices from diverse locations in a secure manner.

**Social networks on the rise:** Despite some initial skepticism over its potential uses and value, the early investors have gone or will be going "social" in the next year through adoption of Social media (76.7%), Enterprise social networking (65.8%), Social analytics (52.7%) and Temporary social media (49.5%).

Social media is expected to have diverse applications in a legal context. Increasingly, firms will adopt sophisticated intelligent automated social search and analysis algorithms. This will enable systems to push information to internal users and clients as it becomes salient rather than waiting for lawyers and paralegals to find it via explicit searches. The growth of social media and social commentary and comparison sites will continue to drive transparency and how companies are perceived by a broad stakeholder community. This will increase the importance of developing a social presence and nurturing a positive reputation across a range of dimensions. Company culture and behaviors will be monitored through social media.

Customers, competitors and investors alike will be able to search social networks and use interconnected data to build a real-time picture of current activity and draw insights and inferences about what is happening to a particular firm. If

trends in the other sectors transfer to legal, then customers may increasingly be able to influence the price and quality of law services through social media. Maintaining an active presence across social platforms will become an increasingly important aspect of the role of all professionals, not just dedicated social media managers.

**Digital currencies: No: Internet of Everything: Yes:** Though digital currencies such as Bitcoin have been gaining more widespread adoption and media attention, there is a belief that the legal sector will hesitate to experiment with using these exchange media for another two to five years (39.8%). Clearly, client demand to transact in such currencies could accelerate that adoption timetable. In addition, as firms seek to enter emerging markets, they could increasingly find clients who are far more willing to embrace digital currencies.

Over the same period, the early adopters are expected to start making use of next generation Internet technologies such as a more Intelligent Web (55.9%), The Internet of Things (IoT) / Everything (51%), the Semantic Web (43.8%) and Virtual Worlds (43%). These should allow for smarter search, enable intelligence to be built into literally every object, unlock the ability to search unstructured documents, videos and images, and facilitate adoption of new platforms for interaction with prospects, clients, employees and stakeholders. The potential for truly multi-sensory interaction via the Immersive Web (43.3%) is expected to see earliest adoption in a six-to-ten-year timeframe. These developments and the expectations of 50 billion Internet-connected objects by 2020 will drive a massive growth in data and the associated storage and processing costs.

*What is the firm's strategy around adopting and exploiting an increasingly functional and intelligent Internet?*

*What impact could digital currencies have across the activities of the firm?*

*"Company culture and behaviors will be monitored through social media."*

# INTERNET AND SOCIAL MEDIA

Internet and Social Media	Now-12 Months	2-5 years	6-10 years	10+ years
Ubiquitous Internet access	24.9%	47.3%	23.4%	4.5%
Virtual worlds	31.5%	43.0%	21.0%	4.5%
The Internet of Things / Everything	11.0%	51.0%	26.5%	11.5%
Digital currencies	18.4%	39.8%	23.4%	18.4%
Cloud computing	77.6%	19.4%	2.0%	1.0%
Hybrid cloud computing	62.2%	31.3%	5.5%	1.0%
Personal cloud	70.3%	25.7%	2.0%	2.0%
Immersive Web	4.5%	24.9%	43.3%	27.4%
Intelligent Web	13.9%	55.9%	21.8%	8.4%
Semantic Web	8.0%	43.8%	30.9%	17.4%
Collective blanket licenses	12.7%	47.7%	29.4%	10.2%
Social media	76.7%	18.3%	4.5%	0.5%
Enterprise social networking	65.8%	30.7%	2.0%	1.5%
Temporary social media	49.5%	43.6%	5.9%	1.0%
Social analytics	52.7%	37.3%	7.0%	3.0%
Knowledge graphs	37.6%	47.0%	12.4%	3.0%

**CASE STUDY:** Shoosmiths' Integrated CRM Platform

# Enhancing Client Interaction

Shoosmiths is a full service national U.K. law firm headquartered in Northampton. The firm wanted to streamline and enhance the way in which it communicated with clients and kept track of interactions. In response, it adopted a CRM platform to communicate with over 20,000 companies and 80,000 individuals. The technology, including robust data quality tools, enables the firm to integrate all client information on a single platform, including contact details, client history and email communication, making it easier for all staff to stay up to date on client interactions.

# COMMUNICATIONS, COLLABORATION AND NETWORKING TOOLS AND DEVELOPMENTS

*IT enhancing client collaboration:* Throughout the study, a **clear emphasis has emerged on the need for deeper and wider IT-enabled collaboration**, particularly with clients and between devices. This is seen as having potential to enhance delivery at multiple levels — encompassing client interaction, presentation of information, workflow transparency, time and budget reporting, process integration, data exchange and even to the extent of developing shared systems and infrastructure. In the short term, adoption of secure Near Field Communications (NFC) technology will enable users to share information from device to device and collaborate more easily. Effective integration with client and court systems will allow lawyers to become productive far more rapidly as they will not have to wait on key data and documents to be shared. Internally, major benefits are anticipated if effective collaboration can be facilitated across practice areas and departments in a law firm.

Communications, Collaboration and Networking Tools and Developments	Now-12 Months	2-5 years	6-10 years	10+ years
5G phones / communications	18.5%	66.5%	14.0%	1.0%
6G phones / communications	2.5%	32.7%	37.2%	27.6%
Pervasive video	23.0%	46.0%	24.0%	7.0%
Remote presence / telepresence	65.0%	25.0%	7.5%	2.5%
Telepresence robots	12.1%	30.7%	31.2%	26.1%
Immersive telepresence	6.0%	30.2%	39.7%	24.1%
Touchable holographs	1.0%	14.7%	37.4%	47.0%
Real-time multi-party document editing	62.5%	33.0%	3.5%	1.0%
Shared databases	64.5%	27.0%	7.0%	1.5%
Shared knowledge bases	67.7%	23.9%	6.0%	2.5%
Mesh networking	29.3%	49.5%	17.2%	4.0%
Mobile Ad-hoc Network (MANET)	15.8%	53.6%	20.9%	9.7%

# COMMUNICATIONS, COLLABORATION AND NETWORKING TOOLS AND DEVELOPMENTS

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**Remote presence / telepresence a service plus:** Pioneers are adopting or will shortly be pursuing a variety of collaboration support approaches. These include Remote Presence / Telepresence (65%). These high-quality video systems are seen as enabling lawyers to service many interaction requirements without having to visit client sites as frequently. Within the current 12-month timeframe, a strong focus on collaboration at the task and process level is expected, with an emphasis on Shared knowledge bases (67.7%), Shared databases (64.5%) and tools enabling Real-time multi-party document editing (62.5%). The latter would help eliminate the need to email documents between client and attorney and ensure that everyone is working on the same documents. Over time, the level of intelligence in these tools will increase, not only alerting users as others make changes but also highlighting logical inconsistencies, duplication of content and suggesting relevant content that could be included.

The adoption of telepresence could give rise to virtual trials, with the potential for juries to connect to a courtroom from home. There might be strong opposition to such a move, as there would be concerns about the effectiveness of jury deliberations conducted remotely and the extent to which jurors might become distracted. There are also risks of others viewing the case, with the potential for the juror to be influenced in their decisions.

**Higher bandwidth, more immersive communications:** The sheer volume of data and range of formats being exchanged will increase dramatically over the next decade, especially with the advent of the Internet of Things (IoT). This will challenge the broadband carrying capacity of network providers in developed and evolving economies. Firms may increasingly find themselves limited in the extent of electronic service innovation they can deliver simply because of broadband constraints. The greater the complexity of the operating environment and the legal matters being pursued, the greater the need for shared understanding, deep collaboration, multi-format content and clear communication.

Over the two-to-five-year timeframe, leaders are expected to adopt developments such as 5G phones / communications (32.7%) and Pervasive video (46%), making content available to anyone, anywhere across multiple devices. Views differ on when we might see first adoption of more immersive, tactile and multi-sensory communication media. For example, six to ten years was the most commonly selected option for developments such as Immersive telepresence (39.7%) and Telepresence robots (31.2%). Such devices could move around an environment enabling conversations and collecting a range of different types of information. User acceptance and connectivity requirements will be important hurdles to the adoption of telepresence robots. While 10 years+ was the most popular option for Touchable holographs (47%), with prototypes of each of these technologies already being demonstrated, there is the potential for all three to be in regular use within five years.

*What requests are clients making around evolving the communications interface?*

*How is the potential to use collaboration-enhancing tools being explored internally and with clients?*

# SOFTWARE TOOLS, TECHNIQUES AND TRENDS

**Encouraging flow — from workflow to gamification:** Significant progress is already seen or expected in software development approaches and the underlying coding tools and languages. A key focus of software usage in the legal environment will be the adoption and development of applications and tools that encourage more efficient flow in one form or another. This will encompass streamlining the flow of key work products, effective routing of communications or navigating users through key tasks using gamification techniques. From an R&D perspective, those pioneering the future of software development are focusing on challenges such as improving developer productivity, processing complex and parallel events, enabling collaborative development and the pursuit of verifiably error-free code.

On the 0-12-month horizon, the first movers in the sector are expected to focus on Workflow optimization technologies (67.5%), Open source development (59.8%), adoption of Enterprise app stores (59.2%), Legal data collection technology (53.4%), Grid computing (52.6%) and introduction of Gamification (46.9%) into a range of business activities. The idea of using a game-based approach is finding favor in other sectors across a range of applications such as delivering education and training, explaining product and service features, encouraging procedural compliance, and the introduction of complex concepts. A common application is improving helpdesk performance by creating a level of competition among team members.

*Where in the firm could gamification techniques be deployed to enhance effectiveness and performance?*

*What methods are currently being adopted or investigated to improve the speed, effectiveness, reliability and complex event processing capability of core business applications and new systems under development?*

Software Tools, Techniques and Trends	Now-12 Months	2-5 years	6-10 years	10+ years
Open source development	59.8%	26.8%	11.9%	1.6%
Grid computing	52.6%	35.4%	9.9%	2.1%
Gamification	46.9%	39.2%	12.4%	1.6%
Workflow optimization technologies	67.5%	29.4%	3.1%	0.0%
Legal data collection technology	53.4%	40.4%	5.7%	0.5%
Automatic content recognition	34.9%	51.6%	12.5%	1.0%
Context-aware computing	16.3%	50.5%	28.4%	4.7%
Complex event processing	25.3%	49.5%	21.7%	3.6%
Enterprise app stores	59.2%	34.6%	4.2%	2.1%
Crash-proof code	19.0%	38.4%	21.1%	21.6%
Procedural storytelling	19.3%	46.9%	21.4%	12.5%

## SOFTWARE TOOLS, TECHNIQUES AND TRENDS

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Gamification acknowledges the entry into the workplace of successive “gamer generations” who are familiar with the use of gaming methods in everything from entertainment to the monitoring and management of their health. Potential legal applications could include time entry and rewarding good security and email filing habits. Major benefits could be gained from games-based approaches to software training by rewarding progress and encouraging learners to take advantage of the full functionality available.

***Increasing capacity for computers to analyze real-world events:*** The two-to-five-year timeframe is most widely seen as the likely window for first adoption of some of the more advanced development techniques currently being piloted. These include Automatic content recognition devices (51.6%) that can deliver additional relevant information to what is being viewed. Similarly, Context-aware computing systems (50.5%) that can sense their environment and

adapt and respond accordingly are expected to become increasingly popular. Other developments anticipated for pioneer adoption in this time window include Complex event processing systems (49.5%) that can draw patterns or inferences from multiple parallel events, Procedural storytelling (46.9%) , which is an automated approach to improving developer productivity by delivering algorithmically generated code in a similar manner to that used for the development of computer games. There is slightly less optimism on the arrival of ultra-reliable and verifiably Crash-proof code (38.4%), a holy grail in the development of increasingly complex systems. These advanced tools will be crucial to helping firms make sense of real-time information flows and the volumes of data generated by the expansion of the IoT.

## ARTIFICIAL INTELLIGENCE (AI) AND INTELLIGENT SYSTEMS

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***Disruption as legal expert systems evolve into legal AI:*** The legal sector has always been heralded as one of the most promising potential targets for the deployment of AI and intelligent systems. Survey participants felt developments in this domain along with those in brain science were likely to cause the greatest disruption. A variety of applications of so-called “weak AI” or expert systems are already emerging in areas such as predictive coding and e-discovery. Indeed, many of the start-ups in the sector are pioneering the adoption of a range of AI techniques to complete a variety of tasks.

The range of potential AI applications identified include automating the court submission process and drawing up draft contract structures based on the key parameters of the transaction. Others are offering predictive analysis of the likely outcome of court cases based on comparing the details to past outcomes and looking at key variables such as the court and presiding judge. AI could enhance predictive coding

engines — these engines are evolving from mathematically-based to language-based and are likely to become much more significant.

IBM’s Watson AI engine has highlighted the potential of using advanced data analytics in domains such as cancer diagnosis, raising the prospect of similar applications in legal. Clearly, major cultural barriers exist to the idea of lawyers being supported or replaced by AI; and the acceptability of such tools will, in part, be dependent on the guidance and decisions laid down by the bar associations. Though expert systems and AI have been around for some time, improvements in functionality and price now create significant incentives for their use. A diverse range of legal applications is envisioned including concept clustering, information categorization, natural language processing, large-scale workflow automation and tracking, automatic generation of pleadings and creation of “Plain English” documents.

# ARTIFICIAL INTELLIGENCE (AI) AND INTELLIGENT SYSTEMS

AI also offers tremendous potential for personalization by learning individual lawyer behavior over time, understanding what they are looking for and presenting it on a predictive basis. Text, audio and video content would be delivered according to the situation being addressed, saving time spent searching for key documents and content. A range of tools that will allow lawyers to put together documents very quickly are emerging. The software typically gathers relevant precedent clauses and performs a statistical analysis to identify which ones are used most regularly (e.g., with a 90% frequency). By showing the frequency distribution for the use of different types of clauses, the lawyer can understand which ones are normally used and either deploy a commonly used clause or write one. The systems also help ensure that all required clauses are included.

Over time, the expectation is that a range of commercial tools and applications will emerge which have the built-in intelligence and semantic Web integration to enable anyone to do legal work. This merger of context -ware computing and AI could spawn a range of start-ups and generate interesting legal liability issues.

Artificial Intelligence (AI) and Intelligent Systems	Now-12 Months	2-5 years	6-10 years	10+ years
Artificial intelligence	13.8%	33.5%	26.1%	26.6%
Expert-level decision systems	11.2%	33.0%	30.9%	25.0%
Intelligent speech understanding	7.5%	48.4%	33.5%	10.6%
Natural language question answering	19.7%	47.9%	17.6%	14.9%
Machine vision	17.0%	44.7%	26.6%	11.7%
Machine learning	21.8%	42.0%	18.6%	17.6%
Deep learning software	3.8%	24.5%	38.0%	33.7%
Intelligent client assistants	3.7%	21.9%	42.8%	31.6%
Collective intelligence tools	7.5%	30.1%	35.5%	26.9%
Reality mining	14.1%	38.9%	30.3%	16.8%
Swarm intelligence	7.5%	33.2%	34.8%	24.6%
Intelligent robots	4.8%	12.3%	25.1%	57.8%
Intelligent personal assistants / avatars	6.5%	29.6%	31.2%	32.8%

**CASE STUDY:** Bradford and Barthel's Spherical Models  
Velocity Billing Platform

# Adoption of AI

Bradford and Barthel is a U.S. employment law, employment/insurance defense firm. The firm recognized that AI and predictive analytics could increasingly be used to determine the potential outcome for a case. This could be either an opportunity or a threat if competitors were to offer such a solution first. To address the opportunity, the firm set up Spherical Models as a separate consultancy business through which to develop its AI-based Velocity Billing solution and processes.

By running analytics on attorney-to-client specific output, type of injury, related doctor involved and other key parameters, Velocity Billing enables a comparison between past performance and possible future performance in each case. The tool and supporting process provide the ability to predict relative outcomes, estimations, and settlement/litigation billing payouts, amounts and project hours. Use of AI-based predictive data analytics in this way helps both in delivering internal efficiencies and in building alternative billing models with interested clients. A key attraction here is that the cost per case of running the analytics can be lower than the traditional cost of going to trial, and interested clients can recoup the investment rapidly.

# ARTIFICIAL INTELLIGENCE (AI) AND INTELLIGENT SYSTEMS

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**AI challenges human legal expertise:** In particular, AI is expected to transform and disrupt the customer experience, execution of legal processes and management of the firm infrastructure. There is a clear expectation that AI will have the capability to do analytical tasks and replicate some or much of the work currently conducted by humans. Critical here is the ability to capture and manipulate tacit legal knowledge that could aid decision-making both by clients and their lawyers. Some suggest that such AI systems could one day become a complete replacement in many of the contexts in which human lawyers are currently used. Such systems would act as a major legal repository, building up and learning from their own knowledge over time to refine the advice offered. However, significant advances would be required in knowledge management technology and AI capabilities to enable such developments.

**Speech understanding and natural language:** While opinion is quite diverse as to the earliest pioneer adoption date, with some arguing that AI is already in use, two to five years is the most commonly cited window for first movers to embrace Artificial intelligence (33.5%). Different facets of AI expected during that period include Intelligent speech understanding (48.4%), systems capable responding to questions phrased in Natural language (47.9%), Machine vision (44.7%), Machine learning (42%) — the ability to spot patterns in and draw inferences from data — and Expert-level decision systems (33%).

Intelligent dictation, voice recognition and speech understanding are expected to drive lawyer productivity. They will also have a major impact on searching internal systems and data as well as information on the Web, helping lawyers create and access structural information from voice files. Video mining could also have a range of applications as more content is contained in videos. The ability to analyze facial expression and voice recognition will be important; facial expression analysis could be used by lawyers, judges and juries to analyze witnesses and assess juror sentiment during the course of a trial.

**Advanced AI and robots:** The six-to-ten-year timeframe was most frequently cited for a range of more advanced developments such as Intelligent client assistants (42.8%) offering advice on demand. The same timeframe was most popular for the adoption of Deep learning software (38%) capable of mimicking the brain's approach to drawing information from unstructured data such as images. Similar adoption horizons were cited for Collective intelligence tools (35.5%) that can pool and intelligently interpret signals and information from multiple sources in real time. Despite the widespread adoption of robots in a variety of sectors from manufacturing to healthcare, there is a strong belief that the legal sector is 10+ years away from deployment of Intelligent robots (57.8%) in key roles.

Robots can come in both virtual and physical form. Their possible applications include personal assistants designed to complete detailed searches and “fetch” the results for the human operator. Over time, the rights of robots will become a real issue as they perform more and more tasks such as driving a car, caring for the elderly and completing a complex analysis task. A host of interesting issues will arise, such as can or should a robot responsible for car crash be sued?

*How regularly are developments in the AI field being reviewed?*

*Where are the most immediate and longer-term opportunities to leverage different forms of AI to deliver benefits to clients and the firm?*

*Which new market opportunities could be opened up using AI-based tools?*

**CASE STUDY:** IBM's Watson AI Supercomputer

# The Rise of the Smart Machine

Watson is a supercomputer developed by IBM. The tool combines AI and sophisticated analytical software and processes at a rate of 80 teraflops per second. To replicate the human ability to answer questions, Watson accesses 90 servers with a combined data store of over 200 million pages of information, which it processes against six million logic rules.

In 2011, Watson beat two human experts at the U.S. quiz game Jeopardy. Since then, it has been used in the medical field where Watson assists doctors in diagnosing and treating patients by analyzing large amounts of unstructured text and developing hypotheses based on that analysis. Major financial institutions are also working with Watson to tackle data-intensive challenges across the financial services sector, including banking, financial planning and investing. For example, Watson is already being used in customer service and as a wealth advisor.

To decide what's next for the supercomputer, IBM launched the Watson Academic Case Competition where 100 students participated. They were divided into 24 teams and were given 48 hours to come up with a new use for the computer accompanied by a feasible business plan. The winning team suggested that Watson could be used not just to look for evidence for legal departments, but also to predict each piece of evidence's probability of success. Nick Brestoff of International Litigation Services believes that Watson could lead to an imminent rise of "legal informatics" and sophisticated computerized approaches to information management driven by concepts like predictive coding and vector clusters. Jordan Furlong, writing for *Practice Source*, suggests that Watson is the final warning to firms to rethink how they acquire and use talent. He paints a future where "... even the most complex legal work will be deconstructed, parts broken out from the whole and assigned to the most effective yet least expensive provider."

# COMPUTING TECHNOLOGY AND DEVICES

**Transformation of computing approaches:** Underlying computing technologies have been out of the limelight in recent times as the focus has shifted toward consumer applications and devices. However, ongoing research efforts are likely to lead to even more science and technology breakthroughs. The decade ahead promises significant developments in the underlying technology that will enable faster, more complex processing and potentially radically different computing approaches. Current R&D efforts offer the potential for major advances in processor design, new device architectures, alternative computing and storage materials and new approaches to data communication and computation using scientific advances in areas such as optical information processing and quantum theory.

**Optical, quantum and bio computing:** Many significant developments are expected to be incorporated into the IT

infrastructure of the early adopters on a two-to-five-year horizon. These include Modular computers (51.9%). These are multiprocessing computing architectures where memory and peripherals can be added and removed while the system is running without disruption. A similar timeframe is expected for Pervasive computing (47.8%) with devices embedded in a wide variety of everyday objects from clothing to furniture. Machine-to-machine (M2M) communications technology (37.2%) and Reprogrammable chips (34.8%) are also seen as two-to-five-year pioneer developments. The six-to-ten-year horizon was the most commonly selected for pioneer adoption of new approaches such as Optical computers (40.6%) and Quantum computers (35.7%), while the majority saw 10+ years as the earliest potential arrival of Biological computers (50.3%), which use DNA to store and process data.

*How might the next waves of development in computing technology influence the design of the firm's IT infrastructure?*

*Could quantum computers offer a radically new approach to complex tasks such as e-discovery?*

Computing Technology and Devices	Now-12 Months	2-5 years	6-10 years	10+ years
Pervasive computing	13.7%	47.8%	25.3%	13.2%
Modular computers	30.4%	51.9%	14.4%	3.3%
Optical computers	4.4%	37.8%	40.6%	17.2%
Quantum computers	6.6%	26.4%	35.7%	31.3%
Biological computers	3.3%	16.0%	30.4%	50.3%
Machine-to-machine (M2M) technology	31.2%	37.2%	22.4%	9.3%
RFID technologies	61.9%	21.6%	12.7%	3.9%
3D spintronic microchips	4.0%	35.0%	40.1%	20.9%
Reprogrammable chips	13.3%	34.8%	34.3%	17.7%
Bio computers decrypting DNA-stored images	3.3%	17.6%	36.3%	42.9%

**CASE STUDY:** Reynolds Porter Chamberlain's Edge

# Driving Client Service Through Knowledge Management Excellence

Reynolds Porter Chamberlain (RPC) is an international law firm with offices in London, Bristol, Hong Kong and Singapore. The firm wanted to build a knowledge management platform using social media techniques reflective of its innovative culture. In particular, RPC wanted to use the knowledge flowing through its business to provide new insights to clients and its own people, enabling them to better pursue commercial opportunities with both broad and specific business content. Using external input from a University of Westminster Knowledge Transfer Program, the firm developed Edge: an innovative social business-driven knowledge management platform.

The platform allows legal teams to create wiki-based dashboards of insight and analysis related to key clients and markets, pulling together strategy and market insights. Edge is fed with a real-time stream of information from the firm's CRM system and RSS feeds from relevant external publications. These are filtered to each person in the firm and are segmented to meet personal, group and firm-wide requirements. Edge replaced RPC's previous intranet, and became a catalyst for further innovation across the firm's systems, learning and external digital programs. Edge allows for the sharing of content across RPC's offices and provides a means to hold personal insights from external and internal knowledge flows. RPC's legal teams believe Edge saves them time, enables better client service and differentiates the firm.

# MANAGEMENT AND ANALYSIS OF DATA, INFORMATION AND KNOWLEDGE

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“The need to extract value and insight from big data is also rising up the leadership agenda in law firms of all sizes.”

## *Demand for data and knowledge management innovations:*

The competitive factors and client drivers discussed elsewhere are serving to reinforce the importance of transparent systems, timely and forward-looking management information and deep client knowledge. The need to extract value and insight from big data is also rising up the leadership agenda in law firms of all sizes. In particular, there is a strong focus on the need for consolidating and sense-making of multiple sources of structured and unstructured data, enabling a single and flexible view of all client-relevant content. This would enable aggregation and analysis of information and communications from the client with relevant content on internal systems. This needs to be supplemented with data extracted from third-party sources and structured and unstructured content from both the Web and social media. Today the focus is on text, voice, images and video data. Over time, as a multi-sensory Internet evolves, data types will expand to include touch, taste, smell, emotions and, eventually, memories and thoughts.

The growth in the range of end user platforms being supported is driving the need to untether data from specific devices and make it available on all. This should provide more flexibility for the collection, sharing and accessing of information and improve response times. Client demands for speed and efficiency will also help drive consolidation of data across multiple formats such as email, forensics and mobile data. Intelligent data capture technology should help automate the marking of documents with tags that tell the lawyer which section of the document they are looking at. The development of standard markups will increase and should lead to more efficient document processing.

Globalization is driving new data challenges as law firms try to search for, consolidate and analyze multi-country data and documents to work on cross-border matters and disputes. These needs will drive the demand for ever more sophisticated search and analysis mechanisms with the capability for intelligent search, categorization, storage and deletion of unwanted data. The boundaries between law firm

and client systems and data will start to blur, and serious questions are already emerging around ownership of data, information and knowledge and who has the right to view it. This will become increasingly important as law firms make more use of intelligent systems to aggregate multi-source content to help generate new insights from client data. This increasingly dynamic, complex, voluminous and real-time nature of the data being accessed will also raise questions around security, retention policies, ethical walls and conflicts of interest.

A greater focus will be placed on tailoring information to the differing needs of clients, which will place even more focus on the sophistication of the information and knowledge management tools that are deployed. At the same time, conceptual search functionality will advance to allow systems to perform basic to mid-level tailored document review and due diligence. The investment, capability and associated management effort required to deliver and maintain such flexibility and the need for continuous innovation could drive firms to look at cloud-based solutions.

Data and knowledge filtration and tailoring will grow in importance. Many professionals feel they are already overwhelmed with information. It is becoming physically impossible to scan for and analyze every relevant item of content. Even having a human assistant doesn't guarantee completeness, relevance and accuracy. This will almost certainly drive demand for intelligent tools to source and filter the most important information and present it in an appropriate and intuitive manner. This need to access and analyze “hyper-contextual” and “hyper-real-time” information will drive fundamental shifts in internal data and knowledge management (KM) tools. Generational shifts are also introducing profound KM challenges. New entrants to the workforce consume information in vastly different ways than people in the profession who are only 10 to 15 years older. Understanding how younger generations work, study, conduct research and process information and knowledge will be crucial to design effective tools.

**CASE STUDY: Schjødt**

# Integrating Knowledge Management with Core Systems

Schjødt is internationally recognized and respected as one of Norway's top-tier law firms. Knowledge management is given a high priority, spearheaded by a separate knowledge department. Schjødt started to work with the Deltek ERP platform three years ago. The tool enables a dynamic approach to knowledge management and integrates into existing systems to support business processes via a role-based Web interface that accommodates individuals' needs for support and information. The firm credits the innovative use of IT as a critical factor in enabling its significant growth over the three-year period.

# MANAGEMENT AND ANALYSIS OF DATA, INFORMATION AND KNOWLEDGE

**Rapid innovation in data and knowledge infrastructure expected:** A clear pioneer emphasis is already seen or expected in the next 12 months around establishing robust data and knowledge infrastructures. Key priorities include Data mining of existing repositories (65.5%), use of Virtual data centers (56.3%) and adoption and exploitation of Big data tools (52%). The need to extract insight from data is driving the same timeframe for pioneer adoption and effective deployment of Knowledge management (KM) tools (49.1%) and the application of Predictive analytics (42.4%) to help postulate future possibilities based on existing information.

**Content mining for real-time analysis of critical data:** The next wave of development on a two-to-five-year perspective is expected to see leaders experimenting with the mining of content in both Video (52.6%) and Audio (51.4%) and the adoption of In-memory database management systems (53.8%) and In-memory analytics (48.8%). These in-memory tools would allow for rapid near-real-time analysis of large data volumes and early identification of trends, unusual transaction patterns, emerging issues and anomalies.

*How does the firm plan to evolve information and knowledge management strategies to enable genuinely deep insight and intelligence to be derived from data and document stores?*

*What is the firm's strategy for the adoption of tools to support tailoring, personalization, real-time and in-memory management of data, information and knowledge?*

Management and Analysis of Data, Information and Knowledge	Now-12 Months	2-5 years	6-10 years	10+ years
Big data tools	52.0%	36.7%	10.2%	1.1%
Data mining	65.5%	28.3%	5.7%	0.6%
Audio mining	31.6%	51.4%	13.6%	3.4%
Video mining	25.7%	52.6%	17.7%	4.0%
Predictive analytics	42.4%	37.9%	17.5%	2.3%
Knowledge management (KM) tools	49.2%	36.2%	10.7%	4.0%
In-memory database management systems	25.2%	53.8%	17.5%	3.5%
In-memory analytics	29.1%	48.8%	16.9%	5.2%
Virtual data centers	56.3%	35.1%	8.6%	0.0%
Converged infrastructure	47.4%	38.9%	10.9%	2.9%
Genetic / DNA storage technologies	3.5%	19.9%	35.1%	41.5%

# SECURITY TECHNOLOGY

**Demand for enhanced security capability:** As business has become more reliant on technology, security has become a critical management issue and a growing priority for law firms. A mobile workforce and use of the cloud is driving the need to think about security at every level — data, applications, hardware platforms, devices and networks. A growing emphasis will be placed on accurate identification of individuals and devices and on activity monitoring. There is also a strong focus emerging on methods of encryption that can guarantee secure transmission and prevent unauthorized access. There is a concern over the apparent conflict between the needs for speed and productivity and the controls required to ensure adherence to effective security and risk management protocols. The example is often cited of the security risks inherent in lawyers transferring client data using social media and public file exchange sites such as Dropbox. Ultimately, the situation is expected to be resolved through a

combination of training using gamification approaches and intelligent embedded tools which make security compliance part of the intuitive process of completing a work task rather than a cumbersome add-on.

**The issue of world class security is increasingly seen as a short-term differentiator that will evolve into a must-have for law firms.** Today concerns exist over the potential for hackers to target data held on law firms’ systems because they are seen as potentially less secure than those adopted by major clients. Some interviewees highlighted that there were already cases of firms losing client business over security concerns. The frequency and severity of security audits are expected to increase as clients strive to manage cyber-risk and control the costs of cyber-threat insurance. Cyber-risk audit opens up a potentially lucrative new market opportunity for firms not already active in this space.

*What IT security expectations are clients placing on the firm?*

*Could the adoption of truly cutting edge security approaches become a near-term source of competitive differentiation?*

Security Technology	Now-12 Months	2-5 years	6-10 years	10+ years
Biometric identification	48.9%	29.6%	17.6%	4.0%
Genetic recognition technologies	14.3%	32.6%	30.3%	22.9%
Body language recognition	17.7%	44.0%	28.6%	9.7%
Homomorphic encryption	19.7%	52.6%	20.8%	6.9%
Quantum cryptography	6.5%	31.8%	40.6%	21.2%
Anonymous e-mail identification	16.1%	46.0%	32.8%	5.2%
Secret data embedded in calls	36.1%	43.0%	15.7%	5.2%
Biometric sensors	30.1%	34.7%	24.3%	11.0%
Technology contradiction	34.1%	38.2%	20.8%	6.9%

## SECURITY TECHNOLOGY

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**Biometric / genetic identification now; quantum cryptography to come:** In the identification domain, Biometric identification (48.9%) is seen as the 0-12-month priority for pioneers. Biometric solutions are expected to deliver cost efficiencies, eliminating the need for multiple passwords, security tags and identification cards. Two to five years is seen as the most popular choices for adoption of Body language recognition (44%), Biometric sensors (34.7%) and Genetic recognition technologies (32.6%). Key encryption developments are also seen as most likely on the two-to-five-year timeframe, with a focus on Homomorphic encryption (52.6%), allowing encrypted data to be sent to and processed in the cloud without decryption. The 10+-year timeframe is the most commonly selected for more advanced encryption methods such as Quantum cryptography (40.6%).

## DISRUPTIVE SCIENTIFIC DEVELOPMENTS

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**The emerging biological era:** The research identified a range of broader scientific advances whose impact could be potentially dramatic but which don't fall neatly under one of the other nine categories above. Perhaps one of the most fundamental changes will be the shift in the governing paradigm from "Information Age" to "Biological Era." The last 30 to 40 years have seen a focus in society on IT and information as the lifeblood of the economy. The next few decades will see a growing focus on biology and the "gene" both from a productive and from a sociological point of view. As things move from being material objects to being living objects, in the future we may be using cells and molecules — rather than electrons — as key media for computing, communication and information storage.

**Transformations driven by 3D manufacturing and human augmentation:** Some developments are already rising to prominence. For example, 3D printing / Additive manufacturing (48.8%) and 3D scanners (41.8%) are already being investigated by law firms to assess their potential impact. The next stage of development of these technologies will see the advent of 4D printers — creating objects that can change their shape and key properties over time. Perhaps the most disruptive and socially challenging scientific advances are expected from progress in enhancing the human body, and in mapping and storing the contents of our brains. With a range of chemical, genetic, electronic and physical enhancements already available or in the pipeline, opinion is

divided as to when legal sector pioneers would seek to adopt such advances. The most popular option for adoption of Human augmentation (31.8%) was six to ten years.

**The brain — just another process to backup and extend:** Enhancements related to the mapping, uploading and augmentation of the human brain are expected to be the most disruptive for the legal sector alongside advances in AI. However, despite the rapid scientific progress being made, the majority placed brain-related advances in the 10+-year adoption category. These include Brain transplants (80.9%), Uploading the brain to the Internet or some other storage device (71.9%), Memory implants (67.9%), Brain mapping (37.3%) and the use of an external information processing device or Exocortex (69.9%) to extend the processing power and memory capacity of our brains.

# DISRUPTIVE SCIENTIFIC DEVELOPMENTS

Disruptive Scientific Developments	Now-12 Months	2-5 years	6-10 years	10+ years
Next generation battery technology	14.1%	59.4%	22.4%	4.1%
3D printing / Additive manufacturing	48.8%	31.8%	16.5%	2.9%
3D scanners	41.8%	38.2%	17.7%	2.4%
Human augmentation	15.9%	24.1%	31.8%	28.2%
Skin- embedded screens	4.2%	11.9%	38.1%	45.8%
Brain mapping	14.8%	13.6%	34.3%	37.3%
Brain uploading	2.4%	7.2%	18.6%	71.9%
Brain transplant	1.2%	3.6%	14.3%	81.0%
Exocortex	1.8%	8.4%	19.9%	69.9%
Memory implants	1.8%	8.3%	22.0%	67.9%
iCyborg lawyers	3.0%	6.1%	12.7%	78.2%
Computational photography	17.3%	41.7%	25.6%	15.5%
Lab-on-a-chip devices	19.2%	36.5%	30.5%	13.8%
Nanotechnology	16.7%	37.5%	27.4%	18.5%
Atomically Precise Manufacturing	6.6%	27.0%	31.7%	34.7%
New quantum materials and devices	3.6%	16.4%	37.0%	43.0%
Self-powered nano devices	9.0%	25.8%	37.7%	27.5%
Civilian and commercial unmanned aircraft vehicles (UAVs)	53.9%	13.6%	16.6%	16.0%

*Who has responsibility for evaluating the broader potential of science and technology advances?*

*What policies will the firm adopt around the use of human augmentation treatments by staff?  
How might these policies change in the face of competitor actions?*

## DEPLOYING THE TECHNOLOGIES: THE THREE HORIZONS MODEL

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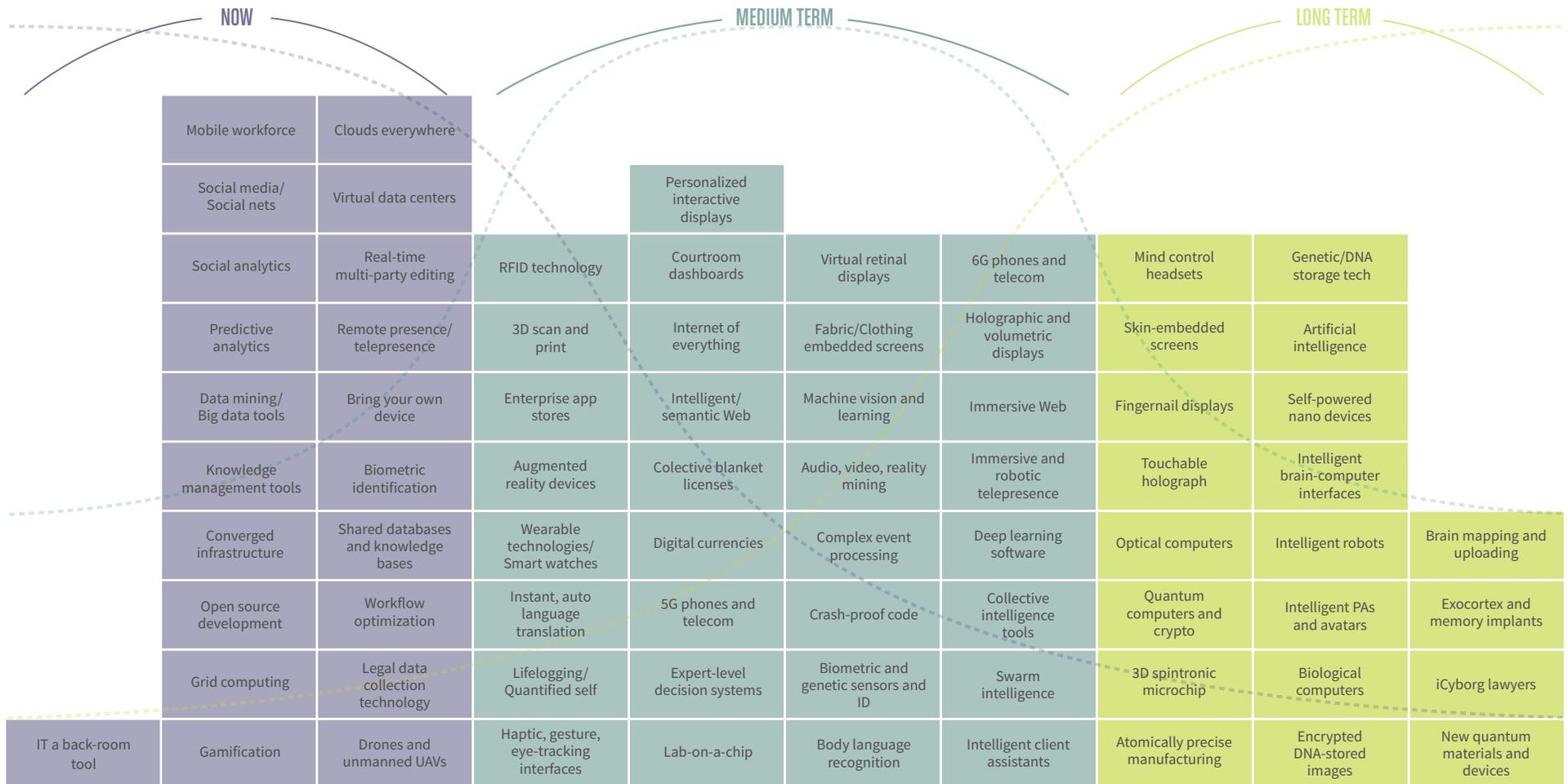
The emerging developments described above have the potential to challenge and transform the legal sector over the next decade and beyond. In the graphic below, we have summarized how they might be deployed by legal pioneers using the “Three Horizons” Framework. This timeline allows us to look at how emerging changes might play out in overlapping waves — generating market turbulence and creating opportunities for further innovation. Horizon One represents the technologies that might be adopted as part of the current state of play, largely being integrated into the business models, structures, client relationships, operating practices and ways of working we understand today.

Horizon Three represents what most in the sector would consider the “far future.” Today, these possibilities are visible to some as weak signals of possible changes to come, typically based on ideas that are still at the early stages of research and development. Their potential applications are typically expressed as wild ideas, theoretical formulations, design dreams, and organizational visions. Horizon Two bridges the present and the farther future with entrepreneurial actions and inventions that are just entering the market.

We have clustered and mapped the new technologies, emerging innovations and discoveries along the Three Horizons Timeline as a useful visual summary and aide-memoire for the landscape of emerging and possible developments. The first column on the left — “IT as a back room tool” — represents the recent past and many firm’s current state of play. The second and third columns, starting with “mobile workforce” and ending in “drones and unmanned UAVs” include IT trends emerging into the current context. If law firms are not already taking advantage of or responding to these technologies, they should consider doing so now.

The fourth, fifth, sixth and seventh columns — beginning with “RFID techs” and ending with “intelligent client assistants” — illustrate emerging technologies with which law practices could create new legal applications as these innovations emerge into wider use. The eighth, ninth and tenth columns — beginning with “mind control headsets” and ending with “new quantum materials and devices” — indicate future visions of scientific and technological discovery that could potentially transform very deep assumptions: what it means to be human, and what the boundaries of independent artificial intelligence are. These changes may affect not only day-to-day legal firm management and the practice of law, but the law itself.

# THE LEGAL TECHNOLOGY TIMELINE



## FIRST HORIZON

Current Assumptions, Paradigms, Systems and State of Play

## SECOND HORIZON

Turbulent Overlapping Change and Entrepreneurial Transformations

## THIRD HORIZON

Pockets of the Future Visible in the Present

# KEY STRATEGIC QUESTIONS

Mobile workforce	Clouds everywhere						
Social media/ Social nets	Virtual data centers						
Social analytics	Real-time multi-party editing	RFID technology					
Predictive analytics	Remote presence/ telepresence	3D scan and print					
Data mining/ Big data tools	Bring your own device	Enterprise app stores					
Knowledge management tools	Biometric identification	Augmented reality devices					
Converged infrastructure	Shared databases and knowledge bases	Wearable technologies/ Smart watches					
Open source development	Workflow optimization	Instant, auto language translation					
Grid computing	Legal data collection technology	Lifelogging/ Quantified self					
Gamification	Drones and unmanned UAVs	Haptic, gesture, eye-tracking interfaces					

*What is the firm's general stance on the use of cutting edge technology developments?*

*Who has responsibility for identifying and evaluating the commercial potential and technical feasibility of emerging science and technology developments and their use by competitors?*

*How far ahead is the firm planning when developing technology strategy?*

*How frequently does the firm engage with key vendors and new suppliers to understand their long term technology roadmaps?*

*What critical strategic, managerial, human, cultural, organizational and operational barriers need to be removed to allow for the more rapid and effective evaluation and adoption of innovation?*

## FIRST HORIZON

Assumptions, Paradigms, Systems and State of Play

## SECOND HORIZON

Turbulent Overlapping Change and Entrepreneurial Transformations

## THIRD HORIZON

Pockets of the Future Visible in the Present



# FUTURE STRATEGIC APPLICATIONS OF TECHNOLOGY IN LEGAL

Specific domains where IT could have disruptive and potentially transformational impact for existing players and new entrants.

## CRITICAL INSIGHTS

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**IT Is a Key Enabler:** IT could play a key role in transforming legal practices and courtroom operations, ranging from enabling new value chains to reinventing service provision.

**Get Ready for Disruption:** AI, the Internet of Things and related innovations could transform both how legal firms operate and how the sector as a whole evolves.

**AI Takes Over:** Legal avatars / expert coaches may be more prevalent in the courtroom than lawyers.

**Reinventing Legal Education:** Law schools and the paths to and through legal education might be completely transformed by changing patterns of demand, digital distance education and artificially intelligent mentors.

**Develop BYOD Strategies:** Supporting a BYOD-enabled mobile workforce may become a strategic HR priority for law firms.

**Invest in Talent:** Developing business-oriented IT staff and a technology savvy workforce become operational priorities on the playing field of globalized competition.

**Embrace the Change:** Risk aversion is a fatal barrier to adaptability and the adoption of innovative business technology solutions.

## RESPONDING TO THE CASE FOR CHANGE

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The combination of strong global drivers, continuous change within the legal sector and a rapid pace of technological advances is throwing up both challenges and opportunities. These will impact both established firms and new entrants seeking to benefit from the process of disruption and transformation. In this section, we explore some of these potential applications and implications, focusing on the following seven key dimensions:

- » *Strategic Roles for IT*
- » *Adapting to the Changing Nature of Information*
- » *Key Technology Leverage Points*
- » *The Impact of New Entrants*
- » *The Technology Wish List*
- » *Developing the Capacity for Innovation*
- » *Securing the Payoff— Key Strategic Opportunities.*

## STRATEGIC ROLES FOR IT

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*The research highlights clear potential roles for IT in the evolution or transformation of legal practices. Key among these are:*

- 1. Value chain enabler:** Technology is expected to play an increasingly significant role — creating opportunities and integrating activity across the whole business cycle from opportunity identification and development to bidding, case management, service delivery, client reporting, billing and the efficient conduct of internal firm processes and workflows.
- 2. Value creator:** The IT function could increasingly be tasked with helping to identify, define and develop new market-facing solutions and form part of the client service team. This means working with the client directly to identify opportunities to enhance service delivery, using client data to generate new insights and creating new sources of client value.
- 3. Collaboration enhancer:** The emerging IT toolset will allow for far deeper and wider forms of collaboration. These range from shared documents and knowledge repositories to enhanced telepresence and joint development of applications and databases that cut across organizational boundaries.
- 4. Service reinvention:** Opportunities are emerging to transform existing services using intelligent IT applications, for example, using predictive analytics to determine whether a case should be taken to court.
- 5. Force multiplier:** Putting tools and applications in the hands of professional staff that enable them to perform tasks more efficiently, offer critical information updates and insights on key clients and enable easy look-up access to industry jargon and regulatory detail.
- 6. Data driven insight:** Using big data and predictive analytics to help analyze case data, identify market opportunities, extract content from the Web and structure it to support strategic planning, marketing, bidding, matter execution, presentations and reporting.
- 7. End-to-end visibility:** By measuring and highlighting the true costs of service delivery, IT should help identify process failures and enable firms to manage their profitability more accurately — particularly on fixed fee and other alternative billing and shared risk arrangements.
- 8. Online delivery:** Technology will make it easier for people to obtain legal advice online. Those who are reluctant to embrace the Web may find it difficult to change and deploy new technology or IT-enabled services quickly. Smaller firms might have a competitive advantage by being more nimble.
- 9. Cost and efficiency:** Clear potential exists to streamline and automate processes, reduce delays, cut travel requirements and accelerate core tasks — all of which could contribute significantly to reducing operational costs.
- 10. Just-in-time training:** Technology will increasingly enable professionals to access the content they need, when they need it, in a format that best suits their personal learning style.

## ADAPTING TO THE CHANGING NATURE OF INFORMATION

The nature of how information is generated and captured is changing and could directly impact the sector. The legal information management process is being changed by the consumerization of technology, the explosion of personal information capture devices such as smartphones, and the emergence of wearable technologies such as Google Glass. The speed of change means that the legal system is still catching up and assessing the validity of such data. The rise of the IoT makes the situation even more complex, as literally every object could have built-in intelligence. How would the evidence of an eye-witness to a crime be compared to that of the chair or post box that also saw the event?

**Information management priorities:** Survey respondents were asked to identify the potential impacts and suggested that key ones would include mobile devices becoming more central to service delivery with a greater emphasis on the quality of information management and analysis tools. Legislation concerning security, privacy and evidence admissibility would all need review, and the potential for a public backlash could increase. Firms would be expected to speed up service delivery and enhance the quality and transparency of information provision to clients while having to deal with greater complexity and more diversity of structured and unstructured information types. A priority also emerges around enhancing the firm's capability to spot, evaluate, pilot and deploy new technologies quickly.

Over the next decade, how might the practice of law be affected by changes in the way information is generated, gathered and accessed? How might these devices (*e.g.*, Google Glass) and access methods be used in practice and how might they be treated when the devices and data on them are evidence in a case?



*How might data generated from a range of wearable devices and the IoT be used in and impact the conduct of legal matters and court cases?*

**CASE STUDY: Brilliant Law's Online Legal Services Platform**

# Offering Fixed Price Web-Based Solutions

U.K.-based Brilliant Law is a new firm that takes advantage of the ABS legislation allowing external investors into the sector. Founded by “business people and solicitors,” it provides a range of corporate legal services include IP, HR and dispute resolution on a fixed price basis. The firm believes it is the first supplier to offer a “fixed price legal services shop” allowing businesses to buy services online.

Customers browsing the firm’s website can easily buy a service and add it to their basket. The order is received within an hour, and a solicitor from the firm contacts the customer to obtain all the necessary information. All documents are then drawn up in plain English and emailed to the client. Their legal services platform gives clients easy and direct access to the firm’s information and enables lawyers to work completely electronically. Brilliant Law reports high levels of satisfaction with the firm’s services because the approach provides clients with a seamless and transparent experience.

# KEY TECHNOLOGY LEVERAGE POINTS

The interviews, workshops and desk research highlighted a range of concepts and ideas for how advances in technology over the period to 2025 might affect the industry. A selection of key concepts were translated into provocative statements of how things might play out. Survey participants were asked to state how strongly they agreed with each statement.

In reporting the analysis of the responses, we have highlighted the percentage of respondents who chose one of the first three options: strongly agree, agree or agree slightly.

**Impact on industry structure: There is a belief that automation and adoption of intelligent systems is inevitable.** The majority agree that The bulk of legal services will be commoditized and highly automated, with only a small number of firms providing premium priced advisory services

(68.3%). Irrespective of their size, law firms will need to master IT and deploy value-adding solutions quickly if they are to retain client confidence.

**Impact of tech-savvy new entrants:** The growing reliance on IT and the increasing component of IT and data management in larger cases highlight the shifting nature of the sector and the rising importance of technology competence. This opens the door for entrants from outside the sector with the relevant IT capabilities. While some “non-legal” new entrants may choose to offer their services to law firms, others may see the potential to go further. There was strong support for the idea that Technology firms will increasingly enter the legal industry, using disruptive innovations to provide direct legal service delivery (76.7%).

*What is the firm’s vision for the IT-enabled service delivery model in one, three or five years?*

*How can the firm respond to or collaborate with non-legal entrants providing direct delivery of key services to clients?*

How strongly do you agree with the following statements? By 2025...	Strongly Agree	Agree	Agree Slightly	Disagree Slightly	Disagree	Strongly Disagree
The bulk of legal services will be commoditized and highly automated, with only a small number of firms providing premium priced advisory services	11.2%	30.0%	27.1%	17.3%	12.6%	1.8%
Technology firms will increasingly enter the legal industry, using disruptive innovations to provide direct legal service delivery	11.5%	32.6%	32.6%	12.9%	9.0%	1.4%
Automation and artificial intelligence (AI) will lead to a major reduction in the demand for legal graduates and law schools	6.8%	23.3%	24.0%	25.1%	17.6%	3.2%
Law schools will increasingly provide legal services to differentiate themselves and generate income	4.3%	18.8%	27.8%	22.4%	21.7%	5.1%

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CASE STUDY: Troutman Sanders' eMerge

# Reinventing eDiscovery

and Project Attorneys who

Troutman Sanders LLP is an international law firm with offices located throughout the U.S. and China, providing legal advice in areas such as corporate, energy and litigation. The firm recognized that they and their clients were struggling with the cost and inefficiency of the current e-discovery process in the U.S. and wanted to provide a better solution. In May 2012, the firm formed a separate subsidiary called eMerge, making a significant investment in technology and people with the goal of transforming the e-discovery process to provide a better value to clients. At eMerge, lawyers and technologists work side-by-side, and all project managers are licensed, practicing attorneys with experience in discovery. The model allows the firm to provide integrated legal and technology advice, which it considers a unique differentiator. Since launch, the firm has worked on over 350 matters on behalf of clients and has received positive feedback.

# TRANSFORMING THE CONDUCT OF LEGAL WORK

The interviews and workshops clearly indicate that the sector is increasingly aware of, and starting to prepare itself for, the widespread deployment of new technologies. While a fundamental mindset change may be required in order to deploy many of the potential applications, the appetite for change appears to be growing. In particular, a clear majority believe that over the next decade or so, we could see AI deployed to deliver significant enhancements to lawyer and work group productivity. There was strong concurrence with the idea that Lawyers will be supported by a digital personal assistant / avatar — providing legal advice on demand, representing them in the online environment and managing workflows (65.2%). Despite concerns over encroachment into the lawyer’s domain of expertise, an overwhelming number agree that AI advisers and helper apps will structure legal documents and check the content generated by lawyers (87.8%).

**AI-provided service:** Perhaps the most contentious application area for AI is in the direct provision of legal advice. However, many argue that this is already happening in the consumer domain and will become more prevalent in commercial law. In the survey, 79.4% agreed that AI will increasingly be used to provide advice on legal cases. Once the expertise and tacit knowledge of lawyers is captured, the choice is either to retain it in-house or seek ways to leverage it in the market. In this regard, many believe that Customers will have their own AI legal advisors embedded in their in-house systems (68.7%).

**Value of the human factor:** Despite concerns over the extent of automation, there is still a belief that clients value human interaction and quality of advice above all. Hence the strength of backing for the notion that Customers will always be willing to pay more for bespoke legal services provided by

“A clear majority believe that over the next decade or so, we could see AI deployed to deliver significant enhancements to lawyer and work group productivity.”

How strongly do you agree with the following statements? By 2025...	Strongly Agree	Agree	Agree Slightly	Disagree Slightly	Disagree	Strongly Disagree
AI advisers and helper apps will structure legal documents and check the content generated by lawyers	17.3%	41.0%	29.5%	5.8%	5.8%	0.7%
AI will increasingly be used to provide advice on legal cases	11.9%	34.3%	33.2%	10.5%	9.0%	1.1%
Customers will have their own AI legal advisors embedded in their in-house systems	8.0%	26.9%	33.8%	15.6%	12.7%	2.9%
Customers will always be willing to pay more for bespoke legal services provided by a human lawyer	12.6%	37.8%	28.8%	12.2%	5.8%	2.9%
The transparency of the legal process will increase as a result of client demands	24.9%	43.0%	23.5%	5.8%	2.5%	0.4%

## TRANSFORMING THE CONDUCT OF LEGAL WORK

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*What consideration has been given to pioneering the use of AI and other emerging technologies to disrupt the market and gain a first-mover advantage?*

*How are professional staff being prepared for the more widespread introduction of smart technologies that could perform parts of their value-adding roles?*

a human lawyer (79.2%). At the same time, the expectation is that technology will be leveraged extensively in the provision of those services to meet client demands around efficiency and information provision. Respondents also believe that the transparency of the legal process will increase as a result of client demands (91.4%).

**Transforming the customer experience:** A number of developments could transform the customer relationship and add the “wow factor” in every aspect of relationship. This impact would extend from initial contact to provision of ongoing reporting and value-adding analytics. For example, client conferences could be enhanced through the establishment of “e-rooms” equipped with sophisticated data presentation and analytical tools for custom interaction and collaboration. At the matter level, major benefits will accrue from automation of document review and due diligence. Storing documents as data structures so that client contracts can be broken down at sub-clause level will allow for advanced search and analytics. This will eliminate a significant amount of billable time currently charged by lawyers for printing off previous work and telling the client their exposure. Client self-service capabilities could also be enhanced by Web-enabled critical systems, workflows, metrics, analytics and databases.

**Process re-engineering:** Internally, the goal of accelerating flow will drive the desire for seamless platforms offering integration across all applications. These will enhance speed of response and enable the rapid refinement and addition of services and offerings. Smart workflow automation, content processing and analysis should help eradicate human error, reduce costs and drive learning that enables continuous process refinement. With clients and judges alike demanding faster turnaround of information, speed will be a major driver for many applications and processes. The focus will be on key tasks such as de-duplicating data quickly, enabling rapid early content codification, speeding up case assessment, shortening the time to file a motion and accelerating analysis and response cycles. Detailed workflow analysis will allow firms to break a process down to its component tasks and

assign each one to the least expensive person who is capable of handling it.

**Consumerization of law:** These developments could accelerate the commoditization of some legal services (e.g., mortgage processing). Some believe commoditization could help drive revenue generation for the early adopters at the cost of their slower moving competitors. AI tools could also make it easier for consumers to put together their own legal documents — a trend which could extend from the consumer market to the smaller firms and eventually larger clients.

**Rethinking the legal workplace:** Collectively, all of these developments suggest that the way law firms operate will change quite dramatically over the next decade, not least in their use of space. For example, law firm offices could become less important with the rise of mobile working and various forms of outsourcing. Many law firm offices could be transformed into entirely different working environments. These changes could be accelerated by a continuously shifting boundary between process and advice. Activities that were once the domain of an individual lawyer will become replicable by a machine. Technology could lead to a reduction in the numbers of practicing lawyers but increase in “legal technicians” with very different needs in terms of client interaction space and office location.

“Smart workflow automation, content processing and analysis should help eradicate human error, reduce costs and drive learning that enables continuous process refinement.”

# TECHNOLOGY IN THE COURTROOM

How strongly do you agree with the following statements? By 2025...	Strongly Agree	Agree	Agree Slightly	Disagree Slightly	Disagree	Strongly Disagree
Lawyers will be supported by a digital personal assistant / avatar —providing legal advice on demand, representing them in the online environment and managing workflows	9.3%	24.9%	31.0%	13.9%	18.2%	2.9%
Emerging technologies will be an integral part of courts in the developed countries	18.0%	47.5%	22.3%	7.2%	4.3%	0.7%
Information generated by smart environments, the "Internet of Things" and social media will routinely be used in court cases	24.0%	46.6%	17.9%	8.2%	2.9%	0.4%
Lawyers entering the courtroom will have a range of wearable technologies and augmented reality applications, being fed real-time information by paralegals and digital assistants	17.6%	31.2%	31.2%	11.1%	7.9%	1.1%
Gesture / facial and voice analysis will be routinely deployed to assess the claims of defendants and plaintiffs	11.8%	28.6%	32.1%	15.0%	9.3%	3.2%
Legal cases will increasingly be argued by AI lawyers with decisions taken by AI judges	2.5%	10.1%	15.2%	17.8%	29.7%	24.6%
The outcome of legal cases will depend more on the technology available to the lawyer rather than on the lawyer's skills	3.6%	14.4%	24.6%	26.4%	23.8%	7.2%
Crowdsourced decision-making could be deployed in the courtroom with the broader stakeholder community voting for the outcome of a case	1.8%	7.3%	17.5%	24.4%	24.7%	24.4%

## TECHNOLOGY IN THE COURTROOM

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Advances in IT are seen to have the clear potential to transform the speed, efficiency and effectiveness of court operations. Frustrations are mounting across the globe at the inefficiencies and delays in the system. Governments are looking for ways of cutting the costs of administering the judicial system. IT is seen as a key enabler of efficiency, transparency and cost reduction. The majority agree that Emerging technologies will be an integral part of courts in the developed countries (87.8%). The range of applications cited include processing of document submissions, management of workflows within the courts, dashboards for presentation of complex case information and communication between legal representatives.

A key driver will be to streamline court-law firm interactions and eliminate the need for manual processing of information. While the idea of AI judges may be distant in legislative terms, there is clear potential to automate all but the most novel aspects of judicial decision-making. With a general political thrust globally to increase consistency, standardize approaches and reduce the leave of judicial discretion, it seems inevitable that greater use of systems will be seen particularly in emerging economies where they do not have the depth of professional legal talent and want to leap-frog whole generations of legal process.

***When the courts of justice are overgrown with grass:*** Some have already started to explore such issues. For example, the Courts of Singapore have invested in effort to think through the implications of when “the courts of justice are overgrown with grass” (title of a talk by the Singapore Chief Justice). In the most advanced scenario, lawyers have been all but eradicated and decisions are made by AI judges. As IT penetrates and permeates every aspect of our lives, so the challenge mounts for courts to determine how they will accept and use data derived from multiple structured and unstructured sources. Generational change in the judiciary could also encourage and open up the way for technology changes in the court system.

There is a clear expectation that over the period to 2025, Information generated by smart environments, the “Internet of Things” and social media will routinely be used in court cases (88.5%). At the same time, IT could have a deep impact on the way in which courtroom proceedings are conducted. Most respondents expect that Lawyers entering the courtroom will have a range of wearable technologies and augmented reality applications, being fed real-time information by paralegals and digital assistants (80.0%).

***Balance between man and machine:*** Despite the potential scale and impact of IT in the courtroom, some traditional facets of the court experience are expected to remain unchanged. However, a fair number of respondents suggest that the balance in the relative importance of man and machine will shift, and that The outcome of legal cases will depend more on the technology available to the lawyer rather than on the lawyer’s skills (42.6%).

***Resistance to citizen decision-making:*** While the current court decision-making system may be seen to have its limitations, there is little sense that we could see dramatic changes in the next decade. It seems likely that some will experiment with the use of AI to automate decision-making on routine cases in the same way that automated dispute resolution is used on various online retail sites such as eBay. There is also a broader debate in society about how to make government more participatory and bring citizens into a range of decision-making activities through crowdsourcing and mass dialogue. However, such developments are not expected to extend to the legal system and only a minority agree that Crowdsourced decision-making could be deployed in the courtroom with the broader stakeholder community voting for the outcome of a case (26.6%).

*What innovations is the firm considering in the courtroom context?*

*Which are the most forward thinking state or national level governments who might be willing to experiment with innovative IT collaborations?*

## LEGAL EDUCATION

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With rising concerns around the over-supply of legal graduates, the prospect of further automation of legal tasks serves to highlight a variety of challenges for the education sector. **Many believe that competition and IT advances will have an adverse impact on the opportunities for new graduates.** The fear is that the number of new graduates being recruited may continue to decline with greater competition for the places that remain. In the survey, a slight majority agreed that Automation and artificial intelligence (AI) will lead to a major reduction in the demand for legal graduates and law schools (54.1%).

**New priorities for law schools:** Changing demand patterns raise challenges for law schools. They must determine how to compete to be the preferred source of legal graduates and how to provide students with deep technology expertise and the kind of experience they would once have received at law firms. One expected response is that law schools will increasingly provide legal services to differentiate themselves and generate income (50.9%). In this model, law schools effectively offer to outsource legal work from other firms or go directly to clients to take on part or all of the work associated with a matter. The rise of free online degree courses from major universities also threatens to disrupt the traditional approach to recruiting talent — a change to which many law firms have yet to adapt.

## THE IMPACT OF NEW ENTRANTS

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*How might graduate recruitment policy and targets need to change in the light of evolving working practices and innovations in free degree level course?*

*How might the relationship between law firms and law schools need to evolve in the face of changing demand and methods of working?*

The industry is beginning to acknowledge that new entrants have had a disruptive effect on the practice of consumer law. They have enabled citizens to conduct a wide range of legal activity using fully- or semi-automated online platforms with little or no human involvement. eBay is frequently cited as an example of a platform that settles thousands of buyer-seller disputes each year using a fully automated dispute resolution system. While many new entrants are establishing themselves in direct competition with existing law firms, others are seeking to become part of the legal value chain. Law firms are decomposing workflows into their base components. In response, new firms and technology providers are stepping in with systems and processes that can streamline, accelerate, standardize and reduce the cost of many of these lower value tasks. A growing number of venture capital funds and incubators are expected to enter the space providing support and funding to potentially disruptive new legal sector businesses.

**Strategies of new entrants:** New players are also entering the commercial sector in direct competition to existing law firms. They are proving their offerings first with smaller clients and

those whose businesses are born-digital. This is a growing client group who naturally expect to do everything they need in the online space. While this initial “proof of concept” work may take place off radar, there is an acknowledgement that larger clients will be paying close attention to these developments. Their procurement functions in particular may look to experiment over time with adopting significantly lower-cost online mechanisms for routine legal work if the same quality of output can be achieved at a greatly reduced cost.

**The future for new entrants:** As with any sector, launching new ventures is fraught with risk, and the likelihood of success is relatively low for any individual start-up. However, some will survive and become profitable. Others may have their functionality emulated and incorporated into existing product offerings by technology suppliers already present in the sector. Law firms may also seek to license or replicate such offerings, cannibalizing existing revenue streams in order to protect client relationships rather than risk losing accounts to a new entrant offering a low-cost solution. A summary of some of the critical challenges and opportunities identified for new entrants is provided here.

# CHALLENGES AND OPPORTUNITIES FOR NEW ENTRANTS

## CHALLENGES

## OPPORTUNITIES

### CLIENTS

- Understanding changing service and experience needs and finding compelling arguments to disrupt existing relationships
- Building brand identity, gaining client trust and differentiation

- Reaching online global clients with the help of technology
- Attracting young clientele and start-ups that are “born-digital”

### COMPETITION

- Potentially increased competition and less legal work available in specialty areas
- Competition from tech-savvy new entrants from emerging markets and from traditional players that deliver high-end work
- Challenge from players who have the scale and skills to run dual-business system / single brand firms
- Established legal firms that compete for low-end work and squeeze new entrants

- Taking advantage of new and unanticipated niches
- Potential for entrants from other sectors to challenge existing orthodoxies and “rules of the game”
- Opportunity to disrupt and maybe dislodge traditional players from the market
- Focus on commodity legal services and leveraging technology to automate processes and lower costs

### STRATEGY

- Entering new markets with insufficient capital /experience
- Raising brand awareness in a market that isn't looking for you
- Forming critical strategic “go to market” alliances with existing vendors
- Developing innovative business models and pricing solutions
- Managing the issues of slow or rapid growth

- Modernizing the practice of law
- Replacing the current partnership models
- Increasing opportunities for alliances and synergies
- Partnering with mid-sized firms that are adapting through specialization
- Becoming part of a global firm with global market access
- Claiming digital space before traditional firms take advantage of it
- Creating a model not tied down by tradition
- Taking advantage of the inherent entropy in existing firms
- Freedom to experiment and be disruptive

# CHALLENGES AND OPPORTUNITIES FOR NEW ENTRANTS

## CHALLENGES

## OPPORTUNITIES

### PEOPLE AND TALENT

- Estimation of staffing needs for the next five or more years
- Keep law from becoming an “automated master” devoid of unique thinking and approaches
- Inability to retain talent and clients

- Bring in fresh minds not bound by tradition
- Opportunity for frustrated innovators in the legal sector to make key changes
- Develop meritocratic reward and promotion models based on contribution

### OPERATIONS AND PROCESSES

- Navigating global regulations for international business
- Overcoming artificial regulatory hurdles to deploy new business and service models
- Increasing volumes of data

- Build new / reshape old-fashioned operations delivery and interaction models
- Spend less on real estate and infrastructure costs

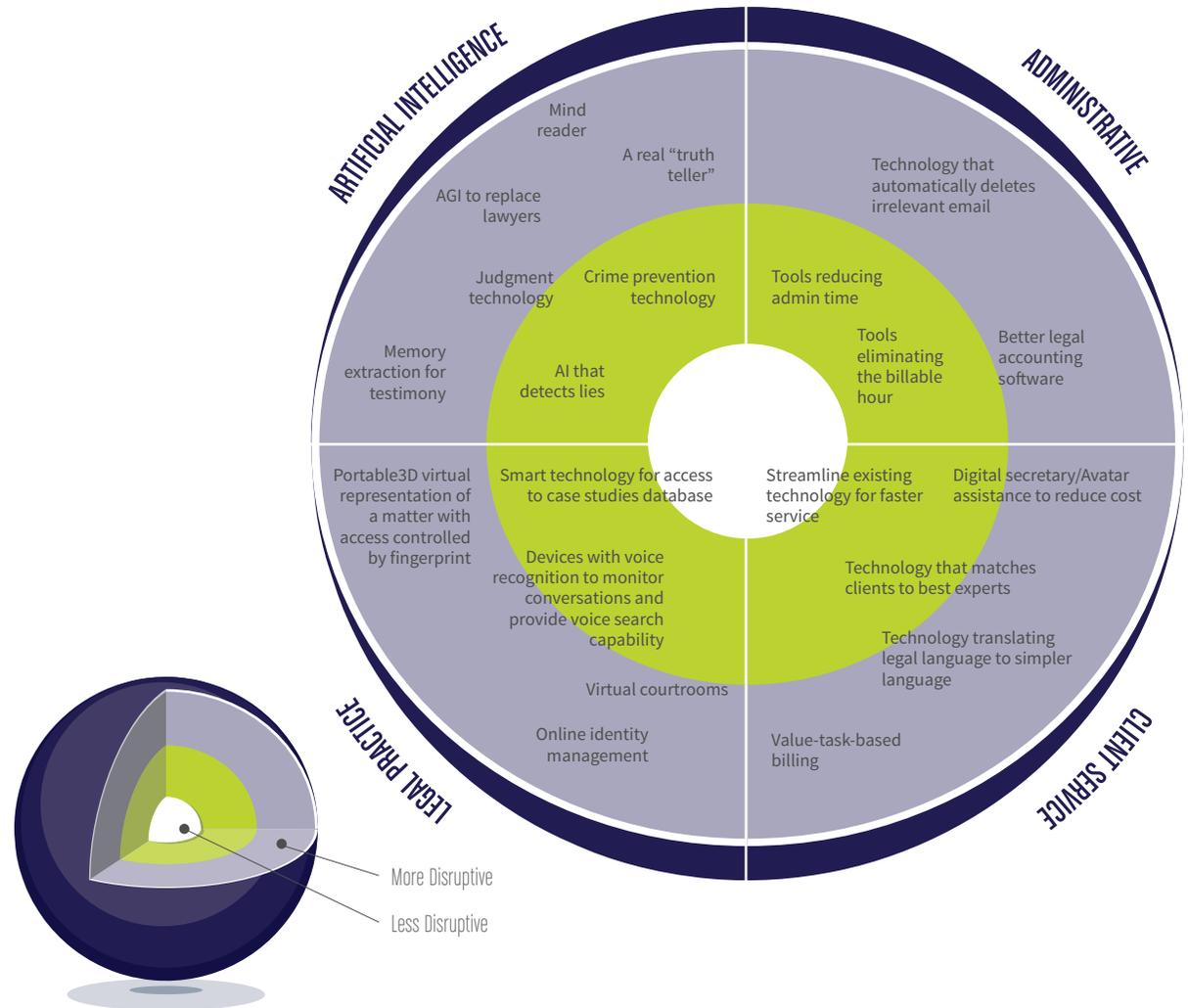
### TECHNOLOGY AND SECURITY

- Overcoming security and confidentiality concerns
- High start-up costs ( e.g., investment in technology to manage big data)
- Ensuring a clear development roadmap beyond the current product

- Finding the right technologies to be efficient but not drown in cost
- Present a view of where legal IT could be going over the longer term
- Bring innovative thinking and processes to the industry value chain from client acquisition to security management

# THE TECHNOLOGY WISH LIST

Survey participants were asked “If you could invent a technology that would transform the practice of law, what would it be, and what impact could it have?” The graphic below presents a range of possible solutions that were highlighted. While some are seen as logical extensions of what the market is today, such as tools to reduce administrative time, many are dependent on AI and other advances that are seen as being 10 or more years away.

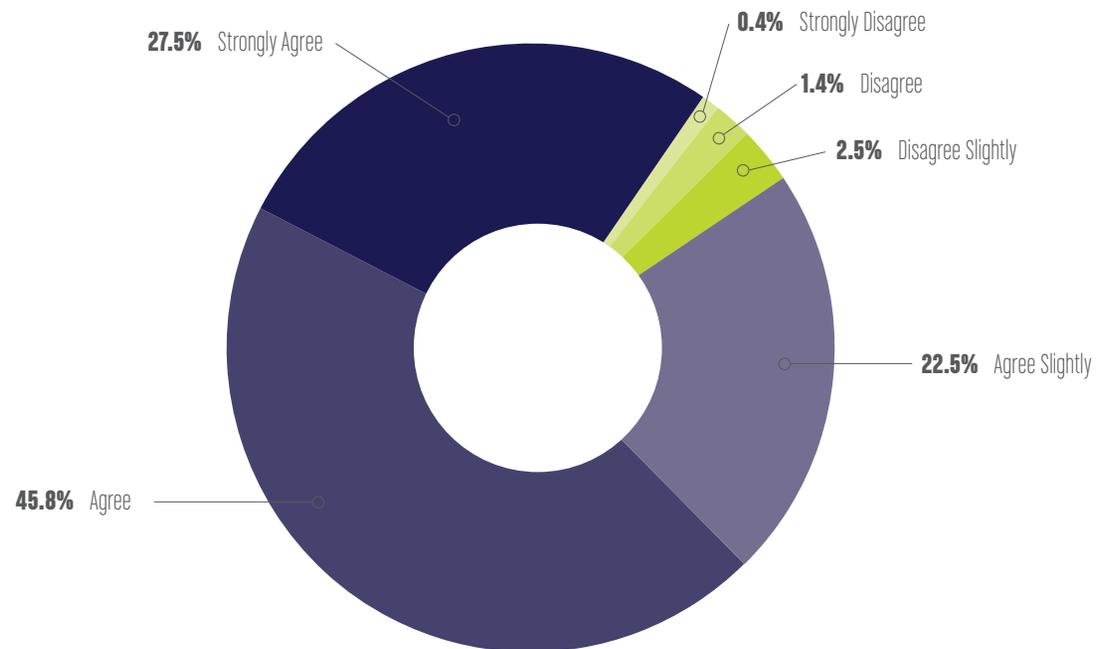


## DEVELOPING THE CAPACITY FOR INNOVATION

The analysis presented throughout this report highlights that advances in IT have the potential to facilitate transformational innovation in law firms. Technology innovations can underpin new strategies and help forge stronger relationships with customers. As the research has shown, these advances also enable the development of new business and revenue models and facilitate the delivery of new products and services. Internally, IT has the potential to enhance the support provided to professionals, streamline workflows, provide better management of information and allow for more efficient management of the technology infrastructure. There is a clear belief that The capacity for rapid IT-enabled innovation will be a critical differentiator for law firms in the future (95.8%).

**Major barriers to innovation:** The barriers to change are seen to lie less with the technology than with organizational mindset and culture. Central challenges here are the acquisition of awareness, speeding up decision-making and accelerating the resulting pace of change at the leadership and operational levels in law firms. This raises the issue of what role the IT function and the Chief Information Officer (CIO) should play in evangelizing, catalyzing and driving change. For many firms, there is a clear positioning and credibility challenge for IT.

The capacity for rapid IT-enabled innovation will be a critical differentiator for law firms in the future.



“Advances in IT have the potential to facilitate transformational innovation in law firms.”

**CASE STUDY: Radiant Law's In-house Software Development Model**

# Innovating the Delivery of Legal Services

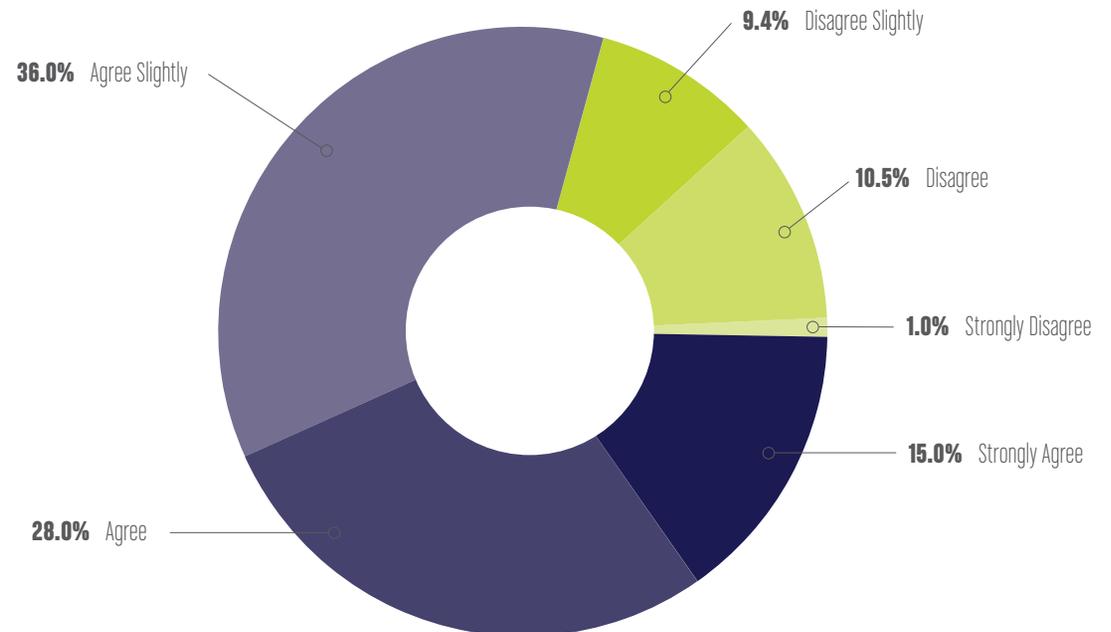
Radiant Law is a U.K. law firm that was established in 2011 in response to clients' demands for efficient and high quality legal services. The firm's goal is to assist clients in having better relationships with third parties by helping them enter into and manage commercial contracts and resolve relevant disputes. The firm charges a fixed price for transactions. Radiant Law develops most of its software in-house, using a team of developers around the world in locations such as Bangladesh and the Ukraine.

To date, Radiant has developed tools that help accelerate the turnaround, clean-up and error detection in documents and extended the functionality of Microsoft Word. The firm also builds its own platforms, expert systems and workflow to support its processes. The software is currently used only by Radiant Law but could be licensed out in the future. Radiant feels the approach has given it a distinct edge in the market and reports strong support from clients who welcome the firm's willingness and ability to experiment and deliver novel solutions.

## DEVELOPING THE CAPACITY FOR INNOVATION

*IT as a source of innovation:* A number of interviewees and survey respondents highlighted the difficulty for IT of gaining airtime with the leadership team. Opportunities to discuss transformational IT-enabled innovation are limited when leaders are preoccupied with the need for cost reduction and issues surrounding networks, core systems and management information. However, there is a clear belief that such hurdles can be overcome. Through effective management of the core current roles of IT, the view is that CIOs can gradually build support for an increased position of authority for IT. **In tomorrow's law firm, IT could play a pivotal role in the innovation process, with widespread agreement that in the next decade, the role of the CIO will evolve from Chief Information Officer to Chief Innovation Officer (79%).**

In the next decade the role of the CIO will evolve from Chief Information Officer to Chief Innovation Officer



*How is the firm currently organizing the pursuit of innovation opportunities internally and with clients?*

*How does senior management view the balance of IT's role between operational services and strategic innovation?*

*What steps are being taken to enhance IT's credibility and internal positioning as a partner in business innovation?*

# SECURING THE PAYOFF

Strategic Opportunities  
to Leverage IT

## ***BUSINESS STRATEGY***

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- Help firms differentiate themselves and support competitive growth
- Make IT more pervasive, relevant and strategic, moving away from back office to front office
- Maximize the value of technologies to core business activities
- Enable firms to address the increasing speed and declining duration of business cycles
- Facilitate generation of increased revenues and maintain profitability

## ***BUSINESS PROCESS***

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- Facilitate decision-making by providing actionable data to firm leaders
- Support case budgeting
- Reduce cost of administration
- Provide better access to legal information
- Improve internal operations
- Enable more efficient workflow
- Help firms to manage big data
- Allow lawyers to provide a consistent and cheaper service

## ***CLIENT SERVICE***

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- Improve collaboration with clients
- Remove barriers to efficient service
- Enhance transparency and information delivery
- Enable faster response time
- Provide greater security and connectivity for clients

## ***INFRASTRUCTURE/RESOURCE USE***

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- Reduce physical space use, which could be substituted with virtual solutions
- Provide support for flexible working
- Match expertise, work and resources within law firms

## KEY STRATEGIC QUESTIONS

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*Which critical strategic priorities and business needs are encompassed in the IT development roadmap?*

*Who has responsibility for working with each practice area to identify opportunities for (potentially IT-enabled) innovation?*

*How regularly does the IT function have contact with key clients to explore the potential to leverage emerging technologies to create new value?*

*How are professional staff being engaged in the search for new innovation opportunities?*

# IMPLICATIONS, OPPORTUNITIES AND SCENARIOS FOR THE MANAGEMENT OF LEGAL IT

Key barriers to effective deployment of IT and emerging opportunities for IT in tomorrow's law firm.

## CRITICAL INSIGHTS

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**Work with Virtual Teams:** The biggest challenge in the future may be managing a workforce so enabled by mobile, wearable technology that we never see them face-to-face.

**Repurpose IT Staff:** The IT staff may become your innovation team, your business advisors, your research analysts, your client interface coordinators, and your skill and tool procurement coordinators; what's your professional development plan for them?

**Develop Outsourcing Strategies:** Might outsourcing be the most cost-effective means to acquire and manage IT systems and staff that can accomplish what's required at the speed of change the market demands?

**Manage Your Caution:** It may be hobbling your innovation by slowing your adoption of innovative information management technologies and processes.

**Take Your Stance:** You can do nothing, remain IT "survivors," or embrace change and the opportunities it reveals, moving into the future as a business innovator.

## MANAGING THE STRATEGIC AND OPERATIONAL IMPACT OF IT

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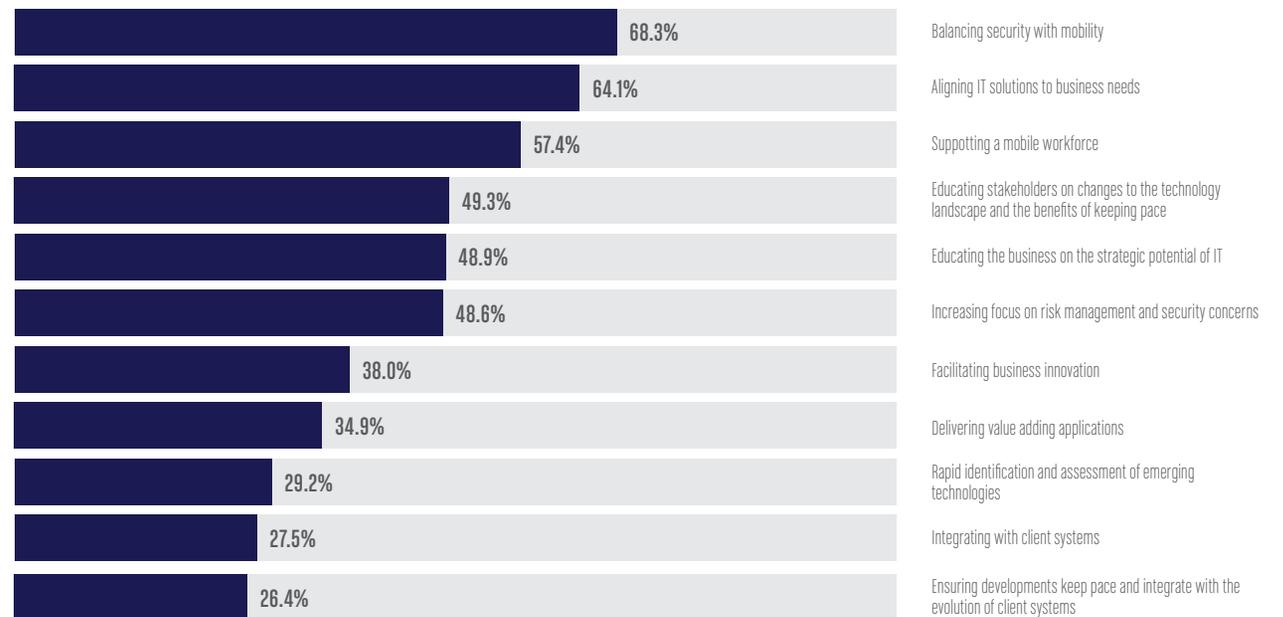
The analysis thus far has focused on exploring the potential of a range of emerging technologies in law firms in a changing global environment and evolving industry context. In this section we explore how these changes could impact the management of IT in law firms. Five key dimensions are examined:

- » *Strategic Priorities for the Management of IT in Law Firms*
- » *Operational Priorities for the Management of IT in Law Firms*
- » *Barriers to Adoption of New Technology*
- » *Emerging IT Management Imperatives*
- » *Scenarios for the Future Role and Positioning of IT in Law Firms*

# STRATEGIC PRIORITIES FOR THE MANAGEMENT OF IT IN LAW FIRMS

**Address the mobile workforce and rapidly evolving user technologies:** The biggest priorities are perceived to be accommodating and managing risks associated with the rise of an increasingly mobile workforce and the accelerating pace of change around end-user technologies. The shift in procurement approaches towards encouraging BYOD adds complexity to these changes. The challenges are expected to be exacerbated by the impact of wearable technologies and body implanted / embedded devices. High priority is thus given to the twin challenges of Balancing security with mobility (68.3%) and Supporting a mobile workforce (57.4%). There is a clear sense that the greater the reliance placed on IT, mobility, the cloud and the public network infrastructure, the more likely it is that we will see an Increasing focus on risk management and security concerns (48.6%).

What will be the biggest strategic priorities for the management of IT in law firms over the next decade?



# STRATEGIC PRIORITIES FOR THE MANAGEMENT OF IT IN LAW FIRMS

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**Emphasize the potential of emerging technologies:** There is a clear understanding of the need to gain business buy-in for both the investment and mindset shift required to leverage the true potential of emerging technologies. Critical steps to achieving the desired support include providing continuous “proof of concept” through the day-to-day work of Aligning IT solutions to business needs (64.1%). Demonstrating value from the current investment is seen as an important enabler for the next steps of Educating the business on the strategic potential of IT (48.3%) and the more continuous process of Educating stakeholders on changes to the technology landscape and the benefits of keeping pace (49.3%).

**Secrecy and internal competition:** Several particular underlying issues emerged from the interviews. There is a clear sense that many law firms are not used to the notion of IT delivering competitive advantage, and they are willing to share what they are doing with their competitors at industry events. As IT moves up the strategic agenda and firms pursue genuinely differentiated uses of IT, levels of secrecy may well increase. The level of competition between lawyers for internal development budgets and resources may increase, creating challenges to a collegial culture among law firms.

**IT proficiency and business culture:** Emerging technologies will only exacerbate the problems of low technological literacy among professional staff. Clients will expect lawyers to understand and be able to use the newest technologies being deployed. For example, Kia Motors tests lawyer efficiency as part of their procurement assessment process, a key component of which is the effective use of technology. Such approaches could become more common. The reduction of office space requirements could serve to exacerbate the cultural and communication gap between lawyers who need prime locations to meet clients and support staff who may be relocated to cheaper locations, off-shored or outsourced.

**Integration with client systems and facilitating innovation:** Despite the potential size of the prize in terms of enabling a transformation of client relationships, low priority is given

to both Integrating with client systems (27.5%) and Ensuring developments keep pace and integrate with the evolution of client systems (26.4%). A combination of factors are at play here, including conservative thinking and a lack of belief that IT will be given the opportunity to make a strategic impact. This can be exacerbated by limited faith in IT’s ability to deliver on the opportunity. Similar factors also appear to underpin the relatively low weighting given to the themes of Facilitating business innovation (38.0%) and Delivering value-adding applications (34.9%). These also stand in contrast to the ranking given in earlier questions to factors related to the strategic role of IT. This suggests that while the opportunity is recognized, there is simply a lack of faith in the ability to pursue and realize it.

*What mechanisms are in place to benchmark IT’s capabilities against other law firms and counterparts in other professional service firms?*

*What plans are in place to drive IT’s capabilities and performance to “best of breed” standards?*

**CASE STUDY:** Fish & Richardson P.C.'s BudgetMatters

# Prototyping for Ease of Use

Fish & Richardson P.C., headquartered in Boston, has more than 350 attorneys and 40 technology specialists in 12 offices across the world. The firm has a strong IP focus, representing clients ranging from leading multinational corporations to visionary inventors in technology, business and the arts. A focus on technology permeates the culture at Fish. For example, Fish.BudgetMatters was borne out of a need to provide an intuitive and easy-to-use tool to budget and monitor litigation matters.

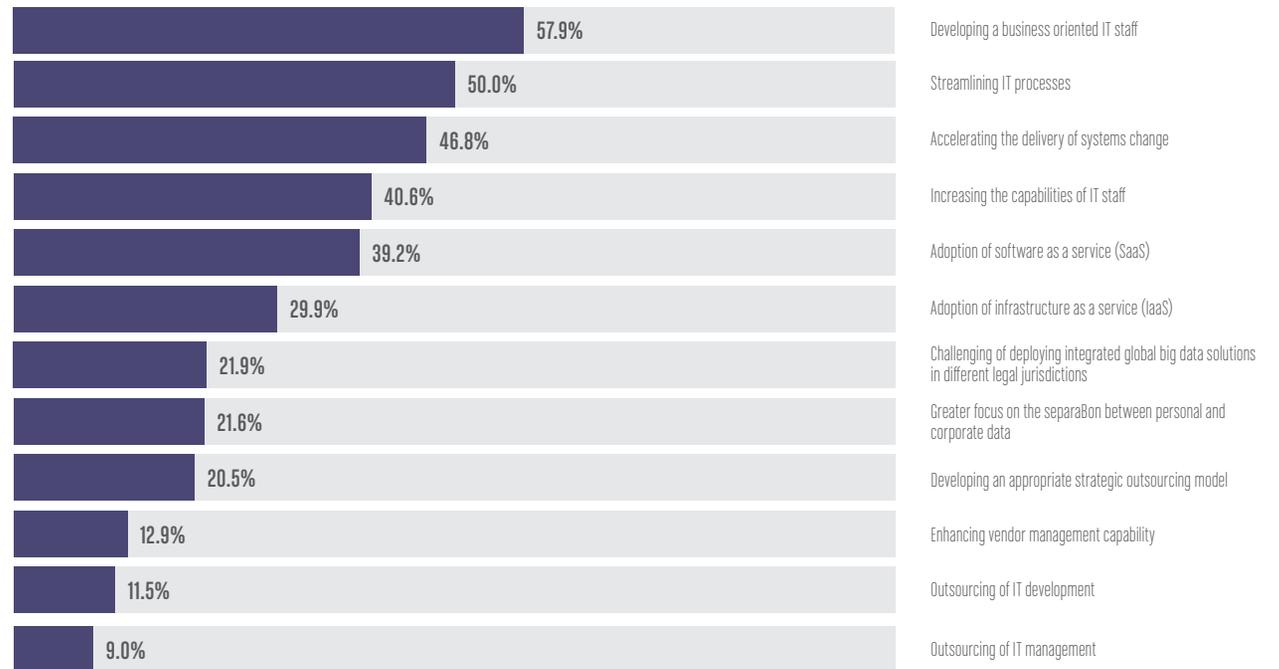
To encourage adoption, Fish applied methods from new product development and agile software development. After interviewing principals about their current budgeting practices and the associated pain points, the firm prototyped the system with a limited set of data for attorneys to review and comment on. With this feedback, Fish fine-tuned the application's requirements before coding was completed. This approach ensured ease of use and minimized training requirements. The firm also developed an iOS app to address litigators' mobile needs.

Fish.BudgetMatters is part of a larger legal project management initiative. Using a template developed by the firm's Pricing Group, the system automatically creates a budget both by litigation phase and by month, with users inputting just the total budget amount. Users can monitor actuals against budget, and case managers can assign and monitor hours by team members on a monthly basis. System features are enhanced regularly, driven by user feedback. The firm enters each new case that has a budget into the system and sends the attorney a link to start monitoring it right away. At the time of writing, Fish had 100 budgets in the new system with 34 repeat users.

# OPERATIONAL PRIORITIES FOR THE MANAGEMENT OF IT IN LAW FIRMS

*Developing the IT talent pool:* At the operational level, human factors receive top billing, with emphasis on building the necessary strategic orientation and delivery capabilities required. The priority is to convince the business that the IT function can rise to the challenge and help realize the opportunity presented by disruptive and transformational technologies. The highest priority ranking is given to Developing a business oriented IT staff (57.9%), with slightly less emphasis placed on Increasing the capabilities of IT staff (40.6%).

What will be the biggest operational priorities for the management of IT in law firms over the next decade?



# OPERATIONAL PRIORITIES FOR THE MANAGEMENT OF IT IN LAW FIRMS

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*What is the focus of the talent management plan for IT?*

*How are succession planning and core skills development processes being used to enhance IT staff capabilities?*

*What mechanisms are in place for the regular review of software development approaches and outsourcing arrangements?*

Key priorities in achieving the desired evolution in skillsets include developing competence in the areas of:

- Switching focus from “maintaining the plumbing” to leading innovation;
- Becoming advisors who have a good business understanding as opposed to being merely technologists;
- Providing “next level” services, not simply monitoring and reporting, but helping firms interpret information and advising them on what actions they should take;
- Providing a range of business analysis and modelling capabilities to derive insight from data;
- Assisting firms to choose systems that will allow for innovation and progress;
- Helping firms realize when AI will be good enough to displace some of the roles played by lawyers;
- Advising attorneys how to communicate with clients (e.g., whether to use a particular method / channel of communication) and removing friction around communication;
- Managing vendor relationships rather than technology; and
- Anticipating value and rating tools that will emerge in legal.

**Enhancing operational capability:** Delivery speed and efficiency are identified as critical enablers of strategic alignment and establishing business confidence in IT. A key thrust here will be that of increasing management flexibility and responsiveness by turning large parts of the infrastructure into utility services that can easily be upgraded, outsourced or moved offshore. Emphasis is placed

on Streamlining IT processes (50.0%) and Accelerating the delivery of systems change (46.8%). The use of cloud-based solutions is climbing the agenda, with a greater interest in Adoption of SaaS — Software as a Service (39.2%) than Adoption of IaaS — Infrastructure as a Service (29.9%). Fewer than a quarter of the respondents prioritize either the Challenges of deploying integrated global big data solutions in different legal jurisdictions (21.9%) or the need for Greater focus on the separation between personal and corporate data (21.6%).

**Too little emphasis on outsourcing?:** Despite rising pressures for efficiency and cost control, little emphasis is placed on different dimensions of outsourcing or Enhancing vendor management capability (12.9%). Only a minority see the need to develop an Appropriate strategic outsourcing model or the resultant outsourcing of IT development (11.5%) or IT management (9.0%).

Over time, the focus on outsourcing and the use of cloud-based solutions may need to increase to cope with the pace of change, the scale of data handling requirements, the complexity of desired functionality and the rate of market innovation. Firms may simply find it easier to select third-party providers for everything from infrastructure provision to applications, data management and global communications. In parallel, the number of players entering the sector with “law firm in a box” IT solutions is expected to grow. Initially, they are expected to target small to medium enterprises that are struggling to keep up with the necessary pace of investment required to develop and upgrade their own systems.

# BARRIERS TO ADOPTION OF NEW TECHNOLOGY

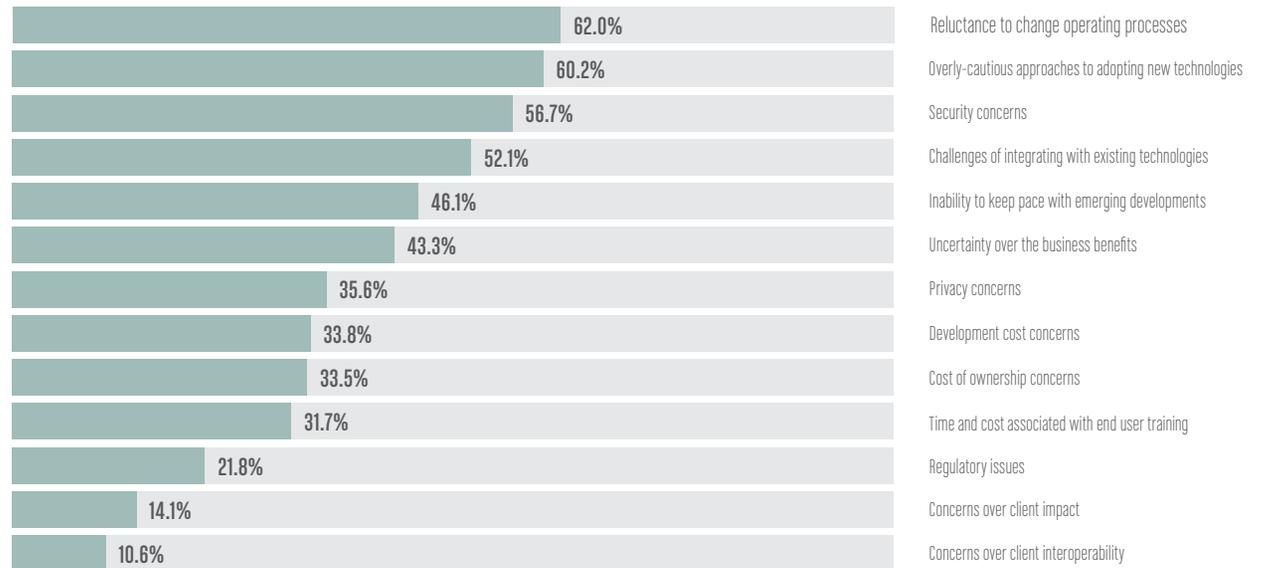
The research highlights that clear barriers remain to the adoption of IT as a vital enabler of innovation, change and transformation. A variety of possible hurdles were identified by the research and then tested through the survey. The most prominent were seen to be mindset related and a fundamental by-product of the caution and risk reduction orientation that are what we look for in lawyers.

**Too cautious, too reluctant to change:** The highest rated barrier is a Reluctance to change operating processes (62.0%). This is typically due to concerns over the impact on business efficiency and the diversion of time and attention away from client matters. At the same time, Overly-cautious approaches to adopting new technologies (60.2%) coupled with an inability to keep pace with emerging developments (46.1%) are seen to be holding back progress. The lack of willingness to focus on IT issues and ineffective communication could

also be a contributor to the Uncertainty over the business benefits (43.3%) that seems common in many firms.

**Security and integration worries match cost concerns:** More IT-specific barriers include the growing issue of Security concerns (56.7%) and the Challenges of integrating with existing technologies (52.1%). Cost is seen as an important but not critical barrier. Relatively equal weighting is placed on Development cost concerns (33.8%), Cost of ownership concerns (33.5%) and the Time and cost associated with end user training (31.7%). While caution dominates the discussion over adoption of new technologies, perhaps somewhat surprisingly, client related factors are not seen as a major barrier. Only a minority cite concerns over either Client impact (14.1%) or Client interoperability (10.6%). Slightly higher weightings were given to frequently cited bogeymen such as Privacy concerns (35.6%) and Regulatory issues (21.8%)

Over the next decade, what will be the biggest hurdles to the adoption of emerging technologies in law firms?



What approaches are being adopted to overcome barriers to innovation?

What assessment is done of the risks of inaction?

**CASE STUDY:** Seyfarth Shaw's Legal Project Management

# Driving Project Management Excellence

Seyfarth Shaw is an international law firm headquartered in Chicago. It serves business and legal needs in litigation, employment, corporate, real estate and employee benefits. In response to a need for better transparency on budgeting, progress of matters, predictability, cost and fees, the firm created a program based on elements from the quality improvement approaches known as “Six Sigma,” “Lean” and “Lean Six Sigma.” The end product is a process map for each client matter which is easy to convert to a project plan.

Adopting this approach allows attorneys to sit down with a client and talk about the scope of work, suggest possible best practices and incorporate the client's perspective on how the work should be managed. Internally, the process map is seen as a valuable training tool, helping to mitigate risk and prepare less experienced attorneys to deal with complex legal matters. Clients are grateful for incorporating their voice in the process.

# EMERGING IT MANAGEMENT IMPERATIVES

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In the face of the opportunities and challenges facing IT, 10 strategic imperatives arise for forward-thinking CIOs:

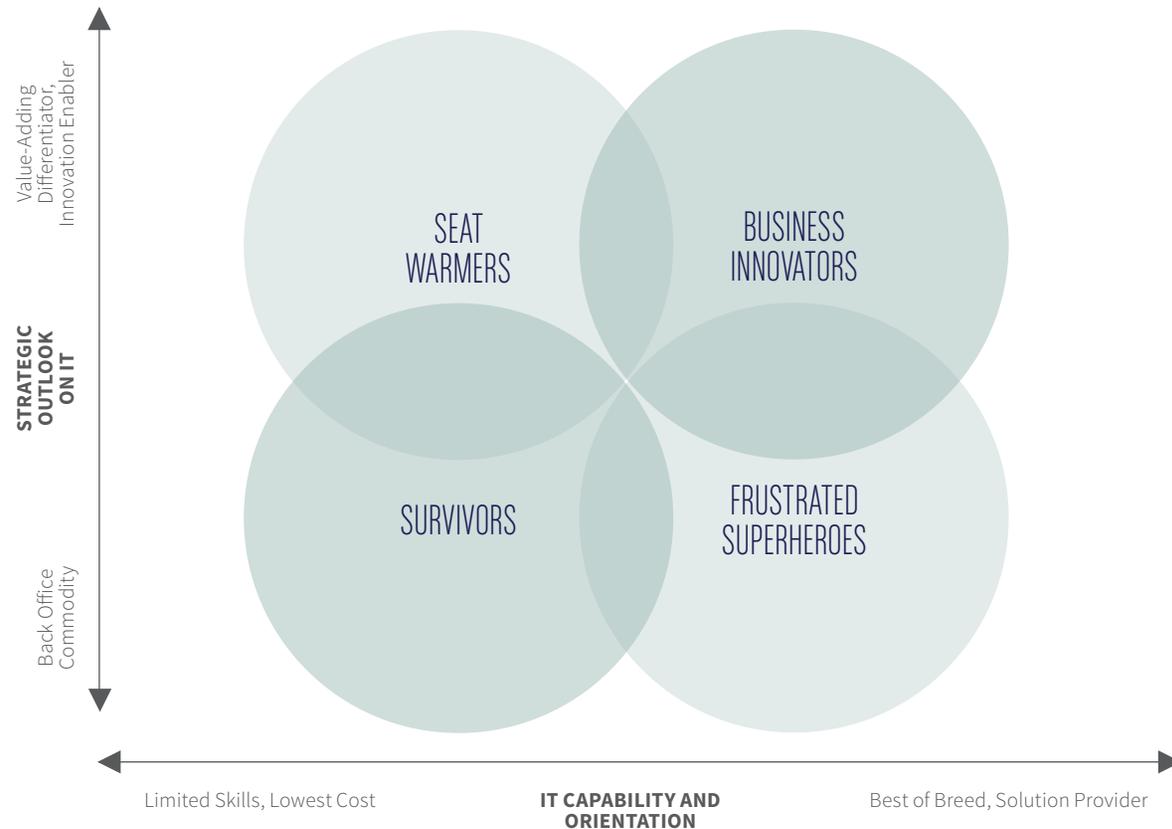
- **Business Alignment:** IT can move the firm away from commodity level services, ensuring a close alignment with business strategy, helping select systems that allow for innovation and progress, helping interpret information and advising on resulting actions.
- **Strategic Management Focus:** As more IT activities are potentially outsourced, management's role will shift from looking after internal staff to managing relationships with internal customers, vendors and strategic R&D partners.
- **Radar / Sense Making:** IT can monitor and interpret the possible impacts of developments coming over the horizon by providing an early warning system to the business; by identifying tools, approaches and emerging technologies that can help the firm add value and differentiate itself; and by helping lawyers use relevant tools and make sense of huge volumes of data.
- **Innovation and Value Creation:** IT could increasingly play a role as an innovation engine for internal developments and strategic R&D partnerships. Technologists could become "business accelerators" and "growth hackers" or key growth enablers by finding ways to set law firms apart and make them more competitive.
- **Communication and Collaboration:** IT may increasingly be expected to advise lawyers on how to communicate and collaborate with clients. This implies suggesting preferred methods and channels that enhance the relationship, improve efficiency and remove friction.
- **Supporting Mobility:** IT can drive the firm to embrace the cloud and accelerate the move towards CYOD; technologists can enable end users to choose and procure their devices, and facilitate an easier transition to an era of wearable and implanted technologies.
- **Staff Profile:** As IT realizes its ability to increase productivity and develop value-adding solutions, CIOs should be recruiting and retaining staff with strong "people skills," a customer service orientation and business awareness; and they should ensure a strong base of key technical skills such as infrastructure managers, cloud architects and data scientists.
- **Cost and Efficiency:** Maintaining a persistent focus on the use of IT can drive down cost and reduce inefficiencies.
- **Master Data and Knowledge:** IT can find tools, smart interfaces and analytical techniques to enable the extraction of value from the volumes of data and knowledge being amassed, and they can manage the associated security risks.
- **Flexible Technology Infrastructure:** IT must acknowledge and accommodate constantly evolving business needs and the rapid pace of technological advancement.

# SCENARIOS FOR THE FUTURE ROLE AND POSITIONING OF IT IN LAW FIRMS

There exists a spectrum of possibilities for how the role of IT in law firms could evolve given the opportunities outlined in this report. In our analysis, we have identified four distinct scenarios that could characterize different possible models for the role and positioning of IT in tomorrow's law firm.

The scenarios pivot on two key axes:

- The capability and orientation of the firm's IT function, with a spectrum from those with limited skills and a lowest-cost focus to those considered strategically focused "best of breed" solution providers.
- The strategic outlook on IT within the business, which ranges from IT being viewed as a back office commodity service to those who perceive it to be a value-adding differentiator and innovation enabler.



# SCENARIOS FOR THE FUTURE ROLE AND POSITIONING OF IT IN LAW FIRMS

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*The four scenarios can be summarized in the following way:*

## BUSINESS INNOVATORS

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These firms have transformed their relationships with clients through the effective use of IT. They are highly IT-literate, and this is seen as a powerful source of competitive advantage and differentiation. A high level of experimentation and innovation is characteristic of the firm's culture, and clients see it as a first port-of-call to try out new approaches and ideas.

The philosophy with IT experiments, pilots and prototypes is to “fail fast and cheaply.” New technologies and ideas are tested quickly by developing proofs of concept and seeing if there is value in them either in a client context or for internal applications. AI has been embraced across a wide range of client-facing and internal applications and has helped the firm develop a set of distinctive offerings in the marketplace. There is a focus on long-term portfolio planning with a shift of services and products across the spectrum from premium to commodity and, eventually, to free delivery.

There is ongoing experimentation with pricing models. IT provides smart metrics and analysis tools that allow clients and the firm to monitor performance and explore the impact of alternative pricing scenarios. Lawyers are supported by a sophisticated suite of intelligent knowledge capture, analysis and interpretation tools that provide proactive, integrated, relevant and up-to-date synthesis of key client- and matter-related information. The notion of R&D is embraced, and the firm regularly partners with innovators looking to bring disruptive developments to the legal sector.

The IT function has built a strong reputation for delivery of effective and innovative business solutions and has close alignment to key client-facing practice areas. Firm leadership has a solid and continually updated understanding of how IT can create new opportunities and values. IT is sufficiently trusted to be engaged in direct conversations with clients. IT is positively encouraged to pursue systematic innovation across the firm and bring new opportunities to the executive table on a regular basis. Horizon scanning of emerging developments, technologies and competitor actions is largely automated and is used to inform the firm's long-term strategic planning.

## SURVIVORS

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For these firms, little has changed in material terms from the world as they knew in 2014. Competition has eroded their competitive position in all but a few key opportunity areas. A few loyal clients and niche services provide the mainstay of income, and fees continue to be driven down in the face of tough competition, commoditization and increasingly sophisticated online offerings. Senior partners have long since given up on the notion of long-term survival and are largely marking time until retirement.

These firms here typically have relatively low expectations beyond basic service provision, seek to minimize investment as far as possible and have no expectation of IT playing a strategic role in the business. The IT function is run with lowest cost as a prime directive and tries to get by with relatively limited skillsets and minimal resources.

# SCENARIOS FOR THE FUTURE ROLE AND POSITIONING OF IT IN LAW FIRMS

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## SEAT WARMERS

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Firms have a good understanding of the potential for competitive advantage and innovation opportunity presented by IT. Clients are asking for more sophisticated and collaborative uses of technology. However, ambitions and the pursuit of opportunities are frustrated by an IT function that may have been shaped in a previous era with more limited expectations. The business is aware that the current incumbents in IT are not up to the job and are effectively keeping seats warm for more talented professionals who are actively being sought to lead the firm into a new era.

In preparation for larger-scale change, firms are entering into third-party arrangements and experiments to explore new ways of delivering IT-enabled solutions and securing client confidence. Funding is increasingly being channeled to third-party innovators who can create disruptive new solutions that the next round of IT leadership will be asked to deploy. Clients are demanding ever firmer commitments of when the firm will upgrade its technology capability and orientation.

## FRUSTRATED SUPERHEROES

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The IT function has managed to build up a highly capable team with a strong business orientation and excellent delivery skills. The business, though, is unwilling to seize the opportunity and is reluctant to embrace an enhanced role for IT beyond delivery of a core set of services. IT is increasingly trying to secure internal alliances with more forward-thinking lawyers and using small amounts of budget to pilot more innovative ways of working and delivering client solutions.

IT invests a significant amount of effort in trying to help the business get maximum value from existing investments, demonstrating the benefits of little used functionality in current systems. Where IT tools have been deployed effectively to enable lawyers to serve clients in more innovative and efficient ways, IT seeks to find ways of introducing these developments to other practice areas. This is a slow campaign, but IT continues to fight the good fight.

*Which scenario do we most  
associate with?*

*Which would best fit the firm's  
ambition, culture and approach?*

## KEY STRATEGIC QUESTIONS

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*Which scenario best fits the ambition and IT orientation of the firm?*

*What steps can be taken to deliver on the preferred scenario?*

*What priority is being placed on eliminating key barriers to change?*

*How does the firm's current IT capability rate against ambition for the 10 imperatives?*

*How can key gaps be closed?*



# CAPTURING BUSINESS VALUE FROM IT – THE LEADERSHIP CHALLENGE

Key business opportunities  
and imperatives for  
leveraging IT effectively.

## THE LEADER'S MANDATE

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As managing partners and leaders in law firms, if we accept the scale of impending disruption in the sector and acknowledge the transformational potential of IT, what do we do next? To help address this question, in this concluding section we explore eight critical aspects of the business where we should be looking to leverage IT for strategic advantage. However, to truly take advantage of these opportunities requires fundamental strategic change that goes beyond the embrace of IT to a much wider and deeper rethinking of literally every aspect of organizational strategy, structure, culture and leadership. These changes are described in the form of 10 key management imperatives for firms that truly want to survive and thrive in a constantly changing reality.

## EIGHT STRATEGIC LEVERAGE POINTS

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Through the research, eight critical aspects of the business or focal points emerge for the effective deployment of IT to help law firms deliver on the opportunities and address the threats that could emerge over the next decade:

- » **Markets:** *IT can be a critical enabler underpinning strategic growth ambitions. Technologists can provide a constant stream of insight on current and future market opportunities, while playing a critical role in delivering an enabling infrastructure. IT can also generate tailored and timely insight on relevant current and future developments affecting key geographic markets, industry sectors, clients, prospects, partners and competitors.*
- » **Mastery:** *IT can enhance the quality, efficiency and effectiveness of core law firm practices. IT was identified as a driver of process re-engineering, integration with client systems and meeting ever more exacting client needs generally and, in particular, in relation to data and system security.*
- » **Muscle:** *IT can build the critical new capabilities required to compete in a changing world.*
- » **Magic:** *IT can create a distinctive point of difference around the firm's offerings and deliver a genuine "wow factor" for the client.*
- » **Message:** *IT can align technology innovation to the firm's brand positioning and stated client focus.*
- » **Models:** *IT can experiment with new models and approaches for organizing internal activity, funding the firm's growth and pricing services.*
- » **Mindset:** *IT can encourage and facilitate new thinking on how to compete in a rapidly evolving landscape.*
- » **Management:** *IT can develop organizational and individual capability to take full advantage of emerging technology solutions and perform effectively and efficiently with the available tools.*

**CASE STUDY:** Bryan Cave's Client Technology Group

# Focusing on Innovation

Bryan Cave LLP is an international business and litigation firm headquartered in St. Louis, and they service a diverse client base. As proof of its commitment to clients, the firm created a dedicated Client Technology Group. The group brings together lawyers, Web developers, business professionals, evidence analysts and others to focus exclusively on innovative approaches to improving client service. A special focus is given to integrating business intelligence tools and supporting a large number of Web-based applications that have been developed for clients. TradeZone is one of these Web-based tools, which, along with a host of other applications, tackles subjects ranging from sexual harassment to insider-trading compliance. Bryan Cave reports that the Client Technology Group has helped the firm achieve extraordinary results. The group now supports more than 700 client-accessible applications that it believes have, in many cases, changed the face of legal practice in the relevant domain.

The firm has developed what it believes to be the most powerful analytics engine in the legal sector. The tool provides access to detailed historical analyses that enable lawyers to plan and price new engagements flexibly and creatively. Using the engine in conjunction with sophisticated staffing and engagement tools, the firm can rapidly match personnel precisely to engagement requirements, adjust staffing mixes and explore various pricing approaches. Bryan Cave believes these tools provide immense flexibility to address client needs, evaluate alternative fee arrangements and deliver innovative solutions.

# ALTERNATIVE APPROACHES TO EXPLOITING IT FOR STRATEGIC LEVERAGE

	AD HOC APPROACH	FUTURE-FOCUSED APPROACH
MARKETS	<ul style="list-style-type: none"> <li>Needs- / event- driven approach to spark insight and development of new systems</li> </ul>	<ul style="list-style-type: none"> <li>Single global platform</li> <li>IT central to due diligence, market/account planning and opportunity generation</li> </ul>
MASTERY	<ul style="list-style-type: none"> <li>Lawyers design process</li> <li>Top talent focused on “dishwashing” processes and tasks</li> </ul>	<ul style="list-style-type: none"> <li>Professional management of capabilities/processes/projects</li> <li>Continuous improvement plan in place</li> </ul>
MUSCLE	<ul style="list-style-type: none"> <li>New capability development driven by client requirements</li> </ul>	<ul style="list-style-type: none"> <li>Systematic scanning of changing business practice and identification of new capabilities</li> </ul>
MAGIC	<ul style="list-style-type: none"> <li>Demand driven approach to new legal/IT solutions</li> </ul>	<ul style="list-style-type: none"> <li>Continuous review of client strategies, challenges and needs to identify differentiation opportunities</li> </ul>

	AD HOC APPROACH	FUTURE-FOCUSED APPROACH
MESSAGE	<ul style="list-style-type: none"> <li>No alignment of innovation and marketing messages</li> </ul>	<ul style="list-style-type: none"> <li>Close integration between development of key brand messages and innovation initiatives</li> </ul>
MODELS	<ul style="list-style-type: none"> <li>Change driven by client requests/demands</li> </ul>	<ul style="list-style-type: none"> <li>Pre-emptive experimentation with new business models</li> </ul>
MINDSET	<ul style="list-style-type: none"> <li>Focus on legal expertise as the core capability</li> </ul>	<ul style="list-style-type: none"> <li>Staff encouraged to look externally for signals of change</li> <li>Regular “drip feed” of innovative thinking/tools</li> </ul>
MANAGEMENT	<ul style="list-style-type: none"> <li>Left to individual partners to develop management style and define training needs of their teams</li> <li>Training purchased from third parties as required</li> <li>IT competence of legal professionals is assumed</li> </ul>	<ul style="list-style-type: none"> <li>Use of IT/wikis/social media to support knowledge sharing</li> <li>Personal online development plans for all staff</li> <li>Provision of e-learning/ simulation environments</li> <li>IT training encouraged, supported and rewarded</li> </ul>

# KEY LEADERSHIP IMPERATIVES

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*In the face of intense competition and an uncertain global outlook, standing still is a luxury that few can afford. Below we summarize 10 strategic and operational imperatives for business leaders to embrace if they are to extract the maximum value from IT in pursuit of their strategic ambitions.*

## 1. BUILD A GLOBAL MINDSET

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**Strategic:** A universal business challenge facing firms of all sizes is the need to gear up to support clients' globalization efforts and the impact of emerging markets. Even firms that don't have ambitions to extend their own footprint will have to be capable of supporting clients as they venture into new geographies.

**Operational:** IT plays a critical role in supporting the due diligence process. IT also provides the underlying infrastructure that enables the firm to assist its professionals in delivering consistent client service globally.

## 2. DEVELOP COMFORT IN CHAOS

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**Strategic:** Firms must learn to manage and thrive in a volatile, uncertain, complex, ad hoc (VUCA) and rapidly changing reality. Developing a "rapid response" mindset becomes a core competence.

**Operational:** IT can deliver the environmental scanning that provides both a radar for emerging changes and the tools that support the firm in the steps from decision-making to execution.

## 3. PURSUE PROCESS EXCELLENCE

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**Strategic:** In an era of commoditization, intense scrutiny and rising client service expectation, process excellence is essential.

**Operational:** This means maintaining a ruthless focus on operational quality, efficiency, transparency and cost control, with IT as a key enabler.

## 4. DIFFERENTIATE THE BRAND

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**Strategic:** In a sector where standards are already high and competition increasingly intense, the search for differentiation is vital for those that want to consolidate or enhance their positioning. A focus is required on insight and strategic wisdom as core sources of advantage and margin enhancers.

**Operational:** IT has a vital role here in the capture, analysis, interpretation and curation of knowledge.

## 5. REDEFINE RISK

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**Strategic:** An uncertain environment creates risks in terms of the potential downsides of preferred strategies and the costs and threats inherent in inaction. Both must be encompassed in any assessment.

**Operational:** IT clearly presents a major source of risk, particularly in terms of security and the integration with client systems.

IT can also offer the tools to monitor and highlight emerging risks in the external environment, for clients and within the firm.

## 6. CREATE MAGNETISM

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**Strategic:** Leaders acknowledge the value of encouraging the flow of ideas and opportunities into the firm.

**Operational:** The perceived approachability of the firm is increasingly determined by its positioning through the Internet, social media and the tools with which external parties can engage.

# KEY LEADERSHIP IMPERATIVES

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## 7. ACKNOWLEDGE DISRUPTORS

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**Strategic:** The sector is now a prime target for potentially disruptive IT-centric new entrants. A systematic approach is required to identify, embrace and pre-empt new entrants through collaboration and competition.

**Operational:** The IT function needs to provide the tracking mechanisms to spot new offerings and have the capability to deliver rapid system-level responses to competitive threats.

## 8. RETHINK TALENT

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**Strategic:** Firms need to prepare for radical changes in staffing profile, recruitment, retention, graduate education and ongoing development.

**Operational:** IT has a crucial role to play in each step from streamlining recruitment to providing self-service HR tools and delivering advanced learning and development solutions that enable people to learn in the manner that best suits their needs.

## 9. EMBRACE IT OPPORTUNITY

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**Strategic:** To deliver on these opportunities requires that firms invest in and unleash the transformational potential of IT.

**Operational:** To secure this investment, IT must demonstrate that it has the capability and strategic understanding to deliver appropriate solutions.

## 10. NURTURE EXCELLENCE

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**Strategic:** To ensure the technology function delivers on expectations, firms need to demand and invest in best-in-class IT leadership.

**Operational:** IT must prove that it understands the capabilities required and can create the working environment that will help attract and nurture top talent.



# SPONSOR FEEDBACK

Commentaries about the  
report from our sponsors.



AccessData®

ILTA's Legal Technology Future Horizons study has revealed an incredibly interesting, sometimes worrying, yet ultimately hopeful future for the world of legal technology. While there are real challenges to be faced in the areas of data security, types and volume, the survey shows that we are moving toward a world where technology truly enhances workflows to make the practice of law more efficient and comprehensive.

At AccessData, we see the report as supporting a narrative that we know has existed for quite some time. Namely, that lawyers need to start becoming knowledgeable in areas adjacent to the law in order to stay competitive. Clients expect expertise in data handling and technology use from their lawyers just as they expect sound legal advice. In fact, the survey shows that increasingly these skills are being seen as part of good legal advice. The survey also revealed a few of these adjacencies that appear to be foremost in clients' minds at present:

- Many survey answers show emerging concern for data security; for example, from the survey report: "As business has become more reliant on technology, security has become a critical management issue and a growing priority for law firms. A mobile workforce and use of the cloud is driving the need to think about security at every level — data, applications, hardware platforms, devices and networks. A growing emphasis will be placed on accurate identification of individuals and devices and on activity monitoring. There is also a strong focus emerging on methods of encryption that can guarantee secure transmission and prevent unauthorized access.
- Similarly mobile data sources and particularly BYOD ("Bring Your Own Device") is identified as a disruptive technology currently emerging. From the report: "Many acknowledge struggling with the co-ordination, control and security implications of allowing their staff to purchase and use a wide range of communication and computing platforms. The majority of respondents felt a Mobile workforce (70.3%) and BYOD were already a reality for pioneer firms or would be over the next

12 months for both handheld devices and phones (76.4% of respondents) and computers (57.1%). A clear decision point is emerging as to whether firms try to retain total control over end-user platforms or give employees some freedom."

At present, both of these areas are of concern and engender many unresolved questions. What responsibilities do lawyers have for the security of client data? How do companies collect and manage corporate data in the age of BYOD? However, these are also areas of opportunity. Firms who make an effort to become knowledgeable about these subjects will have the advantage of being, "expert advisors on more than just the law," which the survey's respondents highly value.

For AccessData, the survey findings affirm our current strategy of developing deep solutions to advanced legal technology problems in an attempt to provide for another request of survey respondents, namely, "...a strong focus on the need for consolidating and sense-making of multiple sources of structured and unstructured data, enabling a single view of all client-relevant content."

We're honored to have been able to sponsor such a fascinating and useful project as the Legal Technology Future Horizons Study.

*Devin Krugly, VP of Product Strategy  
AccessData*



The Legal Technology Future Horizons study has brought to light several themes that we at BigHand feel are very important for the future of technology in law firms.

- The first theme that we see is that law firms will need to rely on outside IT expertise to help them shape their IT agenda. They will need to reference other businesses outside of the legal industry that are progressive in their use of technology, rather than looking only to other law firms for innovative tech trends.
- Another theme that is apparent in the report is that technology companies that work with and develop technology specifically for the legal industry can help lead firms toward technology advancements by using their knowledge of the industry. These companies know that law firms, and lawyers in particular, are traditionally not early adopters. Keeping this in mind, they need to develop their technology with cutting edge power and advantages, yet build it in a way that it is easy to use and adapt into the daily law firm workflow.
- Perhaps most important, we see a theme that lawyers will need to do more than just act on and react to the immediate needs of their clients going forward. They will need to use their deep knowledge and understanding of their clients' needs and business practices to proactively develop new models of service delivery. To do this effectively, they will need to team with technology partners who can enable them to build these models and support them in the long term to adapt to the growing and changing needs of their clients.

BigHand is a proud sponsor of the Legal Technology Future Horizons Study. We believe the information presented in this report will help guide our future development in the legal technology industry and can help shape the industry as a whole.

Based on the findings in the study regarding lawyer mobility, increasing cost pressures and demand for more efficiency, we believe that BigHand has tremendous potential to better enable the industry with our Voice Productivity Technology offerings. We are excited about the opportunity to support our customers in making the transitions needed to continue to serve their clients in the best and most efficient manner possible.

*Eric Wangler, President  
BigHand North America*

## BILLBLAST

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BillBLAST is honored to be a sponsor of this study which provides a forum for IT leaders from around the globe to weigh in on the state of law firm technology today and in the future. More than ever before, the roles of CIOs and their teams are impacting the viability of law firms — providing the infrastructure required to deliver the best possible service to clients. In recent years, the role of IT professionals has become an integral part of the law firm’s business strategy. The ever-growing competitive landscape that exists today brings with it challenges to manage cost effectiveness, predictability and pursuit of excellence every client engagement.

The study highlighted several points that resonated with us:

- **Clients.** Clients are driving the need for innovation with expectations higher than ever, discontinuing the business relationship for those that can’t comply. Their demands include accelerated services through automation, simplification and implementation of Web technologies to facilitate communication of the economic value of their representation and the day-to-day case management correspondence of the legal matter. Failure to self-regulate processes can prove to be costly to law firms. With lack of monitoring, firms continue to staff inefficiently, bill for improper charges and fail to communicate well and often with their clients, compromising their long-term business relationship.
- **Leadership.** Traditional law firm IT leadership has a need for change, with much higher demand on strategic thinking and vision for applying technologies that complement their existing core legal technologies. Lack of business understanding and direction of innovative solutions compromises the firm’s profitability. This shift in mindset has impacted the skillset and expertise required by law firm IT leadership. The complexity of today’s technology decisions are much more entailed than the hardware purchasing decisions of days past.

- **Metrics.** Client relationship managers and metrics by which to assess relationships are a must. Lack of “exhibits” to present to clients and law firm decision-makers results in both clients and law firm leaders being faced with making difficult business decisions. Firms are charged with the task of finding faster and more efficient ways to perform tasks, reduce costs and shorten business cycles. Business intelligence tools to identify the bottlenecks and provide the supporting data are critical. Competition is driving the need for innovation. Being able to predict costs, case outcomes and the probability of client billing acceptance are crucial to success.

This study provided a valuable tool to measure our own strategic plans against our clients’ current and future requirements. It supports our vision and understanding of the market direction as it relates to the evolution of our product offerings. The study further drives home the value of our application and services we provide to the legal sector. We are delighted to know that our offerings are aligned to specifically address some of the current and emerging challenges for law firms that are critical to their bottom line.

*Beth Thompson, Director of Sales & Marketing  
BillBLAST*



Technology in the legal market has long been understood to be staid and cautious. However, in this era of the consumerization of IT and increasing concerns around online privacy and security, we're witnessing a technological transformation in the legal world. And we believe ILTA's Legal Technology Future Horizons study comes at an ideal time for legal IT departments as they start to map out their long-term strategies.

Both law firms and law departments are doing the work and making the investments necessary to ensure they're able to judge risk appropriately and make good decisions around the use of technology. However, at the same time, it is apparent that the rate of technological change is accelerating, and the impact of these changes has yet to play out.

Legal IT departments clearly have a huge role to play, both in terms of supporting this historic technological shift and in terms of understanding what's next and how to best leverage new and emerging technologies while maintaining compliance standards.

We believe the following three themes highlighted in the study are key to understanding what's coming next:

- **Learning to love IT and embracing change.** Both IT organizations and law firms are generally averse to change, as it opens up space for disruption and can hurt productivity. But there's a huge difference between good disruption and bad disruption; IT organizations need to have the knowledge and background to help their organizations embrace the former while minimizing the impact of the latter. Clients demand nothing less.
- **Understanding globalization and global mobility.** With the wide reach of Internet technologies, even small local firms can participate in global markets and have customers located around the world. While, in general, barriers to the movement of capital, ideas, and assets have fallen, many local jurisdictions have introduced specific requirements for businesses and individuals living in their area. Legal IT departments need to

understand how to keep data safe and compliant while enabling delivery of work product to clients, no matter where they are located.

- **Responding to security issues and data complexity.** Both law firms and law departments create a tremendous amount of data — data to be secured based on established compliance requirements and available to employees at all times so that they can meet client needs. In addition, clients are requiring that their data be stored and accessed in a way that also meets the clients' compliance needs.

Here at Microsoft, the report validates a lot of work that we've already done around providing secured access to work product on secured devices. We strongly believe that the future revolves around enabling individuals to work on the devices and in the locations that they're comfortable with, while providing peace of mind to risk officers and general counsel concerned with these issues.

We are delighted to sponsor this important study and believe it will become a vital tool for business and technology leaders alike.

*Nishan DeSilva, Senior Director, LCA Business & Technology Solutions  
Microsoft*



This is an exciting time for the legal sector, as advancements in technology make it easier than ever to better protect confidential information. Security of information is a hot-button issue across every sector, and as we look to the future, this will only continue to grow as an area that can't be ignored for any practitioner that touches data. It is no surprise that the legal sector, in particular, has a major responsibility to keep sensitive data safe. And this responsibility will only intensify over time.

Why the focus on the legal space? Lawyers have high volumes of intellectual property and sensitive data on the line, so they are challenged to protect this data — especially data stored and transmitted via email — from leaks, spam, phishing and other malicious behavior. But times have changed, and keeping this information safe doesn't have to be costly or complex. As lawyers look for ways to protect sensitive information, they must do two key things: implement the right technology platform and enforce proper information security policies.

ILTA's Legal Technology Future Horizons study provides a forward-looking view of how advances in information technology could impact the legal industry over the next decade, citing that 73 percent agree or strongly agree that the capacity for rapid IT-enabled innovation will be a critical differentiator for law firms in the future. We are pleased to see that the study explores the following important topics:

- Global Drivers of Change
- Strategic Challenges for the Legal Sector
- The Emerging Technology Timeline
- Implications, Opportunities and Scenarios for the Management of Legal IT

*Peter Smith, Director of Legal Sales  
Mimecast North America*



ILTA's Legal Technology Future Horizons is a critical report that contains a wealth of new and valuable data on the existing legal landscape as well as trends that will affect the law firm of the future. As leading providers of information to the legal professional, it's critical that we stay in lockstep with our client's needs and provide them solutions and services that will guide them through a rapidly changing market. This report reinforces our philosophy that the fluid landscape of the last five years isn't as important as knowing where our clients are going now and what they face in the future — business landscape in which technology is becoming an increasingly important business priority, and one that may also be shaped by political, environmental and economic factors. The significant and detailed data in this report is extremely valuable. The Three Horizons Tech Timeline in the report clearly illuminates the myriad possibilities that are on the minds of our clients and underscores the laser focus we must continue to have. Survey results on key indicators provide a window into our clients' needs and expectations, and case studies give on-the-ground examples of how law firms' needs can be met with the right technology.

The following messages resonated with us in particular:

- ***Continued globalization will continue and will bring more challenges.*** Thomson Reuters has always placed emphasis on the needs of the global economy. It's almost guaranteed that continued consolidation, fluctuation in the political landscape, and socio-economic and environmental changes in the workplace will continue. Our end goal is, and will continue to be, to meet our clients' needs as they tackle these challenges.
- ***The evolving competitive landscape for our clients will have a substantial effect on their way of doing business.*** Legal consolidations and mergers and acquisitions will change the look of the law firm, both in bricks-and-mortar but also in the virtual world. At the same time, a change in the size and structure of the workforce could result in less in-house staff but growing competition from independents and a need to be more flexible in staffing and organizational processes. This reinforces our call to work with our clients to provide them with solutions for their changing infrastructures.
- ***Innovation will continue and will increase pressure on firms to adjust.*** We need to continue to deliver products that provide intuitive experience, increased productivity, insightful information, and connections between products, people and processes. Mobility will lead the drive for innovation, but so will the need for new business models, tools and solutions that re-imagine workflows, and technology that help clients gather and analyze information.
- ***Consumers will continue to demand value.*** This report drove home the emphasis that the consumer is placing on personalization, less cost, more value and less risk for the products they use — both professionally and personally.

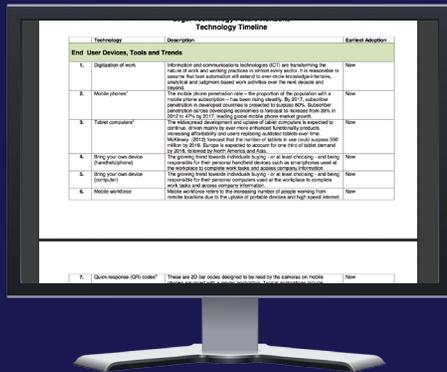
We are pleased to have been sponsors of this important study. Because it encapsulates important business and technology trends, it can both reinforce our current strategies as well as show us how we can help our clients solve their most pressing challenges.

**Andrew Martens**  
*Global Head of Product & Editorial, Thomson Reuters*

# SUPPLEMENTAL RESOURCES

## TECHNOLOGY TIMELINE

Descriptions and Debut Dates



The *Technology Timeline* outlines key emerging technologies that could impact the legal enterprise in the next 10-15 years and beyond. The emerging technologies have been grouped under the following categories:

- End User Devices, Tools and Trends
- Interfaces and Displays
- Internet and Social Media
- Communications, Collaboration and Networking Tools and Developments
- Software Tools, Techniques and Trends
- Artificial Intelligence (AI) and Intelligent Systems
- Computing Technology and Devices
- Management and Analysis of Data, Information and Knowledge
- Security Technology
- Disruptive Scientific Developments

Some of the developments listed are already available or emerging in the marketplace. However, in many cases, they have not been adopted in the legal context and are provided to highlight what pioneers in the sector might turn their attention to in the coming years.

## INTERVIEW WITH ROHIT TALWAR

Following ILTA's INSIGHT 2013 event in London, Rohit was interviewed about his findings.



## SEE WHAT OUR SPONSORS ARE SAYING

In addition to the sponsor commentaries provided in this report, you'll find quotations [here](#).