LEGAL TECHNOLOGY

Where are we now and where are we headed?

Hussain Hadi, Head of Middle East Publishing, LexisNexis



"The digitization of society is at the heart of the economic and societal changes of the 21st century. It will affect all human activities, as it has already changed the business, finance, media, transport and hospitality (...). Tomorrow, digitization will upset the sectors of insurance, health, energy, education ... Professional medical, legal or tax services will be turned upside down by intelligent algorithms based on machine learning..."

Jean Tirole, Nobel Prize winner for economics



Artificial intelligence

Artificial intelligence (AI) refers to the simulation of human learning processes by computers.

Al engines use data (inputs and outcomes) to auto-correct (refine) a set of logical rules that enables the inputs to predict the outcomes









Artificial Intelligence is frequently defined by the technologies it uses





Al technologies appeared decades ago

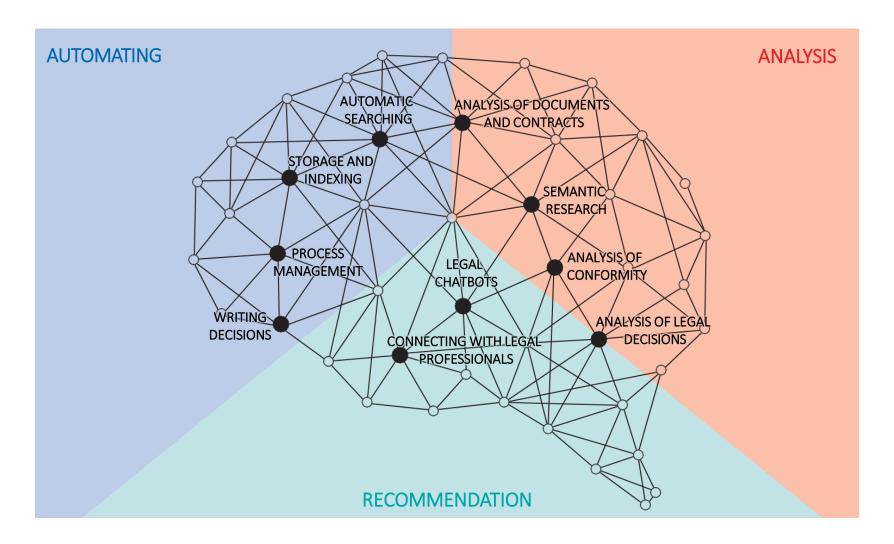
- A. Turing, « Computing machinery and intelligence », 1950
- Neural Networks have been conceptualized since
 1957
- Expert systems have been developed in the 80s and 90s

Results obtained through AI have dramatically improved in the last 20 years

- Growing availability of data (volume, diversity, speed, and quality)
- Decreasing storage costs
- Unprecedented processing capacity (cf. parallel computing with GPU)

LexisNexis 3

Artificial intelligence



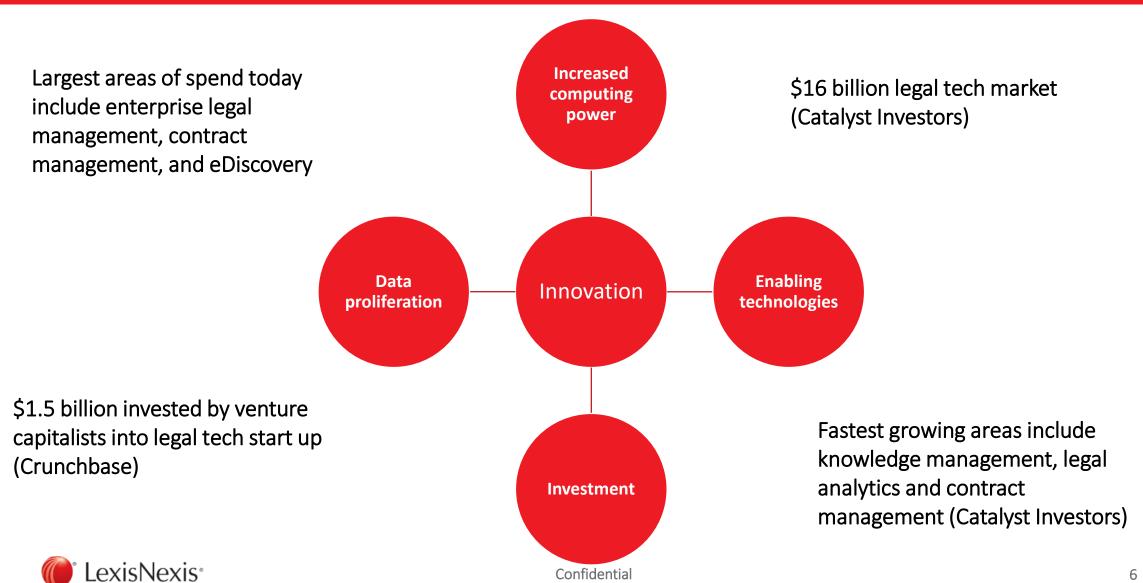


Legal technology traditionally referred to the application of technology and software to help law firms with practice management, document storage, billing, accounting and electronic discovery.

The digitalization of the legal services industry has given birth to a new ecosystem composed of lawyers, entrepreneurs, investors, academics and professionals focusing on applying cutting edge technologies to transform the profession.







What are we seeing now?





"22% of a lawyer's job and 35% of a law clerk's job can be automated"

Mckinsey

"39% of jobs in the legal sector stand to be automated in the longer term"

Deloitte





Dana Remus demonstrated in her publication *Can Robots Be Lawyers? Computers, lawyers and the practice of law* that:

- 85% of tasks heavily exposed to digital will no longer be provided by lawyers but by algorithms.
- 19% of tasks moderately exposed to digital will no longer be provided by lawyers but by algorithms.
- Only 5% of tasks with low digital exposure will no longer be provided by lawyers but by algorithms.



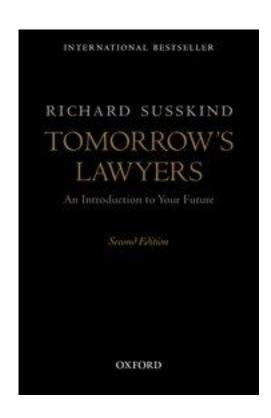
"JPMorgan software does in seconds what took lawyers 360,000 hours"

JP Morgan's program COIN (Contract Intelligence) runs on a machine learning system that automates document review for a certain class of contracts. The algorithm classifies clauses into one of 150 different "attributes" of credit contracts.









"The next two decades will bring more changes to legal institutions and lawyers than have the last two centuries"

"My optimism derives from my aim in life, which is to try to make the law and dispute resolution more accessible to the ordinary person and businesses, too. Ideas about using technology present a rosy future indeed..."

"The pessimism lies in relation to those lawyers who are unwilling to change. As we move into the [2020s], unless you are adaptable, entrepreneurial and really willing to embrace technology, there's a rather grim future ahead."

Professor Richard Susskind OBE



Drivers for change

Technological advances (e.g. machine learning, big data)

More-for-less challenge – i.e. the financial pressures imposed by large businesses on their lawyers to streamline and rationalise their working processes

Liberalisation of the profession, whereby other businesses (such as the 'Big Four' accounting firms or alternative legal service providers such as Axiom and UnitedLex) begin to do some of the work traditionally reserved for qualified lawyers



No choice but to embrace technology

"BCXponent's multidisciplinary team includes professionals with deep experience in law, computer science, actuarial science, probability and statistics, business management and project management"

Bryan Cave

"GravityStack was formed with a vision to combine unique data insights with the most experienced legal process and operational experts. Our unique blend of data and human intelligence is redefining 'value' in the legal industry." Reed Smith

"Fuse, the tech innovation space where tech companies, Allen & Overy lawyers, technologists and their clients can collaborate to explore, develop and test legal, regulatory and deal-related solutions..."



No choice but to embrace technology

"Fast Forward is our emerging tech incubation programme which supports the work of UK-based technology entrepreneurs and innovators."

Slaughter & May

"MDR LAB is a programme for tech start-ups in the legal space. Open to early stage and growth technology start-ups, applications are welcomed from companies at concept through to revenue-generating stage, as long as the product or service is applicable to the legal industry."

Mishcon de Reya



No choice but to embrace technology

The American Bar Association (ABA) has already modified its rules to extend a lawyer's duty of competence to keep "abreast of changes in the law and its practice" to include knowing "the benefits and risks associated with relevant technology." Many State Bars have followed, extending lawyer "competence" beyond knowledge of substantive law to a duty of technological competence.

The Law Society of England & Wales concludes that: "Legal businesses which use technology to deliver legal services focusing on smarter, more flexible resourcing, carrying out work in a more project management style and thinking in terms of process management and improvement, will look very different to the pyramid law firm of the past. They will depend largely on technology and collaboration to do that.

The importance of borderless platforms and digital ecosystems will grow in the coming years as massive movements such as the Internet of Things, big data and data analytics evolve. The ability of law firms to plug into these developments through technological innovation and collaboration will be an important factor for their success in future markets."



What are we seeing now?

- Major law firms setting up low-cost service centers for routine legal work
- Alternative legal service providers
- Emergence of legal tech startups, with more than 1,000 existing worldwide
- An increasing interest in the potential of artificial intelligence
- Judges advocating the wider use of technology
- Professional bodies, such as bar associations, releasing studies on the future of legal services
- Legal tech blogs, publications and events
- During the past decade the legal industry has begun a transition from "lawyers know best" to "legal consumers engage providers that can best resolve their business challenges."



What about the Middle East?

- Many tech players now have offices in the Middle East (e.g. Codengines)
- Legal Advice Middle East is an example of a platform looking to connect consumers and lawyers, with flexible delivery / billing options offered by a range of participating law firms
- Law firms are looking to use technology to engage and collaborate with clients on a deeper level
- Corporate counsel teams are beginning to outsource specific tasks to alternative service providers to control costs (e.g. ACC Middle East President encouraging corporate counsel to explore outsourcing the administrative aspects of their due diligence work)



Looking ahead

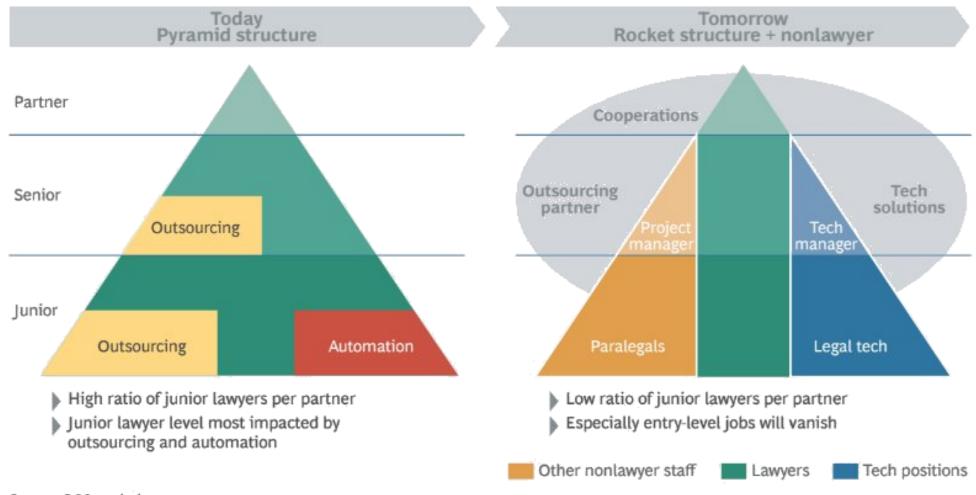
- The performance of routine tasks will be increasingly automated
- More and more jobs will involve managing legal processes by breaking them down into smaller tasks and applying technological solutions to achieve maximum cost-effectiveness
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- As artificial intelligence and big data analysis capabilities evolve, lawyers will be pressed to either use their expertise for designing tomorrow's legal machines or do the jobs where human involvement comes at a premium

Tomorrow's Lawyers: An Introduction to Your Future (Richard Susskind)



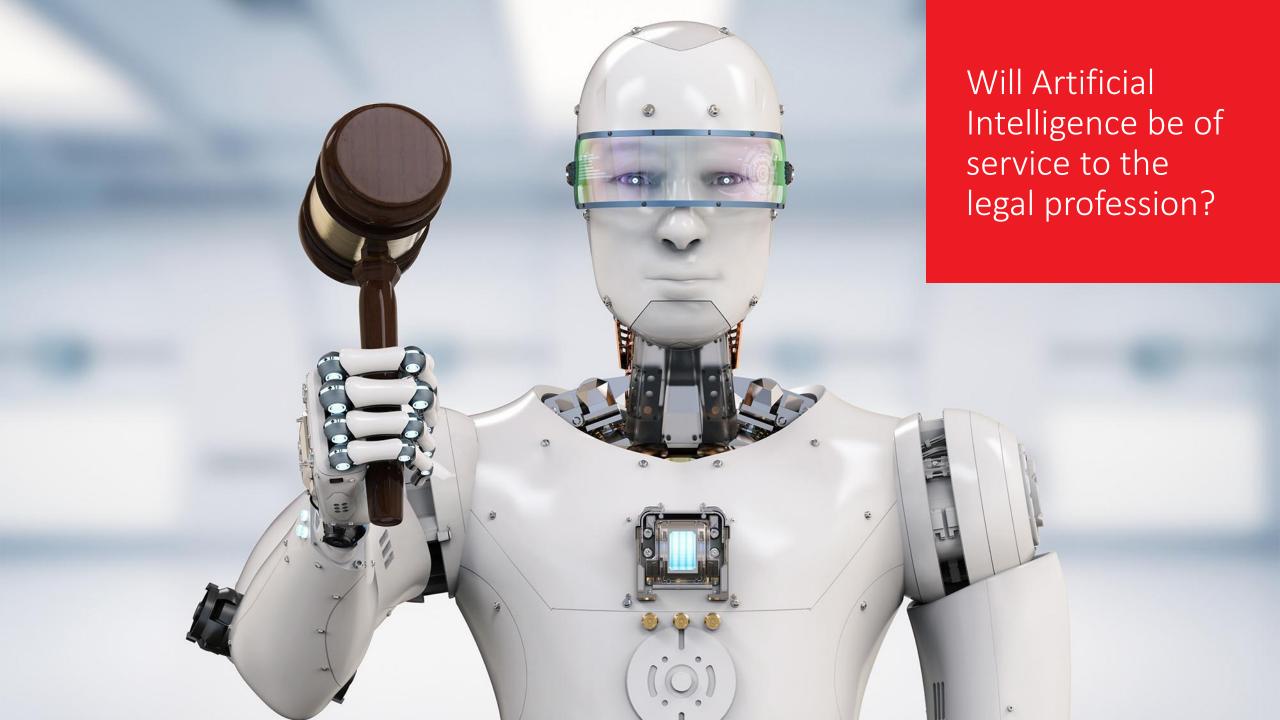
Looking ahead

EXHIBIT 5 | Adapting big law's business model also includes the traditional pyramid structure

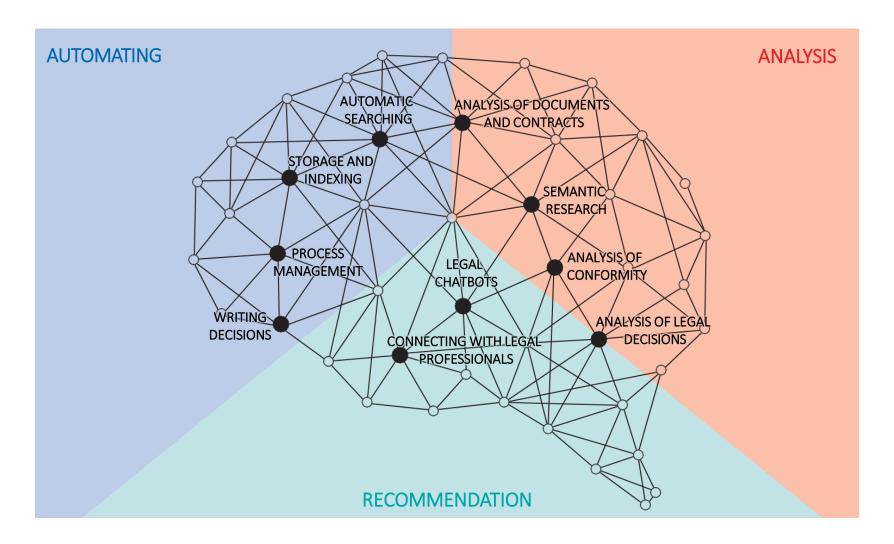


Source: BCG analysis





How artificial intelligence applies to the law





How does it work?

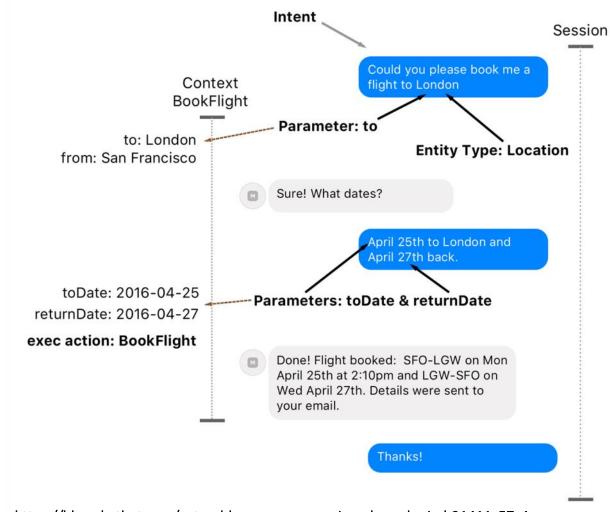
- Natural Language Processing
- Machine Learning
- Semantic Search
- Expert Systems



Natural Language Processing

"Natural Language Processing considers the hierarchical structure of language: several words make a phrase, several phrases make a sentence and, ultimately, sentences convey ideas"

John Rehling



https://blog.chatbot.com/natural-language-processing-nlp-and-a-i-eb21411c57c4

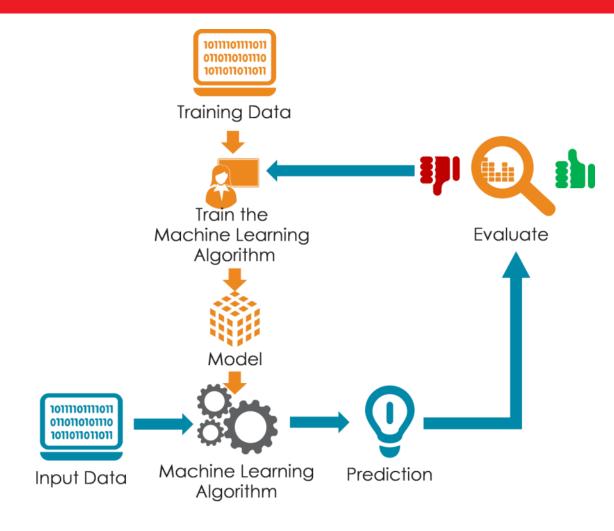


Confidential

Machine Learning

Machine learning is an application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed.

http://www.expertsystem.com/machinelearning-definition/



https://www.linkedin.com/pulse/building-machine-learning-infrastructure-pat-alvarado/



Semantic Search

Semantic search seeks to improve search accuracy by understanding the searcher's intent and the contextual meaning of terms.

https://en.wikipedia.org/wiki/Semantic_search



https://www.hallaminternet.com/understanding-keyword-context/

Classify Keywords by Intent



https://www.smartinsignts.com/searcn-engine-optimisation-seo/seo-analytics/seo-keywords-analysis-to-help-plan-your-conversion-strategies/



Expert Systems

Expert Systems are programs that gives answers, solutions, or diagnoses, based on available information, by following procedures that attempt to duplicate the thought processes and apply the knowledge of an expert in some particular field.

Non-expert
user

Query

Advice

Expert System

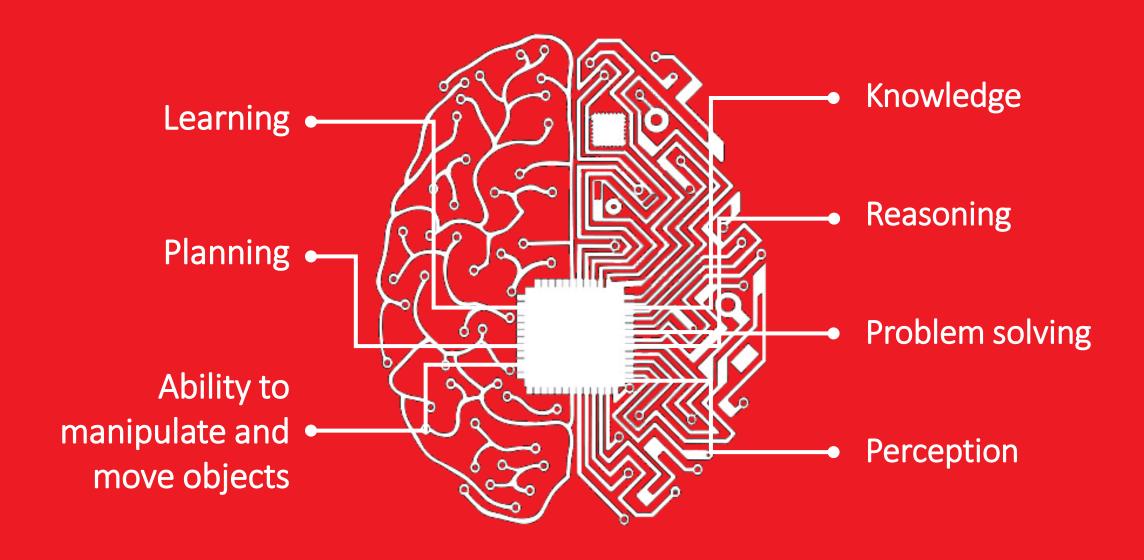
Knowledge from an expert

Knowledge Base

http://www.dictionary.com/browse/expertsystem

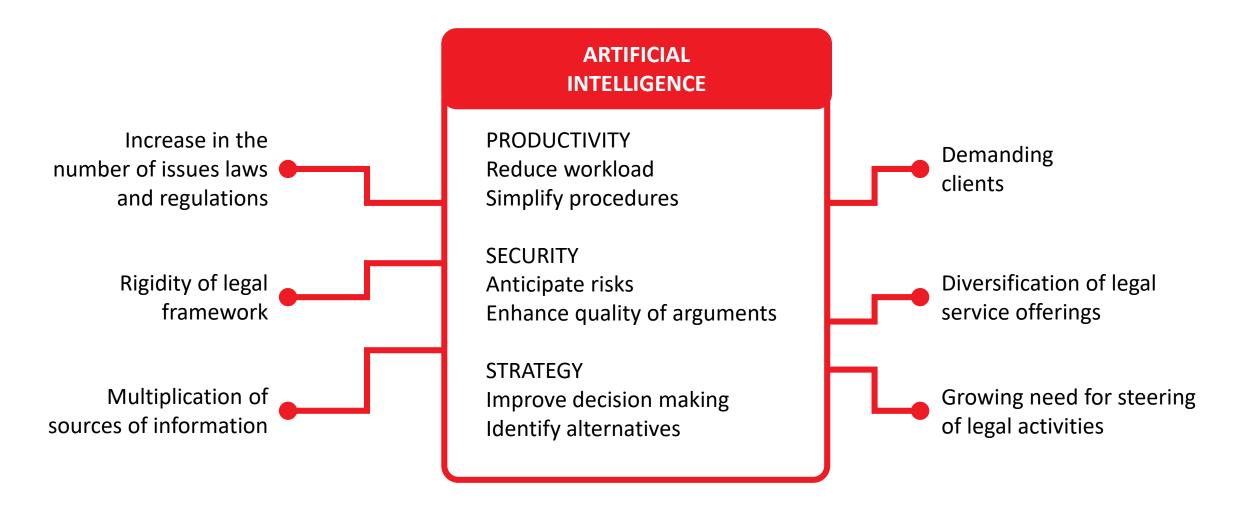
https://sjhobbs.wikispaces.com/Robotics,+Al+and+Expert+Systems?responseToken=c35f78055034317865336cf31e851e82







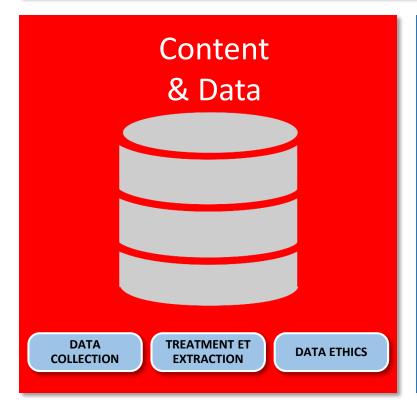
Al for legal practioners will increase productivity, legal certainty, and support the design of legal strategies





Lexis Intelligence is a global initiative aiming at creating the next generation of legal services

Challenges of next generation products







The impact of AI on the legal industry today

Legal research

ROSS

Lexis Answers

Contract review / Due Diligence

Ebrevia

Kira Systems

Analyzing legal data

Lex Machina

Case Law Analytics



The "Lexis Intelligence" Program

Analysis of Contract

- Analyze and categorize legal documents
- Identify missing or at-risk clauses
- Anticipate litigation

Legal Research

Analytical case reading

- Propose a quantitative analysis of the case decisions
- Easily access case law related to the case being handled

Smart data collection

- Select relevant information for the user
- Evaluate the impact of new information on a given situation (contractual basis, litigation, etc.)





How Is Legal Analytics Most Valuable?



Demonstrating competitive advantage to clients



Determining strategy for particular courts and judges



Predicting likely outcomes of strategy or arguments



Case assessment



Legal Analytics In The Future

Respondents believe their firm's use of Legal analytics will increase in these areas:



80.3% Cost Savings



85.3% Pricing Projects



60% Winning Cases



68.3%
Attracting New
Clients



62.9%Growing Existing
Clients

Document Automation

- Repeated elements of a document are coded
- Questionnaire is completed to collect data for the document such as the names of the parties as well as information that will control which clauses are included
- Consistency / accuracy
- Collaboration / workflow
- Security / privacy
- Alerting / tracking system





Document Automation

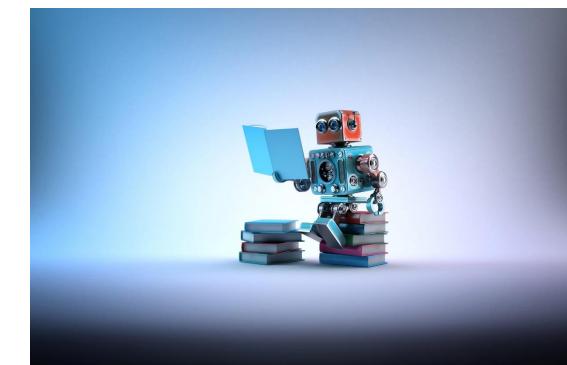
- What is the true / hidden cost of implementation?
- Creating a clause library
- A programmer and/or a legal engineer may be needed to set up the document template, configure the Q&A interface, and test the workflow





Document proofing

- Helps with drafting by identifying errors / inconsistencies
- Tools can check defined terms, cross-references, citations, quotation marks, numbering, phrases, grammar
- Efficiency
- Reduce risk





Contract analysis

- A.I. contract analysis creates a number of opportunities including:
 - contract review where the software is used to review and analyze a contract against a standard;
 - clause identification and extraction where the software is trained to identify and extract specific types of clauses beyond those addressed in a standard due
 - diligence exercise
 - contract management





"JPMorgan software does in seconds what took lawyers 360,000 hours"

JP Morgan's program COIN (Contract Intelligence) runs on a machine learning system that automates document review for a certain class of contracts. The algorithm classifies clauses into one of 150 different "attributes" of credit contracts.



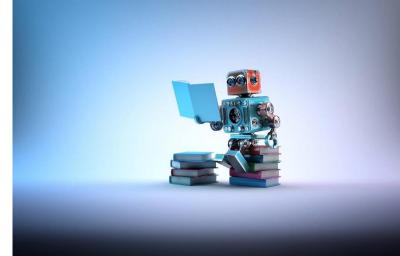




Smart contracts

- A smart contract is computer code that can automatically monitor, execute and enforce a legal agreement.
- "Smart contracts," self-executing computer scripts, enable machines that are
 equipped with virtual wallets to conduct financial transactions
 with other machines, without the need for third-party brokers.





Other areas:

- Decision trees and expert systems
- Legal research
- Technology assisted due diligence
- Transaction management
- Analytics





Looking ahead

- The performance of routine tasks will be increasingly automated
- More and more jobs will involve managing legal processes by breaking them down into smaller tasks and applying technological solutions to achieve maximum cost-effectiveness
- The delivery of legal services will shift online and computerised web-based services will displace lawyers unless truly bespoke advice is necessary
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- As artificial intelligence and big data analysis capabilities evolve, lawyers will be pressed to either use their expertise for designing tomorrow's legal machines or do the jobs where human involvement comes at a premium

Tomorrow's Lawyers: An Introduction to Your Future (Richard Susskind)



LEGAL TECHNOLOGY: GETTING STARTED



"Start from the position of your clients. Mapping out client needs and expectations may suggest new areas of service and service extensions and where there is a natural fit with technology solutions, rather than being pressured or seduced into buying technological innovations and then trying to make them fit with the firm"

"Firm-wide process improvement and process re-engineering are the most important steps that many firms still have to take in any innovation journey"



Developing the business case:

- Identify the problem
- What is the current manual process to solve the problem?
- Is there technology that will replace this manual process and solve the problem?
- What will it cost and do you have (or can you get) the budget?
- Will the benefits of the technology outweigh the cost? And how soon will those benefits pay off the cost? What is the return on investmenT?
- Do you have the support of management (inside the legal department and elsewhere, e.g., CFO,
 CTO)?



1. Conduct a self-assessment

What is your work style and ethic?

What are your primary practice areas?

Consider your current use and ownership of technology.

What are your future plans for your practice and technology?

The amount of time spent in the office and on the road

How many support staff do you have?

What is your experience/comfort level with technology?

What are your absolute necessities?

Determine your budget



2. Research

Find out about vendors and software - the different options/solutions for your particular issue

Read law office technology books and periodicals

Join technology-oriented discussion lists

Read discussion list archives *

Ask your colleagues



3. Try it

Download or request a demonstration/trial version of the software.

Try the software on your desktop or network computers.

Ask for on-line demonstrations of the software.

If you have staff, have the staff try the software.



4. Evaluate it

Compare your list of absolute necessities with the features the software offers

Did the software meet your expectations?

Did you feel comfortable with the "look" and "feel" of the software?

Will the software help you get your work done faster?

Is the price of the software within your budget?

Is the software designed for the type of work you do?

What does the staff think of the software?

Does the software fit into your future goals?



5. Buy it

Determine how many licenses you will need.

Determine what is included in the price of the software.

Determine whether you need a maintenance and support contract.

Determine amount of training you and your staff will need.



6. Implement it

Communicate to the staff when and by whom the software will be implemented

Arrange for training for yourself and your staff

Commit to using the new software

Be positive and patient with yourself and your staff while in the transition period



7. Training

Include training for yourself and your staff.

Arrange for a company representative or a local consultant to come to your office.

Set a training schedule and stick with it.

Get training on new versions of the software when you upgrade, if necessary.



Future of Legal Services (Law Society of England & Wales)

https://www.lawsociety.org.uk/news/documents/future-of-legal-services-pdf/

Legal Tech in 2018: Threats and Opportunities (Law Society of England & Wales)

https://www.lawsociety.org.uk/news/blog/legal-tech-2018-threats-and-opportunities/

THE SYMBIOTIC RELATIONSHIP BETWEEN LAWYER AND LEGAL TECH

https://www.herbertsmithfreehills.com/latest-thinking/the-symbiotic-relationship-between-lawyer-and-legal-tech



Technology: Playing the end game (Law Society Gazette)

https://www.lawgazette.co.uk/features/technology-playing-the-end-game/5064322.article

Legal tech: upskilling for the 21st century

https://www.lawgazette.co.uk/features/legal-tech-upskilling-for-the-21st-century/5057554.article

With A Defined Go-To-Market Strategy, Legal Tech Can Conquer The Industry

https://www.forbes.com/sites/forbesagencycouncil/2018/07/13/with-a-defined-go-to-market-strategy-legal-

tech-can-conquer-the-industry/#51f6f3f4106c



Jargon Buster: Legal Technology (Norton Rose, Page 19)

http://www.nortonrosefulbright.com/files/20170925-international-arbitration-report-issue-9-157156.pdf

Law Tech Glossary (Alex Hamilton)

https://github.com/AlexHamilton/LawTech-Glossary

27 technology terms every legal professional should know

https://www.onelegal.com/blog/27-technology-terms-every-legal-professional-should-know/



GETTING THE BASICS RIGHT: MARKETING WEBSITE



WEBSITES – COMMON ELEMENTS

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Client services / Practice areas / Expertise / Sectors

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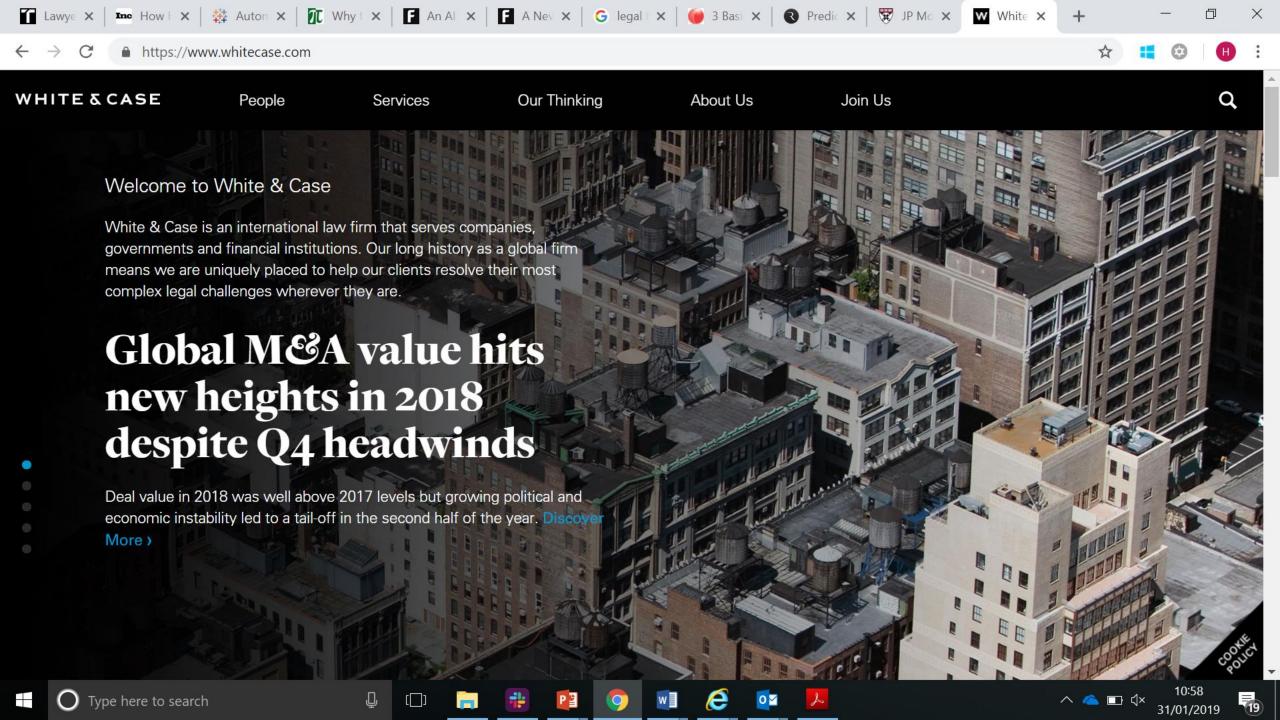
Events

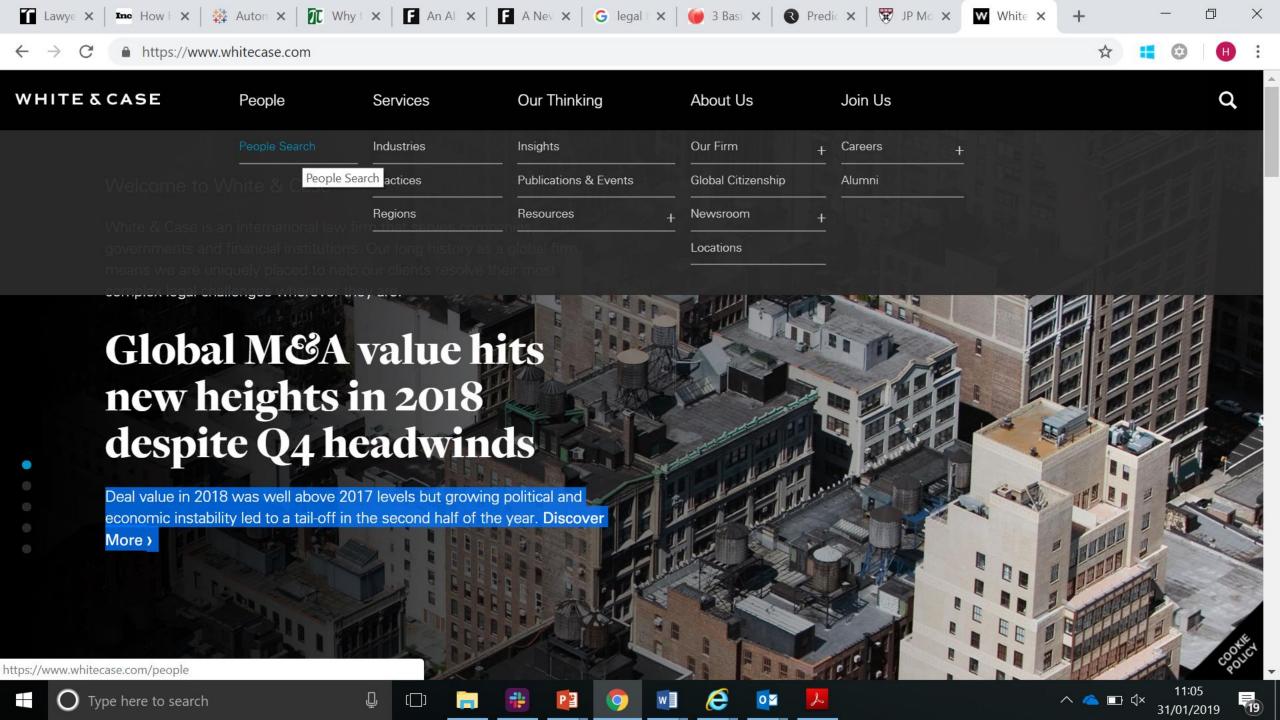
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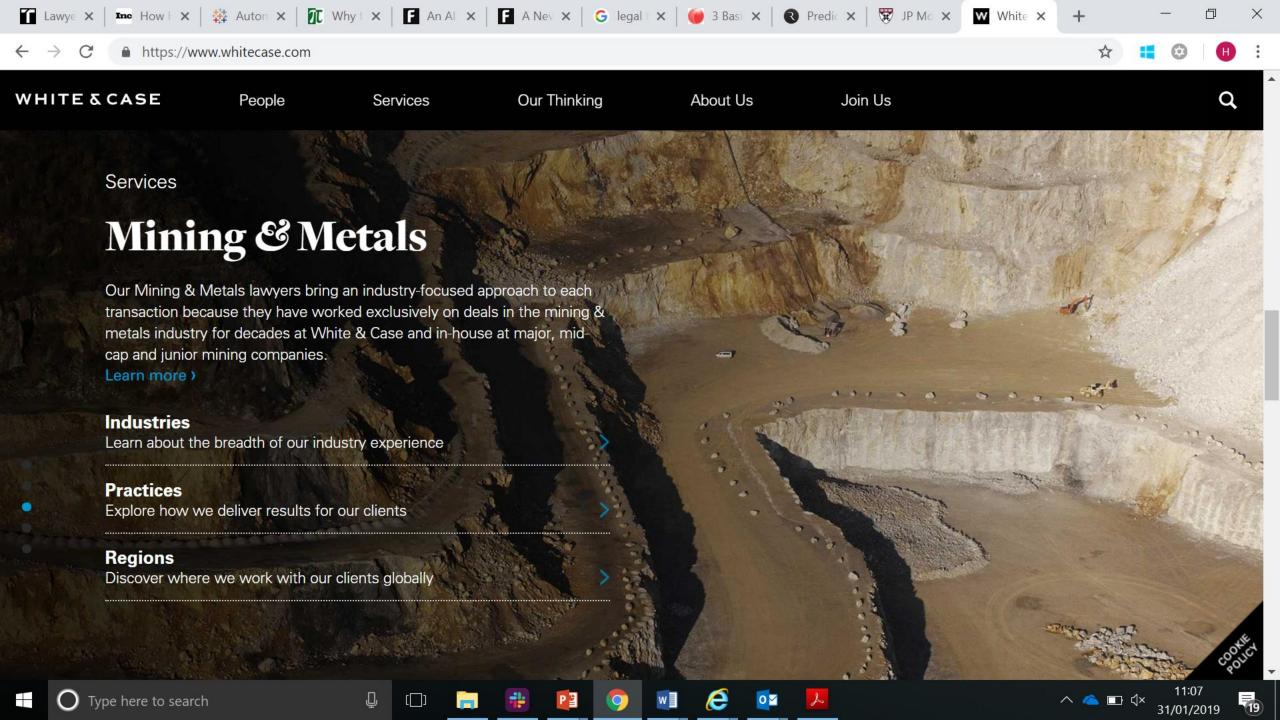
Publications / Content / Blog

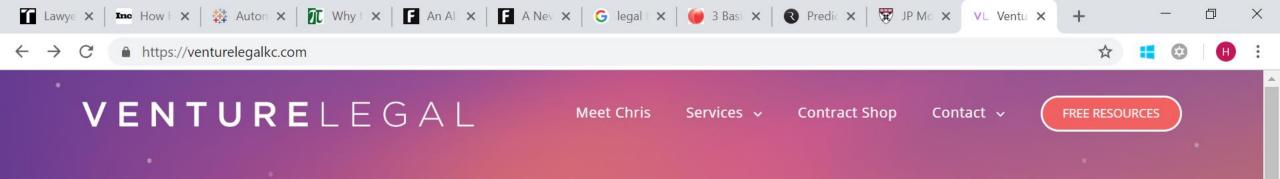
FAQ







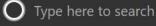




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We're a modern law firm helping forward-looking startups, freelancers, and small businesses.













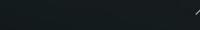




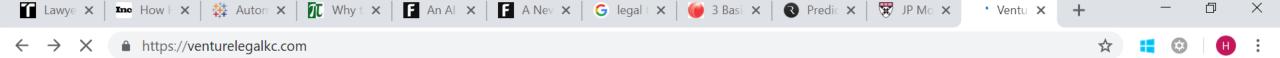












Who We Help

We're not a "general practice" firm that does it all. Rather, we focus on legal issues relevant to successful, modern-day businesses.

Startups

Working in the Kansas City startup community is an awesome experience. When you are ready to take your startup to the next level, we can help you with fixedfee legal services to help you grow.

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Small Businesses

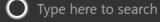
Nearly everything your business does will involve "the law." From business law, contract law, employment law, intellectual property, real estate, and more, we can help guide your business in the right direction.

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Clients We Represent

Waiting for www.google-analytics.com...

















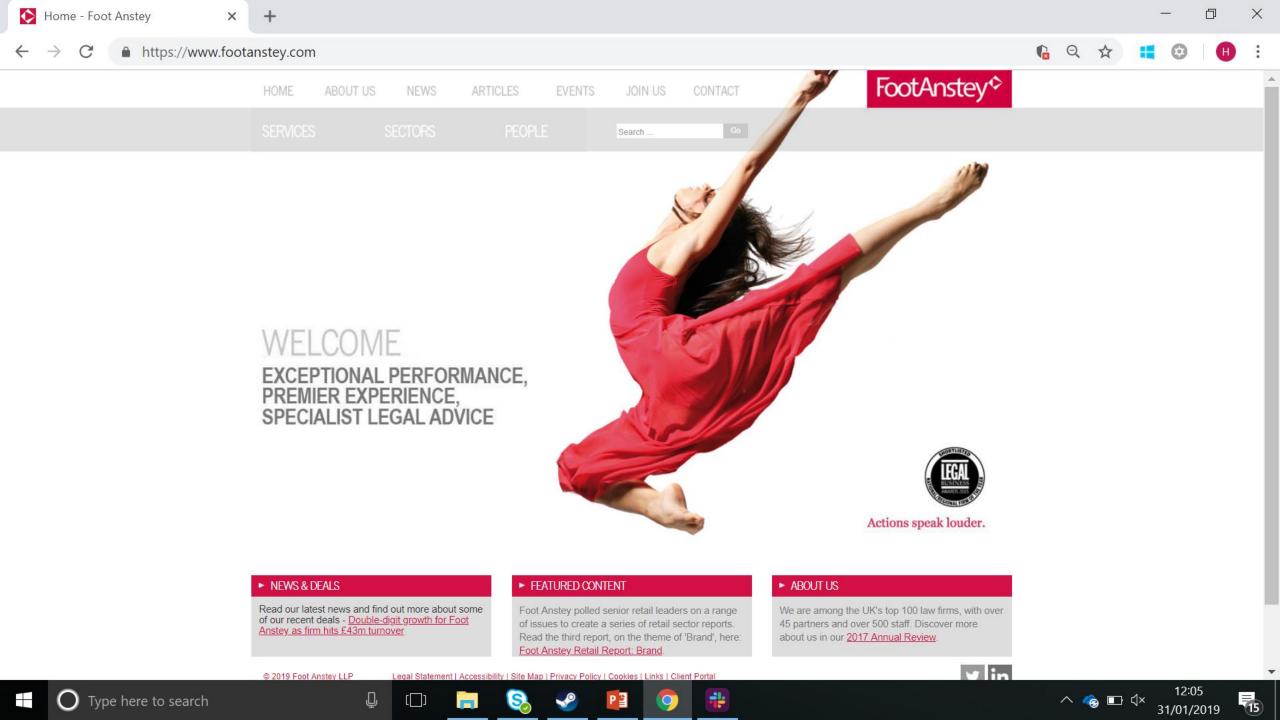


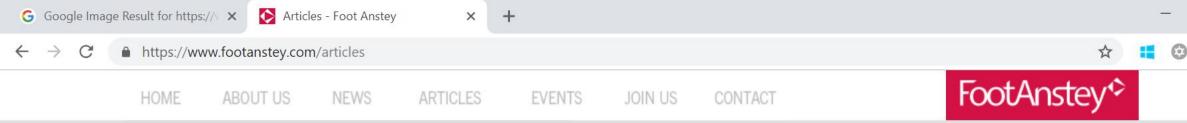












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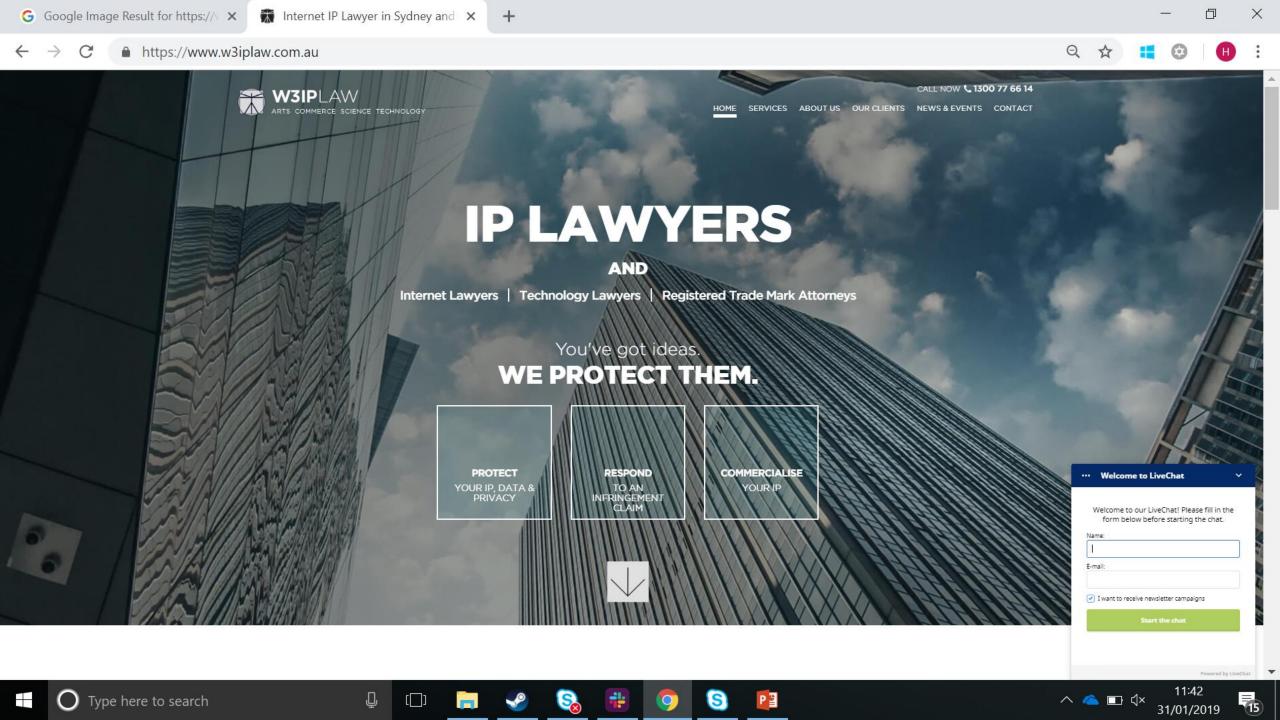












Design

- Keep the design simple, fresh, and unique
- Responsive design
- Avoid visual clutter
- Use bold colors and striking images
- Take advantage of typography
- Design for accessibility
- Search engine optimization and marketing



Call to action

- Add a phone number in the header of your website so it appears on every page
- Make phone numbers on your website click-to-call links for mobile users
- Include a link to a contact page in your primary navigation
- Include email addresses or phone numbers for individual attorneys on their profile pages
- Create registration pages to capture prospective client information (offer useful or education information, and use a simple form)



Content is king

- Focus on your client-centered value proposition
- Keep it brief: concise and practical
- Blogs or vlogs that provide quick answers to simple questions
- "10 key things to consider when..."



Be aware of:

- Search engine optimization
- Hyper Text Transfer Protocol Secure (HTTPS) is the secure version of HTTP, the protocol over which data is sent between your browser and the website
- Content management systems (CMS)
- Google Analytics



How to: create a better website (Law Society Gazette)

https://www.lawgazette.co.uk/features/how-to-create-a-better-website/5066859.article

FYI – Starting a website (American Bar Association)

https://www.americanbar.org/groups/departments offices/legal technology resources/resources/charts fyis/websitefyi/

Marketing tips for law firms (LexisNexis)

http://www.lexisnexis.co.uk/research-and-reports/smolo/marketing-tips-for-law-firms.html



GETTING THE BASICS RIGHT: LINKEDIN



Clear sense of purpose

- What message do you want to deliver about the firm and the roles of the lawyers and staff?
- Is there any specific language that needs to be used consistently across profiles?
- From facial expressions to attire, background, cropping and colours, what is the right look for your headshots?
- Is there a particular writing style that would embody the firm's professional identity? If so, how can that best be carried forward on titles, profiles and posts?
- Does the firm need assistance from a marketing professional to develop this communication strategy and / or to coach the lawyers and staff through implementation?
- Do you need a plan to optimize profiles and posts for search results?



Build your connections

- So, if you want to use this platform well, you will need to build a robust network. Send invitations to clients, referrers, classmates, peers from previous jobs, people in your community, family and friends. Give special consideration to people you know who know the people you want to know
- There are lots of approaches to do this, from manually searching for specific individuals to batch exporting contacts or scanning companies and institutions for old acquaintances
- To further expand your network to new contacts, ask your connections to introduce you to their connections.
 Or, you can reach out directly with a personal note to introduce yourself
- This is a networking site. Follow the same best practices you would at a networking event. Be friendly. Be helpful. Be focused. And remember that the right people will want to connect with you.



Engage your community

- When you post content, your audience can see it. If they respond, your content becomes visible to all of their connections. So, consider how to engage with individuals that are connected to your target market
- To go a step further, identity people who are not only connected to your market, but who have the ability to influence them. Consider how you can engage those individuals to generate higher authority likes, comments and shares of your content
- Join groups that target your market. Seek active groups that present the opportunity to engage with other members
- Offer to write recommendations and ask to receive them
- Be aware that not everything on LinkedIn happens on the main stage. You can also go behind the scenes, with direct messages to continue to build existing relationships



Engage your community

- You may want a comprehensive LinkedIn plan, as opposed to just simply having a presence on the site. If so, give some consideration to a larger concept, a strategy that ties all your content together, makes your materials compelling, graphically pops from the clutter and feels connected to your firm's identity
- LinkedIn may have the numbers. But without a strategy that really connects with your audience, it won't actually do anything substantial for your firm. If you start a group that really offers something of value, people will join, participate and share. If you post content that offers a point of view, people will react and when they do their networks will see your posts.
- Just like any other marketing campaign, it may require finessing. Don't just stop at the first signs of a challenge. Your LinkedIn plan should account for clear, realistic, goal-oriented metrics and a process to regularly review results so you can assess effectiveness.



MAKE IT RAIN ON LINKEDIN (CANADIAN BAR ASSOCIATION)

https://www.cba.org/Publications-Resources/CBA-Practice-Link/solo/2018/Make-it-rain-on-LinkedIn

Six Budget-Friendly Marketing Tips for the Small Law Firm

https://www.lexisnexis.com/community/lexis-legal-advantage/b/law-practice-management/posts/six-budget-friendly-marketing-tips-for-the-small-law-firm

Top 10 Internet Marketing Tips for New, Small Law Firms

https://www.lexisnexis.com/law-firms/pdf/Internet1.pdf



GETTING THE BASICS RIGHT: QUICK WINS WITH MICROSOFT & GOOGLE



