### LEGAL*BUSINESS*WORLD

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### HOW LEGAL CAN BECOME LEAN DURING A DOWN-MARKET

By Daniel van Binsbergen

Other contributors: Milva Finnegan, Alfredo Contreras, Richard G. Stock, Katri L. Nousiainen, Joonas Keski-Rahkonen, Chiara Lamacchia, Lance Eliot, Steve Fretzin, Elif Hilal Umucu

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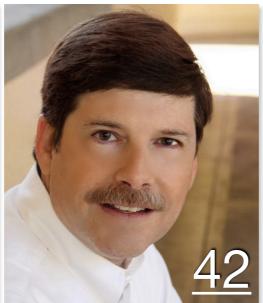
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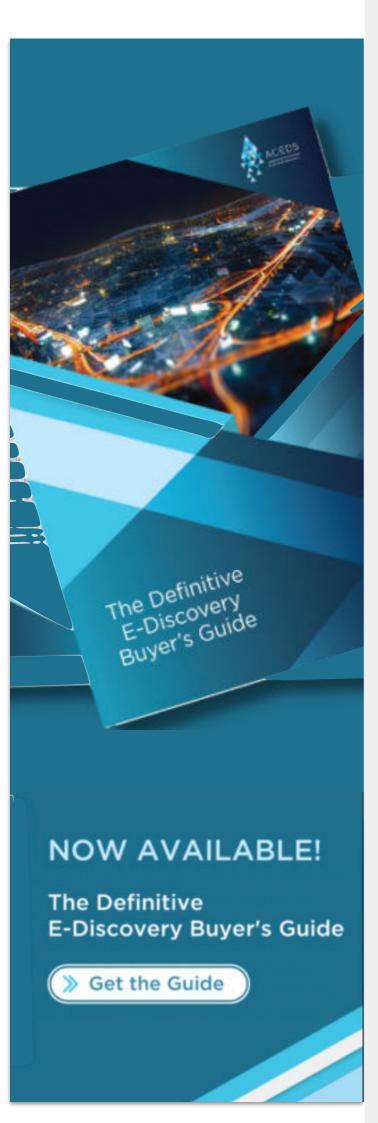
## Change Management in the Time of Automation: How to Boost User Adoption and Engagement Across the Enterprise

There is a growing consensus that the latest legal technology significantly improves day-to-day legal operations, while safeguarding organizations' reputations. But first, chief legal officers (CLOs), general counsels (GCs), and other business leaders need to ensure this digital transformation takes hold — not only in legal departments, but also across the entire business. Join this webinar with Jerry Levine, ContractPodAi's Chief Evangelist and General Counsel, and Daniel Jay Tijerina, of AT&T Sports Networks Business Affairs and Affiliate Relations. Together, they will discuss modern change management and enterprise user adoption, including:

Navigating the usual obstacles around legal tech deployment Using best practices to increase user adoption and engagement Measuring critical business outcomes with key success criteria

Daniel Jay Tijerina, AT&T Sports Networks Business Affairs and Affiliate Relations Jerry Levine, Chief Evangelist and General Counsel (Americas) Jerry Levine is Chief Evangelist and General Counsel (Americas) at ContractPodAi®.

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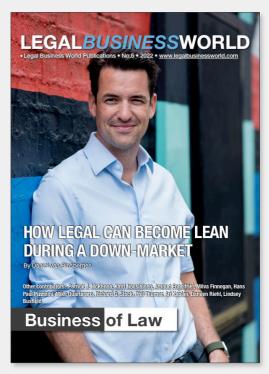
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### Day 1

- Opening Lunch Followed by Peer to Peer Facilitated Sessions
- Welcome Reception at Ritz Carlton Ocean Lawn
- · Opening Dinner at Ritz Carlton Tacos and Tequila

### Day 2

- Breakfast & Lunch Followed by Peer to Peer Facilitated Sessions
- Offsite Dinner Sam's Chowder House
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### Day 3

• Breakfast Followed by Peer to Peer Facilitated Session



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# How legal can become lean during a down-market

By Daniel van Binsbergen, CEO at Lexoo



We're in the early days of a down-market that some analysts are comparing to the dot-com crash. But what does this mean for in-house legal teams?

To survive in a down market, legal needs to stay lean and cut costs. This requires GCs to think strategically and confront core questions such as, where can my legal team have the most impact? Who should do what, internally and externally? How can legal do more without increasing head-count?



efficiency). In our view, finding efficiencies and reducing waste is the only sustainable way to cut costs. Because reducing costs in other ways usually starts a downward spiral: legal risk in the business increases, lawyers end up working overtime all the time, which, in turn, leads to higher team turnover (with associated costs).

In this article, we will explore one key driver for finding efficiency, which is ensuring

matically reduces 'waste', increases efficiency, and drives more value for the business.

### Operating principles for a lean legal team.

The people in your legal team will have various levels of experience. Experienced lawyers cost more. The value they can offer, unlike more junior lawyers, is the ability to exercise judgement. In other words, they can gauge how important something is in terms of legal

risk/commerciality, and change how they approach the work based on that.

In most teams though, experienced lawyers will do a mix of work: work that requires that skill, and work which does not. Your goal as a leader is to ensure that your most experienced lawyers can spend the large majority of their time on work that requires that judgement. Any hours they spend on work that does not require that judgement is 'waste'.

One category of work where this often goes wrong is 'routine contracts'. For example, an experienced lawyer who spends 30 hours a week negotiating vendor contracts has a lower 'legal value output' than if that same lawyer was tasked with more strategic work. This is not unlike a powerful machine being held back or throttled.

You'd want that lawyer focussed on legal matters which *require* a deep understanding of the business and its commercial objectives.

This sounds intuitive to most. So why then do legal teams often struggle to move their more experienced lawyers away from routine work?

### **Ensuring right-talent-to-task**

In short, the culprit usually is suboptimal legal department design which then leads to inefficiency and waste.

This is because most in-house teams are staffed in a generalist way with lawyers who are each responsible for a range of legal work. There are many competing tasks. Each task is separate and it's always a choice between one or the other. This makes efficiency through specialisation impossible.

To improve efficiency, legal teams need visibility on the various workstreams flowing through the department. Then allocate each workstream to the right 'resource', whether internally or externally. Some call this "right-talent-to-task" (i.e., don't have the head of legal review an NDA or routine supplier agreement).

How can this be done practically without the pain and disruption of a full restructure?

### **Tackling vendor contracts**

From our experience, figuring out how to efficiently handle and resource routine contracts like vendor contracts is one way to start on this journey of better aligning 'talent-to-task'.

This category of work is often competing against more strategic priorities, such as delivering complex transactional work, supporting a new product launch, exiting markets, or preparing for an IPO. Legal teams rightfully prioritise these big strategic projects because of the legal risk and complexity involved (not to mention the commercial impact).

As a result, vendor contracts are often put on the back burner. Turnaround times worsen, delays get longer, and a backlog begins to pile up. Stakeholder complaints begin to mount and the legal team is put under even greater scrutiny.

The most urgent contract reviews will typically still get done, but they're an annoying (and costly) distraction from strategic work.

To provide relief, many legal teams bring in external counsel, hire an interim lawyer, or try to get budget to scale internal headcount. This only lowers their ROI and increases costs. Worse still, it takes budget away from other value-add investments.

The result is legal being viewed, often unfairly, as a 'cost-centre' who always seem to need more people, more resources, and more budget.

Solving this problem isn't easy:

- Creating process improvements, such as playbooks and self-serve templates, takes time that legal teams often can't justify spending on vendor agreements.
- Making new hires is time-consuming, and also doesn't perfectly solve the problem, given the variable contract volumes (i.e., during peaks you still don't have enough people).
- Law firms have other more valuable clients and also won't be able to prioritise your vendor contracts.
- And whilst tempting and fun to explore, legaltech doesn't actually solve the problem end-to-end.

We designed <u>Lexoo</u> to solve this problem, so the steps we took may provide a good blueprint of the steps to take if you want to streamline vendor contracts.

The steps we took were:

 We combined our team of former in-house lawyers with our team of developers to provide tooling to speed every single admin step up. We used screen recording software so that our developers could literally watch our lawyers do the work. They then started building product to shave off time. This includes a Word panel that hosts clause databases, playbooks, and automated definition checking.

- We then layered on the data of having negotiated thousands of vendor contracts to find the most 'optimal path' to getting the agreements across the line. We then updated our playbooks (including fallback positions) to follow this path.
- We run a weekly 'continuous improvement cycle' to keep reducing 'waste' in the system.

The end result is that we can do this work very quickly (max 2 day turnaround on full mark-ups), were able to reduce the 'time to close' by 35%, and to drop our fixed monthly price so that we can be more cost effective than hiring a lawyer in-house to do this work.

You may not have the time to follow this approach, and outsourcing to a provider like Lexoo who already has made the investments is likely the most efficient high ROI option.

Crucially, by taking routine contracts off their plate, our clients are able to apply the 'right-talent-to-task' on their end, as their teams are completely freed up to focus on the more strategic side of things.

### Conclusion

You can only control inputs, therefore you should manage your inputs and not your

outputs. To improve a system, you first need to understand how inputs affect outputs.

If your inputs include doing routine contract reviews, your experienced lawyers will have a lower 'legal value output'. If your inputs are geared toward strategic work, your legal team will have a greater impact and deliver more value. From this position, creating even greater value is easier because you are in a position that enables you to be more proactive.

However, to break the cycle you need to focus on aligning 'talent-to-task' and delegating non-strategic work (controlling your inputs). This means valuing system solutions over short-term, reactive problem-solving (i.e., simply throwing more hires at problems).

In this uncertain economic period, legal should focus on building long-term value over short-term pressures. By delegating routine contracts to a specialised provider, you can create the time and space you need to build sustainable efficiency, and come out of this downturn stronger and value-driven.

### **About the Author**

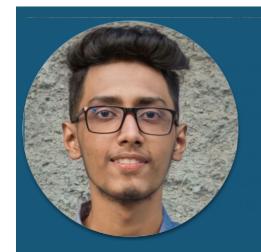
Daniel van Binsbergen is the CEO at <u>Lexoo</u>, a legal service provider for in-house legal teams at rapidly growing companies.

Lexoo operates as an extension of in-house legal teams, by handing their vendor contracts (full outsource or overflow), as well as managing multi-country projects like updating T&Cs or regulatory questionnaires.

Prior to founding Lexoo in 2014, Daniel was a senior associate at an international law firm.

Lexoo is a FT Innovative Lawyer award winner, a Deloitte Fast50 company and the subject of a Harvard Business School case study.

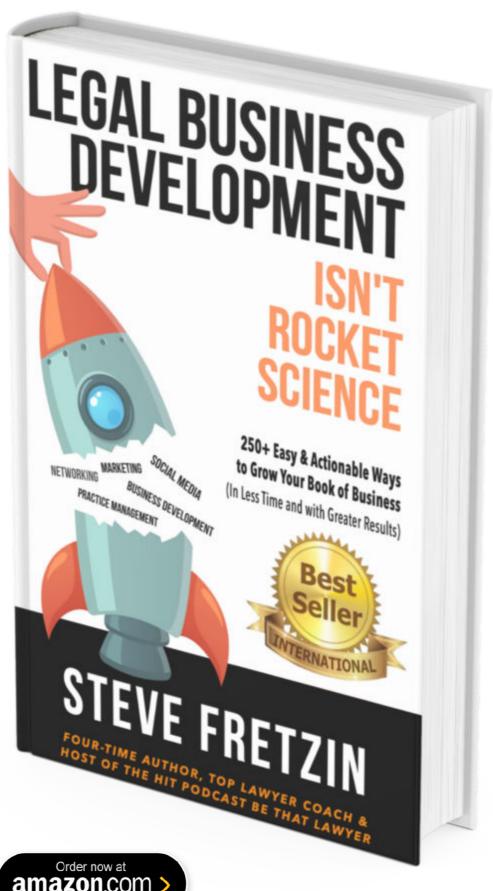
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# Legal design: A new path to reducing contract complexity

By Milva Finnegan PhD, Director Client Contract Value Center, KPMG US



The new buzzword on the street is "legal design". Legal design strives to transform the legal field to produce products that are user centric. Lawyers, academics, designers, and businesspeople have joined together to make legal communication clear, efficient, and user-friendly to a wide range of audiences. The goal is to focus on users' natural behavior as the baseline to design interfaces that are easy to use, intuitive, and avoids performance errors. Legal design aims to make the law accessible to everyone. For contracts, this is imperative.

The reasons contracts are complex documents are driven by many factors. Mainly, due to the fact they are legal documents, and legal doctrine has its own technical language. Furthermore, the business environment contracts operate in has become more complex due to longer-term agreements, products and services combined in one transaction, and globalization.



Together these factors have caused contract documents to reach a point of complexity that even lawyers struggle to read, comprehend, and use them efficiently.

To solve the problem of complexity, user-centered design in contracts aims to simplify contract documents by focusing on the reader during the development process. Compared to legal design, user-centered design differs in that users are defined as the people who need the contract information to perform their jobs, not the entire population. Even within a company, specific contract actions are related to specific functions; not everyone requires all the information in the contract.

Design thinking promotes creativity, flexibility, and collaboration. Steve Jobs, one of the founders of Apple Inc, is a pioneer in user-centered design. He designed products that mir-

rored how users intuitively would interact with the products and he focused on simplicity and functionality simultaneously. To transform traditional hard-to-read and comprehend documents, we need to focus on producing aesthetically appealing AND functional products. Functional contracts serve two essential purposes:

- 1. As legal documents to protect the parties if something goes wrong, and
- 2. As business documents to serve as roadmaps for successful execution.

Looking back the root cause of why contract form and content have remained in its age-old archaic, black-and-white text only format is due to the dominant copy/pasting contract drafting process.

Common practice is to find the "best" prior contract or company template, edit it for the current

business transaction, and send it on for review. The shift to incorporate design thinking into contract creation requires a change in how lawyers think and approach contract development.

### What is user-centered contract design?

When analyzing contract content and clauses, it becomes evident that multiple users from different functions interact and rely on the contract information. Defining who the users and stakeholders are is a critical part of the process. Contract users vary throughout the contract's lifecycle. Therefore, it is important to realize that contracts are dynamic documents not static documents to be negotiated, signed, and stored in a drawer. The process should be flexible and collaborative.

A user-centered contract design process integrated into the company workflow changes the approach from a linear task to an iterative process where it is ok to fail. Design thinking is a

problem-solving approach that is both a process and a mindset. A creative process promotes ideation and allows for brainstorming to generate innovation. In the initial phase of exploring ideas, open-mindedness and consideration for others' ideas are critical. The goal is to produce different solutions and design ideas to improve how the information is communicated.

Once solutions are defined, it is important to evaluate if they are better than the prior norm. User-testing is a crucial element of a design

process to test if the new solutions are better. If the new solution is not an improvement from the prior solution, adjustments or new solutions are explored. It is vital to allow for failure because that is when we learn the most!

How do we incorporate design thinking into a lawyer's daily technical job of developing contract documents? It is not feasible for lawyers to gather many different people in a room for brainstorming, storyboarding, and ideation when they are under a strict deadline to draft a contract for a hot business deal. Figure 1. outlines a four-phase user-centered contract design process that any lawyer or contract developer can use to integrate design thinking into their daily jobs. [1]

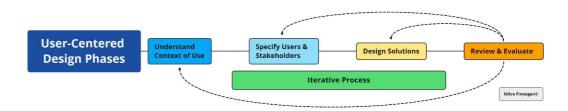


Figure 1. User-centered design process

First, it is essential to consider what the business transaction is. Understanding the elements of the business deal and selecting the correct contract type is critical. Often template contracts or copying a prior contract yield contract terms that are not applicable or not tailored to the specific exchange. The next step is to define the contract users and stakeholders, answering the question of who needs this information to perform their jobs?

Aligning the content with the users provides an outline of who should be part of developing or reviewing the contract.

I use the building blocks approach to develop contracts; in this approach, I consider each contract concept or clause as a standalone element, and only when combined is a contract document generated. Each building block is selected from either a clause library or model contract, reviewed and tailored for the specific transaction, and then organized logically in the document. Approaching the process from a macro-view to a micro-view with clear headings and subheadings layers the information for easy navigation and reading.

### Legal Design is about visualization.

Contract simplification focuses on structure simplification to help readability, and using plain language to assure the intended audience can read and understand the information. To simplify complex information further legal design and visualization are imperative. For example, contract price and payment information in table format improve readability. Product specifications outlined in schematics or pictures communicates complex information instantaneously. Contract delivery and other timeline information outlined in Gant charts or timeline pictorials illustrates interdependencies clearly. One benefit of legal design is standardization, as the new design models can be replicated and reused.

The final step is to evaluate and review the contract document information. Most importantly, is the information correct and applicable to the business deal contemplated? Then consider is the language tailored to the specific

audience, and is the page layout and document structured so that it is intuitive to navigate? Also, consider whether visuals communicate the correct information? Does the document meet the intended purpose? Have the relevant users and stakeholders reviewed their respective information?

In summary, integrating design thinking into contract development helps simplify complex contract information. Legal design is about designing products that are functional and user-friendly. Using a user-centered contract specific design process helps lawyers and nondesigners shift away from drafting to designing contract documents. With a focus on the reader, considering multiple audiences with different backgrounds, language, and education, is central to how the information is presented. Developing the document in a collaborative process, one building block at a time, assures the content is tailored to the business deal. Visualization is the key element in transforming traditional black and white contract documents into user-friendly, inviting documents that everyone can read, comprehend, and ultimately take the intended actions.

### **Notes**

[1] Finnegan, M. (2021). *User-centered design: A key to contract simplification*. Acta Wasaensia. University of Vaasa. <a href="https://osuva.uwasa.fi/handle/10024/12480">https://osuva.uwasa.fi/handle/10024/12480</a>

### **About the Author**

Milva Finnegan, PhD, recently completed her doctorate degree in Economics in business law at the University of Vaasa in Finland. Her research focuses on merging contract law and contract design to produce simplified and usable contracts that all users can understand.

She recently joined KPMG US as the director of client contract value center. Prior to KPMG Milva ran a contracts consulting company, Karhu, LLC, for 10 years. Her company worked with clients implementing contract management best practices, integrating electronic Contract Lifecycle Management (CLM) systems, and taught workshops on how to redesign and simplify contracts documents. Prior to starting her own company Milva worked at The Boeing Company over 12 years in both contracts and finance disciplines on various multi-million-dollar plus government and commercial programs. Follow her on LinkedIn: <a href="https://www.linkedin.com/in/mil-">https://www.linkedin.com/in/mil-</a> va-finnegan-89065376/

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Bringing Transparency to Legaltech Procurement



# Why law school curriculum needs to keep pace with evolving technology

By Alfredo Contreras, Senior Data Scientist at Brightflag



Legal teams increasingly use technology. Legal education must follow suit to prepare the next generation of attorneys for technology's evolving role in legal practice and society.

The revenue of the global legal tech market is expected to reach \$25 billion by 2025, an increase of about \$5.5 billion from 2021. Nine out of 10 attorneys report that legal technology enables them to be more efficient, but a lack of tech savvy remains a barrier to maximizing the potential. A basic understanding of code can help lawyers maximize this technology to improve efficiency and protect their clients.

Computer science has been viewed as its own discipline, but as technology becomes part of everyday life, skills in that area are invaluable, especially for those entrusted with evaluating the legality and ethics of the budding innovations. Adding coding to the skill set of lawyers



prepares them for a future of law practice that will be unlike anything we've seen in the past, with new roles, new challenges and new opportunities.

Legal education has evolved extensively over the past century in reaction to societal changes, and we should continue in that direction. Traditionally, it has been retrospective, relying on past precedents. Now, educators are more focused on a forward-looking approach that emphasizes critical thinking and developing skill sets. Code-based learning may be the next step forward in this new education model as aspiring lawyers learn the promise and the pitfalls of legal tech.

### The promise of legal operations software

There has been concern and speculation about technology replacing lawyers, with research suggesting nearly 40 percent of jobs could be eliminated. Thus far, automation has only changed job responsibilities and improved performance.

Artificial Intelligence (AI) is more efficient than humans at a number of functions. Software saves hours on administrative tasks, such as billing, discovery, data management and spending. Cases and statutes are easily accessible for research purposes. This allows lawyers to focus on more challenging responsibilities that require critical thinking, problem-solving skills and emotional intelligence, such as representing a client in court.

A strong understanding of AI can help attorneys be more efficient, informed and empowered in their practice. That is why building a foundation of coding knowledge during law school is beneficial. The skill opens the door to less traditional legal roles that did not exist in the past, such as interdisciplinary teams involved in developing chatbots and other products and services for firms, legal technologists and legal process analysts.

A computer science background may help cut costs, boost efficiencies and catalyze new relationships in the evolving legal landscape.

Automation saves time, but is not infallible. Human oversight is crucial, and lawyers trained in coding can identify mistakes being made by the algorithm.

### The unintended consequences of AI

Perhaps even more important than how AI changes a lawyer's day-to-day workflow is the pervasive use of AI and machine learning in society and the ethical implications.

Algorithms are only as good as the data on which they are trained. As the algorithm continues to "learn," any bias grows. Technology designed to have a positive impact can negatively affect marginalized groups' rights due to unintentionally biased data.

Oversight of new technologies, such as algorithmic justice, is imperative, and an understanding of coding helps lawyers understand the operation of the technology, identify issues and better defend their clients.

A number of police departments use "predictive policing," one form of algorithmic justice, which analyzes data from disparate policing data sources to predict crime "hot spots." In future applications, that data could be combined with social media, video surveillance

and other personal data repositories. While this may help predict and prevent crimes, it also carries risks. This form of predictive policing can disproportionately target Black and other marginalized populations or even be used to justify existing unfair practices involving these groups. There are similar concerns about computer models that predict an offender's likelihood of committing more crimes.

Big data profiling raises a number of ethical and legal considerations. Including digital literacy in law education makes attorneys better equipped to monitor and mediate the technology.

### Preparing aspiring lawyers for coming innovations

Legal operations software is still nascent, a field we expect to see grow dramatically in the next few years. Law schools must ensure the future workforce is innovating along with the technology.

I taught coding literacy at the University of Minnesota. Through a combination of theoretical and practical exercises, students gained hands-on experience with Python, machine learning and natural language processing. They were required to design an algorithm with bad data to understand the implications of a faulty algorithm. The course took place in a virtual classroom to enable hands-on projects.

Lawyers do not need to be able to code an intensive app. They merely need a fundamental grasp of how coding works — for better and for worse. This course further emphasized the

move toward forward-looking, skills-based learning in law education.

Creating a "future-proof" lawyer is impossible, but the rising cohorts must be ready for the fast evolution of the field. I believe that coding literacy is a foundational tool that will facilitate the practice of law by enabling lawyers to leverage technology to its full potential to reduce costs, eliminate inefficiencies and improve access to justice.

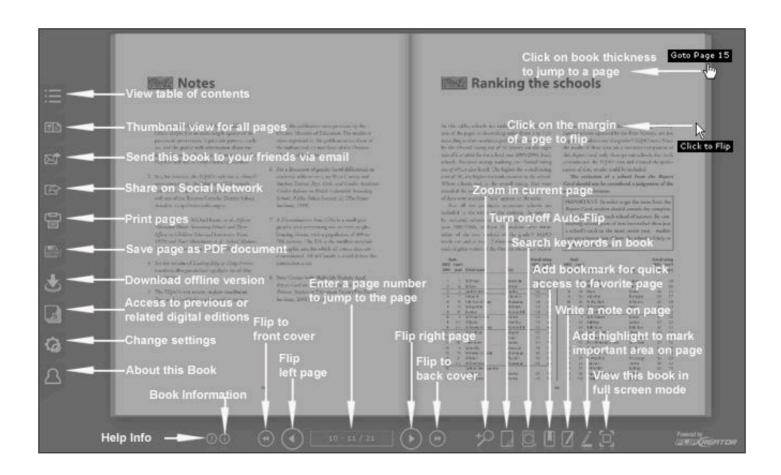
### About the author

Alfredo Contreras is the senior data scientist for <u>Brightflag</u>, the AI-powered legal spend management and matter management platform, and a former adjunct professor at the University of Minnesota. He specializes in natural language processing techniques and artificial intelligence. He is working in research and development to create solutions for in-house legal teams.

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### Legal Project Management is overdue

By Richard G. Stock, M.A., FCG, CMC, Partner with Catalyst Consulting

This is the thirty-fifth in a series of articles about how corporate and government law clapartments can improve their performance and add measurable value to their organizations.



Legal project management and budgeting by law departments and their firms will only come into its own, once a number of basic conditions are met. The impetus will not be that it saves money for the department. Rank and file members of the law department will take one step forward and two steps back if that is all there is to a legal project management program. And law firms have little incentive to convince them otherwise.

There are three basic benefits to legal project management. First, it streamlines the business aspects of legal work because it focuses on time, money and value delivered. Second, it modifies the techniques for work already being done by lawyers. And, third, it better organizes and oversees the work of external counsel. In a nutshell, legal project management adds value to the business.



But the General Counsel must be able to extend this concept beyond a mere catch phrase to measurable specifics on six dimensions: controlling the time spent, controlling costs, better preparing the client for unplanned developments, being more explicit about the planning assumptions and their probabilities, allowing project managers to allocate the most appropriate resources, and having clear communications with clients regarding scope of work, service levels, costs and outcomes.

Companies often refer complex legal matters to external counsel. One would expect that the project manager, usually the law firm, would be a "business partner" in all such cases. He or she handles tasks and monitors processes. Inside counsel should assume the role of project leader. This entails communications with the

business unit and the law firm, negotiating expectations, and keeping everyone focused on the results and use of resources.

One survey found that 60 per cent of law departments used project budgets - more often than not. However, only 26 % of them did so consistently. The same companies also said that they were always on or below budget only 1% of the time for the total of matters referred to external counsel.

Most law firms rely on a collection of improvised spreadsheets to prepare a matter budget by phase and task. Inside counsel need to become much more proficient in their estimating and approving skills if they are to converse with external counsel on legal project management. Executing legal project management

effectively depends on certain fundamentals being in place within the law department.

These include a number of components: broad terms that should be signed off by the firm, work intake protocols and a single point of contact, the scope of individual matters that should be signed off by the law department, and firms that agree to use the company's planning and budgeting templates rather than their own.

Templates must include phases and tasks as the case for any project plan. One rule of thumb is to ensure that there are at least eight hours per task to limit the detail and no more than 40 hours per task to ensure enough detail.

Inside counsel should then review budgets for adequate task delegation.

At this stage, the matter budget is an imperfect estimate. I conducted a review of matter budgets with seven law firms and found that only two provided planning assumptions at the task level, but none provided a probability factor for each assumption. Law firms will not volunteer this information unless the client requests it. And most law departments do not.

Invariably, the resulting estimates are a worst-case scenario making matter budgets a paper exercise. Stephen Levy, author of "Legal Project Management: Control Costs, Meet Schedules, Manage Risks, and Manage Sanity", calls for six competencies in legal project management: outcome expressed as a brief definition of success, expectations for the matter from the client's point of view, costs and

budgeting, resource allocation dependencies, contingencies, and risk.

Effective legal project management and budgeting can be part of the normal course of business, provided companies can rely on terms of engagement and billing guidelines that make legal project management mandatory, robust matter management systems that require phase and task budgets before bills can be submitted, thresholds for matter budgets that capture all matters of moderate complexity beginning at 50 hours per matter, and inside counsel who are trained to be comfortable and efficient in managing external counsel.

Finally, law departments will drive legal project management and budgets with their clients when they have a financial incentive to do so. Fixed-fee arrangements as well as hybrid-fee arrangements with a cost-budgeting feature are a leading business practice. General Counsel must attend to the business of law.

### **About the Author**

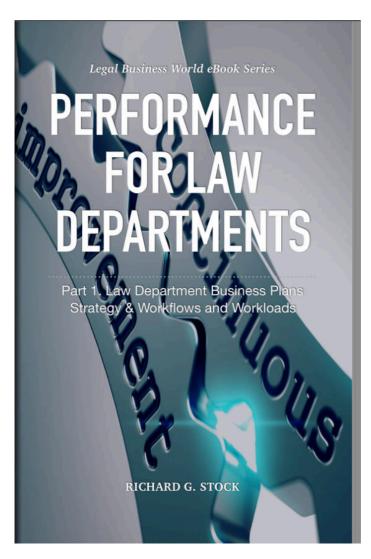
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### Read the new eBook:

### 'Performance for Law Departments'

This book by Richard G. Stock shares valuable insights and analyses on how corporate and government law departments can improve their performance and add measurable value to their organization.



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# Legal Business In The Post-Quantum Society

By Katri L. Nousiainen, Fellow at Harvard Law School & Joonas Keski-Rahkonen, Postdoctoral researcher and teaching fellow at the Department of Physic at Harvard University







The tantalizing quantum technologies such as quantum computing are not anymore far-reaching hopes, but the dawn of the quantum age is just around the corner. Although the new quantum technologies are still at the early stage of commercialization, they have already begun to influence the structures of society in a spectrum of ways. Governments, corporations, and institutions should be prepared for the emergence of these new technologies, with the constant goal of improving society in general.

Some people see the quantum possibilities as miraculous to be shared openly, others are demanding strict control on the usage. For most part, neither of these extremes is desirable; only by finding a regulatory balance between freedom and control can we take advantage of the new emerging quantum technologies in the most beneficial ways to the whole society.

One of the emerging quantum technologies is quantum computers, which explicitly use and exploit the laws of quantum mechanics to store data and to carry out computational tasks. Even though any computational problem solvable with a classical computer can also be solved by a quantum computer, there are some situations where a quantum computer outshines its classical counterparts spectacularly. This quantum-boost will have far-reaching consequences for society. Nonetheless the full implications of quantum possibilities will be only shown by time, quantum computer resources promise a

powerful high-speed processing tool for data science, an ultimate platform to simulate behavior of various physical systems, and sophisticated cybersecurity solutions that could overall shake up how we see computing, science, and product development of the future. Outside of academic curiosity, quantum-computing technology offers a giant leap, e.g., for health-care, finance, and online security industries. On a more grandiose scale, quantum computers will open completely new applications for computing that are most likely to help us to tackle issues related to the green transition of society, vital to the planet we inhabit.

However, as we are entering into the new era of post-quantum world, the legal field with governmental operators and businesses should reflect upon the social and legal relevance of quantum computing. In particular, the legal arena should be prepared to take its own quantum leap. Foreshadowing this transition, we address a novel approach on quantum computing to law within the legal design framework.

The legal design approach aims to empower people within the intersection of means, such as interdisciplinary best practices, design methods, and technology. Generally, it encompasses four noteworthy functions: empowering, improving, supporting, and demonstrating (see fig. 1). In the quantum-computing environment, we see that the legal design approach can ensure law and legal practices to be more transparent, empathic, human-centric, efficient, and comprehensible as well as it can foster equality and nondiscrimination.

We want to underline that legal design can create a systemic impact on the legal framework in contributing to the quantum revolution. Legal rules and terms can be established in a program form as they are logical within their composition. By and large, the quantum advance for the legal profession is the fostered contract optimization and legal process, and the capability to efficiently process vast data sets which pave an accelerated path towards transparent legal solutions.

Figure 1. Four Functions of Legal Design

Empowers	Improves	Supports	Demonstrates
Society, communities,	Efficiency, ethics, and	Collected empirical	Law and economics is not
entities, and people to	quality as often as the	data fosters efficiency	merely a theoretical science of
reduce, or at its best,	design and/or practice	and ethics in decision	neoclassical economics - but
even completely	applies a more user-	and policy making.	rather it applies empirical
abolish information	centered approach.		numerical research data to
and knowledge			verify prospective value and
asymmetry between			impact of legal processes,
operators.			services, or products.

While being often regarded as static, the legal sphere must also adjust to a new social environment brought by the new quantum technologies. It is especially the duty of those who determine policies and regulations, and of those who practice in the legal arena, to ensure that their knowledge and expertise of current technology conditions are up to date. This is particularly essential since a new kind of lawand-order structure is required to be put in place when society takes its steps towards the post-quantum time.

Despite the urgence and utility during the quantum reformation of our society, no one has investigated earlier for the authors' knowledge how to promote legal quality with the legal design approach in the quantum-tech framework. This deficiency is onward improved by the shortcoming of a greater ease of access for information. We cannot afford to wait, the time to act is now. To spark further debate on the legal environment in the post-quantum world, we put forward the proposal of The Quantum

Roadmap - Law, Economics, Sustainability and Society (aka LESS).

As always, the application and possession of new technologies involve harmonizing different rights but also taking account of rising obligations. In anticipation of the social embodiment of quantum technologies, we address this regulatory dilemma within a legal design framework which comes together in our guideline – The Quantum Roadmap (LESS is more!). It dissects the emerging legal and ethical responsibilities into five basic principles that are ethics, inclusion, balancing regulatory activities, safeguarding individual rights, and innovating by design (see fig. 2). These five areas are composed of:

1. Ethics: Commercial incentives and business benefits should together be recognized within primary calls for humankind. Public good, transparency, and equal access are the guiding principles. The development or application of new technologies should not aggravate or create inequalities, neither it should create a



Figure 2. The Quantum Roadmap - Law, Economics, Sustainability and Society (LESS is more!)

diverse level of standing via its design nor should it enable for hidden discriminatory practices.

- 2. Inclusion: Democratic inclusion, resource and knowledge sharing are the guiding principles. The development or application of new technologies must be inclusive and enable utilization of the benefits and advantages for the common good of all humankind.
- 3. Balancing Regulation: Regulatory measures must not hinder the innovation, development, or the application of new technologies. As guiding principles, we must balance regulatory legal measures and activities, judicial rights and obligations, common public good, and incentives to develop and innovate. Moreover, we must secure fertile soil to develop technologies further.
- 4. Safeguarding individual rights: Safe-guarding equal standing, non-interference on individual rights, and safeguarding for taking larger frameworks into account when making justified decisions affecting individual's rights and obligations are the guiding principles. The development or employment of new technologies should not interfere with recognized individual rights, exclude individual access without good cause, create or aggravate inequalities between individuals, interfere on individual autonomy, create barriers to justice or other recognized democratic principles.
- **5. Innovating by design:** The development or employment of new technologies should be designed in accordance with equality, transparency, ethics, and human centricity. Providing an equal access to technology, design-

ing technologies to foster non-discriminatory practices, transparency, and sustainability.

The above principles will desirably guide the future legal regulation in the upcoming age of quantum technologies. In the end, equally effective and forceable, as predictability, transparency and stability are the cornerstone for respectful and functional society.

The brave new world of new quantum technologies is almost upon us. Undoubtedly, quantum technologies will have a profound social impact. This new age of quantum opens a new legal landscape. Therefore, it is pivotal to recognize the best characters now so that the flourishing new technology will maximally benefit the whole humankind. It is of the utmost importance to find the regulatory balance, ensuring the functionality of society while not smothering the evolution and integration of quantum technologies.

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# Devil's Advocate – Break it until you make it!

By Chiara Lamacchia, Founder at lawrketing.com and withoutconsulting.com



During my law studies, there was a special exercise I quite liked. It consisted in reviewing the details of testimony and trying to anticipate questions which would have arisen from the counterpart during a trial. You cross-examine your witnesses as much as you can, grilling and attaching their statements, pressing on every piece of existing evidence, and confronting them with tough questions. The more you can spot and review upfront, the better you can reduce setbacks and complications.

This is called playing the Devil's Advocate and it is an intriguing practice that might come in handy in many situations.

In this article, I will look at the Devil's Advocate beyond its strategic feature of the lawyer's craft to explore the approach and understand



how to use it both in personal and business life.

### The Advocatus Diaboli

It was quite a job title in the Catholic Church, between 1587 and 1983: the *Advocatus Diaboli* [1] had the role to present counter-evidence to whoever was proposed as a candidate for sainthood. Quite a rigid door policy but we cannot be all saints, after all!

Taken out of context, the role of a Devil's Advocate can be generalised as "someone who pretends, in an argument or discussion, to be against an idea or plan that a lot of people support, in order to make people discuss and consider it in more detail" [2]. Thus, the goal is to test an idea and expose it to a thorough examination.

It is true that this approach does not always enjoy a good reputation: it is tendentially stymied, as we often confuse the Devil's Advocate with a merely evil one, who is silencing opinions, derailing from fostering a conversation or test a concept.

Instead, it is about engaging in a healthy critical debate: be incisive but never disrespectful; avoiding frictions; remember you are challenging ideas not attacking others personally; be objective and reasonable and never have a personal agenda; always test an opinion on multiples levels, examine whatever comes out: literally everything and its opposite.

You embody the antagonist to the idea of someone else. If they successfully defend it, we conclude the idea is successfully tested. If they struggle, there is space to investigate more and learn (please note: when there is no apparent defence to your objection, you should try to find a defensive argument, actually going against your own objections: I warned you that this is about testing everything and its opposite!).

Having the ability to test ideas and uncover possible logical or practical weaknesses can have impressive implications in many contexts, both professional and personal.

### **Dealing with the Devil**

From start-ups to settled companies, failure is more common than success when launching a new product or service. Certainly, failure is complex and needs to be framed and contextualised. Many reasons can cause *fiascos*: market demand *mis*reading, pricing *mis*-matching, competitors *mis*esteeming, customer experience *mis*designing, product *mis*timing, success *mis*calculation, etc.

We usually "*mis-do*" when we do not have all elements at our disposal to "*properly do*". In business, this might be due to specific approaches or group dynamics that prevent us from even delving into those elements. I have compiled just a couple of cases I encountered till now.

• *I-have-a-great-idea*. This dynamic is often based on the wrong logic that "*I like it*, therefore they will like it". If the person stating an idea is quite influential, due to status or charisma, it will be difficult for the group members to challenge it, either they do not dare to oppose it or because they are bought in.

- Let's-go-with-the-flow. This approach is typical of those organisations with cult-like company culture, which infuse the team with so much emotive attachment that the people tend to support ideas on the emotional wave or sense of belongings, becoming excessively in line with whatever the majority is supporting.
- They-know-their-stuff. This is the classic situation where a statement is given for granted, although it appears odd, solely because the person stating it is an expert. This induces the group to believe that an idea would work, based on certain non-challenged assumptions.
- They-told-me-so. This is often a consequence of bad decision-making. However, I experienced it way too often not to name it as a factor in bad decision-making. Inputs usually come from random sources: a meeting with a client, who asks us to solve a problem but then suggests to us how to solve it; a chat with an old friend, who probably does not know anything about our core business and targets; a once-a-year dinner with that uncle who still thinks we live in two-cities-ago. Whatever the source: it suddenly happens that a single individual input is lifted up as an absolute assumption, the great foundation of our next strategic step.

You might see that these cases are leading to making sub-optimal decisions. At this point, getting a Devil's Advocate to do the dirty job of confronting your idea with its demons pays off immeasurably.

In some industries, this is a common practice.

For instance, in the software security field, companies test their systems by letting hackers find a way to break into their security maze. This ensures a high level of quality in security before it is released to the public, saving millions in lost income in the event of a security breach. Another example is the automotive industry, where the car crash test is the ultimate Devil's Advocate: all automobile prototypes must pass destructive testing to check the safety standards in case of a crash.

The bottom line is the same: whenever you are not testing your idea or input you receive, your decision-making is likely to be partial, resulting in a guessing game rather than an optimal step. We need to start from the principle that every time we are not able to defend and back up our ideas or opinions, there is something wrong. When we can logically and tangibly hold up against criticism, conflicting scenarios, alternatives and objections then we have fewer chances to fail. To do so, we need to be ready to shake our certainties. Playing the Devil's Advocate challenges stagnant thinking and the *status quo*, forcing a more intense level of analysis and reducing the risk to overlook roadblocks.

We take more sound decisions, and when confronted with other inputs, we can better discern which input is worth exploring further and which to disregard.

#### Breakfast at the Devil's

Who did say that this approach is exclusive to business purposes? I would argue we can use it for almost everything in life.

I admit I probably abuse it – as soon as someone states a fact, my mind always tries to look at the opposite side. Sometimes, it results in a dead-end street. Some other times, it creates powerful moments to enrich the conversation, unveiling and integrating perspectives otherwise not taken into account.

I do it almost automatically, perhaps to remind myself that we mostly have only a partial view: whatever we think, we believe, we support – there is always another side of the story we are yet to discover. Almost everything is relative.

As humans, we tend to be surrounded by a homogenous environment, preferring people with whom we share at least, by and large, the same principles. Although physiological, this is narrowing our possibilities to get to see *the other side of the coin*. To worsen this situation, nowadays, all external inputs we receive tend to be indexed around what we like or prefer. Ads, news, captions, images, videos, songs: everything revolves around our tastes. We live in a world where all is dangerously targeted on our profile.

Gone are those times when we were exposed to many different and disparate opinions, ideas or products. This was silently enriching us, providing a smattering of this and that, independently from our preferences. These general notions granted us to make potentially more complex and richer reasoning, detaching ourselves from our niche of reference and, above all, being exposed to new opportunities. Of course, we were more or less sensitive to one topic rather than another, but at least we were exposed to different universes.

From my experience, playing Devil's Advocate is handful whenever we need to take decisions

under emotional circumstances or stress, where we tend to focus on *validating* rather than *criticising* our idea, fear or issue. Most probably we are more irrational, unreasonable and short-sighted than usual. In fact, in such circumstances, we are pressured by the urgency to find a solution or follow what is expected of us. We become resistant to new or dissenting ideas and substantially blind to foresee problems – we cannot see past our own noses. What is coming next? Bad decisions.

That is when your Devil's Advocate can support us: take your opinion and try to smash it, pretending to be against your own idea, secretly aiming at uncovering any flaws or mistakes. Your only purpose is to find out whether there are weaknesses or not.

The added value is the capacity of bringing different perspectives into the picture. We stretch our brains to find a convincing counter-argument.

Again, it can bring nothing other than taking our decision stronger. It can also lead to exploring other possibilities, creating a stimulating environment for personal reflection and growth. Either way, it will force us to think harder.

In some cases, it is also powerful when confronting others, to gather insights into their point of view and underpinning reasons. This then helps us to play with an angle when presenting our opinion, making it understandable and *digestible*.

To take a sound decision, we need diverse perspectives, experiences, points of view, and

styles. I have to be honest: it takes a lot of effort to bring up counter-evidence and opposite perspective against our own opinions. By all means, it is arduous to argue with yourself. Pretending to support something against something we strongly believe in is almost impossible as we inevitably sabotage the overall operation to draw water to our own mill. Still, it is worth trying – you could become the best ally to yourself.

On another note, this can be an evening saviour when you need to spice up a dinner with friends: try to be Devil's Advocate just for the sake of it. You might need to do some explaining at the end, but I assure you this is the best way to enhance the debate and have a deeper conversation. The result might be surprising.

#### How to do it in practice

Where and how could we start to put it into practice? I listed some tricks and tips that are useful to experience it.

- 1. Turn a statement into a question. This is a terrific place where to start. Put your statement on the spot by transforming it into a question, over and over again, never allowing the same answer twice. Nothing is taken for granted, as soon as you are questioning it. Once confronted with a question, our minds will naturally be on the lookout for an answer.
- 2. Say "yes, but..." out loud. Whatever the idea on the table, initiate the "yes, but..." conversation. The instant we say it, we feel stimulated to find the end of the sentence, with an objection, a contradictory example or a small remote concern.

- 3. Ask incisive questions. Chase the statement closely with a chain of questions (e.g., How can you be sure? Is it really feasible? Are we biased? Is this misrepresented? Who is disadvantaged by this? Does it apply to all situations? Is there any exception? What do you mean when you say ...? How would you define the word "..."? Why do you think so? Are there examples that support this? Is this relevant for...?)
- 4. Consider the opposite perspective. As humans, we are much more inclined on finding problems than solutions. There is a technique that I found very powerful to come up with new ideas: reverse brainstorming, where you identify the problem, reverse it, collect ideas, reverse ideas, analyse them and find solutions. In the same way, we can apply it when we play the Devil's Advocate.
- 5. Find exceptions. Think about specific cases or scenarios where that certain statement, belief or opinion would not work. If you find it difficult to find exceptions, try to find hidden assumptions and place them in another situation or context. If you still cannot find suitable exceptions, use reductio ad absurdum: think of extreme scenarios and push the arguments to their logical limits. In any case, as soon as you find an exception, you offer a seat for doubts, leading to more questions and more answers.
- 6. Look for alternatives. The quickest way to achieve it is to give for granted that the statement is unquestionably wrong, unavailable or unfeasible. This will push the debate towards possible alternatives.

7. Think of the downsides. Anything in life has its pros & cons. If we focus on the downsides, we create a powerful space to enrich the idea even more.

I also have a final tip. Like any other skill, this one requires considerable practice. I would advise you to start with yourself in your daily life. When you are too convinced of something, try to break the logic behind and look at the other side. If you pass the hardest task — i.e., challenging your own opinions and beliefs — the rest will be a piece of cake.

#### Conclusion

Getting a Devil's Advocate on board is an enriching move. Being it in business in your daily life, it is worth taking a look at the other side of things. We are exposed less and less to beliefs, tastes, opinions, and customs that are different from our own.

On a professional level, we should get our new ideas, strategies and tactics crash-tested. In this way, we come up with a stronger idea, a better product, a more far-sighted strategy, or more innovative solution. We discuss better, exchange better, learn other ways of thinking, resolve conflicts and reach compromises.

On a personal level, we should take the healthy habit of questioning or testing our opinions or beliefs. Break our own ideas can help us grow, enrich our universe, and take sounder decisions.

There are some techniques to try and give it a go: at the end of the day, it is all about questioning and creating space for doubts, curiosity, and analysis. If you cannot find anything against an idea – then you have it there: the idea might be the one you should go with!

What is the worst that can happen anyway? We can always agree to disagree.

#### **Notes**

[1] All That's Interesting. (2018). The Origin Of The Term 'Devil's Advocate' Is More Literal Than You Think.

[2] Definition of devil's advocate from the Cambridge Advanced Learner's Dictionary & Thesaurus © Cambridge University Press

#### **Further readings**

Vv.Aa. (2017). The Devil's Advocate approach: An interview technique for assessing consistency among deceptive and truth-telling pairs of suspects. Legal and Criminological Psychology. 23.

Schlitz, I. (2018). Stop Playing Devil's Advocate, and Other Advice for Better Decision Making. Behavioral Scientist.

#### **About the Author**

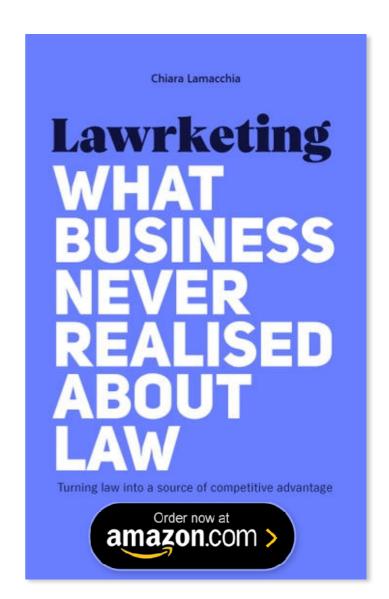
Chiara Lamacchia is a consultant in legal, marketing & legal forecasting, working in corporate strategy for global organisations across different sectors, after an LL.M. from Bocconi University (Milan, Italy) and an MSc in Marketing from Edinburgh Napier University (UK). Chiara is the Founder of lawrketing.com and withoutconsulting.com, promoting the adoption of ground-breaking ways of using the law for innovation and competitive advantage.

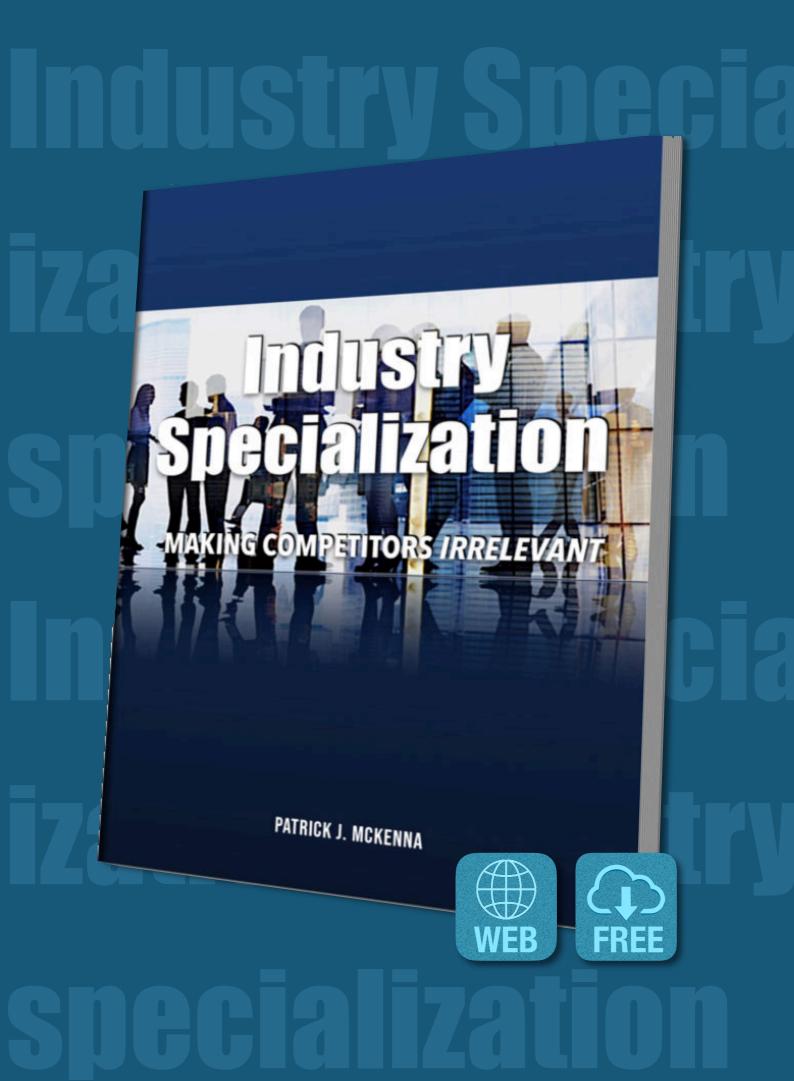
Besides, among other things, she authored and published the <u>book</u> "Lawrketing – What Business Never Realised About Law", introducing a new concept, lawrketing, combining law, business, marketing and innovation.

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# Aiming Al At Routine Legal Tasks Is Helpful But Also Raises Lawyering Line-In-The-Sand Questions

By Lance Eliot, Stanford Fellow at Stanford University & Chief Al Scientist at Techbrium Inc



Some lawyers contend that they are exasperated and exceedingly demoralized by having to do routine legal work.

According to recent nationwide surveys, nearly two-thirds of professional workers reportedly indicated that they are tired of doing routine tasks and that the adverse effects include a precipitous drop in employee morale (the survey respondents included attorneys). One assumes that the decrease in morale translates into less interest in the job, poorer performance on the job, and can produce heightened turnover as workers seek other opportunities that are more inspiring.

For lawyers, the types of routine tasks notably bordering on tedium entail everyday types of court filings and other perceived legal grunt work. The consumption of "lawyering" labor for such legal services is certainly eyebrow-raising



as to expending highly trained and highlypriced lawyering talent to undertake tasks that would seem viably done by less costly labor.

Of course, law firms of larger sizes are usually steeped with para-legal professionals and other such staff to try and take on the routine tasks that do not especially require attorney-level acumen. Not all law firms have that luxury. Furthermore, sometimes the most expedient way to get something done seems to be to do so yourself. Having to convey to someone else the nuances of a routine legal task might be more time-consuming and error-prone than just shrugging your shoulders, gritting your teeth, and doing the legal chore directly.

All of this brings up a somewhat hidden assumption, namely whether we can all agree on exactly what constitutes a seemingly routine legal task. Let's dig into that assumed notion.

Imagine the somewhat straightforward act of assembling a collection of legal documents into one comprehensive set for purposes of distribution to other parties associated with a legal case.

Is this a legal task that is routine or non-routine?

On the one hand, you could claim that the task is routine if there was no semblance of legal acuity required to perform the task. If this was simply the tedious chore of collecting the needed artifacts, perhaps scanning paper-based documents for machine readability purposes, and then accumulating them into one electronic-based mega digital document, presumably the amount of legal acumen that would be needed is ostensibly minimal.

Suppose though that the choice of which artifacts to include required attorney-level legal reasoning. And that the sequencing of the

documents likewise required astute legal reasoning. And so on. We seem to have veered beyond the mundane mechanical facets of this task and into a realm that does in fact entail legal savviness.

You could get a non-lawyer to put together the whole kit and kaboodle and then use lawyering prowess to cull through the collective, tossing out elements that should be removed and perhaps outrightly legally are legitimately able to be excluded. Along the way, this might also require shifting items into a different order to make the compendium more legally telling. Etc.

But would it have been more prudent to instead have started with a clean slate and undertaken the entirety of the task via the skilled hands and cognitive talents of a lawyer? It could be that doing an arduous clean-up is going to be messier and inadvertently leave something amiss. Perhaps safest and notably sensible to use a lawyer at the get-go for this particular task.

While you ponder that pickle, consider a more evident example.

Most lawyers would readily assert that drafting a legal contract and reviewing a legal contract is decidedly a legal task. For this, certainly, you need to exercise keen legal reasoning and leverage the capacities of a lawyer.

As you likely are aware, there are online programs that nowadays perform some semblance of legal contract preparation and review, as mentioned by this legal researcher: "In the past, Americans who wanted to handle

might have tried to buy a book of forms or consulted a form-processing service with limited ability to provide customized assistance. Now those customers can meet their legal needs with LegalZoom or Rocket Lawyer, frequently at a price that no attorney can afford to match" (by authors Benjamin Barton and Deborah Rhode, "Access To Justice and Routine Legal Services: New Technologies Meet Bar Regulators" in *Hastings Law Journal*).

If a computer can be used to undertake such a task, does this ergo imply that the task must indeed be of a legally routine caliber or perhaps even be construed as a task well below that of a routine legal nature?

Some lawyers vehemently argue that those online programs are in fact performing legal services, routine or otherwise. The nature of what is legally routine has somewhat ill-defined connotations and will increasingly be a tough nut to crack. For those that believe these online programs are crossing over into the legal lawyering realm, the odds are that a strident argument will be made that these are decidedly not legally routine efforts. This in turn opens the door to shutting down those online programs by asserting that they violate key legal precepts concerning the practice of law.

To date, these online services have clung to the insistence that they are below such a threshold: "They do not, and under bar ethics, rules and statutory prohibitions, cannot offer services that constitute the practice of law. Their disclaimers make clear that they are, as Legal-Zoom notes in bold on its platform, 'not acting as your attorney,' and 'not a substitute for the

advice of an attorney.' Rocket Lawyer similarly declares it does not provide legal advice, but only a platform for legal information and self-help" (per the cited article by Barton and Rhode).

#### **Laying Out The Categories of Routine Legal Work**

There is yet another perspective on what constitutes legally routine work.

An attorney that day in and day out creates roughly the same legal contracts for various clients, all contracts of which are almost identical would probably lean toward stating that they are being underutilized and performing legal services in a legally routine manner (even if there were genuine legal insights required to perform the task at hand).

It might be useful to try and unpack the nature of routine legal work. In my ongoing research about Artificial Intelligence (AI) and the law, I have postulated that there are at least four types of purportedly routine legal work that vary across a spectrum:

- Transparent Routine legal work involving no bona fide semblance of legal acumen
- 2. **Base Routine** legal work requiring minimal legal acumen
- 3. **Upscale Routine** requiring legal reasoning but repetitively and with little added value
- 4. **Non-Routine** legal work that is reasonably said to require devout legal acumen

I have covered the underlying details of these

four classifications in my various writings and books on AI and the law.

The key here is that this discussion about what is or is not routine legal work dovetails substantially into the advent of AI in the law. AI is stepping up the game of using computer-based automation for performing legal tasks and raises anew the question of where we draw the line on what automation is allowed to legally undertake versus the use of a human lawyer.

You likely already know about especially popular ways of applying AI in the law such as infusing Natural Language Processing (NLP) capabilities into the arduous chore of doing e-Discovery. AI-based NLP is especially useful when dealing with large-scale narrative-oriented datasets that require extensive and otherwise laborious by-hand legal discovery efforts. That being said, the odds are that a lawyer is the one guiding and utilizing the AI. The AI is unlikely at this stage of advancement to be performing such a task on an autonomous basis.

The list of such AI-applied uses that are arming lawyers is continually growing.

Let's dovetail this into the conundrum about routine legal tasks.

One use of AI as applied to performing legal tasks consists of lawyers using such high-tech tools. In that sense, the AI is somewhat unseen by clients and merely part and parcel of an attorney undertaking their legal tasks, perhaps akin to using a word processing package or using a spreadsheet package to get their legal work done.

Another use of AI in the law consists of making AI-based lawyering tools available to non-lawyers such as consumers (who might otherwise be construed as prospective clients for human attorneys). This is already underway: "Some see a future in which legal artificial intelligence ('AI') will largely replace humans in providing legal advice and drafting documents. Others doubt that AI will progress that far. But, everyone agrees that computers are already displacing human lawyers in areas like document review and assembly and will likely continue to do so" (per the cited Barton and Rhode).

You could argue that the AI usage for consumers is only targeting the "routine" legal work and therefore not a particularly unsettling encroachment on attorneys.

Indeed, tying back to the earlier points about attorneys potentially being dissatisfied with having to perform routine work, perhaps AI capabilities solves that dilemma. Clients would take on the routine work themselves via the leveraging of AI. After which, they presumably would come to human attorneys solely for non-routine work that truly invokes legal acumen (and no longer bother attorneys with routine work).

You might fervently argue to the contrary that clients ought to still bring the routine work to the human attorneys, doing so under the presumption that it is the lawyers that will use AI as part of their lawyering efforts to undertake any routine legal tasks. Thus, the attorneys use the AI and presumably can reduce their labor efforts (and costs) accordingly, parceling out the routine legal tasks to (one assumes) less

costly AI-based legal-focused tools. But we apparently should not have clients performing legal work via AI tools alone (some would so insist).

The arming of lawyers with AI Legal Reasoning (AILR) capabilities might seem to be the preferred approach, at least as far as attorneys are generally concerned. Doing so makes their work more efficient and effective. This might in the end be a boon for clients. Clients might be able to get their legal work done more inexpensively and sooner as a result of a human attorney being augmented by AI facilities. Not all of this is a bed of roses.

Clients are bound to have a preference at times for using AI-based legal services. Cut out the middleman, as it were. Access the AILR from any location and at any time of the day, 24 by 7. Why go to a bank teller when you can do online banking in your pajamas? The same logic could just as easily apply to conferring with human lawyers versus an online AILR system.

That would seem to be a readily apparent concern for attorneys just about everywhere.

Let's add another twist, one that you might not have previously noodled over. One worry is that attorneys relying upon the AI to aid in doing their legally routine tasks will gradually and inexorably become deskilled at being a lawyer. The slippery slope here is that when no longer undertaking the routine legal tasks, this precariously undercuts the lawyer's ability to perform the non-routine legal tasks (i.e., the routine and the non-routine are ultimately exercising the same "legal muscles" as it were).

Is it a necessity to do routine legal work to keep the non-routine legal skills at the ready.

Arguments pro and con are readily devised on that contention.

Here's yet another qualm.

If AI can inexorably chew away at legally routine tasks, suppose this eventually becomes commonly viable and nothing is remaining for AI to tackle in the routine legal task milieu. It would seem blatantly obvious that the AI would have to be extended to try and perform nonroutine legal work. But this presumably threatens lawyers as to displace them in a much more substantive way than does the low-level crunching of routine legal work by AI.

Yikes, even this can be turned somewhat on its head.

Some would claim that if we don't seek to apply AI to the non-routine legal tasks, we are going to undercut what AI can potentially attain for us as a society. By somehow a priori deciding that the AI should only be used for routine legal tasks, we will limit the range and depth of benefits that advanced AI can provide. We have either wasted AI or have dogmatically short-changed how far we are aiming to propel AI in the legal field (by unduly shortening the goal-posts, one might say).

#### Conclusion

Let's do a quick recap and then consider the future underlying the nature of lawyer-proffered legal services amid the frontiers of AI in the law.

Returning to the postulated levels of legally routine tasks, AI researchers and AI developers are proceeding step by step to devise AI-augmented LegalTech systems. This usually entails starting with the simplest of routine legal tasks, perhaps tasks that barely edge into any semblance of legal prowess. Next, they rachet up to the base routine level and then stretch into an upscale routine level. Finally, the trick is to embellish AI capabilities sufficiently to tackle those "creative lawyering" non-routine legal tasks.

Should you be shaking in your boots right now as a human lawyer?

Today's attorneys can breathe a brief short sigh of relief that AI is still not far enough along to have yet risen alarm bells about AI slipping and sliding significantly into the revered legal protections of UPL (Unauthorized Practice of Law). Conventional computing has already inched into that realm. AI is going to unavoidably exacerbate that. This is a line in the sand that is going to spur a tremendous amount of legal and societal debate.

For those of you that sneer and overtly doubt that AI will advance far enough to encroach on human lawyering, I have a piece of keen nonlegal advice for you. Best to not be overly smug since the march of progress in AI is ardently gunning for those non-routine legal activities. If your legal career still has legs on it, keeping aware of what AI is doing for the law would be a prudent heads-up and aid you in adjusting your legal beagle services accordingly.

Let's put it this way, you would be wise to not get caught with your head in the sand.

**About The Author** 

Dr. Lance Eliot is a Stanford Fellow at Stanford University as affiliated with the Center for Legal Informatics, a co-joining of the Stanford

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He is also Chief AI Scientist at Techbrium Inc., has been a top exec at a major Venture Capital firm, served as a global tech executive at several large firms, previously was a professor at the University of Southern California (USC), and headed an AI lab there.

His columns have amassed over 6.8+ million views including for Forbes, AI Trends, The Daily Journal, and other notable publications. His several books on AI & Law are globally recognized and highly praised.

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# LEGALTEC DCA ON WOMEN OVATION THE VARIOUS MYTHS AND MISCONCEPTIONS AP AI IN THE LEGAL SECTOR

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JUSTICE BID IN THE PICTURE & THE LEGAL OPS DIRECTOR









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## Introducing Steve Fretzin, Author, Lawyer Coach and Plane Crash Survivor

By Steve Fretzin, President Fretzin, Inc.



Have you ever had a near-death experience? If not, I'm sure you have read about people who were given a second chance at life. Well, I'm one of those people.

In 1996 I was a passenger on a privately rented plane heading back from Eagle River, Wisconsin in the US. Without much warning the engine failed, and we started falling from the sky–fast! Before any of us knew exactly what was happening, our plane crash-landed upside down at 75 miles per hour into a house in Crystal Lake, Illinois. I nearly lost my life.

For months afterward, I was a human pretzel unable to move or maneuver myself. I had two broken arms and was helpless in a wheelchair. I doubted whether I would ever be able to do the things I had done before, to enjoy the life I had known.

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While working hard to regain my strength I had a great deal of time to think. I never considered myself to be a spiritual person, but I realized the unimaginable gift I had been given. Surviving the crash that day, I vowed to do something meaningful with my life.

Learning and teaching business development and marketing had always been a passion of mine. In 2004, I started my own business with an emphasis on helping entrepreneurial professionals to grow a thriving business. The secret sauce was in my credo, "You get what you want out of life, by helping enough others to get what they want." So, I set out to be the best business coach, trainer and advisor I could be. The end goal, to help lawyers to get over the finish line with a successful law practice they could rely on through good times or bad.

As a lawyer, it's never been more important to drive your personal practice upward. The mind-set that I suggest aligns well with my credo. You can build a bigger book, only by helping more people. While many attorneys despise the thought of sales, marketing or business development, it is clearly the best way to help more people. As you know, you can't help people that have never heard or met you before. To hammer this point home further, here are three suggestions to living your life to the fullest while leveraging your skills as an lawyer.

#### 1. Invest in learning time management

Time effects everything from the billable hour to being home for dinner, so why are you still struggling with it? Probably because it wasn't something you learned, like learning the law. It's unfortunate because we often don't know what happened to our time and then we say

things like, "the day must have gotten away from me." The truth is, without controlling your time, you may not be controlling your life.

My recommendation is to schedule a few hours to dive into a book entitled, "Getting Things Done," by David Allen. While you may not initially grasp 100% of what this book has to offer, it's very doable to pull out three to five tactical and actionable steps to improve your time management. For me, it was a game changer. I know it will be for you too.

#### 2. Set goals and drive forward to achieve them

The number one reason why people fail is a failure to plan. Establishing business and life goals is not only for the "selling professionals" anymore. If you're looking to improve your lease on life, you have to own it every day. Here's an easy to follow way to develop a plan in **under 75 minutes**.

Step one: Set the objective. What are your goals for the year? This could be making more money, having more free time or finding a different firm to join. For example: *I* will drive my originations to \$200,000 this year.

Step 2: Outline the various ways in which the objective could be met. This might be reading David Allen's book on time management, my books to learn biz dev or leveraging LinkedIn to find inroads to meet new people. For example: Leverage my existing network to find new general counsels to meet with.

Step 3: Develop the tactics for success.

These are the action steps that you will take to achieve the strategies you've set for yourself. For example: Work on LinkedIn for 30 minutes each day to uncover two to three inside connections. I will do this between 8 am and 8:30 am each work day before answering emails and calls. I will track all progress on an Excel spreadsheet that I will have done by May 15, 2019.

As you can see, creating a simple plan like this is not complicated. Just follow the guidelines above and knock it out. Then, leave it on your desk or desktop to ensure it stays top of mind.

While I'm not suggesting that changing is easy, you may want to consider the short-and long-term ramifications of doing nothing.

#### 3. Enjoy what you do

Are you showing up to do a job every day or are you truly enjoying your career as a lawyer? This is a very important question to answer honestly to yourself. If your answer is a "job" it might make sense to look at options to change your situation. That doesn't necessarily mean leaving the firm or not practicing the law, but rather, identifying things that you do enjoy or might enjoy doing. For example, I do not enjoy managing people, but I love coaching. The difference is helping people explore options for improvement versus telling them what to do. Review this list and think about whether you're in the right place, at the right time, with the right people, doing the right things

- Think about the firm you're with. Big, small or solo?
- Think about the environment you are in. Fast or slow? Hostile or friendly?

- Think about the practice area you are in. Stressful, mundane or stimulating?
- Think about the types of people you help. Difficult, laidback or interesting?
- Think about the area you live in. Too hot or too cold? Too crowded or lots of space? Short commute to work or long?

There is tremendous power when you control your own time, set and achieve goals and putting yourself in the best place with the best people. It shouldn't take a near death experience to make positive changes in your life. You just need to commit yourself to eliminating the status quo and driving positive changes today.

For more information on business planning and career growth, please visit my website at www.fretzin.com or email me directly at steve@fretzin.com.

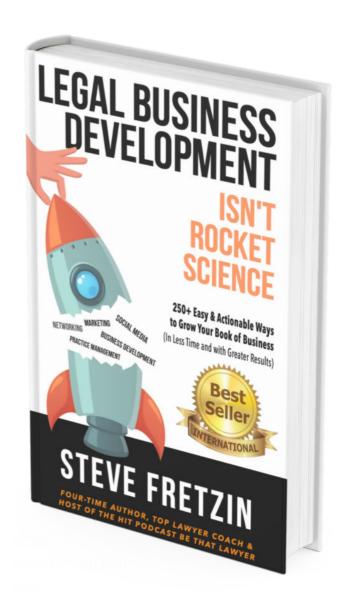
#### **About the Author**

Driven, focused, and passionate about helping lawyers to reach their full potential, Steve Fretzin is regarded as the premier coach, skills trainer, and keynote speaker on business development for lawyers.

Over the past 18 years, Steve Fretzin has devoted his career to helping lawyers master the art of business development to achieve their business goals and the peace of mind that comes with developing a successful law practice. In addition to writing four books on legal marketing and business development, Steve has a highly-rated podcast called, "BE THAT LAWYER."

When not busy helping ambitious attorneys to grow their law practices, Steve enjoys fishing with his son, playing many racquet sports, and traveling with his wife.

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# Solidity: Smart Contract = e nodel Language or Legal Contract (b. data (b.

By Elif Hilal Umucu, Chainlink Labs



#### Introduction

This article primarily focuses on how a smart contract written in the Solidity programming language can qualify as a legal contract. The use and examples of smart contracts in the world are increasing day by day. These smart contracts, in which computers define the will of the parties in codes, also relieve the legal sector and speed up the transactions. Although the basis of law is "language", smart contracts are an excellent way to create contracts that can be put forth concretely without human emotions.

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This article explains what smart contracts are and how to write a legal contract by showing the syntax of the Solidity programming language, known as the smart contract language. In the continuation of this article, starting which acts with the principle of code is the law, is expressed as a smart contract. The word from the definition of smart contract, it also

includes in which sectors and in which projects smart contracts are used.

The article also focuses on the syntax of the Solidity programming language, which is a statically typed programming language designed to develop smart contracts running on the EVM. The article ends by showing how to write an Inheritance Agreement with this syntax.

#### 1. What are Smart Contracts?

A smart contract is basically a code-based automated process that executes the transaction between two parties without an intermediary. On the other hand, the reflection of the issues agreed by the parties to the computer codes,

"smart contract" is self-explanatory, often though the smartness of smart contract is considered a misnomer, the third party-less working of a contract in a decentralized ledger where each party enters into an agreement by programmed codes is what perhaps makes it "smart."

The earliest definition of smart contract is Nick Szabo's article titled "Smart Contracts: Building Blocks for Digital Markets" published in early 1995. It is seen that smart contracts, which were put forward by Nick Szabo, a lawyer, cryptographer and computer programmer in 1994, have become widespread

with Blockchain technology today. In Szabo's definition, a smart contract is 'a transaction protocol that executes the terms of a contract'.

To illustrate with an example, let's say I want my grandchildren to receive 20% of my inheritance. However, I have some conditions, for example, if my grandchildren are 25 years or older, they will be able to inherit this legacy. If we add this requirement to the smart contract, the smart contract will handle the transactions without the need for any third party. This is just the basic logic of a smart contract. Wherever a transaction needs to occur between two parties, you can use a smart contract that gives you full control and automates those transactions.

#### 2. Sample Smart Contract Projects

- Fizzy AXA, a French airline, uses Blockchain technology with Ethereum Smart Contracts to provide more secure insurance for its passengers. When passengers choose to take out insurance, flight information such as departure time appears in smart contracts. Also, their systems upload the flight status to their Blockchain codes. In the event of a delay exceeding two hours, passengers are offered compensation options.
- The Indian Academy of Science states that a decentralized mortgage industry can be developed with the advantages of smart contracts. In their report, they show how technically useful smart contracts can be for the mortgage industry. As customers enter their credentials, the system verifies them by looking at their government's database. This example also sheds light on how smart contracts can be

beneficial for governments. Along with secure verification, using smart contracts in the mortgage industry can save a lot of time.

- In a healthcare project involving IBM, food supply is provided through smart contracts. The aim of this project, which includes Nestlé and Walmart companies, is to protect consumer health and to minimize deaths. In the project, foods are tracked in smart contracts transferred to the supply chain. Foods that impair people's health are identified through the chain and solutions are sought for problems.
- The Smart Port Project is another project that came into effect at the Port of Rotterdam in the Netherlands. In this project, Blockchain and smart contracts were used in terms of maritime transport. The aim of the project is to record the communication and interaction between the receiver, sender and carrier during maritime transport. The information recorded are as follows: entry-exit of the goods to the port, arrival and departure information, transportation information, transportation conditions of the goods.

#### 3. Example Sectors Where Smart Contracts Can Be Used:

- 1. Financial Services
  - a. Taxation (KDVcoin)
  - b. Fund Transfer
- 2. Health Services
  - a. Roche Group
  - b. MediLedger Project
- 3. Digital Services
  - a. Intellectual Property in Digital Works

- b. Counterfeiting of Digital goods
- 4. Public Sector
  - a. Land Registry Records
  - b. Real estate purchase and sale
- 5. Supply Chains and Automation

#### 4. Introduction to Solidity

Solidity is a statically typed programming language designed to develop smart contracts running on the Ethereum Virtual Machine (EVM). Solidity is a contract-oriented, highlevel language for implementing smart contracts. Smart contracts are programs which govern the behaviour of accounts within the Ethereum state. It was influenced by C++, Python, and JavaScript and was designed to target the Ethereum Virtual Machine. Solidity is compiled as bytecode executed in the EVM. Using Solidity, developers can write Decentralized Applications (dApp) that implement a self-enforcing business mechanism that is returned to smart contracts and leave an authoritative record of the transaction. While discussing Solidity in this article, first the syntax is explained in a simple way, then it is explained how to write an Inheritance contract using this syntax and codes. Contracts in Solidity are very similar to classes in object-oriented languages. They can contain state variables, functions, events, and struct types.

When getting started with the Solidity programming language, you don't need any prior experience with the language; However, having some experience with Blockchain technology or at least understanding the basics of what Blockchain is and how it works will help you. You can develop smart contracts on a Mac, Windows, or Linux using the Solidity programming language. In other words, the

environment you use will not have any effect on your language learning. And in most cases, you can use the web-based Remix environment, which we will review below. If you want to discover what others are doing, you can check out the link at <u>stateofthedapps.com</u> where you will see hundreds of games and apps created using Ethereum and Solidity.

#### 5. Ethereum Virtual Machine (EVM)

Ethereum is a system first introduced at the North American Bitcoin Conference by Ethereum founder Vitalik Buterin. Although it is actually seen as an alt coin, Ethereum is an innovative system that aims to develop blockchain technology and use it in more areas. Buterin has changed the certificate used by Blockchain. And he developed the blockchain-based software Ethereum using the SHA-256 certificate. Ethereum made it possible to produce documents consisting of codes, called smart contracts. To explain in a short and understandable way; as a function, smart contracts are non-intermediary systems that express the autonomous (so by itself) performance of the contractual acts without any additional discretion of the parties, in the event that the contractual terms agreed upon by the parties are fulfilled.

Smart contracts are a computer protocol that enables the exchange of money, real estate or any asset that can be traded without any intermediary. All transactions performed in these contracts are converted into computer code, stored and controlled by users on the blockchain network. In addition, smart contracts provide accounting feedback of transactions such as money transfers, purchases and sales of products or services.

E.g; If an individual who wants to buy a house uses the smart contract protocol in this transaction, the first thing to do is to create a digital contract with the seller on the blockchain network with the terms of purchase and sale. When a trigger transaction (payment, expiration, etc.) is initiated that is coded into the contract, the contract runs itself and the transaction is recorded in the blockchain network.

At the end of the transaction, digital receipts are added to be kept in the agreements of the parties and the shopping is completed.

### If you want to delve deeper into cryptocurrencies and smart contracts, you will need to know:

- Programming language: Solidity
- The way the Ethereum network works

#### Tools that you will need:

- Solidity compiler (solcis)
- Text editor : Remix

The web-based compiler called Remix is a convenient platform for coding and running smart contracts. Remix is a tool that allows writing smart contracts using a browser. In addition, Remix allows compiling contracts and uploading them to the network. Remix also supports JavaScript virtual machine, which allows you to simulate uploading and running a contract on the network. Then all functions will be testable.

So <a href="https://docs.soliditylang.org">https://docs.soliditylang.org</a> can be clicked first. And here click the link to install the Solidity compiler. Next you will need to find Docker. Docker is a nice and simple way to start using a local environment. In addition, in

the Solidity integration section on the main page, all integrations that can be used with Solidity are available. Then all the extensions you have for the compiler can be downloaded from here. These are Atom, IntelliJ, Visual Studio etc. are examples.

#### 6. Solidity Syntax

Everything is ready to start syntax in Solidity. First seen the compiler at <u>remix.ethereum.org.</u> Deleting everything from scratch will be helpful to understand the logic of the syntax.

The first thing to do is to import solidity, to do this, the pragma keyword should be used. This is done only once while coding the smart contract, Solidity must be loaded followed by the version number. In this case, one should go for version 0.4.0.

#### // import solidity pragma solidity ^0.4.0;

After importing Solidity to file, it will be able to import any other file. That way and then you will be able to import the "filename". This is the import syntax. If certain files in a file are to be imported, symbol1 can be used symbol1 as an alias and symbol2 from a filename. Basically, it's possible to change any of these filenames, it's purely by convention so that alias can be used in this file and symbol2 can be used from .filename in this file. Then, finally, the contract establishment phase will be started.

import "filename";
import \* symbolname from "filename";
import {symbol1 as alias, symbol2}
from "filename"

**BasicContract**, open curly brackets and close curly brackets. Whenever something is added, variables or functions are added, they need to be put inside the contract.

#### // this is my first contract contract BasicContract {}

needed need to be imported.

Solidity needs to be imported first.

Then the filenames or any files that may be

And then it comes to the stage where the contract will be established.

And the code will go into the contract here.. Everything is ready for the first smart contract written with basic syntax.

The next thing to do is to declare a state variable. So the way you declare a state variable and the word state by the way means that it is the current state of that "variable". First the type is made, in this case the "uint" statement is applied and the types will be described in future codes, then the name of the variable will be "storedData".

```
// this is my first contract
contract BasicContract {
// state variable
uint storedData;
}
```

There are also "functions" and "modifiers". Modifiers are conditional to a function or conditions before executing the function. So it will do the modifier first. By the way, the compiler may return an error if it is run as stated in these examples.

This is normal for now because the codes are

not fully completed yet. But when the final contract is actually written, the compiler will be able to run. Also, the code can be written with comments (*the green line with //*) as you can see below, which are always useful to help remember or show where you left off. Now it is necessary to assign a modifier.

#### // modifier is a conditional modifier onlyData() {

In this case, the modifier keyword is used after the modifier's name. So it's preferable to make the modifier name "onlyData" in the code. In this case, it may be requested that the value of the stored data be equal to or greater than zero, it is entirely at the discretion of the people who prepared the contract. Then the semicolon must be underlined to close the modifier. This syntax belongs to Solidity.

```
// modifier is a conditional
modifier onlyData() {
require (
storedData >= 0);
_;
}
```

It is important to note that the modifier will usually need a function. A function must now be written. Functions work like any other programming language. Therefore, it is necessary to start by writing the function word.

#### // function

It is possible to write the name of this function later. It can be written what kind of parameters this function takes. It is also possible to say that my function takes an integer named "e", this expression is entirely up to the person writing the code.

#### function set(uint e) public {

The "public function" will be used so that everyone can see this function. However, code writers can choose a private function instead of a public function by making a different choice in their own contracts. The stored data is equal to "e", which will be the body of the function.

```
function set(uint e) public {
storedData = e;
}
```

So basically the modifier will check that the value has a value greater than or equal to zero before running the function. This check is available in the above codes:

```
storedData >= 0);
_;
```

If there is a value that matches the given example, that is, if this condition is met, the function will actually run. If the condition is met, the function works fine, which means that the code should not throw an error.

The last thing to write in a contract is an "event". Also this is the syntax for an event. First of all event is the keyword here. In the contract in question, the name of the event is "Sent". So the event is basically expecting an address and then the address type needs to be determined.

event Sent(address from, address to

```
uint storedData);
}
```

#### 7. Coding an Inheritance Contract with Solidity

First of all, the syntax of the Solidity programming language is briefly as described above.

Now, "Inheritance" contract can be written with solidity programming language. First of all, it is necessary to start coding by creating a few variables. Of course, the expression that should not be forgotten is the "**pragma**" expression. It is possible to write the name of the contract after "pragma" and it depends on the person who wrote the code. The smart contract in this article will be named "**Inheritance**".

```
// import solidity
pragma solidity ^0.4.0;
contract Inheritance {
address owner;
}
```

An address will be needed when defining variables. It is possible to use **"bool"** after specifying the address, and it is necessary to construct the bool expression with **"deceased"**.

```
contract Inheritance {
address owner;
bool deceased;
uint money;
}
```

Then it would be necessary to introduce a new "constructor", the constructor would be public which means it must be "public".

But whether this constructor is public or private depends on the person who wrote the code, it is possible to change it.

```
contract Inheritance {
  address owner;
  bool deceased;
  uint money;
  constructor() public payable {
  owner = msg.sender;
  money = msg.value;
  deceased = false;
}
```

In this situation, the owner variable created above needs to be passed to msg.sender. The message will come with a value, so it is necessary to pass it on to money. Initially the deceased must be set to false. Then it would be correct to specify a range of "addresses". This address string is called a "wallets".

```
constructor() public payable {
  owner = msg.sender;
  money = msg.value;
  deceased = false;
  address[] wallets;
}
```

Next, mapping needs to be used to pass integers (money amounts) to addresses in Inheritance. In this case, again, a modifier will be used. Then the name of the modifier needs to be defined and the curly brackets to open and close.

```
constructor() public payable {
  owner = msg.sender;
  money = msg.value;
  deceased = false;
}
```

```
modifier oneOwner {
require (msg.sender == owner);
}
```

There is one thing that should be added and not forgotten. After writing the contract, it is necessary to make sure that there is someone who is executing the contract so that this message or money can be transmitted.

So this is actually an important situation that needs to be checked. If this situation is not checked, the conclusion of the contract will have no meaning. Do not forget the semicolon and underscore right after it. Because that's how a modifier is written in the solidity programming language.

```
modifier oneOwner {
require (msg.sender == owner);
_;
}
```

Then another modifier called "**isDeceased**" can be set. Therefore, it is necessary to make sure that the person has passed away before actually executing the inheritance contract. Again, it is necessary to open and close the curly brackets here. Then the definition of "require" is necessary and important. The same must be done again. Do not forget to add the underscore with a semicolon.

```
modifier oneOwner {
require (msg.sender == owner);
_;
}
modifier isDeceased {
require (deceased == true);
_;
}
```

Therefore these two modifiers will be run before the function is run to check for these values. By having a value of "true" on these modifiers, the function that runs the contract will actually be executable. When continued later, a function will be used again. The name of the function will be "setup". And this function will need to use two parameters. The first parameter will be "wallet" and the second parameter value will be "uint" for inheritance. Also, this will preferably be made "public", but it can also be private depending on the person coding the contract. This means that when it is set as a public value, it is readable and accessible to everyone. Also this operation will need "oneOwner". (By the way, the modifier assigned as "oneOwner" is very important for the system. If it works properly and passes the modifier, the next codes of the system will work smoothly and properly.)

### function setup(address \_wallet, uint \_Inheritance) public oneOwner { }

Again, the curly brackets will need to be opened and closed, as exemplified above. In the next code, it will be necessary to add the existing wallet to the "wallets" using the "push" function.

```
function setup(address _wallet, uint
_Inheritance) public oneOwner {
  wallets.push(_wallet);
}
```

In fact, it can be said that this is the most important point for the contract. Because this is where the contract is established. In this section, an array will be created that contains or

holds the wallet transferred here. Therefore, the code below can be called the crux of the contract.

Inheritance[\_wallet] = \_Inheritance;
It will now create a second function called
"moneyPaid" without parameters. This function will be written as private, not public. The
person's death must be confirmed and confirmed.

This time it will be necessary to run a for loop in the code. Loops are used to repeatedly execute a series of statements until a certain condition is met. Therefore, it would be appropriate to use a for loop in this code. An integer value will be passed inside the for loop and the loop will be set up with normal or typical for loop code.

And then as long as this loop is running, in essence, a loop will be run that will send the inheritance funds if they die.

```
Inheritance[_wallet] = _Inheritance;
}
function moneyPaid() private isDe-
ceased { for (uint i=0; 1<wallets.length;
i++) {
  wallets[i].transfer(Inheritance[wallets[i]]);
}
}</pre>
```

To summarize, basically a for loop is executed and the inheritance is distributed accordingly. A final function will need to be added to the contract.

This function is the "dead" function.

This functionality needs to be made public. A "oneOwner" will also be needed. Basically this is the function to run to indicate that this person is dead. In this case, the deceased will be changed to "true" and the contract will then continue and carry out the inheritance with moneyPaid. This function works if the person is declared dead, and then when this person dies, the money set up in the wallet is transferred to the designated places.

It is very important for inheritance contracts to create a wallet that will hold the actual inheritance waiting for the person to die when the actual contract is first established. As a result, all functions and the contract that needs to be established are completed.

## function died() public oneOwner { deceased = true; moneyPaid(); }

A look at the Code of Inheritance Contract written in Solidity programming language.

#### Conclusion

Since the transactions in smart contracts are carried out with computer codes, whether these contracts will be legally accepted is still among the issues discussed in the doctrine. Understanding the logic of smart contracts, where codes are law, is important for the development and advancement of technology law. As a tech enthusiast and blockchain researcher, I started this post because I wanted to keep up with the digitizing world and contribute to the digitization of law. But my main purpose in writing this article is to simplify the Solidity language so that lawyers can under-

stand it and to write a contract in that language.

#### **About the Author**

Entering her Blockchain and Technology Law career with cryptography, Elif Hilal developed her own encryption method when she was only 10 years old. She then began to learn encryption mechanisms and the science of cryptography. She found the way to communicate with computers by learning to code, she learned to code when she was a freshman at university.

While she was a university student, she had the chance to work as a blockchain researcher in the Digital Transformation Office of the Presidency of the Republic of Turkey. In addition, she was elected as the Microsoft Turkey Student Ambassador and represented her country many times in the international arena.

Elif Hilal, who has been working on Blockchain for about 6 years, is currently working on Blockchain at Chainlink Labs.

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# Investor Visa Strategy To Launch A Global Business In Italy

With the global economy opening up, entrepreneurs are keen to explore the international markets. As an aspiring business owner, you may think beyond export and import and set up a venture abroad. Italy is a hub for global entrepreneurs as it offers the best of everything, from fair trade regulations to open markets, an excellent family lifestyle, and easy immigration. According to Investor Visa experts for Italy LLC, this is an ideal immigration route for most entrepreneurs because of the minimum eligibility requirements. But you must take a strategic approach for a smooth launch of your global business in Italy.

Here is some valuable investor visa advice to follow.

#### **Know your investment capacity**

Before starting with the investor visa process, you must decide on your investment capacity. The <u>financial part is often the most daunting concern</u> for global business aspirants. You will probably have a shoestring budget, and spending millions on immigration sounds challenging. Luckily, the Italian investor visa process starts with a minimum investment value of €250,000 as funding for an innovative startup. You have other options that are higher in value. Seek expert advice on them,

and pick an ideal match for your financial readiness.

#### Sort out the documentation

Although the Italian investor visa process requires hefty funding, you can complete it without bringing anything to the country. You only need to provide proof of funds to validate your investment capacity and obtain a certificate of no impediment (nulla osta). Your bank statements are the mainstay of the process, so arrange them in advance. Also, complete other documents like your IDs, family IDs, and income proof indicating the capacity to support your family members.

#### Fly in with your funds

Bringing the committed funds to Italy after obtaining your investor visa is the next step on the checklist of strategies. After all, you will expect to launch your business sooner than later. Having the funds at hand is essential because you must deposit them within three months of obtaining your residence permit. Once you sort out the deposit part, you can go ahead with your venture.

#### **Embark on a global expansion**

Launching a business in Italy is your first step

to a global expansion. In fact, it is your chance to capture the entire EU market as you can travel visa-free to these countries being an Italian resident. Traveling to these markets is a breeze, whether you want to participate in international trade shows, prospect clients, or set up meetings. Embark on your global expansion spree sooner than later.

#### Stay for the long haul

Staying for the long haul should be a part of your investor visa strategic planning. After all, you will expect to reap the benefits of your hard work and pass it on to the next generations. The good thing is that you have a chance to do it because the Italian investor visa opens the road to citizenship by naturalization. You only need to renew your residence status and stay in the country for a decade. Also, be prepared to retain your investment throughout this period.

#### **Conclusion**

The Italian investor visa is a gateway to launching a business venture in the country. Taking a strategic approach enables you to succeed as an entrepreneur, set up a home in Italy, and stay back for good.

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