

The Industrial Age of Law: Operationalizing Legal Practice Through Process Improvement

Introduction	854
I. The Legal Industry at a Glance: The New Normal	855
II. Legal Market Stratification: Process Is Where the Money Is	856
III. Separating from the Herd: The Need to Evolve	858
A. Innovation as Offense: Differentiation.....	860
B. Innovation as Defense: Neutralization	862
C. Innovation to Increase Productivity	863
IV. Managing Innovation in a Mature Market.....	864
V. Defining Value: Reduction in Pure Non-Value-Adding Work.....	866
VI. The Operational Excellence Landscape: Legal Process Outsourcing, Legal Service Integration, and Process Improvement	868
A. Legal Process Outsourcing.....	868

*Michael is a business attorney with twelve years of legal experience both in private practice and in-house. He currently works for Am Law 200 law firm Davis Wright Tremaine LLP's innovation team as a legal process strategist. Michael has a bachelor's degree from the University of Oregon, where he was a scholar-athlete, a Juris Doctor from the University of Oregon School of Law, and he is in the process of completing a Master's of Science in information management at the University of Washington with an emphasis on strategic information initiatives and risk management.

Achim is a management consultant with more than twenty years of experience guiding organizations in performance management and improvement. Achim has a Diplom-Ingenieur degree in aerospace engineering with a major in computer science from the University of Stuttgart in Germany. He has extensively studied performance management and improvement techniques for the past fifteen years and coached leaders and practitioners around the world for the past nine years.

B.	Legal Service Integration	868
C.	Legal Process Improvement	869
VII.	DMAIC: The Roadmap for Process Improvement Success ..	869
A.	Origins of DMAIC	870
B.	Utility of DMAIC.....	870
C.	Five Phases of DMAIC	871
D.	Applying the DMAIC Framework	872
E.	Tools of the Trade	873
F.	Overcoming Challenges to Adopting Process Improvement Initiatives	874
1.	Challenge #1: Applying a Manufacturing Framework to a Nonmanufacturing Environment....	875
2.	Challenge #2: Fear of Change or Obsolescence	875
3.	Challenge #3: Environment.....	876
VIII.	The Need for Independent Thought	878
	Conclusion.....	879

INTRODUCTION

The need for law firms to evolve and innovate is well-known and much discussed. However, the term “innovation” has become a buzzword as firms struggle to implement innovation strategies. This Article not only advocates for law firm evolution through innovation, but promotes operational excellence as the optimum innovation strategy. In the legal industry, operational excellence can be divided into three categories: legal process outsourcing, legal service integration, and process improvement. Of the three categories, firms would benefit most from developing process improvement capabilities. This holds true for three reasons. First, in-house lawyers want more efficiency from their law firms, and process improvement emphasizes efficiency. Second, the legal industry has reached a point of maturity in which operational excellence, including process improvement, is a primary strategy to grow and compete. Third, there are decades of process improvement methods, models, tools, and best practices that law firms can leverage to build process improvement capabilities.

Any innovation initiative must begin with learning. This Article encourages the use of operational excellence innovation strategies by educating readers about DMAIC, a structured problem-solving framework that underlies modern process improvement techniques. DMAIC is a scientific problem-solving method that stands for Define,

Measure, Analyze, Improve, and Control.¹ Our hope is that by understanding how DMAIC works, law firms will have greater confidence in the feasibility of process improvement and begin to incorporate DMAIC into the way they do business, spurring wider adoption and introducing greater efficiency into the delivery of legal services.

I

THE LEGAL INDUSTRY AT A GLANCE: THE NEW NORMAL

The only constant is change.

— Heraclitus

Since the financial crisis and associated economic downturn beginning in about 2008, corporate law departments face increasing pressure to do more with less.² In turn, law firms are constantly looking for new ways to improve efficiency, reduce costs to themselves and clients, provide clients with more value-added services, and differentiate from rival firms.

According to the International Legal Technology Association (ILTA), changing global dynamics will drive rapid and continuous change for law firms over the next decade.³ Global drivers have converged to create a perfect storm. Many analysts believe that we have pushed key systems up to, or beyond, critical thresholds resulting in the current conditions to which we must adapt.⁴ These drivers impact legal departments in a number of ways: first, by constraining in-house legal budgets, causing companies to insource

¹ See *infra* Part VI.

² See Daniel Martin Katz, *The MIT School of Law? A Perspective on Legal Education in the 21st Century*, 2014 U. ILL. L. REV. 1431, 1442 n.41 (citing Jennifer Smith, *Smaller Law Firms Grab Big Slice of Corporate Legal Work*, WALL ST. J. (Oct. 22, 2013, 12:02 AM), <http://online.wsj.com/news/articles/SB10001424052702303672404579149991394180218>, which states: “General counsel at many companies have become smarter shoppers since the economic downturn in 2008, when clamping down on legal costs became a necessity. Corporate law departments face continued pressure to keep the bills down.”).

³ INT’L LEGAL TECH. ASS’N, LEGAL TECHNOLOGY FUTURE HORIZONS: STRATEGIC IMPERATIVES FOR THE LAW FIRM OF THE FUTURE 15 (2014), available at <http://www.iltanet.org/Downloads/LTFH-Report.pdf>.

⁴ *Id.* at 16 (discussing global challenges that shape the way society makes decisions as identified by The Millennium Project, “a global future-watch initiative that draws on a network of contributors from over 80 countries,” and summarized in the following categories: economic, politics, and governance; socio-demographic; science and technology; and energy, environment, and sustainability).

more legal work and outsource less; second, by shifting the legal market, served by the Am Law 100 and 200,⁵ to a buyer's market; and third, by giving in-house counsel leverage to drive down the cost of outside counsel legal fees.

Chief legal officers' (CLOs) opinions reflect these changes and, like a thermometer, can be used to gauge the legal industry's temperature (and, like a thermostat, turn up the heat and drive change). The Altman Weil 2014 Chief Legal Officer Survey captures CLO opinions on the state of the legal market.⁶ Of 186 survey respondents,⁷ one of the two methods CLOs most frequently used to control costs was direct fee reduction from outside law firms.⁸ Forty percent of CLOs shifted work in-house, 36% shifted work to lower priced firms, and 34% reduced the overall amount of work sent to outside counsel.⁹ Of all cost control efforts, CLOs reported the greatest cost reduction occurred from shifting work in-house.¹⁰ Further, 26% of respondents plan to decrease use of outside counsel in 2015, while only 14% plan to increase usage.¹¹ This represents a seven-year decrease in CLOs' use of outside counsel.¹²

II

LEGAL MARKET STRATIFICATION: PROCESS IS WHERE THE MONEY IS

If there is any one secret of success, it lies in the ability to get the other person's point of view and see things from that person's angle as well as from your own.

— Henry Ford

Market pressures have caused CLOs to evolve into astute legal supply chain and legal process managers, effectively operationalizing

⁵ Aric Press, *Punching Above Their Weight*, AM. LAW., June 2014, at 68, 70 (2014) (stating that the Am Law 100 and 200 earned gross revenues of \$96.4 billion). The Am Law 100 and 200 represent the top-grossing 100 and 200 law firms in the United States. See Aric Press, *The Super Rich Get Richer*, AM. LAW., May 2014, at 130, 130 (2014) (discussing the Am Law 100 as the top one hundred grossing firms); Press, *Punching Above Their Weight*, *supra* note 5, at 68 (stating that the Am Law 200 includes firms ranked 101 to 200 on the list of the nation's top-grossing firms).

⁶ ALTMAN WEIL, INC., 2014 CHIEF LEGAL OFFICER SURVEY: AN ALTMAN WEIL FLASH SURVEY (2014), available at <http://www.altmanweil.com/CLO2014/>.

⁷ *Id.* at v.

⁸ *Id.* at i.

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.* at ii.

¹² See *id.*

corporate legal departments.¹³ To increase efficiencies, two-thirds of CLOs responding to the Altman Weil Survey increased their departments' use of technology, more than 50% restructured their departments, and 45% took measures to optimize internal nonlawyer work.¹⁴ In addition to greater cost reductions, CLOs want more efficient project management and budget forecasting from their outside counsel.¹⁵ *American Lawyer Magazine* divides the \$96.4¹⁶ billion legal market into five service categories:

- Critical strategic work: a deal of a lifetime, a subpoena to the CEO;
- If you want us, you'll pay our fees. The client needs a law firm's imprimatur;
- Important [business] operations support that the client can't manage in-house;
- Ordinary [business] operations support that the client can't manage in-house; and
- Commodity work that is more efficient to outsource.¹⁷

The top two premium-priced categories account for approximately \$32 billion.¹⁸ All Am Law firms compete for this premium priced "bet-the-company" work. However, 60% of that work, or approximately \$19 billion, goes to the 23 top-earning law firms.¹⁹ That leaves 177 firms to compete for the remaining \$13 billion of premium work.²⁰

The last three tiers of operations and commodity work—such as company internal software, hardware, and professional service procurement agreements—make up two-thirds of the legal market, or

¹³ See Katz, *supra* note 2, at 1441–45; see also GEORGETOWN LAW CTR. FOR THE STUDY OF THE LEGAL PROFESSION, 2013 REPORT ON THE STATE OF THE LEGAL MARKET 13 (2013), available at <http://www.law.georgetown.edu/continuing-legal-education/executive-education/upload/2013-report.pdf> (“[A]ll of the critical decisions related to the structure and delivery of legal services—including judgments about scheduling, staffing, scope of work, level of effort, pricing, etc.—are now being made primarily by clients and not by their outside lawyers. This represents a fundamental shift in the relationship between lawyers and their clients.”).

¹⁴ ALTMAN WEIL, INC., *supra* note 6, at ii.

¹⁵ *Id.* (Of those responding, 58% want “greater cost reduction,” 57% want “more efficient project management,” and 57% want “improved budget forecasting.”).

¹⁶ See Press, *Punching Above Their Weight*, *supra* note 5.

¹⁷ See Aric Press, *A Chasm with Consequences*, AM. LAW., June 2011, at 63, 64.

¹⁸ See *id.* (referring to the 2011 legal market served by the Am Law 100 and 200).

¹⁹ See *id.*

²⁰ See *id.*

approximately \$64 billion. Not only is this work subject to steadily intensifying price pressure, but, due to its somewhat repetitive, low-risk nature, service delivery for this work can be standardized and optimized, like an efficient factory production line.²¹ As such, and in conjunction with rising client expectations around value-added work plus cost and time pressures, the legal market has expressed both explicit and implicit need for operational excellence practices in law firm services delivery.²²

Going forward, firms wielding innovative, process-based service delivery models will have a competitive edge against competition. “In order to meaningfully compete at virtually every tier of the legal industry, firms need . . . to embrace process. . . . [I]f one expands the relevant dimensions of competition, then {law} becomes {law + tech + design + delivery} where {law} is substantive legal expertise and {tech + design + delivery} are process.”²³ As such, “process is where the money is.”²⁴

III

SEPARATING FROM THE HERD: THE NEED TO EVOLVE

It is not necessary to change. Survival is not mandatory.

— W. Edwards Deming

With regard to a changing value proposition on legal service delivery, 42% of CLOs like to work with law firms that offer innovative legal service delivery models, 9% actively seek out law firms that offer innovative approaches to service delivery, and only 4% of CLOs are satisfied with the traditional legal service delivery model.²⁵ Despite desire for change in legal service delivery, CLOs lack confidence in law firms’ willingness to satisfy this desire. Over the last six years, when asked how serious they think law firms are about changing their service delivery model in order to add more value to clients, the average response by CLOs, on a scale of one to

²¹ For our purposes, “operationalization” means defining repeatable success measures for legal work through a systems view that tracks inputs, throughputs, and outputs. After operationalization, the work becomes subject to standardization, performance measurement, and process improvement. This is unlike bespoke legal solutions.

²² For purposes of this discussion, “operational excellence” means legal process outsourcing, legal service integration, and—the focal point of this Article—process improvement.

²³ Katz, *supra* note 2, at 1452.

²⁴ *Id.* at 1456.

²⁵ ALTMAN WEIL, INC., *supra* note 6, at iii.

ten with ten being very confident, was three.²⁶ In addition, CLOs gave a measly 6% vote of confidence to law firms' long-term interest in or ability to change.²⁷

A few firms have taken the need to evolve seriously and developed capabilities to succeed and add value in a changing marketplace. In 2012, Davis Wright Tremaine LLP, for example, launched an in-house research and development initiative called De Novo (i.e., "starting anew") led by the firm's chief innovation officer, Jay Hull.²⁸ The mission of De Novo is to deploy people, processes, and technology that help attorneys work more efficiently at a lower cost to clients and in ways that create greater value for clients.²⁹ Additional innovators and early adopters of change include firms such as Seyfarth Shaw LLP (Seyfarth Shaw), with its focus on Lean Six Sigma principles,³⁰ and Bryan Cave LLP, winner of ILTA's 2014 Innovative Law Firm of the Year Award.³¹

Change is necessary to survive and is marked by innovation, i.e., creating or applying a new method, idea, or product in order to adapt

²⁶ *Id.*

²⁷ *Id.* at iv. The 2013 Altman Weil survey found that "[m]ost firms appear to be reacting to external forces and making incremental changes within the framework of the existing business model, rather than pursuing opportunities to meaningfully differentiate their firms in the eyes of clients." ALTMAN WEIL, INC., 2013 LAW FIRMS IN TRANSITION: AN ALTMAN WEIL FLASH SURVEY, at i (2013), available at http://www.altmanweil.com/dir_docs/resource/2d831a80-8156-4947-9f0f-1d97eec632a5_document.pdf. In this same 2013 survey, Altman Weil asked firm leaders about their greatest challenge in the next twenty-four months, and improving efficiency was "eleventh on the list of twelve challenges, cited by only 2.8% of respondents." *Id.* at v–vi.

²⁸ Jessica Ridgway, *Justice for All: Redefining Law Firms*, OR. BUS. J. (Dec. 11, 2014), <http://www.oregonbusiness.com/articles/167-january-powerbook-2015/14218-justice-for-all?start=1> ("Hull leads a new in-house research and development initiative called De Novo."). De Novo's mission is to partner with clients to create new ways of delivering services; using data analytics and process improvement to help clients mitigate risk and cut costs; and leveraging technology, staffing models, and project management to complete projects as efficiently as possible. *See id.*

²⁹ *Id.* (Hull says clients "expect more for less.").

³⁰ *See infra* Part III.A.3 and note 50.

³¹ ILTA's Distinguished Peer Awards, ILTA, <http://awards.iltanet.org/2014-winners.html> (last visited Feb. 25, 2015) ("Bryan Cave's Rosetta project is a new and innovative technology that is able to increase attorneys' understanding of key firm performance metrics by translating numbers into stories that examine the most significant reasons for the resulting metric and surface new opportunities for the lawyer to act upon. This technology has transformed the methodology and level of understanding management employs in decision-making. Rosetta has also deepened lawyers' investment in the business of law by helping them understand and take ownership over their practices' performance.").

to a changing environment. The purpose of innovation is competitive advantage. Leading innovation strategists divide innovation outcomes into three primary components: innovation as offense (differentiation), innovation as defense (neutralization), and a focus on increasing productivity and reducing costs.³² The next Sections explore these three innovation outcomes.

A. Innovation as Offense: Differentiation

Innovation can distinguish one company from another, causing clients to choose between products or services based on value rather than price. Innovation for the purpose of gaining separation from the pack is a differentiation innovation strategy.

The economic argument in favor of innovation focuses on pricing power. Without innovation, offerings become more and more like each other. They commoditize. As they do so, customers are able to play off one vendor against the next to get a lower price. Over time, the market stabilizes at prices at or below cost, creating returns for investors below the cost of capital, causing investment to flee the marketplace. By contrast, when innovation is applied, offers become more and more differentiated from one another, leading to different ones becoming the preferred choice for different market segments, giving those vendors pricing power within those segments. In this scenario the market stabilizes at prices well above cost, creating returns above the cost of capital, attracting more investment into the marketplace.³³

Amongst the Am Law firms, legal competence, Ivy League degrees, and practice areas are not differentiators because all firms have them or can acquire them. As Dan Katz states in his article, *The MIT School of Law? A Perspective on Legal Education in the 21st Century*, law firms primarily compete on one dimension—substantive legal expertise.³⁴ The concept of legal precedent discourages innovation in the application of substantive legal expertise, at least until, for example, the arrival of new regulatory law (e.g., the Dodd-Frank Act)³⁵ or a groundbreaking judicial decision³⁶ that creates new

³² See GEOFFREY A. MOORE, DEALING WITH DARWIN: HOW GREAT COMPANIES INNOVATE AT EVERY PHASE OF THEIR EVOLUTION 5–7 (2005).

³³ *Id.* at 5.

³⁴ Katz, *supra* note 2, at 1452.

³⁵ Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376–2223 (2010) (codified at 12 U.S.C. §§ 5301–5641 (2012)). The Dodd-Frank Act’s purpose is “[t]o promote the financial stability of the United States by improving accountability and transparency in the financial system.” Pmbl., 124 Stat. at 1376.

law. Even when new areas of law arise, such as cyber security and digital privacy, the Am Law firms quickly acquire professionals in those fields to maintain their full-service offerings.

Accordingly, to deploy a differentiation innovation strategy, firms must focus on factors other than substantive legal expertise. For example, in 1986, John Quinn created what has evolved into the biggest all-litigation firm in the nation.³⁷ At that time, the dominant model was to expand practice areas until a firm eventually reached the full-service level.³⁸ By breaking from the herd and claiming to be experts in litigation only, Quinn Emanuel Urquhart & Sullivan, LLP (Quinn Emanuel) became one of the most profitable firms in the Am Law 100.³⁹ Adding to Quinn Emanuel's success, and equally innovative, is that it does not represent financial institutions, which leaves it free to sue financial institutions in the large and profitable cases that continue to arise from the financial crisis of 2008.⁴⁰ No firm has yet dared to follow Quinn Emanuel's path of maintaining a pure litigation practice and, in doing so, penetrating the Am Law 100.⁴¹

Similarly, in 2002, Orrick, Herrington & Sutcliffe LLP (Orrick) migrated its back office work to a low-cost "global operations center" in Wheeling, West Virginia.⁴² Although back office migration is not a new concept, Orrick was the first large, U.S.-based law firm to so thoroughly embrace the concept; Orrick grew from 70 professionals in 2002—mostly IT, accounting, and operations—to 300 employees—including 47 career associate attorneys—by 2013.⁴³ A

³⁶ See, e.g., *Moran v. Household Int'l, Inc.*, 500 A.2d 1346 (Del. 1985) (upholding the shareholders' rights plan, a hostile takeover defensive mechanism that rose to prominence under the more familiar moniker: the "poison pill"). In the 1980s, a period defined by corporate raiders, the poison pill was an innovation by Martin Lipton of Wachtell, Lipton, Rosen & Katz. Two-thirds of public companies incorporated a poison pill provision into their bylaws by the early 2000s, and law school corporations courses included it in their curricula. See Susan Beck et al., *The Top 50 Big Law Innovators of the Last 50 Years*, AM. LAW., Aug. 2013, at 27, 42.

³⁷ See Beck et al., *supra* note 36, at 28.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.* at 28–29 (Similarly, King & Wood stands as the result of the first ever merger between U.S. and Chinese law firms. The intent of the merger was to effectively represent the increasing number of Chinese companies venturing abroad. Since 1993, most other leading Chinese law firms have not followed King & Wood's strategy.).

⁴² *Id.* at 30.

⁴³ *Id.*

few firms, like Wilmer Cutler Pickering Hale and Dorr LLP, as well as Pillsbury Winthrop Shaw Pittman LLP, have since followed suit but, on the whole, not many firms have tried.⁴⁴ By reducing overhead and optimizing back office work, these firms are able to free up resources and increase profit margins, effectively bringing more capital to the table to compete. A differentiation strategy involves boldly going where no firm has gone before—and where no or few firms are willing or able to go.

B. Innovation as Defense: Neutralization

In addition to differentiating from competitors, innovation can neutralize a competitor in order to minimize loss of market share.⁴⁵ The goal of a neutralization innovation strategy is to eliminate competitor differentiation by either catching up to superior competitor performance or to a market standard that a company has thus far failed to reach. The innovation of car cup holders provides an interesting case study.

Before 1950, car manufacturers made little attempt to accommodate multitasking while driving, such as driving and drinking a beverage.⁴⁶ As time progressed, the increasing popularity of drive-thrus and drive-ins improved cup holder usefulness.⁴⁷ Chrysler changed the game in 1983 when it invented the minivan, further increasing public awareness of cup holder utility.⁴⁸ Momentum for cup holders finally culminated with *Liebeck v. McDonald's Restaurants*,⁴⁹ in which seventy-nine-year-old Stella Liebeck sued McDonald's restaurant for damages after spilling 180-degree coffee on her lap in a stationary car.⁵⁰ The spill caused Ms. Liebeck third-degree burns, and the jury awarded her \$2.7 million in

⁴⁴ See *id.*

⁴⁵ See MOORE, *supra* note 32, at 6.

⁴⁶ Sam Dean, *The History of the Car Cup Holder*, BON APPÉTIT (Feb. 18, 2013, 11:00 AM), <http://www.bonappetit.com/trends/article/the-history-of-the-car-cup-holder>.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ No. CV-93-02419, 1995 WL 360309, at *1 (N.M. Dist. Aug. 18, 1994), *vacated sub nom.* *Liebeck v. Restaurants*, No. CV-93-02419, 1994 WL 16777704 (N.M. Dist. Nov. 28, 1994).

⁵⁰ See Neal Rubin, *Holding Its Own: The Humble Cup Holder Keeps Its Grip*, DETROIT NEWS (Jan. 14, 2015, 11:46 PM), <http://www.detroitnews.com/story/opinion/columnists/neal-rubin/2015/01/14/detroit-auto-show-naia-porsche-boxster/21789607/>; see also *Liebeck*, 1995 WL 360309, at *1.

punitive damages, which was reduced to \$640,000 on appeal.⁵¹ Since that time, cup holders have not only become customer requirements, but have become selection criteria for more than one-third of car buyers.⁵² At this point in the automobile industry's evolution, the absence of cup holders can cause financial loss instead of the presence of cup holders causing financial growth. That is the essence of innovation as a defensive or neutralizing strategy—innovate to defuse a competitor, service, or product's impact on your market position.

C. Innovation to Increase Productivity

A third goal of innovation is to improve productivity and reduce costs.⁵³ In this sense, the innovator's intent is not to affect market outcomes, like differentiating from competitors or neutralizing competitor differentiation, but to achieve desired market outcomes at a reduced cost.⁵⁴ The remainder of this Article focuses on this strategy and its primary innovation type—operational excellence.

Normally, productivity improvement is designed primarily to reduce costs to companies and clients. In the legal industry, however, firms so rarely focus on productivity improvement, as opposed to substantive legal expertise, that operational excellence can both reduce costs and differentiate, as Seyfarth Shaw has done with *SeyfarthLean*.⁵⁵ In the not-too-distant future, due to market demand,

⁵¹ *Liebeck v. Restaurants*, No. CV-93-02419, 1994 WL 16777706 (N.M. Dist. Sept. 16, 1994).

⁵² See *Cupholders Sell Cars*, WARDSAUTO (Aug. 1, 2004), <http://wardsauto.com/news-amp-analysis/cupholders-sell-cars>; see also Deborah Austin, *Today's Hottest Automotive Feature: Ideal Cup Holder?*, INDUSTRYWEEK (Jan. 13, 2005), <http://www.industryweek.com/archive/todays-hottest-automotive-feature-ideal-cup-holder>; Janice, *How Big Is Your Cupholder?*, GIGABITING (July 27, 2012, 2:17 PM), <http://gigabiting.com/how-big-is-your-cupholder/> (discussing an Autobytel survey that found that car buyers would switch car brands because of a difference in or dissatisfaction with a cup holder (citation omitted)).

⁵³ MOORE, *supra* note 32, at 7 (This definition presents a problem for law firms that, as a matter of industry standard, measure productivity as average billable hours per attorney.); see also Press, *A Chasm with Consequences*, *supra* note 17, at 64. Firms measure their productivity based on profits per partner—billable hours times hourly rates equals gross revenue, which is then divided amongst the partnership. *Id.* But this financial structure reveals nothing about the value of the attorneys' work and its ability to meet the definition of value-adding—i.e., the customer is willing to pay, the work is done right the first time, and the work changed the paid-for product or service in some manner.

⁵⁴ See MOORE, *supra* note 32, at 8.

⁵⁵ Elaine Schmidt, *Law and Order: 64-Year-Old Law Firm Seyfarth Shaw Adapts Six Sigma to the Delivery and Billing of Legal Services*, ISIXSIGMA, Dec. 2009, at 26,

legal industry maturity, and the availability of knowledge, methods, models, and best practices, law firms will compete on operational excellence capabilities much the same way that car manufacturers compete on cup holders. In other words, law firms without operational excellence capabilities will lose market share.

Productivity improvement is also essential to differentiation and neutralization strategies because it frees necessary resources to engage in more value-added work. Geoffrey Moore aptly states:

Productivity improvement is essential to evolutionary adaptation because it frees resources that other forms of innovation can use. It requires significant innovation focused largely on reengineering existing processes based on either a better understanding of their dynamics or a better set of tools. The focus is on resource reclamation to ensure that the project pays for itself, and this is normally accomplished by reducing budget and head count.⁵⁶

Accordingly, for law firms that choose to evolve, operational excellence capabilities are essential.

IV

MANAGING INNOVATION IN A MATURE MARKET

All markets mature, and the market for legal services is no exception. Moore divides market maturity into four stages: the Growth Stage, the Mature Stage, the Declining Stage, and the End of Life Stage.⁵⁷ The Growth Stage is marked by double-digit growth rates and healthy profit margins.⁵⁸ The Mature Stage is marked by flat growth and increasing commoditization.⁵⁹ During the Declining Stage, companies experience increasing difficulty finding opportunities to innovate, and even market dominators have difficulty creating attractive returns.⁶⁰ The End of Life Stage speaks for itself.⁶¹

The legal industry is in the Mature Stage, as evidenced by flat financial performance and an increasing trend toward commoditization. In 2014, the Am Law 100 registered flat performance on profits per partner (PPP), up by just 0.2%, and

available at http://www.seyfarth.com/dir_docs/brochure/49a50a21-9eeb-4dc4-a63e-757284677433_brochure3.pdf.

⁵⁶ MOORE, *supra* note 32, at 7.

⁵⁷ *Id.* at 14, 18–20.

⁵⁸ *Id.* at 18.

⁵⁹ *Id.*

⁶⁰ *Id.* at 19.

⁶¹ *See id.*

revenue per lawyer (RPL), down by 0.4%—two key performance indicators for law firms.⁶² Since 2008, RPL in the Am Law 100 beat the rate of inflation by only 0.005%, while average PPP beat inflation by 8%.⁶³ This performance is far weaker than the previous four years in which, from 2004 to 2007, average RPL beat inflation by 5% and average PPP beat inflation by 24%.⁶⁴ The Am Law 200⁶⁵ experienced similarly flat performance. Although RPL grew by 2.5%, average PPP grew by only 0.7% (and only after the total number of Am Law 200 equity partners dropped by 30 lawyers).⁶⁶

Typically, when we hear the word *innovation*, it is being used in the context of its most dramatic form—disruptive innovation—like the invention of the light bulb. But disruptive innovation typically occurs during the Growth Stage (i.e., the very beginning) of a market category life cycle, and it creates a new market where none previously existed (e.g., smartphones). Innovation, however, lives across all stages of a market’s life cycle, appearing in different forms based on the market’s stage of maturity.⁶⁷ During the Mature Stage, companies achieve growth not by category creation or expansion as the market is too saturated for that, but by increasing yield from current clients or by acquiring new clients from competitors.⁶⁸ Accordingly,

⁶² Press, *The Super Rich Get Richer*, *supra* note 5, at 130.

⁶³ *Id.* at 132.

⁶⁴ *Id.*

⁶⁵ In this case, Am Law 200 means top-grossing firms ranked 101 to 200.

⁶⁶ Press, *Punching Above Their Weight*, *supra* note 5, at 68.

⁶⁷ For a thorough analysis of innovation types across the maturity life cycle, see MICHAEL TREACY & FRED WIERSEMA, *THE DISCIPLINE OF MARKET LEADERS: CHOOSE YOUR CUSTOMERS, NARROW YOUR FOCUS, DOMINATE YOUR MARKET* (1995); MOORE, *supra* note 32, at 58–72.

⁶⁸ Moore goes on to indicate that companies can exist in the Mature Market in perpetuity, “experiencing round after round of renewal [and] renovation,” but only in the “continued absence of viable disruptive alternatives.” MOORE, *supra* note 32, at 19; *see also* Beck et al., *supra* note 36, at 33–42 (providing an assessment of disruptive innovation in the legal industry). To be clear, a Mature Market does not immediately, or even necessarily, lead to decline or demise, although for interesting reading on the death of Big Law, *see generally* MITCHELL KOWALSKI, *AVOIDING EXTINCTION: REMAINING LEGAL SERVICES FOR THE 21ST CENTURY* (2012); BRUCE MACEWEN, *GROWTH IS DEAD: NOW WHAT? LAW FIRMS ON THE BRINK* (2nd prt. 2013); RICHARD SUSSKIND, *THE END OF LAWYERS? RETHINKING THE NATURE OF LEGAL SERVICES* (2010); RICHARD SUSSKIND, *TOMORROW’S LAWYERS: AN INTRODUCTION TO YOUR FUTURE* (2013); Daniel Martin Katz, *Quantitative Legal Prediction—or—How I Learned to Stop Worrying and Start Preparing for the Data Driven Future of the Legal Services Industry*, 62 EMORY L.J. 909 (2013); Bruce H. Kobayashi & Larry E. Ribstein, *Law’s Information Revolution*, 53 ARIZ. L. REV. 1169 (2011); Larry E. Ribstein, *Delawyerizing the Corporation*, 2012 WIS. L. REV.

operational excellence is an optimal innovation zone for mature markets because it focuses on giving the client more value for less money. To do so and remain profitable, firms must focus on developing efficient processes centered around customer value.

V

DEFINING VALUE: REDUCTION IN PURE NON-VALUE-ADDING WORK

Price is what you pay. Value is what you get.

— Warren Buffet

Clients define value, and each client may define value differently. At its core, operational excellence is about delivering greater value to clients. When clients push for lower fees, they are making a statement about the value of legal services compared to the price of those services. It is not necessarily that clients want cheaper legal services; they just want more value for their money. Value means furthering the client's purpose by generating output that is considered more valuable by the client than the inputs consumed in producing it.⁶⁹ For a legal service deliverable to satisfy the definition of value, each activity of which it is comprised must, for the most part, meet three criteria: (1) the client must be willing to pay full price for the activity, (2) the activity must be done right the first time, and (3) the activity must change the product or service in some meaningful way.⁷⁰ These are value-adding activities. Everything else is non-value adding (NVA) and should be minimized or eliminated.⁷¹ Process

305; Larry E. Ribstein, *The Death of Big Law*, 2010 WIS. L. REV. 749; NEIL RICKMAN & JAMES M. ANDERSON, INNOVATIONS IN THE PROVISION OF LEGAL SERVICES IN THE UNITED STATES: AN OVERVIEW FOR POLICYMAKERS (Kauffman-Rand Inst. for Entrepreneurship Pub. Policy 2011), available at http://www.rand.org/content/dam/rand/pubs/occasional_papers/2011/RAND_OP354.pdf; Katz, *supra* note 2.

⁶⁹ See *Value Added Work*, BUSINESSDICTIONARY.COM, <http://www.businessdictionary.com/definition/value-added-work.html> (last visited Feb. 25, 2015).

⁷⁰ GEORGE ECKES, SIX SIGMA FOR EVERYONE 50 (2003).

⁷¹ NVA activities can be subdivided into two categories: Business Non-Value Added (BNVA) and Pure Non-Value Added (PNVA). BNVA activities do not add value to the client but are necessary. See *Business Non Value Added*, MANUFACTURING TERMS, [http://www.manufacturingterms.com/Business-Non-Value-Added-\(BNVA\).html](http://www.manufacturingterms.com/Business-Non-Value-Added-(BNVA).html) (last visited Mar. 31, 2015). Examples may include: docket scheduling, document management plans, and anything else that does not immediately appear valuable to a client. BNVA activities should be managed but not eliminated.

In contrast, PNVA activities are pure waste because they do not add value and are not actually necessary to conduct business. Cf. ECKES, *supra* note 70, at 50–53 (stating that subprocess mapping reveals inefficient, non-value-added steps that teams should attempt to change or remove); BEAU KEYTE & DREW A. LOCHER, THE COMPLETE LEAN ENTERPRISE: VALUE STREAM MAPPING FOR ADMINISTRATIVE AND OFFICE PROCESSES,

improvement, a category of operational excellence, is all about managing, minimizing, and eliminating NVA activities.⁷²

Many will agree that “[t]he only way lawyers can maintain or improve the quality of their work while minimizing the [cost] to their clients is to make operational improvements in how the work is done.”⁷³ Operational improvements result from operational excellence. Lawyers who care about delivering and maintaining client value care as much about managing their processes as they do about accurate interpretation of substantive law. In fact, with the right process-based tools, even an inexperienced lawyer can perform above-average legal work.⁷⁴

at xi (2004) (indicating that value stream mapping enables users to “see administrative waste, identify its sources, and develop a future state that eliminates it”). PNVA activities may include: printing, scanning and subsequently e-mailing documents, reworking and reviewing, editing standard forms manually instead of using document assembly software, and searching a poorly structured document management system for forms and examples. PNVA activities should be changed or eliminated.

⁷² Many industries have already adopted process improvement methodologies. The legal industry holds the distinction of being one of the last industries to do so. *See* Dan Devroye & Andy Eichfeld, *Operations Practice: Taming Demand Variability in Back-Office Services*, MCKINSEY Q., Sept. 2009, available at http://www.mckinsey.com/insights/operations/taming_demand_variability_in_back-office_services (back office processing and sales); Stephen J. Doig et al., *The Hidden Value in Airline Operations*, MCKINSEY Q., Nov. 2003, available at http://www.mckinsey.com/insights/travel_transportation/the_hidden_value_in_airline_operations (airline industry); Anthony R. Goland et al., *First National Toyota*, MCKINSEY Q., Nov. 1998, available at http://www.mckinsey.com/insights/financial_services/first_national_toyota (automotive industry); Paul D. Mango & Louis A. Shapiro, *Hospitals Get Serious About Operations*, MCKINSEY Q., May 2001, available at http://www.mckinsey.com/insights/health_systems_and_services/hospitals_get_serious_about_operations (health care industry); John R. McPherson & Adrian V. Mitchell, *Lean Cuisine: Proven Techniques from Manufacturing Might Be the Recipe for Improving Productivity in Restaurants*, MCKINSEY Q., Feb. 2005, available at http://www.mckinsey.com/insights/operations/lean_cuisine (restaurant industry); Marc Onetto, *When Toyota Met E-Commerce: Lean at Amazon*, MCKINSEY Q., Feb. 2014, available at http://www.mckinsey.com/insights/operations/when_toyota_met_e-commerce_lean_at_amazon (e-commerce industry). For process improvement generally, see also MIKE GEORGE ET AL., WHAT IS LEAN SIX SIGMA? (2004); VALARIE A. ZEITHAML ET AL., DELIVERING QUALITY SERVICE: BALANCING CUSTOMER PERCEPTIONS AND EXPECTATIONS (1990); David A. Garvin, *Competing on the Eight Dimensions of Quality*, HARV. BUS. REV., Nov. 1987, available at <https://hbr.org/1987/11/competing-on-the-eight-dimensions-of-quality/ar/1>.

⁷³ JOHN E. MURDOCK III & NANCY LEA HYER, *LEAN LAWYERING 2* (2012), available at http://www.lawpracticeoperations.com/Lean_Lawyer_as_of_1_4_13__2_.pdf.

⁷⁴ *Id.* at 7–8.

VI

THE OPERATIONAL EXCELLENCE LANDSCAPE: LEGAL PROCESS
OUTSOURCING, LEGAL SERVICE INTEGRATION, AND PROCESS
IMPROVEMENT

The operational excellence innovation type can be executed in three ways: value engineering, integration, and process improvement. For law firms, that can translate into legal process outsourcing (LPO), legal service integration, and process improvement. This Part briefly describes the operational excellence landscape, and the remainder of the Article focuses on process improvement and the DMAIC problem-solving framework.

A. Legal Process Outsourcing

LPO means outsourcing legal work to lower cost legal professionals without reducing quality. To deploy this method effectively requires scalability and good project management. For law firms, this could mean outsourcing standardizable, junior associate legal work to low-cost onshore or offshore service providers.⁷⁵ It may also include outsourcing specialized legal work to legal analytics experts, like the “law machine,” Lex Machina, or Katz with Computational Legal Studies.⁷⁶

B. Legal Service Integration

Legal service integration means taking a number of disparate or complex elements and integrating them into a single, manageable system.⁷⁷ In practical terms, integration provides a management layer that will take care of all the details while keeping things consistent with the system as a whole. Integration work can serve to bring the complexity of target legal issues under the singular management of one firm. For integration to succeed, it must: (1) shield the client from complexity, (2) deploy at relatively low cost, (3) generate ongoing cost savings, and (4) lead to future enhancements.

⁷⁵ Radiant Law, a U.K. firm, follows this model. See Alex Hamilton & Kevin Colangelo, *Making LPO Work*, OUTSOURCE MAG. (July 3, 2012), <http://outsourcemagazine.co.uk/making-lpo-work/>.

⁷⁶ See Tam Harbert, *Supercharging Patent Lawyers with AI*, IEEE SPECTRUM (Oct. 30, 2013, 2:00 PM), <http://spectrum.ieee.org/geek-life/profiles/supercharging-patent-lawyers-with-ai>; see also COMPUTATIONAL LEGAL STUDIES, <http://computationallegalstudies.com/> (last visited Feb. 25, 2015).

⁷⁷ See Harbert, *supra* note 76.

C. Legal Process Improvement

Legal process improvement is about reducing cost to the client and improving profit margins to the firm. Legal process improvement is achieved by managing and eliminating NVA activities from all of the enabling processes that create, deliver, and support a product or service and by eliminating error or defects.⁷⁸ Seyfarth Shaw was an early adopter of legal process improvement. On the path to increased efficiency, typically referred to as a “lean journey,” Seyfarth Shaw, like many organizations that emphasize process improvement, leveraged the DMAIC roadmap to guide its process improvement projects.⁷⁹

VII

DMAIC: THE ROADMAP FOR PROCESS IMPROVEMENT SUCCESS

A journey of one thousand miles begins with a single step.

— Lao Tsu

All travelers embarking on a journey into unfamiliar territory would be wise to follow a map to ensure they arrive at their intended destination. The map is not the territory itself, but simply an explanation of certain aspects of the territory. But imagine that you wanted to drive from Chicago to New Orleans, but you had no map. You might reach New Orleans, but you probably would not have taken the most efficient route. Now imagine that you had the wrong map. You would eventually arrive somewhere, but it is unlikely that “somewhere” would be your intended destination.

DMAIC is a prominent process improvement map or framework that accompanies the Lean and Six Sigma Bodies of Knowledge. Recall that DMAIC is an acronym that stands for Define, Measure, Analyze, Improve, and Control; each letter represents a different phase of a process improvement project. Each phase calls for different emphasis, different activities, and different tools. For law firms, the journey toward process improvement should begin with a strong understanding of the DMAIC framework.

⁷⁸ The term “waste” includes: errors, unnecessary production, unnecessary waiting, and over-processing.

⁷⁹ Schmidt, *supra* note 55.

A. *Origins of DMAIC*

DMAIC was originally inspired by W. Edwards Deming's Plan-Do-Check-Act Cycle and formalized by Motorola in the 1980s as the framework for the process improvement methodology, Six Sigma.⁸⁰ Six Sigma was developed to improve quality and organizational performance by systematically identifying sources of variation, in both manufacturing and support function processes, and to drive variation out of the process.⁸¹ The Sigma level of a process is a universal metric that describes the amount of variation a process can exhibit and still meet client needs.⁸² Jack Welch popularized Six Sigma when he made it a central element of General Electric's strategy.⁸³ The application of the DMAIC framework to thousands of problems across many manufacturing and service industries has caused it to evolve significantly into a generic problem-solving framework that has been integrated into additional Bodies of Knowledge such as Lean.⁸⁴

B. *Utility of DMAIC*

DMAIC encourages practitioners to gain clarity about the nature of problems and their causes prior to implementing solutions. By doing so, the framework counteracts the temptation to "over manage" a process and react to individual data points of lagging performance metrics. Such over-management actually decreases performance despite the best of intentions. The DMAIC framework is driven by data (i.e., performance metrics, such as number of incomplete or inaccurate process deliverables, number of billing mistakes, days of billing delays, resources consumed by a process, etc.) and is most useful where such data is easily accessible. Where no reliable information about the performance of a business is available, process improvement projects take longer because practitioners have to put

⁸⁰ ECKES, *supra* note 70, at 2–5 (Six Sigma is a statistical term that refers to the number of defective products manufactured per million products.).

⁸¹ *Id.* at 5–7; see also MIKEL J. HARRY, *THE NATURE OF SIX SIGMA QUALITY* (1997).

⁸² ECKES, *supra* note 70, at 4–6.

⁸³ *Id.* at 8–9, 13.

⁸⁴ Lean and Six Sigma complement each other. Lean reduces complexity, eliminates pure NVA activities, and improves cycle times; Six Sigma emphasizes client value, is data driven, and creates an environment to manage and sustain results. Lean Six Sigma incorporates both Lean and Six Sigma principles. According to some process improvement experts, when used together, Lean and Six Sigma "can solve 90 percent of the problems faced by organizations today." Lann Wasson, *Lean Six Sigma: Mastering the Art of Service Delivery*, ILTA WHITE PAPER, Mar. 2010, at 24, 27–28.

the necessary measurement systems in place prior to improving performance. Such a circumstance indicates that an organization is not yet ready for systemic, enterprise-wide performance improvement.⁸⁵ In our experience, this obstacle is particularly prevalent in law firms. Fortunately, Lean and Six Sigma include qualitative tools that help identify performance indicators and performance problems that allow practitioners to build data collection mechanisms into relevant processes in which no such processes previously existed.

More important than the availability of data is the availability of “accurate” data for process improvement project success. Often the analysis finds that one of the key contributors of poor process outputs is poor process inputs. In other words, “garbage in, garbage out.” Insufficient information about a business leads to poor contract formation, incorrect routing information leads to rejected wire transfers, and insufficient training of process owners leads to poor performance. Hence, the execution of process improvement projects, more often than not, leads to the need to transcend organizational boundaries and address problems at their root, even if the root is to be found in an altogether different process or department. Therefore, widespread buy-in and support from senior leaders in the organization is critical to the success of DMAIC projects.⁸⁶ This is one of the reasons that General Electric’s Six Sigma deployment, until today, is one of the most successful deployments in history, as it was driven from the very top by Jack Welch.

C. Five Phases of DMAIC

The phases of the DMAIC framework are designed to achieve and demonstrate sustainable improvements by following the roadmap below:

- Define the problem for resolution by identifying the process that exhibits the problem, the pain this problem inflicts on the business and clients, and a baseline and desired target performance.

⁸⁵ In other words, if I am continuously late on billing my clients but I do not know how late I am, how often I am late, the dollar amount of the outstanding receivables, or where the lateness originates from, regardless of my efforts, I will never be able to conclude that I have improved the situation sustainably.

⁸⁶ Senior organization leaders who pave the way and provide top-down support for process improvement projects are called “Project Sponsors” or “Project Champions.”

- Create the ability to measure the problem as well as factors suspected to be causing the problem.
- Analyze the possible causes of the problem to determine which causes are the key contributors.
- Improve the process by eliminating the key contributors and making changes to the process, the tools used in the process, and the resources or skill sets deployed in the process. Ideally, this approach will make recurrence of the cause impossible rather than gradually testing the problem out of the process through quality control and NVA review steps. This is called “building quality into the process.”
- Control the process going forward such that process owners recognize when the causes of the problem return.⁸⁷

The control phase is particularly important in process improvement because it encourages building process improvement principles into daily routines. The control phase advocates changing the way process owners look at and react to performance metrics, with an eye toward continuous improvement. To foster continuous improvement, daily process management ultimately draws to the surface information needed to trigger new improvement efforts. This is why leadership must fully engage in process improvement deployment. The best-executed improvement efforts may not lead to sustained improvement if leadership and management counteract improvements achieved through contrary daily management and decision making.

D. Applying the DMAIC Framework

Quality, cost, and time are the fundamental performance dimensions the DMAIC framework aims to improve. Whether applying the Lean or Six Sigma Body of Knowledge, DMAIC is most commonly applied to improve and manage processes that produce a distinct output. Document production, interrogatories, disclosures, and briefs, as well as billing invoices and docket schedules, are all examples of distinct process outputs. DMAIC is typically targeted toward the output failing to meet internal or external client

⁸⁷ See MICHAEL L. GEORGE ET AL., *THE LEAN SIX SIGMA POCKET TOOLBOOK: A QUICK REFERENCE GUIDE TO NEARLY 100 TOOLS FOR IMPROVING PROCESS QUALITY, SPEED, AND COMPLEXITY* 1–19 (2005); see also ECKES, *supra* note 70, at 29–65.

requirements and expectations (quality), delays in production (time), or excessive cost in generating the outputs (cost).⁸⁸

Regardless of the performance dimension, application of DMAIC is always a learning process that applies Lean or Six Sigma tools to incrementally generate more knowledge about the target process's behavior. During the stages described by DMAIC, the practitioner seeks to:

- Define: What is the performance problem, how big is it, and what is the process that generates the problem?
- Measure: How does the process behave over time, and are there any applicable segmentation factors?
- Analyze: Why does the process behave this way, and what parameters and settings make it behave this way?
- Improve: Does the process behavior change if we implement certain changes?
- Control: How can we maintain the desired process behavior by monitoring and managing the right leading performance metrics?

Application of DMAIC ultimately drives practitioners to understand interactions between process parameters. Interaction between process parameters is like interaction between different medications taken concurrently—two lifesaving medications can be deadly when taken in combination. Accordingly, process parameters can interact with each other and lead to undesired results. Each phase of DMAIC drives a greater level of understanding about these interactions. During the measure phase, practitioners develop knowledge about the factors impacting process performance. During the analyze phase, practitioners seek to understand whether and how such factors interact with each other and to prevent unexpected effects of changes implemented during the improve phase.

E. Tools of the Trade

Process improvement practitioners bring an arsenal of tools to a project that enables them to analyze the relationship between the parameters driving the process and the performance dimension they

⁸⁸ See ECKES, *supra* note 70, at 29–65; see also MICHELLE FUJIMOTO & ERIC D. BROWN, *LEAN SIX SIGMA: WHAT YOU DON'T KNOW CAN HURT YOU*, available at http://www.iadcmeetings.mobi/assets/1/7/15.1_-_fujimoto_-_six_sigma.pdf; THOMAS PYZDEK, *THE SIX SIGMA PROJECT PLANNER: A STEP-BY-STEP GUIDE TO LEADING A SIX SIGMA PROJECT THROUGH DMAIC* 95–164 (2003).

seek to improve. Not every tool is necessary for every project. In fact, law firms do not need an army of statisticians to make process improvement work. “‘Ordinary people’ [including lawyers] can be trained to conduct Six Sigma projects successfully.”⁸⁹

In a 2009 survey of Lean Six Sigma practitioners, Michael Marx discovered that in actual practice, the only tools that process improvement practitioners use on every project are process maps, project charters, and brainstorming.⁹⁰ A few more tools are considered tools of choice: Pareto charts (identifying which twenty percent of factors are causing eighty percent of process defects), Five Whys (a root cause analysis exercise), basic statistics, and graphical charts.⁹¹ In service industries, such as legal practice, practitioners also use specific tools to enhance client empathy and define quality and value from the client’s perspective. These tools are Voice of the Customer (an analysis of client survey results), Stakeholder Analysis (analysis of primary parties impacted by the process), and SIPOC maps (a tool that identifies a process’s suppliers, inputs, process steps, outputs, and internal/external clients).⁹²

We take the position that any lawyer who is supported by a system of tools that automates tasks, or otherwise assists the lawyer, can have an above-average capacity for legal work.⁹³ Logically, a lawyer of above-average skill, supported by the same tools, would have a superior capacity for legal work.

F. Overcoming Challenges to Adopting Process Improvement Initiatives

Changing behavior is not a simple task. Law firms pursuing enterprise-wide process improvement implementation should do so strategically, with an eye toward what challenges to expect and how to overcome those challenges.

⁸⁹ Wasson, *supra* note 84, at 28 (quoting Ronald Snee). Snee is a leading Lean Six Sigma practitioner and former DuPont professional. *See id.* at 25.

⁹⁰ *Id.* at 28. This article cites other useful sources. *See, e.g.*, Michael Marx, *Lean: Benefits and Challenges*, *SIXSIGMA MAG.*, Sept./Oct. 2009; GEORGE ET AL., *supra* note 87.

⁹¹ Wasson, *supra* note 84, at 28.

⁹² *Id.*

⁹³ MURDOCK & HYER, *supra* note 73, at 7–8.

1. Challenge #1: Applying a Manufacturing Framework to a Nonmanufacturing Environment

Though DMAIC has demonstrated success in many industries and business areas, the legal industry has maintained a greater resistance to improvement than others.⁹⁴ We typically observe that owners of processes that do not generate tangible deliverables—like some legal processes—demonstrate significant resistance to process improvement and require experienced practitioners to demonstrate the value of the systematic DMAIC approach. Examples include the R&D process or other processes that generate knowledge as their primary output. Once resisters recognize that knowledge can be treated as a tangible output, they can adopt and apply process improvement principles in their entirety. In that context, activities that do not increase the knowledge about a product, process, or client would henceforth be defined as a form of NVA and managed or eliminated accordingly.

For example, developing a product typically requires qualification tests that demonstrate the product works. A failed test requires a rework of the product's design or manufacturing process. Traditional lean concepts would consider such tests NVA, as they do not change the form or function of the product and failed tests that require a rework would be a form of waste. With knowledge being the prime deliverable of the process, however, the experiment generating the least expected result has generated the maximum amount of information. Thus, a test the product passes is the test that did not add as much value because it generated an expected result and was purely confirmatory. Conversely, when conducting legal research to determine whether any case, statute, or regulation would render a particular litigation strategy vulnerable to attack turns up empty, the research adds value because the resulting knowledge supports the strategy for which the client has paid.

2. Challenge #2: Fear of Change or Obsolescence

The difficulties in applying process improvement concepts are the same in the manufacturing industry as they are in all other industries, including legal. What is generically labeled as a “fear of change” is actually much more deeply rooted in a fear of being reduced,

⁹⁴ See Wasson, *supra* note 84, at 29–30.

diminished, commoditized, and made replaceable or redundant.⁹⁵ Such fears are commonplace where any change occurs.

A common defense to the threat of change is the declaration that one's service is not a process and neither measurable nor manageable, but that it depends on education, experience, relationships, or intuition.⁹⁶ The best way to deal with such fears is to engage the affected parties in the change process, provide incentives for supporting the new process, and provide pathways for all affected parties to benefit from both the improvement journey and the outcomes. Education and skills training play an important role in this transition. Equally important is the recognition that cost reduction and efficiency improvement are only one side of the business equation, while new market opportunities, product and service offerings, and increased customer satisfaction are growth opportunities that require increased efficiencies to be harvested in an increasingly competitive marketplace.⁹⁷

3. Challenge #3: Environment

Where there is no measure for the outcome or result of a process, neither DMAIC nor any other process improvement framework can yield verifiable improvements. “We don't need measures, we will know when it gets better” is an environment in which many improvement activities may be conducted, none of which will be able to verify that anything has actually improved. As Chris Argyris points out in *Teaching Smart People How to Learn*, “[p]rofessionals embody the learning dilemma: they are enthusiastic about continuous improvement—and often the biggest obstacle to its success.”⁹⁸ Because professionals are almost always successful at what they do, they rarely experience failure. “[B]ecause they have rarely failed, they

⁹⁵ As Moore states:

One place where many companies need to improve is in repurposing the resources that are freed up. Too often management resorts to layoffs and write-offs, disrupting both the workforce and the hosting social environment and sowing seeds of distrust and misalignment. This is a highly expensive and inefficient approach, and finding sounder alternatives is key to sustaining innovative performance.

MOORE, *supra* note 32, at 7.

⁹⁶ See Wasson, *supra* note 84, at 30–31.

⁹⁷ For more on fear and change, see JOHN P. KOTTER, *LEADING CHANGE* (1996).

⁹⁸ Chris Argyris, *Teaching Smart People How to Learn*, HARV. BUS. REV., May/June 1991, at 99, 101, available at <https://hbr.org/1991/05/teaching-smart-people-how-to-learn/ar/1>.

have never learned how to learn from failure.”⁹⁹ So whenever their strategies go wrong, they become defensive, screen out criticism, and put the blame on anyone but themselves.¹⁰⁰ “In short, their ability to learn shuts down precisely at the moment they need it the most.”¹⁰¹

Learning from failure is a key element of any improvement framework. At Toyota, not only do workers pull the andon cord to notify their superiors of a problem in the car assembly, management gets particularly concerned when the andon cord is not pulled often enough.¹⁰² The frequency of andon pulls is a metric for the pace at which they identify problems and develop solutions, i.e., improve the process.¹⁰³ Similarly, improvement projects start by identifying and describing a problem and its magnitude, rather than by proposing the solution to fix the problem. Traditionally, lawyers are not trained or rewarded for surfacing problems in their own processes. Lawyers pride themselves on knowing the solutions, and it is a zero-sum game. This perspective is embedded in typical law firm culture for both lawyers and non-lawyers alike.

Argyris coined the term “double-loop learning” and recommends productive reasoning to tackle such challenges in professional environments.¹⁰⁴ At the same time, he leaves no doubt that an environment for success must embrace a new attitude toward the concept of failure that transcends the entire organization, including the standards upon which professional performance evaluations are based.

Toyota’s leadership has embraced the fact that when a worker makes a mistake, his superior is primarily to blame for failing to provide the tools, conditions, and skills required to perform the job

⁹⁹ *Id.* at 100.

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² JEFFREY K. LIKER, *THE TOYOTA WAY: 14 MANAGEMENT PRINCIPLES FROM THE WORLD’S GREATEST MANUFACTURER* 130–31 (2004). “Workers pull the [andon] cord to alert co-workers when a problem crops up so they can get help. . . . The cords are essential to Toyota’s concept of built-in quality, or catching problems before they head down the line and are cemented in place in a completed vehicle.” Hans Greimel, *Toyota Cutting the Fabled Andon Cord, Symbol of Toyota Way*, *AUTOMOTIVE NEWS* (Aug. 5, 2014, 1:38 p.m.), <http://www.auto-news.com/article/20140805/OEM01/140809892/toyota-cutting-the-fabled-andon-cord-symbol-of-toyota-way>.

¹⁰³ See LIKER, *supra* note 102.

¹⁰⁴ Argyris, *Teaching Smart People How to Learn*, *supra* note 98, at 100; see also Chris Argyris, *Double-Loop Learning in Organizations*, *HARV. BUS. REV.*, Sept./Oct. 1997, available at <https://hbr.org/1977/09/double-loop-learning-in-organizations>.

flawlessly. As Deming's 85/15 Rule states, 85% of the problem in any organization is system-related and 15% is worker-related.¹⁰⁵ "Until senior managers become aware of how they reason defensively . . . [a]ny change activity is likely to be just a fad."¹⁰⁶ This is why any successful improvement program starts with educating leadership.

VIII

THE NEED FOR INDEPENDENT THOUGHT

If you only have a hammer, you tend to see every problem as a nail.

— Abraham Maslow

A word of caution: DMAIC is not a one-size-fits-all prescription for process improvement success. Not every problem will be solved by simply following the DMAIC steps. Often in the measure and analyze phases, practitioners split projects into different tracks. No-brainer improvements follow DIC¹⁰⁷ or DMIC.¹⁰⁸ Other projects might follow a DMDMAIC¹⁰⁹ track. It is the situation at hand and the practitioner's experience that determine the right route. Just like IRAC¹¹⁰ and CREAC¹¹¹ provide structure to legal argumentation while simultaneously instructing legal writers where to focus their efforts, DMAIC shapes the process improvement project structure. Frameworks are not substitutes for ingenuity and creativity; they are tools designed to augment such attributes. Accordingly, DMAIC, like IRAC, is not a Bible or a cookie-cutter process; it is a framework and cannot substitute for good analysis, teamwork, and a willingness to learn (and sometimes fail).

¹⁰⁵ See Alexander Mead, *Deming's Principles of Total Quality Management (TQM)*, WELL.COM (1996), <http://www.well.com/user/vamead/demingdist.html>; Gregg Stocker, *Business Planning and the 85-15 Rule*, LESSONS IN LEAN (Feb. 9, 2014), <https://leadingtransformation.wordpress.com/2014/02/09/business-planning-and-the-85-15-rule/>; but see W. EDWARDS DEMING, *OUT OF THE CRISIS* 315 (6th prtg. 1989) (stating that in his experience, 94% of problems are derived from the system and only 6% is attributable to special causes, including employee mistakes).

¹⁰⁶ Argyris, *Teaching Smart People How to Learn*, *supra* note 98, at 106.

¹⁰⁷ Define, Improve, and Control.

¹⁰⁸ Define, Measure, Improve, and Control.

¹⁰⁹ Define, Measure, Define, Measure, Analyze, Improve, and Control.

¹¹⁰ Issue, Rule, Application, and Conclusion.

¹¹¹ Conclusion, Rule, Explanation, Application, and Conclusion.

CONCLUSION
LEARNING TO SURVIVE

An investment in knowledge pays the best interest.

— Benjamin Franklin

Innovation begins with learning. Learning organizations evolve and thrive through innovation, while other companies perish. Process improvement is an optimum innovation strategy for any law firm that chooses to adapt to mature and changing legal markets. DMAIC is a process improvement building block that can help to achieve greater efficiencies, reduced costs, and greater value to clients.

Regardless of the innovation strategy that law firms choose to adopt, innovation is necessary, although survival is not. We, however, encourage law firms to adopt operational excellence innovation strategies and prescribe to process improvement.

