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A Comparative Case Study on Process Optimization and the Modern Law Library's Involvement in Achieving Efficiency at the Law School in Times of Change

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ABSTRACT

Law firms have been utilizing process optimization tools, such as Lean Six Sigma, to improve internal processes and build efficiencies. Successful outcomes require leadership teams that believe that process improvement is more than just a tool kit to solve problems or a collection of methodologies and processes. Through collection development practices, continuous learning opportunities, and the use of cross-functional teams, the modern law library has effectively demonstrated its ability to meet the dynamic needs of the law school community. Similarly, law librarians find themselves uniquely positioned to collaborate with law school administration on continual process improvement strategies in times of change. This article will provide a foundation on process optimization methodologies, such as Lean Six Sigma, Agile, and Legal Lean, as well as the application of those tools and techniques in various fields. Finally, the article asserts that law schools should adopt process optimization techniques and leverage their law libraries to improve business processes and operations at their respective institutions.

Introduction

In the 1980s and 1990s, companies such as Motorola, Toyota, and General Electric implemented continuous improvement tools to streamline internal processes¹ and reduce quality inefficiencies.² Because these techniques were so effective, other industries incorporated these tools³ to eliminate waste within their own workflow processes.⁴

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¹Ayon Chakraborty & Kay Chuan Tan, *Qualitative and Quantitative Analysis of Six Sigma in Service Organizations, in Total Quality Management and Six Sigma* 249–250 (Tauseef Aized ed., InTechOpen 2012).

²*Id.*

³See *infra* Part I, "Tools and Techniques in LSS."

⁴*Id.*

Part I provides the foundation of how process improvement tools, such as Lean Six Sigma, were created. The article will discuss how Lean Six Sigma was introduced into the manufacturing industry and led to successful results. The article will also provide basic definitions for significant tools for process optimization. Part II further explores the use of these same tools in other select industries, such as health care, local government, information technology, finance, and higher education.

Part III then provides a review of the current uses of Lean Six Sigma, Legal Project Management, and Agile⁵ in law firms and legal organizations today to identify inefficiency parallels currently plaguing law schools.

Part IV asserts that law schools should adopt process optimization techniques and should leverage their law libraries to improve business processes and operations at their respective institutions.

Part I: What is Lean Six Sigma and how is it tied to process optimization?

Lean Six Sigma (LSS) is a process improvement strategy that addresses evaluating and analyzing processes in an organization while meeting the goal of improving efficiency. This is accomplished by *combining two different fundamental practices*: the Toyota-inspired *Lean Thinking*,⁶ which focuses on the front-end process, and the Motorola-inspired *Six Sigma*,⁷ which focuses on the outcome or end result.⁸ Lean Thinking (Lean) is also significantly focused on a team effort to improve the waste for the organization,⁹ whereas Six Sigma's focus is on analyzing statistical data and design to improve variation through reduction.¹⁰

It is important to first define the term *process* before discussing why Lean and Six Sigma work so well collectively. The term *process* lies at the heart of both methodologies.¹¹ For our purposes, it will be defined as a

⁵*Id.*

⁶Lean Thinking was coined by James P. Womack and Daniel T. Jones to describe their study of the Toyota Production System. See generally James P. Womack & Daniel T. Jones, *Lean Thinking: Banish Waste and Create Wealth in Your Corporation* (Free Press 1996).

⁷Six Sigma is a statistical-based methodology, and the sigma represents the population standard deviation, which is a measure of the variation in a data set collected about the process. The Six Sigma process mean is six standard deviations from the nearest specification limit. Lourdes M. Slater, *Legal Process Improvement Through Lean: Bring the Best of Business to the World of Law*, <https://www.kartalegal.com/insights/legal-process-improvement-through-lean-bringing-the-best-of-business-to-the-world-of-law> (accessed November 2, 2020).

⁸Jiju Anthony, *Six Sigma vs. Lean: Some Perspectives from Leading Academics and Practitioners*, 60 Int'l J. Prod. & Perform. Mgmt. 185–190 (Jan. 2011).

⁹The eight wastes of Lean are "Defects, Overproduction, Waiting, Non-utilized talent, Transportation, Inventory, Motion, and Downtime." Slater, *supra* n. 7.

¹⁰*Id.*

¹¹It should be noted that there are two processes that are at the core of each methodology. Lean uses a process called PDCA (or "Plan, Do, Check, Act"). Six Sigma incorporates a process called DMAIC ("Define, Measure, Analyze, Improve, Control"). Both processes use the scientific method to address problem solving. Lean Six Sigma incorporates the DMAIC method.

sequence of steps articulated and repeated to reach an outcome.¹² For purposes of this article, the phrases *process improvement* or *process optimization* will be defined as the utilization of a set of predetermined methods that allow an organization or individual to identify and understand the current process as well as identify problems and areas for repair or enhancement in the ongoing process. The problems, repairs, and improvements will then be prioritized based on the needs of the individual or organization. This priority list determines how and when the process optimization tools are applied, with the intent to create a new measured process that also ensures the repetition of expected positive outcomes.¹³

With our shared terminology, the authors will now further explore the two practices of Lean and Six Sigma. When combined, using the appropriate mixture of both Six Sigma and Lean methods, the two processes create a robust methodology that will improve any business or organization.¹⁴ Lean focuses on assessing the value and need for a particular process to determine how to get rid of waste, rework, and downtime in the process. Using Lean tools, an organization will be able to streamline the process to its most efficient steps while still achieving the desired result and increasing productivity.¹⁵ “Repeatability and stability” are core tenets of the basic process of Lean.¹⁶ Lean is successful because once an organization finds that repeatable stability of process, it will remove the human element that will cause inefficient variances in the process.¹⁷

Six Sigma, on the other hand, is focused on finding the cause of errors and mistakes by concentrating on the outcome of the process. This methodology uses statistically based tools that deliver data-driven results designed to reduce discrepancies in outcomes.¹⁸ With Lean, the focus is to apply a qualitative model¹⁹ to address issues with the process. In contrast, Six Sigma uses quantitative models²⁰ to address process improvement.²¹

¹²Catherine Alman MacDonagh, *Lean Six Sigma for Law Firms 2* (Ark Group 2014).

¹³*Id.* at 1–2.

¹⁴Twinkle Goel, *What’s the Difference Between Six Sigma and Lean Six Sigma*, News Patrolling, <http://www.newspatrolling.com/whats-the-difference-between-six-sigma-and-lean-six-sigma/> (July 12, 2020).

¹⁵See Antony, *supra* n. 8, at 185. See also MacDonagh, *supra* n. 12, at 4.

¹⁶Goel, *supra* n. 14.

¹⁷*Id.*

¹⁸Antony, *supra* n. 8, at 185–186; Chakraborty & Tan, *supra* n. 1, at 250.

¹⁹“Qualitative method is used to understand people’s beliefs, experiences, attitudes, behavior, and interactions. It generates non-numerical data.” Bijayini Jena, Sanjay Kalra & Vibha Pathak, *Qualitative Research*, 4 Perspectives in Clin. Res. 192 (July–Sept. 2013).

²⁰“Quantitative . . . is essentially about collecting numerical data to explain a particular phenomenon.” Daniel Muijs, *Doing Quantitative Research in Education with SPSS 2* (Sage 2004).

²¹Antony, *supra* n. 8, at 188.

This merger enables an organization to identify and address process breakdowns to improve outcomes and productivity so that the desired result is repeatable.²² Described another way, regardless of field and industry, Lean Six Sigma allows for “uniform process outputs” employing a reduced “process flow time” for an organization²³ by determining and eliminating the factors that lead to the identified errors in the first place.²⁴

Tools and techniques in LSS

*DMAIC*²⁵ is the most recognized tool for LSS and is an acronym for Define, Measure, Analyze, Improve, and Control.²⁶ This cycle improvement tool is best for optimizing and stabilizing specific business processes.²⁷ It is best used on existing processes and incorporates financial implications and schedule development for the project.²⁸

In addition to incorporating the DMAIC method, there are several tools and techniques that are included in Lean Six Sigma that lend themselves well to being implemented in markets that are more service-based than manufacturing.²⁹

Process mapping (also referred to as value stream mapping or functional flowcharting) allows everyone in an organization to understand and agree on how to produce value in the eyes of customers and how to identify where waste occurs.³⁰ It is a process map with data, which may include data points such as cycle time of processes, work in progress, idle time, etc.³¹

²²MacDonagh, *supra* n. 12, at 4.

²³Marcus Assarlind, Kristoffer Backman & Ida Gremyr, *Multi-Faceted Views on a Lean Six Sigma Application*, 30 *IJQRM* 387, 388 (2013).

²⁴*Increasing Quality with Six Sigma*, Law 360, <https://www.law360.com/articles/148761/increasing-quality-with-six-sigma> (Feb. 18, 2010, 4:23 p.m.).

²⁵DMAIC stands for Define, Measure, Analyze, Improve, Control. *Define* means identifying, evaluating, and selecting projects; preparing the mission; and selecting and launching the team. *Measure* means measuring the size of the problem, documenting the process, identifying key customer requirements, determining key product characteristics and processing parameters, documenting potential failure modes and effects; theorizing on the cause or determinants of performance. *Analyze* means planning for data collection; analyzing the data; establishing and confirming the “vital few” determinants of performance. *Improve* means designing and carrying out experiments to determine the mathematical cause-effect relationships and optimize the process. *Control* means designing controls; making improvements, implementing, and monitoring. See Chakraborty & Tan, *supra* n. 1, at 253.

²⁶Slater, *supra* n. 7.

²⁷*Id.*

²⁸See Chakraborty & Tan, *supra* n. 1, at 253.

²⁹*Id.* at 249–250.

³⁰Slater, *supra* n. 7.

³¹Process analysis tools used when an understanding of process flow is desired include flowcharts, failure mode effect analyses, and mistake-proofing. See Chakraborty & Tan, *supra* n. 1, at 252.

A *cause-and-effect* (or root-cause) *analysis* allows a team to identify and explore all of the potential factors related to the root of the problem.³² Examples of causes include workforce, machines, methods, materials, or the environment.³³

Visual management allows the team to understand what is going on in a process and see what is under control and what is not. This technique allows the team to understand and indicate priorities, create tangible work standards, and identify workflow and what is being done. It also allows the team to communicate what performance measures are in place.³⁴

A *Pareto analysis* is used to separate out the vital few causes from the trivial many.³⁵ In other words, 80% of the problems are due to 20% of the vital causes or factors.³⁶ It is more colloquially called the 80/20 rule.³⁷ By graphically separating the aspects of a problem, a team will know where to direct its improvement efforts.³⁸

A *project charter* provides an overview and serves as an agreement between management and the LSS team regarding scope, objectives and participants.³⁹

A *supplier-input-process-output-customer* (SIPOC) is used to document a process at a high level.⁴⁰ It visually shows the process from the supplier's inputs to the products or services received by customers.⁴¹

Rapid improvement workshops (RIW) are focused on local processes to quickly tackle obvious problems or issues within the time frame of the workshop.⁴²

A *Kaizen event* is a three- to five-day planned team meeting often across departments or projects. The group comes together to address inefficiencies in a particular process or to address a specific problem in the following activity cycle: Plan, Do, Check, Act (PDCA).⁴³

³²Cause-analysis tools used to identify the cause of a problem include fishbone diagrams, Pareto charts, and scatter diagrams. *See id.*

³³Benjamin Sweeney, *Lean Six Sigma QuickStart Guide: The Simplified Beginner's Guide to Lean Six Sigma*, 120–128 (2nd ed., ClydeBank 2017).

³⁴Process analysis tools used when an understanding of process flow is desired include flowcharts, failure mode effect analyses, and mistake-proofing. *See* Chakraborty & Tan, *supra* n. 1, at 252.

³⁵Chad Brooks, *What Is a Pareto Analysis?*, Bus. News Daily, <https://www.businessnewsdaily.com/6154-pareto-analysis.html> (Mar. 29, 2014).

³⁶*Id.*

³⁷*Id.*

³⁸*Id.*

³⁹*See* Jamil Enani, *Project Charter*, 60 *IJUSER* 853–857 (Mar. 2015).

⁴⁰Sweeney, *supra* n. 33, at 168.

⁴¹*Id.*

⁴²Jennifer A. Farris, Wiljeana J. Glover & Eileen M. Van Aken, *The Relationship Between Continuous Improvement and Rapid Improvement Sustainability*, 53 *Intl J. Prod. Research* (2015).

⁴³Slater, *supra* n. 7.

A *Kanban system*⁴⁴ is a visual to-do list made up of segments that represent each work stage of a project.⁴⁵ The goal is to not start a new project in the stage until a prior project in that stage is complete.⁴⁶

A *User Story* is a current point-in-time need of a customer and the reasons behind that need.⁴⁷ The user should ask what the problem is aiming to solve to combat obstacles and building blocks.⁴⁸

Scrum is a series of rituals⁴⁹ a team can complete where the members will quickly check in with one another, provide assistance if needed, foster accountability, and provide retrospective updates⁵⁰ on goal progression.⁵¹

Sprints may occur during Scrum and allow a team to break their work into smaller tasks that can be completed within a fixed duration cycle.⁵²

Part II: The application of process optimization and Lean Six Sigma in various fields

Process optimization tools have not been restricted to manufacturing. Many other fields have applied Lean, Six Sigma, or both methodologies to eliminate waste and improve processes. In service organizations,⁵³ Lean comes in as a methodology to reduce waste and to allow the process to become more efficient.⁵⁴ Six Sigma focuses on refining the process,

⁴⁴*Kanban* is a Japanese term that literally translates to “sign” or “card,” and the idea is that you can use individual cards to represent pieces of knowledge work. See John E. Grant, *Lean Legal: Three Techniques for the Agile Lawyer*, Clio.com 4, <https://files.clio.com/marketo/ebooks/lean-legal-three-techniques-for-the-agile-lawyer.pdf>.

⁴⁵Cards can then be arranged on a board, where different columns represent different stages of the workflow. When a particular stage in the process starts to fail or a choke-point develops, you can easily see where the work is slowing down and develop a plan to address it. See *id.*

⁴⁶Slater, *supra* n. 7.

⁴⁷User stories follow a simple format: As a _____, I need to be able to _____, so that I can _____. Each blank represents information that you need to capture based on the best information you have about the customer. See Grant, *supra* n. 44, at 6.

⁴⁸*Id.*

⁴⁹The four rituals in Scrum are the Planning Meeting (organizing the work to be done), the Daily Stand Up (coordinating the work while it is being done), the Review Meeting (assessing whether the problem in the user stories is actually solved), and the Retrospective (the process for doing the work). See *id.* at 8.

⁵⁰Retrospective is the process for doing the work and follows a three-question format: (1) What went well that we should keep doing?; (2) What didn’t go well that we should stop doing?; and (3) What should we try that is different? The answers to these questions provide the basis for continuous improvement (the Lean concept of Kaizen). See *id.* at 9.

⁵¹*Id.* at 8.

⁵²Enric Senabre Hidalgo, *Adapting the Scrum Framework for Agile Project Management in Science: Case Study of a Distributed Research Initiative*, 5 *Heliyon* (Mar. 2019).

⁵³Services organizations are groups that provide assistance through processes that serve an outcome that benefits the customer. Service organizations vary across the board, with financial services organizations providing assistance in mortgages and real estate processes. Manuel Castelo Branco, Catarina J. M. Delgado & Marlene Ferreira, *The Implementation of Lean Six Sigma in Financial Services Organization*, 21 *J. of Mfg. Tech. Mgmt.* 1, 3–4 (May 2010).

⁵⁴*Id.*

reducing the variability, to obtain the result 99.9997% of the time.⁵⁵ This section highlights case studies that illustrate the use of process optimization tools and the application of Lean, Six Sigma, or LSS methodologies.

Case studies in health-care organizations

LSS can provide a useful framework for producing systematic innovation efforts in controlling health-care cost increases, improving quality, and providing better health care.⁵⁶ The application of LSS has reduced patient waiting in an outpatient department (OPD) of a large hospital.⁵⁷ In this case study, the OPD identified that the average patient waiting time was 57 minutes but could sometimes go beyond two hours.⁵⁸ The OPDs had determined that the delay in treatment to the patients would lead to increased absenteeism in the company, causing production stoppages and other operational inconveniences. Using LSS, the OPD aimed to resolve issues in a 15-week time line and established a cross-departmental team of stakeholders in the process. The team then identified several root causes, including the medicine not being available, an inability to read the prescription, and the doctor arriving late to the consulting room.⁵⁹ Several solutions were offered to address the issues. For example, software was prepared with real-time updating of medicine stock in the pharmacy. Additionally, a printout of the list of medicines was given to the patient in place of a handwritten prescription. Lastly, rearranging the plan of activities for the day enabled doctors to arrive on time to the consulting room.

However, the concept of LSS is not new to health-care organizations. Stanford Hospital and Clinics (Stanford) used quality and process principles in the mid-1980s, when changes in Medicare reimbursements and the advent of HMOs⁶⁰ meant that health-care providers had to start balancing fiscal concerns with their primary mission of providing high-quality patient care.⁶¹ One of their success stories highlights how a basement stockroom with medical supplies was replaced by several smaller service centers to provide “just-in-time”

⁵⁵*Id.*

⁵⁶Soren Bisgaard, Jaap Van den Huevel, Henk de Koning & J. P. S. Verner, *Lean Six Sigma in Healthcare*, 28 JHQ 4 (June 16, 2011).

⁵⁷E. V. Gijo & Jiju Antony, Reducing Patient Waiting Time in Outpatient Department Using Lean Six Sigma Methodology, 30 *Qual. Rel. Eng'g Int'l.* 1481 (2014).

⁵⁸*Id.*

⁵⁹*Id.*

⁶⁰HMOs (health maintenance organizations) are networks of health insurance providers that cover medical care for hospitals, doctors, and other health providers who are contracted to the HMO with various fee obligations. See Michael L. George, *Lean Six Sigma for Service: How to Use Lean Speed and Six Sigma Quality to Improve Services and Transactions* 169–170 (McGraw-Hill 2003).

⁶¹*Id.* at 169.

stocking. Before just-in-time stocking, nurses used self-stick labels attached to their name badges to remind themselves of what supplies they needed to charge for patients.⁶² This method of requesting and charging back for supplies often resulted in unreliable data entry and lost inventory. In the new materials delivery model, each service center would stock a three-day supply of material for three to five specific hospital units.⁶³ Materials were received upon request, and stockroom staff delivered the materials to unit mailboxes within five minutes of order entry. As materials were used, suppliers would be contacted, and the stock would be replenished within the same day.⁶⁴

The application of LSS not only improved the process performance but also ensured the sustainability of results in the long run.⁶⁵ In the first case study, the OPD held monthly reviews, discussed problems during the implementation, and standard operating procedures were modified to ensure sustainability.⁶⁶ At Stanford, this change would effectively eliminate the \$60,000 budget reserved for lost material and supplies. It would also reduce hospital investment in inventory in excess of \$250,000.⁶⁷ Lastly, the new computerized system interfaced with the hospital billing system, ensuring accurate and complete billing for hospital patients.⁶⁸

Case studies in Information Technology

Modern-day organizations rely heavily upon their Information Technology (IT) departments to enable them to achieve their company vision, business strategy, and goals.⁶⁹ To meet these benchmarks,⁷⁰ IT organizations must overcome common barriers in their daily work, such as overloaded mailboxes, aging change requests, and countless projects.⁷¹ Total chaos in the knowledge management system and a hidden mountain of improvement suggestions compound the inefficiencies.⁷²

⁶²*Id.* at 173.

⁶³*Id.* at 174.

⁶⁴*Id.*

⁶⁵Gijo & Antony, *supra* n. 57, at 1481.

⁶⁶*Id.*

⁶⁷George, *supra* n. 60, at 175.

⁶⁸*Id.*

⁶⁹Anil Kumar Raghavan Pillai, Ashok Pundir & L. Ganapathy, *Improving Information Technology Infrastructure Library Service Delivery Using an Integrated Lean Six Sigma Framework: A Case Study in a Software Application Scenario*, 7 *J. Software Eng'g & Apps.* 484 (2014).

⁷⁰These organization benchmarks can include the following: changes in operation, communication, and business, developing and gaining market advantages to differentiate the organizations to its customers, increasing productivity and efficiency, improving business processes, cost reductions, and more. *See id.* at 485.

⁷¹*Id.* at 491.

⁷²*Id.* at 495.

LSS can provide a practical framework for producing systematic innovation and development, especially when combined with service delivery models such as the Information Technology Infrastructure Library (ITIL).⁷³ ITIL was developed by the British government during the 1980s in an effort to increase efficiency, value, and success in the delivery of programs and projects in the public sector.⁷⁴ Today, ITIL adopts a life-cycle approach to IT services, focusing on practices for service strategy, service design, service transition, service operation, and continual service improvement.⁷⁵ The ultimate goal of ITIL is to design, deliver, and manage IT services to meet or exceed an agreed on level for quality.⁷⁶

Typically, in IT service desk operations, it is not enough to “work smarter” or “run faster.”⁷⁷ Consulting firms specializing in LSS call for providing “just enough”⁷⁸ service—identifying everything that a person may want but only delivering what is necessary.⁷⁹ In one case study, consultants streamlined workflow processes for a multinational organization with 70,000 employees.⁸⁰ The IT service desk provided first-line support 24 hours a day/7 days a week and adapted their ticketing system to accommodate different priority levels.⁸¹ This process adoption enabled the service desk to assign dedicated agents who handle web tickets without getting distracted by phone calls or other activities.⁸² This improvement delivered cost savings of more than €250,000 per year.⁸³

Case studies in local government

Local governments have also benefited from applying LSS to their administrative operations. One case study investigated a local government’s finance department and their financial processing for their 7,000-citizen

⁷³ITIL stands for Information Technology Infrastructure Library. *Id.* at 483.

⁷⁴*Id.* at 486.

⁷⁵*Id.*

⁷⁶*Id.*

⁷⁷ATOS Consulting, *Lean and Six Sigma in IT: Applying Process Improvement Best Practices in IT Organizations* (ATOS Consulting 2015)

⁷⁸“Just enough” means not only optimizing the speed of the services delivered but prioritizing cost-reduction opportunities that eliminate waste that do not disrupt the quality of the service that should highlight the customer’s satisfaction. *See id.* at 5.

⁷⁹*Id.*

⁸⁰*Id.* at 7.

⁸¹*Id.*

⁸²*Id.*

⁸³*Id.*

municipality.⁸⁴ In this case study, the DMAIC model⁸⁵ was implemented. The finance director, as the “project champion,”⁸⁶ identified the need to establish the team mission and goals and provide project team resources and support.⁸⁷ The finance clerk was the “process owner”⁸⁸ and was responsible for delivering process knowledge as well as identifying and implementing improvement opportunities. A team quality facilitator was also named and would offer technical quality and Lean tool knowledge as well as best practices for financial processes.⁸⁹ The process analyst prepared documents, collected data, and identified improvement opportunities.⁹⁰ The consulting manager provided business knowledge, direction, and managed consultants.⁹¹ The team quality facilitator, process analyst, and consulting manager interviewed finance personnel to understand departmental goals, project scope, and objectives.⁹² They then created a plan with activities, a time line, and dedicated resources.⁹³ A process improvement team⁹⁴ was then created, consisting of the finance director, the finance clerk, and a team quality facilitator,⁹⁵ a process analyst, and a consulting manager.⁹⁶ The team quality facilitator, the process analyst, and the consulting manager were hired from an external consulting firm.⁹⁷

The finance team in the local government case study used flow charts to map the current processes, identified steps in the finance department’s activities, as well as written and unwritten policies that governed the processes.⁹⁸ The finance clerk estimated two measurements: a time average and a time range it would take to complete a task.⁹⁹ The time range would take

⁸⁴Sandra Furterer & Ahmad K. Elshennawy, *Implementation of TQM and Lean Six Sigma Tools in Local Government: A Framework and a Case Study*, 16 *Total Qual. Manag. Bus. Excell.*, 1179, 1181 (2005).

⁸⁵*See id.* *See also supra* n. 25.

⁸⁶Project champions should be high-level managers who serve in supervisory roles that undergo a week of training to effectively lead, support, and remove any barrier to achieve successful implementation. *See id.* at 1179.

⁸⁷*Id.* at 1181.

⁸⁸A process owner has knowledge of how the process works and is responsible for delivering services. *See id.* at 1179.

⁸⁹*Id.* at 1181.

⁹⁰*Id.*

⁹¹*Id.*

⁹²*Id.*

⁹³*Id.*

⁹⁴*Id.*

⁹⁵The Team Facilitator performed the role of a Black Belt. *See id.* at 1183.

⁹⁶*Id.*

⁹⁷*Id.*

⁹⁸*Id.* at 1184.

⁹⁹*Id.*

into account an employee's work experience.¹⁰⁰ The team also standardized operations to identify and eliminate non-value-added activities¹⁰¹ and problems, such as the inefficient sorting and filing of purchase orders and invoices.¹⁰² In addition, the team used cause-and-effect analysis to identify root causes related to people (lack of training and skills), methods (lack of standardized procedures), and information technology (broken and inefficient printers).¹⁰³

Their next step was to analyze process inefficiencies and define improvements. A Pareto analysis¹⁰⁴ identified employee training and knowledge gaps with respect to the financial and administrative information system.¹⁰⁵ From there, the team would be able to develop standardized processes and procedures.¹⁰⁶ For example, staff used Excel spreadsheets instead of the financial system to match and divide invoice amounts across different account numbers. Training opportunities were identified and offered for employees who were not properly using the financial system.¹⁰⁷ In addition, the city sought to standardize time sheets in Microsoft Excel to reduce payroll data entry errors and to more efficiently compare calculated totals between reports.¹⁰⁸

These improvements were implemented across a four-month period.¹⁰⁹ Implementation plans were created for improvements that required significant expenditures.¹¹⁰ Reports were provided on a weekly basis and contained an accounting of completed tasks, status, and estimated completion dates.¹¹¹ Any unresolved issues were noted on a separate item resolution form.¹¹² As a result, payroll processing time was reduced by approximately 60%.¹¹³ Purchasing and accounts payable time was reduced by

¹⁰⁰*Id.*

¹⁰¹To add value means that three things have occurred. (1) The process step has changed the form or function of a product or service; (2) the customer is willing to pay for the change; (3) the step is performed correctly the first time. Any time in the process where value is not added is waste, also known as nonvalue adding. There is no use for a nonvalue adding step, but it is essential that you can see it, reduce it, or completely eliminate it. What is Value Add vs. Non-Value Add?, Six Sigma Daily <https://www.sixsigmadaily.com/what-is-value-add-vs-non-value-add/> (Jan. 22, 2019).

¹⁰²Furterer & Elshennawy, *supra* n. 84, at 1184.

¹⁰³*Id.*

¹⁰⁴*Id.* See also *supra* n. 35 (explaining the purpose of a Pareto analysis).

¹⁰⁵Furterer & Elshennawy, *supra* n. 84, at 1185.

¹⁰⁶*Id.*

¹⁰⁷*Id.* at 1186.

¹⁰⁸*Id.*

¹⁰⁹*Id.* at 1188.

¹¹⁰*Id.*

¹¹¹*Id.*

¹¹²*Id.*

¹¹³*Id.*

approximately 40%, and all vendors started getting paid on a consistent and timely basis.¹¹⁴ Accounts receivable processing time was reduced by approximately 90%, revenue checks were deposited daily, and monthly reconciliation processing time was reduced by approximately 87%.¹¹⁵ Lastly, the number of financial system problems reported to the software vendor decreased from 13 reported problems per month to six reported problems per month.¹¹⁶ Thorough desktop procedures and cross-training enabled other employees to perform the payroll process when the finance clerk was not available.¹¹⁷ The finance department was encouraged to continually assess the process to increase productivity and quality.¹¹⁸

Case studies in financial institutions

Financial organizations, such as GE Money Portugal,¹¹⁹ have implemented LSS in the pursuit of service excellence.¹²⁰ GE Money adopted LSS for financial services operations, such as loan application processing. Process owners, project managers, and department managers with proper training¹²¹ in Lean and Six Sigma formed teams. Team creation was followed by a training period, a set of sessions on goal setting, and critical processes identification. GE Money then participated in a “lean week”—a five day brainstorming week dedicated to the critical processes that were identified by the team.¹²² Through the implementation of LSS, GE Money was able to cut the processing time for auto loans and reduce the lead time to 1/10 of the original value.¹²³ GE Money also simplified the application forms to make them easier and quicker to fill.¹²⁴

¹¹⁴*Id.* See also *supra* n. 35 (explaining the purpose of a Pareto analysis).

¹¹⁵*Id.*

¹¹⁶*Id.*

¹¹⁷*Id.* at 1189.

¹¹⁸*Id.*

¹¹⁹GE Money Portugal (GE Money) is a subsidiary of the General Electric group. It is a financial services organization and provides services such as mortgages, real estate, and homeowner services. Delgado, Branco & Ferreira, *supra* n. 53, at 4.

¹²⁰Service excellence is service that is delivered in a faster, simpler, more flexible and competitive manner. Delgado, Branco & Ferreira, *supra* n. 53, at 10.

¹²¹Organizations may opt to send their teams to training opportunities. See *infra* n. 193 (providing examples of common training opportunities).

¹²²Delgado, Branco & Ferreira, *supra* n. 53, at 10. This is similar to a Kaizen event. See *infra* n. 43 (explaining what a Kaizen event is). The agenda for the “lean week” was as follows: “In the first two days, a Value Stream Mapping (VSM) meeting takes place with all members of the team to identify the added-value actions in terms of Inquiry to Order (ITO), Order to Remittance (OTR), and New Product Introduction (NPI) in a client-based approach. In the third and fourth days, the process owners meet to measure and analyze the process map and to build an action plan and in the fifth day, the “action workout” day (AWO), all members meet to perform a 360-degree analysis and verification of the new proposed process and to contribute with suggestions. After that, the final part of the DMAIC cycle takes place.” See Delgado, Branco & Ferreira, *supra* n. 53, at 10.

¹²³*Id.* at 8.

¹²⁴*Id.*

In June 2000, Bank One handled more than 210,000 transactions where customers requested a photocopy of a cleared check.¹²⁵ The data from June 2000 revealed that 10% of those transactions resulted in a service failure.¹²⁶ The next month, the rate peaked as high as 25%.¹²⁷ This meant that Bank One could create 10,000 or more unhappy customers in any given month.¹²⁸

A cross-functional team was brought together to improve the photocopy retrieval process.¹²⁹ When Bank One had tried to fix this problem before, the efforts always focused on the people who made the copies.¹³⁰ When creating this new team, Bank One included people from all parts of the process on the team, from front office retail and commercial, item processing, and retrieval.¹³¹ Bank One also devoted sufficient resources to this problem, and the team members were committed to this project full-time for four to six weeks.¹³²

This new team quickly identified three main points of failure: The customer did not get the check copy on time, the customer could not read the copy; and the bank had no copy of the check.¹³³ The team's inquiry into this process uncovered that customers were not getting their check copies on time because the staff promised the wrong service level to customers.¹³⁴ The team also found that vendor service quality had a big effect.¹³⁵ Some check "copies" were images on microfiche, and the team discovered that the vendor overexposed one out of every 10 cartridges.¹³⁶ Lastly, they found that check copies could not be retrieved because information was either missing from the request form or filled in incorrectly.¹³⁷ A Pareto chart¹³⁸ revealed the most common types of problems and specifically identified two of the biggest errors.¹³⁹ Fixing those two types of errors first would eliminate the majority of errors.¹⁴⁰

¹²⁵George, *supra* n. 60, at 318.

¹²⁶A "service failure [is when] the customer didn't get what they want, when they wanted it." *Id.*

¹²⁷*Id.*

¹²⁸*Id.*

¹²⁹*Id.*

¹³⁰*Id.* at 321.

¹³¹*Id.* at 321–322.

¹³²*Id.* at 322.

¹³³*Id.* at 318.

¹³⁴*Id.* at 319.

¹³⁵*Id.*

¹³⁶*Id.* at 319–320.

¹³⁷*Id.* 319.

¹³⁸See *supra* n. 35 and accompanying text (describing a Pareto analysis).

¹³⁹George, *supra* n. 60, at 319.

¹⁴⁰*Id.*

Bank One instituted numerous changes to deal with the problems they had identified.¹⁴¹ Some common themes in the solutions included mistake-proofing the process, educating staff on the procedures, developing better tracking, and initiating maintenance on key equipment.¹⁴² Soon after the team implemented these new procedures, the overall service failures were cut in half.¹⁴³

Case studies in higher education

A common driver for implementing process improvement is the moment when a crisis or an event that changes the normal order of things occurs.¹⁴⁴ For most higher education institutions, budget reduction is one of the major reasons to streamline processes. Severe budget reductions force higher education institutions into survival mode and require leadership to set priorities for expenditures and to justify the existence of programs.¹⁴⁵

The University of Central Oklahoma (UCO) is an example of a higher education institution that embraced Lean as a result of budget reduction.¹⁴⁶ Using a four-step approach,¹⁴⁷ UCO applied Lean to over sixty projects and targeted academic, service, and office processes.¹⁴⁸ For the first processes, UCO outsourced the facilitator role to a Lean specialized consultation company.¹⁴⁹ A Process Improvement office was later created, staffed with a manager who oversaw Lean processes and offered closer oversight of past Lean processes as well as the scheduling of future Lean initiatives.¹⁵⁰

Employees at the UCO Physical Plant were the first to be involved with Lean.¹⁵¹ Employee morale was low, and turnover was high.¹⁵² In applying Lean, the number of work orders was reduced from over one thousand per

¹⁴¹*Id.* at 320.

¹⁴²*Id.*

¹⁴³*Id.* at 321.

¹⁴⁴Cristina Dragomir & Felicia Surugiu, *Implementing Lean in a Higher Education University*, 18 *Constana Maritime Univ.* 279, 280 (2012).

¹⁴⁵Karen Kusler, *University of Central Oklahoma Lean University: Culture Shift to Reduce Employee Stress*, submitted for nomination to the NACUBO Innovation Award 2011, available at <https://www.nacubo.org/Search-Results?q=central+oklahoma>.

¹⁴⁶See generally Tiffany Wilson, UCO Earns National "Innovation" Award for Lean Processes, Univ. Central Okla., <https://www3.uco.edu/press/prdetail.asp?NewsID=10849> (July 27, 2011).

¹⁴⁷UCO's four-step model included identifying opportunities, solution design, implementation, and continuous improvement. First, UCO completed an organization-wide diagnostic search for issues, problems, and opportunities. Then, they created a draft for success that involved all employees. UCO also used Kaizen events, core teams, and metrics to implement and illustrate change. Finally, UCO monitored performance after projects were completed. See Dragomir & Surugiu, *supra* n. 144.

¹⁴⁸Kusler, *supra* n. 145.

¹⁴⁹Dragomir & Surugiu, *supra* n. 144.

¹⁵⁰*Id.*

¹⁵¹Kusler, *supra* n. 145.

¹⁵²*Id.*

month to approximately three hundred per month.¹⁵³ The process went paperless, with only the work order printed for the worker to take to the repair location.¹⁵⁴ This change enabled UCO to save \$15,000 per year.¹⁵⁵ A total of twenty-four touches in the process was reduced to only four touches for the work order to be completed, which also reduced the work time from an average of twenty-four days to two days or less.¹⁵⁶ Additionally, standardized equipment in buildings reduced inventory needs.¹⁵⁷

UCO also applied Lean to the graduate student application process.¹⁵⁸ Graduate student applications were handled on a cross-departmental basis between the Graduate College, International Studies, and Academic Colleges and Departments.¹⁵⁹ The Department of International Students reported to the Vice President for Student Affairs, while the other areas reported to the Provost/Vice President for Academic Affairs.¹⁶⁰ UCO identified that application paperwork was reviewed multiple times by each office. Additionally, the departments did not leverage staff expertise in the application review process.¹⁶¹ There was also an overproduction of written communication to students from various departments, and student applications were frequently submitted to the wrong department.¹⁶² These process breakdowns resulted in delayed application review and processing.¹⁶³

The implementation of Lean resulted in the submittal of an accurate and complete application packet. Additionally, 93% of the applications were touched only once by a staff person for review.¹⁶⁴ Process time for applications in the Graduate Office was reduced from thirty days to ten days.¹⁶⁵ Centralizing communication through one office resulted in 75% of the students receiving only one letter of correspondence that addressed all of their issues.¹⁶⁶ Correspondence also went paperless, and all communication was conducted by email.¹⁶⁷

¹⁵³*Id.*

¹⁵⁴*Id.*

¹⁵⁵*Id.*

¹⁵⁶*Id.*

¹⁵⁷*Id.*

¹⁵⁸*Id.*

¹⁵⁹*Id.*

¹⁶⁰*Id.*

¹⁶¹*Id.*

¹⁶²*Id.*

¹⁶³*Id.*

¹⁶⁴*Id.*

¹⁶⁵*Id.*

¹⁶⁶*Id.*

¹⁶⁷*Id.*

Part III: Process optimization and Lean Six Sigma for the legal industry

The legal industry is in the unique position of being both a service provider¹⁶⁸ and a service-receiving organization.¹⁶⁹ With law and individual service so intertwined, some lawyers have an adverse reaction to calling the services that they provide to their clients as mere repetitive processes.¹⁷⁰ Every law firm today, no matter the size, needs to be looking for opportunities in their practice for expanding legal professional services, reducing or maintaining their budget, controlling costs, and meeting clients' demand for a fee reduction.¹⁷¹ The other professions discussed previously have embraced process optimization practices, such as Lean and Six Sigma, to improve their work. Legal Lean Six Sigma (LLSS) is a result of a need to provide legal services in a more efficient, streamlined, repetitive, and documented way.¹⁷² LLSS will often involve adopting different aspects of both traditional Six Sigma and Lean techniques, as we have seen in the case studies in Part II.¹⁷³ The methodologies or tools used will often change based on the type of legal practice, desired information gathering, or desired outcome.¹⁷⁴ Executing some process optimization allows a legal organization to discover, collect, revise, confirm, and disseminate firm and client information in a way that will call for continuous access.¹⁷⁵

The majority of the time LLSS uses a framework that contains the core methodologies of Six Sigma: focusing on the customer (Client), identifying the problem, getting rid of waste (workflow, time, and billing), and putting new processes into motion.¹⁷⁶ LLSS will also use core values from Lean¹⁷⁷ and Agile¹⁷⁸ that involve identifying the most effective solutions to be deployed with the fastest turnaround.¹⁷⁹ LLSS often includes one, many,

¹⁶⁸Service providing organizations are "business units within the company and to customers of those business units." Neota Logic, *Achieving More Efficiency in the Legal Sector Through Six Sigma Initiatives* <https://www.neotalogic.com/2019/08/12/achieving-more-efficiency-in-the-legal-sector-through-six-sigma-initiatives> (Aug. 12, 2019).

¹⁶⁹Service receiving organizations are "legal, accounting, appraisers and other expert firms around the world." See *id.*

¹⁷⁰Slater, *supra* n. 7.

¹⁷¹*Id.*

¹⁷²Lisa Damon, *Applying Lean Six Sigma Methods to Litigation Practice*, *Prac. L.J.* (Dec. 2013–Jan. 2014).

¹⁷³MacDonagh, *supra* n. 12.

¹⁷⁴*Id.*

¹⁷⁵Neota Logic, *supra* n. 168.

¹⁷⁶Jonathan Trout, *Six Sigma: A Comprehensive Overview*, *Reliableplant*, <https://www.reliableplant.com/six-sigma-31688> (last visited Aug. 15, 2020).

¹⁷⁷"The voice of the customer" and "value of defect prevention over defect detection." Slater, *supra* n. 7.

¹⁷⁸Agile came to be in the early 2000s as a methodology used for software development that is not based in manufacturing but instead is native to the more abstract demands of knowledge work. See Grant, *supra* n. 44, at 3.

¹⁷⁹Tom Puthiyamadam, *The Evolution of Problem Solving, Tech. & Innovation*, <https://www.strategy-business.com/blog/The-evolution-of-problem-solving?gko=9a381> (Sept. 30, 2019).

or all tools of both Six Sigma and Lean methodologies.¹⁸⁰ Legal project management and LSS have several overlapping principles to assist a law firm with gaining efficiencies. Legal project management¹⁸¹ adopts some of the techniques of both Waterfall project management¹⁸² and Agile project management.¹⁸³ For example, a traditional Waterfall project management style assumes that each key step must be completed in the project before moving on.¹⁸⁴ This structure works well with a predictable project, but it can add unnecessary time (waste) to the project if there is potential for an unknown variable.¹⁸⁵ The Agile approach to project management allows for the structure to evolve as the nature of the work changes.¹⁸⁶ “Sprints”¹⁸⁷ are an Agile project management approach that has been successfully executed in law firms. Firms, like Seyfarth Shaw LLP (Seyfarth), execute these small miniprojects from start to finish.¹⁸⁸ Knowledge of both Waterfall and Agile styles allows a firm to customize their structure for project management. This enables the firm to meet the need of the matter by dropping some goals and adding new ones where appropriate.¹⁸⁹ Legal project management will adopt other tools and tailor their use to expedite a successful project. These tools may include the use of legal technology software,¹⁹⁰ zero-based services,¹⁹¹ future solutions,¹⁹² and strategic linking.¹⁹³

It is important to note that the implementation of only some of these process optimization methodologies in a law firm or legal department will

¹⁸⁰See *supra* Part I. See also Damon, *supra* n. 172, at 30–37 (discussing several tools that are used specifically in legal practice, such as identifying and defining the client’s value, as well as measuring current legal performance).

¹⁸¹Legal project management is a systematic approach for scoping, planning, managing, and controlling legal work within a clearly understood time budget and performance requirements. This approach also captures lessons learned after a project is complete to enhance future performance. See Pamela H. Woldow & Douglas B. Richardson, *Legal Project Management in One Hour for Lawyers* (ABA 2013).

¹⁸²See Aleksandar Olic, Waterfall Project Management Methodology, Active Collab., <https://activecollab.com/blog/project-management/waterfall-project-management-methodology#:~:text=Waterfall%20is%20a%20project%20management,any%20changes%20in%20the%20plan>. (May 24, 2017).

¹⁸³Agile does not appoint a single project manager. Instead, it has a collaborative leaderless team that spreads responsibility and accountability among various team members. Everyone serves as the project manager. See Woldow & Richardson, *supra* n. 181, at 5.

¹⁸⁴Damon, *supra* n. 172, at 35.

¹⁸⁵*Id.*

¹⁸⁶*Id.*

¹⁸⁷See *supra* n. 52 and accompanying text.

¹⁸⁸Damon, *supra* n. 172, at 35.

¹⁸⁹*Id.*

¹⁹⁰Legal technology includes e-discovery, intake, as well as case tracking and analysis. See Woldow & Richardson, *supra* n. 180, at 9–10; Damon, *supra* n. 172, at 30–37.

¹⁹¹Zero-based services are examples of resource allocations, like using in-house lawyers or outsourcing. Damon, *supra* n. 172, at 36.

¹⁹²*Id.* at 37.

¹⁹³An example of strategic linking is developing or acquiring a patent file as part of the business plan. *Id.*

allow for positive change.¹⁹⁴ Even the adoption of a select few focusing on process improvement, legal project management, and technology solutions will provide firms with a powerful tool kit. This tool kit will target inefficiencies, as well as identify risk management and mitigation for their clients and business operations.¹⁹⁵ Despite this, there is still a critical need to adopt a LLSS culture at the firm. Adoption of a LLSS workplace culture allows any process optimization to be sustained with the proper training.¹⁹⁶ At times, this culture shift translates into a substantial change to a firm's infrastructure.¹⁹⁷ Lastly, open communication will be necessary for training to motivate those resistant to change.¹⁹⁸

Implementing process optimization and Lean Six Sigma in law firms

The 2008 recession resulted in law firms saving money via mass layoffs as well as salary freezes.¹⁹⁹ Clients also began demanding more efficiency to reduce fees and legal spending.²⁰⁰ This client demand has not gone away even after the legal sector began to financially right itself.²⁰¹ In fact, as the market has seen an increase in competition, client loyalty has continued to be on the decline.²⁰² In the last few years, law firms have substantially increased their adoption and implementation of process optimization and LLSS methodologies to meet the client demand for better service and greater cost savings.²⁰³

Yet not all firms have elected to implement these tools. The 2018 *Report on the State of the Legal Market* theorizes that some firm leaders, due to lethargy in decision making, blind spots, and reluctance to adjust strategies,

¹⁹⁴*Id.* at 38. Law firms may hire consultants and provide training opportunities that specialize in lean services and Agile services. See generally Karta Legal, <https://www.kartalegal.com/law-services/education-and-training-for-law-firms> (last visited Aug. 16, 2020); Legal Lean Sigma Institute, <http://legalleansigma.com/certifications-and-programs/> (last visited Aug. 16, 2020); IASSC: Lean Six Sigma Certification, <https://www.iassc.org/iassc-lean-six-sigma-accredited-providers/> (last visited Aug. 16, 2020).

¹⁹⁵Damon, *supra* n. 172, at 38.

¹⁹⁶See *supra* n. 194 and accompanying text (listing examples of popular LLSS training programs).

¹⁹⁷See generally Thomas McCarthy, Lorraine Daniels, Michael Bremer & Praveen Gupta, *The Six Sigma Black Belt Handbook* 88–89 (McGraw-Hill 2005) (discussing how LSS leaders often encounter resistance to change). There may be those who are resistant to change because there is a skepticism that process optimization techniques, such as Lean and Six Sigma, are inherently automating themselves out of a job or that it is a distraction from completing regular job duties. See John Dyer, *What Is the Greatest Impediment to Lean and Six Sigma Implementation?*, *Indus. Wk.* <https://www.industryweek.com/operations/continuous-improvement/article/21994817/what-is-the-greatest-impediment-to-lean-and-six-sigma-implementation>. (last updated Oct. 18, 2016).

¹⁹⁸Chakraborty & Tan, *supra* n. 1, at 257.

¹⁹⁹Ronald W. Staudt & Andrew P. Medeiros, *Access to Justice and Technology Clinics: A 4% Solution*, 88 *Chi. Kent L. Rev.* 695, 695 (2013).

²⁰⁰*Id.*

²⁰¹*Id.* at 696.

²⁰²Jessica L. Mazzeo, *Why Your Law Firm Should Consider Lean Six Sigma: Law Firm Management*, *Legal Intelligencer* (Nov. 17, 2016).

²⁰³Staudt & Medeiros, *supra* n. 199, at 695.

will ignore a failing approach or acknowledge that the legal world is progressing.²⁰⁴ The most successful firms are those that take the time to allow their teams to fully understand the methodologies of process optimization, its philosophy, and implementation.²⁰⁵ Clients interested in professional services are retaining firms that can provide those services with speed, convenience, ease, and successful results.²⁰⁶

Law firms are professional service entities, and clients only see benefit from firms *correctly applying* the concepts of Six Sigma and Lean.²⁰⁷ In the manufacturing industry, it is easy to physically see a bottleneck or breakdown in a process. In contrast, knowledge-based industries, like the law, have a more difficult time translating a concept or service into a tangible thing.²⁰⁸ Traditional services, such as document review, historically involved the participation of all firm employees. Today, this would be considered a waste of time and money if it was kept in-house, or if technology, such as AI or analytics, was not used to offset costs.²⁰⁹

Other traditional legal services that lend themselves to DOWNTIME²¹⁰ are often found in the form of defects in data or budget, overproduction of documents, or rehashing what has already been completed, as well as waiting for guidance and instruction from others or your client. The firm may also be wasteful by fostering nonutilized talent. This happens when one employee does all of the work when it can be shared by others or given to a paralegal. Transportation, people, and resources may be unnecessary or unused for a case. Extra processing of resources will occur when firms are not using templates. Saving errors or working in silos may also result in the recreation of work product.²¹¹

Additionally, attorneys need to remain focused on continuous improvement in their own daily business operations, such as hiring and training.²¹² By consciously refining and making these critical legal services more efficient, attorneys are ensuring better relationships with clients and outside counsel.²¹³ Firms can then implement a process optimization method that

²⁰⁴Slater, *supra* n. 7.

²⁰⁵Puthiyamadam, *supra* n. 179.

²⁰⁶See *id.*; Slater, *supra* n. 7.

²⁰⁷Neota Logic, *supra* n. 168.

²⁰⁸Grant, *supra* n. 44, at 4. "Things" can come in the form of reengineering the processes of mastering fact, researching the law and prior practice, formatting and communication judgment, documenting transactions, or providing advice. See Neota Logic, *supra* n. 168.

²⁰⁹Slater, *supra* n. 7.

²¹⁰DOWNTIME is an acronym that represents the eight sources of waste within the Lean system. See Sweeney, *supra* n. 33, at 168.

²¹¹Slater, *supra* n. 7.

²¹²Mazzeo, *supra* n. 202.

²¹³Neota Logic, *supra* n. 168.

requires very little investment and where it is easy to gain buy-in with proper training and communication.²¹⁴

Litigation practice

Some litigation firms like Valorem Law Group (Valorem)²¹⁵ and Seyfarth²¹⁶ have been incredibly successful in implementing LLSS into their firm.²¹⁷ Successful integration of LLSS in litigation practice relies on process improvement techniques, such as project management,²¹⁸ the use of technology,²¹⁹ zero-based services,²²⁰ and strategic linking.²²¹ Legal process improvement uses the DMAIC approach.²²² Using these techniques in a litigation practice allows firms to identify waste.²²³ For example, waste may occur when materials are prepared too early in the litigation process.²²⁴ This kind of waste will come in the form of overproduction of materials or having too many inventory resources that are never used for the case.²²⁵ Untimely preparation of resources can result in materials not being needed or being repeatedly redrafted, failing to assign work to the proper employee or practice group, and inefficient communication processes with the client.²²⁶ There are many processes and tasks completed in a litigation firm that are suited for optimization and standardization.²²⁷ A few of these tasks are issuing litigation holds, communication with clients, offices or practice groups, conducting discovery, and negotiating settlements.²²⁸ Aspects of project management come into play when looking at what the clients will value or see as success.²²⁹ During this stage, the attorneys need to meet with the clients or potential clients to thoroughly understand the scope of

²¹⁴Slater, *supra* n. 7.

²¹⁵*Client Service and Value Innovations: 5 Firms Take Bold Approaches*, 38 L. Prac. 40, 40 (2012).

²¹⁶*Id.* at 46.

²¹⁷*Id.*

²¹⁸*See supra* n. 183–191 and accompanying text.

²¹⁹*See supra* n. 192 and accompanying text.

²²⁰*See supra* n. 193 and accompanying text.

²²¹*See supra* n. 195 and accompanying text; *see also* Damon, *supra* n. 172, at 30.

²²²*See supra* n. 25 and accompanying text; *see also* Damon, *supra* n. 172, at 30.

²²³Damon, *supra* n. 172, at 31.

²²⁴*Id.*

²²⁵Slater, *supra* n. 7.

²²⁶Damon, *supra* n. 172, at 31.

²²⁷*Id.*

²²⁸*Id.*

²²⁹Identifying client value or success is comparable to the engagement phase in traditional project management. *See id.*

representation and what mutual success looks like.²³⁰ Once a litigation firm can articulate and define how the client measures value and success, the firm will then be able to design appropriate litigation goals.²³¹ Additionally, a time line detailing milestones toward goal completion prevents wasteful and unnecessary practices that add cost to the litigation.²³² Integrating select principles from process improvement, project management, and other related methodologies allows a litigation practice to “build long-term waste avoidance” and a “long-term cost saving model.”²³³ The elimination of this waste will add job satisfaction by excluding unnecessary tasks and monotony, while mitigating stress for the employees of the firm.²³⁴

The Valorem case study showcases specific examples of how a litigation firm successfully integrates process improvement to provide greater value to clients.²³⁵ For example, Valorem’s approach to pricing its services is very different than most BigLaw firms today. Valorem considers the billable hour to be a deterrent to innovation, efficiency, redundancy, and cost stability.²³⁶ The management team’s approach to services is to provide skilled lawyers whose main priority is to achieve the goals of clients in each case.²³⁷ The first step to fulfilling this commitment is to have the lawyer meet with the client prior to discovery. The purpose of this meeting is to establish an approach that is aligned with the desired outcome of the client.²³⁸

Once this approach has been established, Valorem offers a fee rate based on a full case assessment and winning strategy that aligns with the desired case outcomes for the client.²³⁹ One of Valorem’s clients is DSW. A DSW representative, David Gram, discussed Valorem’s unique pricing model and what it looked like in practice for a recent trial.²⁴⁰ He stated, “Throughout the three years up to trial ... at each juncture we wrote down all of the tasks and pieces that would be involved in the next chunk of work, evaluated the objectives, then priced it accordingly.”²⁴¹ Gram’s description of

²³⁰*Id.* at 38.

²³¹*Id.*

²³²*Id.*

²³³*Id.*

²³⁴*Id.*

²³⁵*Client Service and Value Innovations*, *supra* n. 215, at 40–42.

²³⁶*Id.*; See also *What’s So Revolutionary?*, Valorem Law Grp., <https://www.valoremLaw.com/what-is-revolutionary> (last visited Aug. 16, 2020).

²³⁷*What’s So Revolutionary?*, *supra* n. 236.

²³⁸*Client Service and Value Innovations*, *supra* n. 215, at 41.

²³⁹*Id.* at 41–42.

²⁴⁰*Id.*

²⁴¹*Id.* at 42.

Valorem’s alternative fee structure demonstrates how process mapping converts intangible litigation actions into tangible “things.” Each “thing” is then assigned a value to determine an efficient and fair pricing model for both Valorem and the client.

Continual client feedback is key to Valorem’s process optimization and client retention. After each matter, the attorneys conduct a self-assessment then meet with the client to solicit feedback and ask for recommendations on how to make the process better next time.²⁴² Additionally, attorneys call clients every month to check in²⁴³ and to identify minor issues and potential questions to maintain a positive working relationship.²⁴⁴ This model creates opportunities for continuous improvement with every client during and after every legal matter.²⁴⁵

Valorem’s clients provide their final feedback to the firm with their purse. Revenue is key to the continued success and livelihood of the firm, and 80% percent to 85% of all of Valorem’s revenue comes from alternative fee structures like those described by DSW.²⁴⁶ Valorem’s invoicing contains a value adjustment line that allows clients to pay a price that is equal to, more than, or less than the initially offered fee rate.²⁴⁷ Clients calculate the value of the services received and only pay the amount they believe those services were worth.²⁴⁸

Corporate counsel

Corporate counsel aims to minimize errors and to standardize processes that will give back to their client. This is done by defining the corporation’s mission, creating process maps to reduce inefficiencies and redundancies, and improving the coordination of services.²⁴⁹ One area that has seen significant standardization is e-discovery.²⁵⁰ Root-cause analyses²⁵¹ may be applied in an in-house e-discovery setting. These analyses may come in the

²⁴²*Id.* at 41.

²⁴³*Id.* Patrick Lamb, a founding partner of Valorem says that he even “spends a lot of time on planes to have face time with clients.” *Id.*

²⁴⁴*Id.*

²⁴⁵*Id.*

²⁴⁶*Id.* at 41–42.

²⁴⁷*Id.* at 42.

²⁴⁸To this date, only two clients have paid less (due to a billing error), two have paid a small amount more, and one has paid significantly more than its markup. *Id.*

²⁴⁹William H. Simon, *Where Is the “Quality Movement” in Law Practice?*, 2012 Wis. L. Rev. 387, 393 (2012).

²⁵⁰*Id.* at 394.

²⁵¹See *supra* n. 32 and accompanying text.

form of *The 5 Whys*²⁵² or the cause-and-effect or “fishbone” diagram.²⁵³ For example:

Why #1: *Why are there too many defects related to privilege calls and redactions?*

Answer: The review team may not have case specifics.

Why #2: *Why doesn't the review team have the case-specific information necessary to make accurate privilege calls and redactions?*

Answer: The review team does not have a list of all custodian and counsel names to track attorney-client communication that could potentially be privileged or require redaction.

Why #3: *What custodian names and counsel names pertain to this matter?*

Answer: A list of 20 custodian and five counsel names was provided to the review team.

Why #4: *Is the list accurate? What about the surrounding privilege and confidential issues related to Joe Smith and Kelli Jones?*

Answer: We don't see Joe Smith or Kelli Jones on this list of custodian or counsel names. This could be a root cause!²⁵⁴

This series of questioning enables the corporation's in-house counsel to identify and then alleviate the actual error occurring in the firm's current e-discovery process.²⁵⁵

Litigation firms and general counsel working together

Large litigation firms will work with general counsel to provide support teams for e-discovery and document review.²⁵⁶ At the initial meeting, litigation firms and general counsel identify the goals and any deadlines or requirements that must be met.²⁵⁷ To execute the project, a combination of in-house counsel, litigation attorneys, and technology professionals will work with the clients and occasionally other specialized attorneys.²⁵⁸ This cross-functional team establishes the workflow for the document review project. This workflow is then standardized by the technologist. The

²⁵²Sweeney, *supra* n. 33, at 163. Although *The 5 Whys* is the name of the process, in reality, there may be more or less *Why* questions required to identify the root cause.

²⁵³Fishbone diagrams or Ishikawa diagrams are effective cause and effect tools that can be used to investigate the root cause of unwanted effects. *See id.* at 165.

²⁵⁴Simon, *supra* n. 249, at 393.

²⁵⁵*See supra* nn. 250–254 and accompanying text.

²⁵⁶*Litigation Support Requires Both Talent and Technology: Document Review Works Best When All Players Can Bring Their Skills to the Fore*, Metro. Corp. Counsel <http://www.metrocorpcounsel.com/articles/33870/litigation-support-requires-both-talent-and-technology-document-review-works-best-when/> (last updated May 2016).

²⁵⁷*Id.*

²⁵⁸*Id.*

combination of skills presented by the cross-functional team allows reviewing lawyers to follow a consistent, repeatable process that minimizes or eliminates unnecessary tasks or errors.²⁵⁹ The goal is that the work completed by the firm complements the corporation's efforts on the project.²⁶⁰

Even when early collaboration occurs and deadlines are set, inefficiency and waste may still appear in the document review process. In a case study where a 10-month deadline for document production had been set, inefficiencies occurred and resulted in the review of only 30% of documents in a six-month period.²⁶¹ To complete the document project on time and on budget, additional Lean tools were incorporated to combat project waste.²⁶² A Kaizen event²⁶³ brought together key members from outside vendors, specialized attorneys, and the litigation team.²⁶⁴ The Kaizen event with the cross-functional team identified waste in the form of:

Waiting: Contract attorneys sat waiting for documents to be batched for review, for guidance on coding calls, and for large files and spreadsheets to be loaded.

Defects: Metrics showed certain reviewers were either too slow or frequently made mistakes; the coding panel was too long and complicated; the documents in the review set had not been properly culled.

Nonutilized talent: Associates were not training contract reviewers or controlling the quality of their work; high-performing contract attorneys had not been asked to work full-time; the full analytics function of the review tool had been purchased but was not being used. Getting the team comfortable with, and tackling how to apply, predictive coding was key to speeding up the review.

Extra processing: Documents were being reviewed multiple times because the review had not been properly structured, and protocol was subpar. The quality control process was multilayered and ad hoc.²⁶⁵

Once these waste elements were identified in the Kaizen event, it was easy for the team to find ways to improve the current process to meet the deadline. Finally, an updated process map was created to ensure the successful completion of the project both on time and on budget.²⁶⁶

Another process optimization case study between a litigation firm and general counsel occurred when a defense contractor with a large footprint

²⁵⁹*Id.*

²⁶⁰*Id.*

²⁶¹Slater, *supra* n. 7.

²⁶²*Id.*

²⁶³*Supra* n. 43 and accompanying text (defining a Kaizen event).

²⁶⁴Slater, *supra* n. 7.

²⁶⁵*Id.*

²⁶⁶*Id.*

of business units in the United States issued a request for a single firm to handle all of its counseling and litigation.²⁶⁷ The defense contractor's goal was to create better-quality outcomes, consistency, and efficiency in practice.²⁶⁸ The retained firm received input and support from in-house lawyers and immediately began implementing the following process improvement:

Interviewing counsel from both corporate and the divisions and identifying the "voice of the client" to determine the root cause of present issues.²⁶⁹

Creating a trial process map²⁷⁰ for all cases at trial and standardizing the map. The standardized map assisted with identifying matters with the potential of going to trial in the future.²⁷¹

Developing a triage approach to cases going to trial and assigning staffing based on potential risk at a flat fee.²⁷²

There was a conscious effort to engage the client's counsel in the process improvement strategy. This led to significant improvement, including predictability of legal expenses. Over a five-year period, the client secured an average cost savings of 30% per matter (out of 180 matters).²⁷³

General practice and boutique firms

Clients are always important to the health of law practice, but if the firm is solo, small, or a boutique, the emphasis on client satisfaction may be even stronger. Applying the user story²⁷⁴ technique informs the work that should be done in the practice that best meets the clients' needs.²⁷⁵ User stories follow a simple format:

As a _____, I need to be able to _____, so that I can _____.²⁷⁶

Therefore, a user story at a family law practice may look like:

²⁶⁷Damon, *supra* n. 172, at 34.

²⁶⁸*Id.*

²⁶⁹*Id.*

²⁷⁰Process maps help lawyers and clients visualize and pinpoint opportunities for change. The team analyzes each step of the process by asking these three questions: (1) Is this step necessary?; (2) How can we reduce the activities to accomplish the step?; and (3) How can we keep the focus on improving the process metrics? (If time is the metric being tracked, they may keep a step in the process that that reduces the overall time of the process.) *Id.* at 33.

²⁷¹*Id.* at 34.

²⁷²*Id.*

²⁷³*Id.*

²⁷⁴*Supra* nn. 47–48 and accompanying text (defining the user story technique).

²⁷⁵Grant, *supra* n. 44, at 7.

²⁷⁶*Supra* n. 46.

As a person whose financial interests are entangled with those of my spouse, I need to be able to ensure that my assets are protected, so that I can have the resources I need to continue my life on my own.

As a soon-to-be single parent, I need to be able to maintain a strong relationship with my kids, so that I can be assured that they are safe and well-nurtured.²⁷⁷

Story sets result in the lawyer finding a new client-focused measurement for determining when the work is done. The work is not done when the work product is complete, but instead it is when the client problem is solved.²⁷⁸

The use of the story set format standardizes the client narrative and effectively summarizes client goals.²⁷⁹ The story set format also provides a structure that helps lawyers consistently identify and retain potential clients.²⁸⁰ This standardization of repetitive legal tasks in small firms and boutique practices adds significant value by reducing inefficiencies and costs.²⁸¹ Stories can be incorporated into retainer agreements and engagement notices.²⁸² Some firm services that can easily lend themselves to standardization are some employment matters, IP licensing, and select compliance issues.²⁸³

Government attorneys and the judiciary

Performance measurements are a metric often kept in law firms. Most often, performance is tied to business metrics like billable hours, bill rate, and profits from judgments.²⁸⁴ Positive business metrics may factor into an attorney's promotion or additional compensation,²⁸⁵ but these metrics do not help firms diagnose a problem.²⁸⁶ It is necessary to have metrics with diagnostic value²⁸⁷ to properly identify an issue that needs to be improved is necessary.²⁸⁸

²⁷⁷Grant, *supra* n. 44, at 7.

²⁷⁸*Id.*

²⁷⁹*Id.*

²⁸⁰*Id.*

²⁸¹Simon, *supra* n. 249, at 393–394.

²⁸²When establishing a lawyer-client relationship, Model Rule of Professional Conduct (MRPC) 1.5(b) requires lawyers to disclose “the scope of the representation and the basis or rate of the fee and expenses for which the client will be responsible.” It is recommended to provide this information in written form. Model R. Prof. Conduct 1.5 (ABA 2020).

²⁸³Simon, *supra* n. 249, at 399–400.

²⁸⁴Simon, *supra* n. 249, at 394.

²⁸⁵Simon, *supra* n. 249, at 400.

²⁸⁶*Id.*

²⁸⁷A diagnostic value will provide indications of what something is, lending itself as specific characteristics that can be used for future improvement. Simon, *supra* n. 249, at 400.

²⁸⁸*Id.*

Government lawyers appear to have made the most progress with diagnostic metrics.²⁸⁹ Although the initial metrics held at the prosecutor's office focused mainly on conviction rates and pleas,²⁹⁰ a focus on that metric alone often added pressure for a plea and led to overcharging.²⁹¹ Today, prosecutor offices across the country no longer collect data on conviction rates.²⁹² Process improvement occurred when additional metrics were compiled to assist in the diagnosis of possible issues in the prosecutor's office.²⁹³ These offices now internally track whether the convictions or pleas are associated with the offenses charged in the case or are associated with lesser offenses.²⁹⁴ If a high percentage of the pleas are associated with lesser charges, the office leadership will then evaluate whether the metric indicates overcharging.²⁹⁵ Office leadership may also measure timeliness, the consistency of charging decisions, and the satisfaction felt by victims and witnesses about their treatment by office staff.²⁹⁶ Finally, office leadership may elect to keep a specific diagnostic metric to assist locally implemented government programs.²⁹⁷ If a local government office is experimenting with an alternative drug treatment diversion program, the prosecutor's office may choose to track specific aspects of all cases that were diverted to the program.²⁹⁸ Diagnostic metrics enable government attorneys to efficiently identify trends and issues while supporting other governmental programs.²⁹⁹

Since the 1970s, case overload in the judicial branch has been well documented.³⁰⁰ Changes in statutory and case law, court rules, technology, and legal practice contributed to the amount of judicial work.³⁰¹ Commissions

²⁸⁹*Id.*

²⁹⁰*Id.*

²⁹¹*Id.*

²⁹²*Id.* See also Lawton P. Cummings, *Can an Ethical Person Be an Ethical Prosecutor? A Social Cognitive Approach to Systemic Reform*, 31 *Cardozo L. Rev.* 2139, 2157 (2010) (discussing how ethical prosecutors do not rely on or track conviction rates as a measure of their success).

²⁹³*Id.*

²⁹⁴*Id.*

²⁹⁵*Id.*

²⁹⁶*Id.*

²⁹⁷*Id.*

²⁹⁸*Id.*

²⁹⁹*Id.*

³⁰⁰See generally Maria L. Margus, *Judicial Overload: The Reasons and the Remedies*, 28 *Buff. L. Rev.* 111 (1978); Joseph P. Fried, *U.S. Courts Are Jammed By Caseload*, *N.Y. Times*, <https://www.nytimes.com/1984/07/09/nyregion/us-courts-are-jammed-by-caseload.html> (July 9, 1984); William H. Manz, *Documents and Materials Regarding the Creation, Structure and Organization of Federal Courts and the Federal Judiciary* (Congress and the Courts: A Legislative History 1993–1998 series n. 48, 1999).

³⁰¹Performance & Accountability, *Fla. Court*, <https://www.flcourts.org/Administration-Funding/Performance-Accountability> (last accessed September 18, 2020).

were established to assess performance and accountability.³⁰² Judges received pressure to get rid of cases, placing an emphasis on speed instead of quality.³⁰³ Intercircuit assignment programs were also created to enable federal judges in one jurisdiction to temporarily volunteer their assistance in another jurisdiction where caseloads were high.³⁰⁴

Caseflow management coordinates court processes and resources so that court cases progress in a timely manner from filing to disposition.³⁰⁵ The National Center for State Courts has compiled a comprehensive guide on caseflow management resources.³⁰⁶ The guide offers resources for courts handling a variety of cases: ranging from civil and criminal to mass tort, probate, and small claims.³⁰⁷ The guide offers tools, databases, and other resources that enable courts to consider time standards, new processes and work methods, and case management strategies to promote prompt and affordable justice.³⁰⁸

Process optimization in a fragmented and overly complex judicial organizational structure may result in proposals for reorganization.³⁰⁹ For example, Chief Judge Janet DiFiore has put forth a proposal in front of the New York State Legislature that aims to merge New York's 11 trial courts into three different levels.³¹⁰ The new structure would consist of a Supreme Court, a Municipal Court, and Justice Courts.³¹¹ The recommended reorganization of the New York judicial system aspires to deliver more efficient, affordable, and high-quality services for judges, lawyers, and litigants.³¹²

³⁰²*Id.*

³⁰³Fried, *supra* n. 299.

³⁰⁴*Judges Help Judges When Courts Face Heavy Caseloads*, U.S. Courts, <https://www.uscourts.gov/news/2018/11/08/judges-help-judges-when-courts-face-heavy-caseloads> (Nov. 8, 2018).

³⁰⁵*Caseflow Management Resource Guide*, National Center for State Courts. <https://www.ncsc.org/topics/court-management/caseflow-management/resource-guide#> (last accessed September 18, 2020).

³⁰⁶*Id.*

³⁰⁷The NCSC offers resources for civil, criminal, differentiated, drug, family, mass tort, probate, rural, and small claims cases. *Id.*

³⁰⁸*Id.*

³⁰⁹Press Release, Governor Supports Chief Judge's Efforts to Simply the State's Outdated Court Structure, http://ww2.nycourts.gov/sites/default/files/document/files/2020-01/PR20_01.pdf (Jan. 8, 2020).

³¹⁰*Id.*

³¹¹*Id.*

³¹²*Id.*

Part IV: Law schools should leverage law libraries in times of change to effectively implement process optimization

At the start of the 21st century, law schools experienced a decline in law school enrollment, resulting in impending budget cuts and hiring freezes.³¹³ This decline caused law schools to reassess their admissions practices and standards, causing pedagogical changes within the 1L curriculum.³¹⁴ The American Bar Association (ABA) then shifted its focus to achieving outcomes related to assessment, academic success, and bar passage.³¹⁵ The law school community was now required to meet these standards while facing the challenge of increased scholarship dollars and declining budgets.³¹⁶

At the same time, academic law libraries were interested in collecting print materials to support faculty scholarship and the students' legal education.³¹⁷ Since then, legal information vendors shifted their services to online platforms at an increased price, promoting emerging technologies such as AI and data visualization as an efficient way to conduct legal research.³¹⁸ As the demand for digital materials increased, the footprint of the physical library collection decreased.³¹⁹ This allowed the law school to identify opportunities to repurpose library space as law school space.³²⁰ No

³¹³Elizabeth G. Adelman, Robert M. Adelman, Richard J. Patti & Karen L. Shepard, *Academic Law Library Director Status Since the Great Recession: Strengthened, Maintained, or Degraded?*, 112 *Law Lib. J.* 117, 120–121 (2020). Also see David Frakt, *Cost Cutting in an Age of Declining Law School Enrollment*, *The Faculty Lounge*, <https://www.thefacultyounge.org/2015/01/cost-cutting-in-an-age-of-declining-law-school-enrollment.html>. (last updated Dec. 2016, 10:35 a.m.)

³¹⁴Adelman, Adelman, Patti & Shepard, *supra* n. 313 at 120; Linda Kawaguchi, *Assessing Academic Law Libraries' Performance and Implementing Change: The Reorganization of a Law Library*, 49 *U. Tol. L. Rev.* 35, 36 (2017); Margaret Loftus, *Drop in Applications Spurs Changes at Law Schools*, *U.S. News & World Rep.* (Mar. 11, 2015, 9:00 a.m.), <https://www.usnews.com/education/best-graduate-schools/top-law-schools/articles/2015/03/11/drop-in-applications-spurs-changes-at-law-schools>.

³¹⁵Catherine L. Carpenter, Michael J. Davis, Jerome C. Hafter, Joseph D. Harbaugh, Randy Hertz, E. Christopher Johnson, Jr., Maryann Jones, Lisa A. Kloppenberg, Thomas E. Perez, Raymond C. Pierce, Kurt L. Schmoke, & Kevin J. Worthen. *Report of the Outcome Measures Committee*, A.B.A.: Legal Educ. & Admissions to the Bar, https://www.americanbar.org/content/dam/aba/administrative/legal_education_and_admissions_to_the_bar/reports/2008_outcome_measures_committee_final_report.pdf (July 28, 2008); see also Kawaguchi, *supra* n. 314, at 38–39.

³¹⁶Taylor Fitchett, James Hambleton, Penny Hazelton & Anne Klinefelter, *Law Library Budgets in Hard Times*, 103 *Law Lib. J.* 91, 91–92 (2011) (mentioning that law school ranking increasingly pressures law school expenditure toward recruitment of the best students and faculty).

³¹⁷Roberta F. Studwell, *The Strategic Academic Law Library Director in the Twenty-First Century*, 109 *Law Lib. J.* 649, 650. See also Amanda M. Runyon, *The Effect of Economics and Electronic Resources on the Traditional Law Library Collection*, 101 *Law Lib. J.* 177, 178 (2009).

³¹⁸Runyon, *supra* n. 317, at 179.

³¹⁹*The Future of Academic Library Print Collection: A Space for Engagement*, *Ariz. St. U. Lib.*, <https://lib.asu.edu/sites/default/files/marketing/ASU%20Whitepaper%20-%20Which%20Books.pdf> (Oct. 2017). See also Fitchett, Hambleton, Hazelton & Klinefelter, *supra* n. 316 at 109.

³²⁰Michelle Wu, Pauline Aranas, Steven Barkan, Barbara Bintliff & Darin Fox, *Nowhere to Run; Nowhere to Hide: The Reality of Being a Law Library Director in Times of Great Opportunity and Significant Challenges*, 107 *Law Lib. J.* 79, 86 (2015).

longer identified as the “library as a place,” law libraries were forced to identify creative, efficient ways to serve their communities.³²¹

To create the new identity of “library as a service,”³²² law library leadership has rebranded the library team as a potential change agent and transformer uniquely qualified to identify trends and opportunities and stay ahead of them.³²³ Businesses and law firms employ process improvement techniques to predict costs, increase return on investment, and improve predictability and efficiency of outcomes.³²⁴ Additionally, effective businesses and law firms are expected to create cross-functional teams that eliminate waste and promote continuous improvement.³²⁵ Similarly, law library leadership uses data and process optimization to plan for the future of library space, personnel, programs, and services.³²⁶ This paved the way for cross-training opportunities within the library and the creation of cross-functional teams between the library and several departments in the law school.³²⁷ When law library leadership successfully applies these process optimization techniques, this leads to positive change within the law library and ultimately the law school.

Successful outcomes require leadership teams that believe that process improvement is more than just a tool kit to solve problems or a collection of methodologies and processes—it is a whole mindset that can be taught to others.³²⁸ Some believe that key leadership capabilities in LSS are the end product of extensive training and skills development.³²⁹ Others believe

³²¹Geoffrey T. Freeman, *The Library as Place: Changes in Learning Patterns, Collections, Technology, and Use*, CLIR 1–10, <https://www.clir.org/pubs/reports/pub129/freeman/> (2015).

³²²See Barbara A. Bintliff, Laura N. Gasaway, Penny A. Hazelton & Frank G. Houdek, *Rebuilding the Profession: Recommendations for Librarians Interested in Becoming Academic Law Library Directors*, 99 *Law Libr. J.* 101, 104 (2007) (discussing how running an academic law library is like is running a multimillion-dollar, not-for-profit service organization).

³²³Studwell, *supra* n. 317, at 651. See also Wu, Aranas, Barkan, Bintliff & Fox, *supra* n. 320, at 88.

³²⁴See *supra* Parts II, III.

³²⁵See *supra* Parts II, III.

³²⁶Studwell, *supra* n. 317, at 653. Centralization is also an option for library leadership who are interested in streamlining services. However, 97% of law libraries are autonomous with law library directors reporting directly to the law school dean. See Adelman, Adelman, Patti & Shepard, *supra* n. 313, at 125.

³²⁷See Peggy Johnson, *Planning and Implementing a Cross-Training Program*, 57 *ACRL* (1996) (discussing the reasons why libraries should cross-train for better efficiency); John Palfrey, *Reorganizing the Harvard Law School Library*, *Harv. L. Sch. Lib. News*, https://etseq.law.harvard.edu/2009/08/reorganizing_the_harvard_law_school_library/ (last accessed Sept. 16, 2020) (discussing how the Harvard Law Library streamlined unit functions to efficiently expand services that meet user demands and support future curricular changes).

³²⁸See Amy Beckham Osborne, Conference Presentation, *The Pros and Pitfalls of Cross-Training* (Canton, OH. Oct. 20, 2010) (Ohio Reg'l Ass'n of Law Lib. Annual Meeting) (presenting on how to implement a cross-training program in one's library); Alessandro Laureani & Jiju Antony, *Leadership Characteristics for Lean Six Sigma*, *Total Quality Mgmt. & Bus. Excellence* 9 (2015).

³²⁹*Id.* at 7.

this mindset stems from the natural core actions that individuals must possess to become great LSS leaders.³³⁰

All believe that LSS leadership is best demonstrated by individuals possessing these five qualities:³³¹

Communication focuses on engaging the workforce and achieving buy-in. Verbal and visual communication systems are used to mutually reinforce how a message is conveyed. Leaders broaden the awareness of LSS and provide basic training for process improvement.³³²

Employee motivation involves the use of nonfinancial reward systems to encourage staff to actively participate and incorporate LSS practices in everyday workplace behavior.³³³

Leading by example is central to creating the ideal conditions for success. Project champions embody the rules of LSS, embrace the workplace culture, and teach others how to use the rules of LSS to succeed.³³⁴

Leadership commitment requires buy-in, involvement, and active participation by top management. For example, commitment can be demonstrated by sufficient staffing levels, appropriate training, proper allocation of time, provision of peer support in the form of events and conferences, and nomination to projects once training is completed.³³⁵

Commitment to training involves selecting candidates, determining the training format, and evaluating the effectiveness of the training.³³⁶

When individuals demonstrate these leadership qualities, effective cross-functional teams can be easily deployed for project success throughout the organization.³³⁷

Law library leadership have demonstrated such success in their own libraries by applying these leadership qualities in their daily work ethic and when working with their teams. Law library leadership engage the workforce and achieve buy-in during the collection development process. During collection development, law library staff collaborate on how to

³³⁰*Id.*

³³¹*Id.*

³³²*Id.*

³³³*Id.*

³³⁴*Id.*

³³⁵*Id.*

³³⁶*Id.*

³³⁷See *supra* Parts II, III. See also Wu, Aranas, Barkan, Bintliff & Fox, *supra* n. 320, at 94–97 (discussing how senior administrators can work together on decanal leadership teams to fully understand the mission and vision of the law school, as well as priorities and broader institutional concerns).

effectively maintain, add, and weed from a collection³³⁸ that must support the academic mission of the law school while meeting patron expectations and budget constraints.³³⁹ Law library leaders motivate employees to pursue professional development opportunities.³⁴⁰ Law library leaders encourage participation and networking in professional organizations that foster mentoring and continued learning.³⁴¹ The concept of the law library as a service requires sufficient staffing levels to maintain library operations and collection access.³⁴² To accomplish this, staff must have appropriate training to complete these tasks, offer current services, and develop new initiatives.³⁴³ Finally, law library leaders demonstrate a commitment to training when they enable staff to attend symposia, conferences, and workshops within the law school and in the law librarianship profession.

³³⁸Some may believe that there would be tension incorporating LSS when considering library ethics. Library ethics include the legal issues posed by the USA Patriot Act by tracking individual users and connecting them to particular books and other sources. In reality, it is common practice for law librarians to base their weeding decisions on item usage statistics. See Ian Chant, *The Art of Weeding: Collection Management*, <https://www.libraryjournal.com/?detailStory=the-art-of-weeding-collection-management> (last updated June 23, 2015); Duplication of resources is another consideration for canceling and weeding. Runyon, *supra* n. 317, at 189–191.

³³⁹To ensure successful collection development practices, cross-departmental teams construct a collection development policy, produce circulation analytics, and create workflow charts that track the life cycle of material from acquisition to weeding. See generally, Connie Lenz & Helen Wohl, *Does Form Follow Function? Academic Law Libraries' Organizational Structures for Collection Development*, 100 *Law Libr. J.* 59 (2008). Librarians act as liaisons to the collection development process on behalf of the faculty member. As liaisons, librarians solicit feedback from faculty on upcoming research interests and advocate to purchase or acquire materials that meet budgetary limits but ultimately support current scholarship efforts. *Id.* at 76–79. See also *supra* n. 325.

³⁴⁰Professional development opportunities come in many forms. Some examples of professional development are allocating time to write for publication during work hours, keeping abreast of current literature within the profession, and attending educational events that expands their knowledge and/or skills sets. See, e.g., Carol A. Parker, *Tenure Advice of Law Librarians and Their Directors*, 103 *Law Libr. J.* 199, 211 (2011) (discussing how “supportive directors” will allow librarians time away from their “day-to-day duties” to “take advantage of professional development, research, and scholarship opportunities”); Carol Ottolenghi & Lauren M. Collins, *Ask a Director: Professional Development 101*, 20 *AALL Spectrum* 16, 17 (Jan.–Feb. 2016) (discussing how the author encourages her staff to participate in a variety of professional organizations as they each have their own strengths); *Leader Profile: Staying on the Cutting Edge of Technology*, *AALL Spectrum* 30, 33 (Jan.–Feb. 2018) (“recommend[ing] that the new generation of law librarians become engaged and involved with their local, regional, and national library associations”).

³⁴¹For example, the American Association of Law Libraries (AALL) offers the Conference of Newer Law Librarians (CONELL), the Leadership Academy, the Management Institute, and the Mentor Program to facilitate professional networking and continued education. *Conference of Newer Law Librarians (CONELL)*, Am. Ass'n of L. Libr., <https://www.aallnet.org/conference/agenda/programs-workshops/conell/> (last visited Aug. 18, 2020); *Leadership Academy*, Am. Ass'n of L. Libr., <https://www.aallnet.org/education-training/in-person-programs-seminars/leadership-academy/> (last visited Aug. 18, 2020); *Management Institute*, Am. Ass'n of L. Libr., <https://www.aallnet.org/education-training/in-person-programs-seminars/management-institute/> (last visited Aug. 18, 2020); <https://www.aallnet.org/careers/mentor-program/> (last visited Sept. 16, 2020). Other associations, such as the American Library Association and the Special Libraries Association, offer similar programs and activities.

³⁴²As a result, law libraries often have the largest departmental staff in a law school. See generally, Wu, Aranas, Barkan, Bintliff & Fox, *supra* n. 320, 82–84.

³⁴³Training opportunities come in a variety of different forms, ranging from webinars offered by legal information vendors to the Annual Conference provided by AALL. Training opportunities may also arise when cross-departmental teams are formed, eliminating single points of failure and ensuring success even when budgets are constrained. Upon training, staff are often asked to execute or implement their newfound knowledge and/or skills to positively impact library operations and services. For example, law librarians who teach Advanced Legal Research classes are called to employ new techniques for student engagement and stay up-to-date on technological advances on legal research platforms. See generally Liz McCurry Johnson, Dolly Knight & Maribel Nash, *Reference Desk: Finding Time for Training*, *AALL Spectrum* 54 (Jan.–Feb. 2018).

Through collection development practices, continuous learning opportunities, and the use of cross-functional teams, the law library has effectively demonstrated its ability to meet the dynamic needs of the law school community. Law library leaders have employed process optimization techniques, from creating a strategic plan³⁴⁴ to conducting surveys³⁴⁵ to digitizing and collecting law library metrics.³⁴⁶ These improvements result in positive change at the law library for its users³⁴⁷ and also have an indirect impact on how pedagogy, student success, and faculty scholarship is fulfilled at the law school.³⁴⁸

Assessment, academic success, and bar passage continue to be at the forefront of legal education.³⁴⁹ Budgets and programs are systematically reduced,³⁵⁰ while enrollment is steadily increasing.³⁵¹ To face these challenges, law libraries will continue applying process optimization techniques and adapting its methods as legal education focuses its efforts on creating practice-ready attorneys.³⁵² As the norms of legal education continue to change during this time of crisis, it is practical for law school administration to seek counsel from, and leverage the skills of, law library leadership

³⁴⁴Michelle Cosby, *Strategic Planning: Using SWOT or SOAR Analysis to Improve Your Organization*, AALL Spectrum 20 (Nov.–Dec. 2018); Wu, Aranas, Barkan, Bintliff & Fox, *supra* n. 320, 86–87. See also Jason Eiseman & Teresa Miguel, *Planning for the 21st Century: Creating a Strategic Plan at the Yale Law Library: Part 1: Planning the Plan*, 21 Trends L. Libr. Mgmt. & Tech. 37 (2011); Jason Eiseman & Teresa Miguel, *Planning for the 21st Century: Creating a Strategic Plan at the Yale Law Library: Part 2: Writing the Plan*, 22 Trends L. Libr. Mgmt. & Tech. 1 (2012).

³⁴⁵Jessica de Perio Wittman & Kathleen (Katie) Brown, *Discovering Diamonds in Your Survey Data*, AALL Spectrum 20 (Mar.–Apr. 2020) (discussing how effective use of surveys can enable leadership to make data-driven decisions based on qualitative and quantitative metrics to create, eliminate, and adapt services).

³⁴⁶The American Bar Association (ABA) collects individual law school reports and national compilation spreadsheets. See Statistics, ABA Required Disclosures, https://www.americanbar.org/groups/legal_education/resources/statistics/. Similarly, Integrated Postsecondary Education Data System (IPEDS) is a system of interrelated surveys conducted annually by the U.S. Department of Education's National Center for Education Statistics. See IPEDS, Nat'l Center for Educ. Stats., <https://nces.ed.gov/ipeds/>. The Association of Research Libraries (ARL) gathers and disseminates data and analytics on research library practices, effectiveness, and impact. See ARL, <https://www.arl.org/>. The Association of College & Research Libraries (ACRL) also provides summary reports about college and research libraries, including trend data on staffing, new services, and reference staff models. See ACRL, <http://www.ala.org/acrl/publications/trends>. All of these statistics may be compiled in the ALLStAR Official Survey. See Jessica C. Panella, Christine Iaconeta & Teresa M. Miguel-Stearns, *ALLStAR Benchmarking: How Collaborating and Sharing Data is a Win-Win*, AALL Spectrum 12, 13 (Nov.–Dec. 2017) (discussing ALLStAR—Academic Law Libraries: Statistics, Analytics, and Reports, which “was developed to collect, share, analyze, and utilize data among academic law libraries”).

³⁴⁷See *supra* nn. 331–333 and accompanying text (discussing the success of employing these improvements).

³⁴⁸See generally Lenz & Wohl, *supra* n. 339, at 59; Wu, Aranas, Barkan, Bintliff & Fox, *supra* n. 320, at 82–84.

³⁴⁹See *supra* n. 302 and accompanying text.

³⁵⁰Kawaguchi, *supra* n. 314, at 41 n. 36.

³⁵¹Stephanie Francis Ward, *More People Are Applying to Law School, But It's Not Like Last Year's "Trump Bump,"* ABA J., <https://www.abajournal.com/news/article/more-people-applying-to-law-school-but-its-not-like-last-years-trump-bump> (last updated August 7, 2019, 12:04 p.m.).

³⁵²Wu, Aranas, Barkan, Bintliff & Fox, *supra* n. 320, at 87–88; Fitchett, Hambleton, Hazelton & Klinefelter, *supra* n. 319, at 91–92.

and their cross-functional teams to create direct change in the law school environment.³⁵³

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³⁵³Wu, Aranas, Barkan, Bintliff & Fox, *supra* n. 320, at 92–100 (discussing how law library directors can develop collaborative working relationships with their deans to ensure mutual success for the betterment of the law school).