

# *Six Sigma, the Discovery Process and the Corporate Legal Department*

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Even before the current economic crisis, American corporations have been under extraordinary pressure to find ways to “get it done” cheaper, faster, and easier without sacrificing any quality along the way.<sup>1</sup> The legal process, especially electronic discovery, is extremely expensive, and has become a prime target for scrutiny. Moreover, in the minds of many executives, the high costs of the legal process do not make any logical sense. In companies where the *Six Sigma* Approach to cost cutting has already taken hold, or where the current economic environment pushes the company to embrace the *Six Sigma* process, the legal department may find itself facing increasing critical questions from management regarding how and where *Six Sigma* can be incorporated into the legal process, and more specifically, why electronic discovery is so expensive. Applying some of the principles of *Six Sigma* to the electronic discovery process can reduce costs, increase the quality of review, and provide metrics to determine the effectiveness and accuracy of review. New technologies based on statistical and linguistic algorithms are emerging in the e-discovery marketplace that allow fewer attorneys to review more documents faster and more effectively. When properly used, these technologies can aid in the *Six Sigma* process by improving the quality of the discovery review and saving enormous amounts of money. However, for the technology to be defensible it is imperative that it is transparent, measurable, and fully vetted. It behooves both in-house counsel, and the external counsel on whom they rely, to understand what *Six Sigma* is, how it can reduce legal costs, how it can improve e-discovery, and how to avoid certain pitfalls of *Six Sigma* that can undermine the Company’s legal defense and unnecessarily increase the costs of the discovery process.

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<sup>1</sup> The views expressed herein are the collaborative views of the authors and not necessarily the views of any other entity or association.

## What is Six Sigma?

*Six Sigma* is nothing more than a logical, methodical style of project management which can be applied to review and ultimately improve the process by which tasks are accomplished. *Six Sigma* developed in the industrial sector as a means to improve the manufacturing process. Increasingly, however, the *Six Sigma* methodology is being applied to a wide variety of business processes to improve efficiency and reduce costly errors. In fact, efforts are underway in many companies to implement and measure *Six Sigma* in all aspects of the business, including the administrative and office functions. These efforts are typically referred to as “Lean *Six Sigma* Beyond the Shop Floor.” Properly applied *Six Sigma* principles can reduce the costs associated with discovery and defending litigation. *Six Sigma* can improve manual processes by increasing their accuracy and providing a framework to defend the process if and when challenged during litigation. *Six Sigma* can also help define a process so lawyers and business experts can better understand it and identify where and how an IT application can improve the process. Finally, *Six Sigma* techniques are increasingly being used by e-discovery vendors and practitioners to improve the process of conducting e-discovery, making the process more defensible and less costly.

The technical meaning of “*Six Sigma*” is that a process functions 99.9997% defect free. Specifically, a process functioning at a *Six Sigma* level will only have 3.4 defects per million opportunities. As an illustration, if a golfer played 100 rounds of golf per year and his putting achieved “*six sigma*” accuracy, the golfer would only miss 1 putt every 163 years (or one putt every 16,300 rounds). In the more mundane world of e-discovery, a person reviewing documents for litigation would only make a mistake on 3.4 documents out of every 1 million documents reviewed.

Not all processes need to achieve *Six Sigma* accuracy. The following chart summarizes the accuracies at various levels of “*Sigma*” accuracy:

<b>Sigma</b>	<b>Defects Per Million Opportunities</b>	<b>Accuracy Percentage</b>
3.0	66,807	93%
3.5	22,750	98%
4.0	6,210	99%
4.5	1,350	99.87%
5.0	233	99.977%
6.0	3.4	99.9997%

Lawyers should be able to see a clear desire for achieving “*Six Sigma*” accuracy for typical legal processes like filing a timely response to a lawsuit filed against the corporation or client, timely and

accurately responding to subpoenas, and applying legal holds as well as collecting and producing electronic discovery. In reality, the average corporation probably functions at a four *sigma* for timely answering lawsuits, but maybe at a three *sigma* or worse for implementing legal holds and collecting and producing electronic discovery.

### **What is Wrong with the Current System that Makes Six Sigma Necessary?**

For large scale electronic discovery projects, reviewing every single document to determine relevancy is cost prohibitive, requires using attorneys less familiar with the case, and is prone to errors. Clients attempt to save money by using cheaper, but less knowledgeable attorneys as resources during the initial review process. The relative inexperience of these attorneys coupled with the vast number of judgment calls needed to be made creates an ineffective process where a second more experienced reviewer must re-review the documents and ends up overturning the primary reviewer's calls.

In attempts to reduce the population of documents to review, clients have used keywords to cull the data, but using only keyword searches to pare down the reviewed documents relies on an arbitrary set of limitations. Keywords alone can't pick up on linguistic variations or slang and likely omit responsive documents. It is costly when secondary reviewers reverse calls made by the primary reviewer. Implementing some of the *Six Sigma* principles discussed below can help improve the primary review and reduce overall costs. *Six Sigma* asks you to focus on the cause of the mistake – was it poor training, human error, an ineffective review tool, or a process that allowed subpar contract attorneys to be staffed on the project – and brainstorm ways to create repeatable improvements to the failed process. The *Six Sigma* tool is known as the “Five Why's” and is the practice of asking, five times, why the failure has occurred in order to get to the root cause/causes of the problem (the actual number of why's is not important as long as you are able to get to the root cause of the failure).

### **The Internal Politics of Cost Cutting**

Lawyers may understand the need for, and indeed applaud, process improvements, but still ask the question: Does the legal department really need *Six Sigma* for legal matters? After all, lawyers are professionals, not manufacturers. Moreover, can't lawyers improve these processes without *Six Sigma*? The truth is, the business people probably don't think they need *Six Sigma* either. The reality is, however, many manufacturing companies are extending *Six Sigma*, not only to their legal departments, but to all facets of the business. The hard fact is that successfully implementing *Six Sigma* impacts the company's bottom line. As a result, in many companies the general counsel is being held to the same standards and metrics as other business unit colleagues and are expected to implement process improvement in measurable ways. In companies that have embraced *Six Sigma*, implementation of the philosophy is as serious in the law department as it is on the manufacturing floor.

At its core, *Six Sigma* focuses on process improvement. Instead of adding costly extra layers of quality control to the end of a process and operating in silos as opposed to across functions as a team, the *Six Sigma* method asks you to focus on what failings in the process caused mistakes to happen in the first place. The overall philosophy of *Six Sigma* is to facilitate a continuous improvement culture. Activities and processes are constantly being challenged and pushed to a higher level of performance.

One of the benefits of *Six Sigma* is the framework and discipline it brings to an organization seeking to improve its internal processes. *Six Sigma* employs numerous qualitative and quantitative tools, which comprise the underlying structure of *Six Sigma*. *Six Sigma* experts have titles like “master black belt,” “black belts” and “green belts.” These experts assist companies and their employees with integrating *Six Sigma* tools into daily working practices. They market themselves as

consultants and get hired into organizations precisely to drive cost reductions through process changes achieved *via Six Sigma* projects. In setting up a *Six Sigma* project, a *Six Sigma* “master black belt” will consult with senior executives to identify processes that should be reviewed for improvements. Upon identifying a project, the senior executive will “sponsor” a *Six Sigma* project and a “champion” will be identified who “owns” the improvement process and is responsible for approving any process changes or making the determination that a *Six Sigma* project is not worth pursuing. The “champion” will identify “subject matter experts (SMEs)” who will work as the “process team” with the *Six Sigma* “master black belt” and his apprentice “black belt” to work on the *Six Sigma* project. Sponsoring Executives, Champions and sometimes SMEs will go through their own *Six Sigma* training/indoctrination course and will become *Six Sigma* “green belts.”

Since the “champion” is usually a senior manager who reports to the sponsoring executive, he or she gets the credit for any *Six Sigma* “wins” or the unenviable task of explaining to the boss why no process improvements were achieved. Thus, there is a tremendous incentive to ensure that the *Six Sigma* process achieve some level of process improvement. As a practical matter, *Six Sigma* projects rarely conclude that a process does not need improvement. It is simply bad corporate politics to report back to the “boss” that there were no cost savings to be achieved and no improvements that can be made.

### **The Specifics of a *Six Sigma* Case Example**

*Six Sigma* projects are divided into segments – Define, Measure, Analyze, Improve and Control – called the “DMAIC” process. DMAIC is a highly structured and standardized approach to process improvement. This approach paves the way for corporations in today’s competitive business environment to meet and exceed ever increasing customer expectations. At the end of each stage of DMAIC, the black belts report on their progress to the Sponsoring Executive, Champions and Master Black Belts in “Tollgates” seeking continued support for the project and approval for the work done to date.

In the Define phase, the black belt seeks to understand the current process, what constitutes an “error” or “defect,” what constitutes an error-free result and what the end-user of the process (the “voice of the customer”) wants to see the process achieve. The process generally involves interviews and a review of any current policies and procedures in place. Properly defining the process and properly defining an “error” are critical because these determinations drive the remaining stages of the process.

In the Measure phase, the black belt attempts to count the number of defects and the number of error-free results to define a base-line *sigma* for the current process. The black belt will do his/her very best to apply statistical analysis to the current process to measure its efficiency and declare the current process as  $x$  *sigma*. As an overly simplistic e-discovery example, let’s define a “defect” as any time it costs the company more than \$2.50 per gigabyte to collect electronic data, the black belt will attempt to gather data on the number of times the lawyers instructed the IT department to collect electronic data and add up the costs (IT department time, down time for the employee from whom the data is being collected, costs of the storage media and any other cost metric that can be defined) and determine whether it cost more or less than \$2.50 per gigabyte to collect the required information. The black belt will then try to identify the most illustrative chart that highlights the costs of failure and why the process requires improvement. After all, the *Six Sigma* black belts are trying to drive change (that is what keeps them employed) and the easiest way to do that is to describe all the flaws in the current process to the sponsoring executive and the champion. Moreover, since people are generally resistant to change, the black belts, the executive sponsors and the champions have to “sell” the change to the SME’s and other impacted employees. Whether its an e-discovery *six sigma* project or any other *six sigma* project, all of these documents will likely be discoverable in future legal matters.

In the Analyze phase, the black belt facilitates a discussion between and among the subject matter experts (SMEs) to further define the process and identify the “root causes” of the errors. In short, the process tries to understand why in particular instances the cost of collecting electronic data exceeds \$2.50 per gigabyte. To achieve this understanding, the black belt may conduct “deep dives” to understand particular aspects of the process. So, for a paralegal responsible for communicating with the IT department to collect an employee’s hard drive, a black belt may “deep dive” to understand that the paralegal i) receives instructions from the in-house attorney, ii) gets a data request form, iii) searches for an asset tag number associated with a particular employee, iv) completes the data request form, v) e-mails the form to a designated IT employee, vi) puts a tickler in her Outlook calendar to follow up in 5 business days, vii) receives the data and records it on a log the paralegal maintains, and viii) sends the data to outside counsel and puts a duplicate cd-rom of the data in a vault that the legal department maintains. Ultimately, all of the steps that each person involved in the process undertake may get documented in an overall “process map.” The “process map” will include color codes or other indicia of precisely where in the process “defects” typically occur so that attention can be focused on those points in the process for improvement.

In the Improve phase, the collective project team attempts to identify and define process improvements that will reduce the number of “defects” in the future. These can be improvements to manual processes or introduction of some type of IT solution to make the process easier. For a *Six Sigma* process focused on e-discovery, it is here where IT experts and *Six Sigma black belts* may suggest solutions that simply don’t work for the legal department or external counsel. An engaged law department, however, should be able to direct the project to considering external vendors and potential solutions that could dramatically assist the corporate legal department manage costs and better control the process. For example, the internal legal department could utilize the process to build business unit buy-in for a global contract with an appropriate e-discovery vendor so that all of the company’s data is stored and processed through a common e-discovery vendor rather than the more common practice of selecting e-discovery solutions on an *ad hoc* basis. The Define and Analyze stages of the *Six Sigma* project, properly focused, should help the internal legal department understand the average size of the company’s e-discovery projects and what requirements exist for the successful collection of electronic data. Armed with the data gathered during the project and the collaborative process by which a process solution (electronic or manual) is adopted in the context of a *Six Sigma* team, the legal department can immunize itself from future criticism for the high cost of e-discovery. Moreover, the process improvements and implementation may prove useful when the company later needs to explain to a court why its process is sufficient to satisfy the company’s legal obligations.

The Control Phase is the final component of a *Six Sigma* project. In the Control phase, the black belt attempts to develop ongoing protocols to confirm that the new procedures are being followed and that statistical data is being collected to measure the performance. Typical, control elements include documented procedures, some type of training course to ensure that employee turnover does not result in a loss of knowledge and perhaps even some type of scorecard that reports on performance. Another typical control element might be procedures for an annual audit to confirm that minimal defects are occurring.

The *Six Sigma* process attempts to complete all phases in a fixed timeframe, perhaps 90 to 180 days. It is easy to see that *Six Sigma* documents, particularly any “tollgate” summaries or power point presentations are a potential treasure trove for the industrious plaintiff’s lawyer. Some of the documents, like a process map, may prove beneficial for the defense lawyer as they can provide the foundation for a 30(b)(6) deposition or simply shorten the learning curve for the external counsel.

What does this mean for the corporate legal department? First, *Six Sigma* master black belts, who probably are not lawyers, will be brain storming with senior executives regarding large costs that need to be reduced. The litigation process, as well as other legal processes, will inevitably hit that list. After all, to a corporation the legal function is a cost center, not a revenue maker. Moreover, the

business unit managers will not let the general counsel (or the chief financial officer or the human resource director) avoid participating in the *Six Sigma* fun. When the *Six Sigma* project focuses on e-discovery, internal lawyers, as well as external counsel, must remember that the existence of a process map regarding the steps to be undertaken to collect electronic data will require strict adherence. Variance away from the procedures adopted during a *Six Sigma* project will be difficult to explain to a judge or plaintiff's lawyer at a later date. So, the company better develop a good, defensible protocol. Second, the business processes that the lawyers will have to defend will be under scrutiny across the Company. It may make sense for the legal department to monitor these projects for three purposes: (i) to understand how the business processes are changing; (ii) to educate the participants in the multitude of *Six Sigma* projects underway throughout the corporation regarding the potential harm a document that makes an over-zealous call for change can be to future litigation; and (iii) to moderate the language being used as documents are being created.

### **The Intersection of *Six Sigma* and the Electronic Discovery Process**

Although the corporate legal department might consider investing the time and resources into improving the process by which electronic and paper data is collected and provided to external counsel to ensure that a defensible process with a high *sigma* is in place, the reality of most electronic discovery operations and projects is that there simply is not the budget or desire to bring on a dedicated *Six Sigma* resource to follow the DMAIC all the way through every discovery project for every piece of litigation and calculate the *sigma* of the entire operation. Without a dedicated *Six Sigma* resource, the best way to use *Six Sigma* in a discrete e-discovery project for a specific case is to extract and apply the *Six Sigma* principles that are most relevant to the work that you are doing.

Because every discovery project is different, it is important and relatively easy to implement the "voice of the customer" *Six Sigma* application into your projects. It's simply good business to pay attention to how your client wants to frame the scope of the project and what they view are the crucial elements. By taking time to focus on early case assessment and what the client wants, you have a better idea of what *Six Sigma* principles or available technologies should be incorporated or left out of the project. For example, if the client wants you to produce everything, there is no need to implement the rigorous *Six Sigma* procedures when no judgment calls are being made. If the scope of the project is relatively small, there won't be a need to cull the data with keywords or statistical technology. Knowing whether your client is more interested in controlling costs or achieving 100% accuracy can help you determine which *Six Sigma* or IT tools are applicable to the project and which would be cost prohibitive or outside the project's scope.

Even if your clients or your discovery practice are not interested in dedicating any budget or resources towards *Six Sigma*, the principles from the program can be used on a much smaller scale. The DMAIC can simply be applied to e-discovery projects by working to identify key mistakes, such as overturned privileged calls, and determining why those mistakes were made and how a repeatable process can be implemented on future projects to avoid those same mistakes.

### **The Intersection of New Technology and Statistical Sampling with Electronic Discovery**

There are many new technology products on the market that can help reduce the volume of documents that need to be reviewed or speed up the review process, allowing more experienced attorneys to review documents at lower costs, resulting in fewer omissions and errors and increasing the *sigma* of a project. If projects are achieving a lower *sigma* score because of human error or are over budget because of the time it takes to review large populations of non-responsive documents, certain statistically enabled technologies can improve the accuracy of work and reduce the cost. Because the cost of storing data is only dollars for each gigabyte, companies have become packrats with electronic data because it's cheaper and easier to continue to store everything than create and execute an effective document retention plan. The increased scope of electronic documents needs to

be reduced in a logical way and the new technologies use statistically based methodologies coupled with judgment calls made by attorneys to remove unnecessary documents. We are seeing that keyword searches alone are not always effective, and in some cases becoming more difficult to support in litigation.

If certain statistically based technologies don't fit the scope of the project, simple statistical sampling can be used to validate the effectiveness of keywords or provide metrics to the review process. If clients, opposing parties, or judges want proof of the effectiveness of a set of keywords, a technologically aided process, or a human review, sampling the non-responsive document set for misses can provide a quantifiable measure of success.

### **Hurdles and Pitfalls to Avoid with *Six Sigma* and New Technologies**

The obvious hurdle to implementing *Six Sigma* strategies and statistically enabled technology is that clients have a fear or misunderstanding of the defensibility of the statistics and the costs involved with using *Six Sigma* or statistically based technology. Obviously, if the scope of the project doesn't warrant a full scale statistical review, there won't be cost savings. But on large discovery engagements, the costs of the technology are more than recovered by improving and speeding up the review process. Courts have consistently accepted keyword searches as a means to collect data, and technology aided review is essentially a more targeted, mathematically based method to gather data. According to *The Sedona Conference Best Practices Commentary on the Use of Search & Information Retrieval Methods in E-Discovery, 2007*: "If human review or even keyword searching is the benchmark for accuracy and reliability, it arguably should not be difficult to compare the new technology favorably with either keyword searching or human review, especially when guided by a reasonable process. The discovery standard is, after all, reasonableness, not perfection."

Effectiveness, transparency, and cooperation are the crucial elements in having courts and opposing parties accept new cost saving technologies. If the statistical tool makes mistakes and allows privileged documents to be released, there will be less understanding on the part of clients and judges than if the mistake was attributed to human error. The technology has to be explainable, most likely by a discovery or statistical expert, and the process needs to be transparent and fully vetted. With human review, a discovery team can look at the history of the review of a document and see which attorneys made the calls at each stage of the review process to allow a document to be produced or not produced. With technology aided review, there still needs to be a clear path that delineates how the decision for each document was made.

With so many competing technologies in the marketplace claiming to improve the e-discovery process, it can be difficult for opposing sides to agree on the use of a specific process or technology, especially if there is a black box element to the technology. However, with the overwhelming and verifiable evidence that the new technologies increase accuracy and decrease the cost and time spent on discovery, it clearly behooves parties to embrace the technology and sampling methods designed to improve the e-discovery space. Subscribers to the old school of thought that, in discovery, every document must be reviewed by a human must realize that with the increasing scope of discovery projects, these technologies aren't options to perhaps consider, but necessities. The dictates of *Sedona Principle 6* state that a party producing documents is in the best position to choose the most appropriate method for searching and reviewing their own data, which supports cooperation in the implementation of technologically aided review.

### **The Application of *Six Sigma* to the Process of Being a Lawyer and Electronic Discovery**

Once the corporation embraces *Six Sigma* as a methodology for seeking process improvement, the general counsel will likely face pressure to find areas within the legal process where applying *Six Sigma* makes sense. By its nature, *Six Sigma* is a more natural fit for processes that are

repetitive, routine and require a high degree of accuracy. Thus, applying *Six Sigma* principles to processes like applying litigation holds, collecting responsive paper and electronic documents and ultimately reviewing the material for production in the litigation makes a great deal of sense if the corporate legal department has the resources and commitment. A *Six Sigma* project may prove a catalyst for gaining a financial commitment for the investment in IT and statistically aided technology solutions that can simplify the process of implementing legal holds and streamline the process for collecting and producing documents and data. *Six Sigma* projects can also be a good way to develop defensible procedures to comply with the company's obligations under the revised federal rules regarding e-discovery. Moreover, a fully defined process with appropriate, accurate process maps may reduce the company's future legal costs simply by reducing the time that external counsel must spend to learn and understand the company's IT systems and figure out how to collect electronic data. By implementing an archiving application, or statistically enabled technology, the company may also reduce the costs of collecting, reviewing and producing electronic data.

Using a *Six Sigma* project to achieve these goals does not come without risk. The company will inevitably have ongoing litigation matters before and during the *Six Sigma* project. These earlier litigation matters obviously will use a process that does not incorporate any of the process improvements that the *Six Sigma* project is designed to achieve. Additionally, any technology used to streamline electronic discovery and reduce costs must be transparent and well thought out, or it could create litigation risks. Thus, although the *Six Sigma* project may make future lawsuits more defensible, the project could create risks for prior and current litigation matters.

It is universally agreed that the costs and scope of electronic discovery projects have increased to unsustainable levels. *Six Sigma* processes and principles coupled with statistically aided technology can effectively be applied to the discovery space to reduce both the cost and scope of discovery and provide quantifiable metrics of success. While some of the technology is relatively recent and untested in the litigation environment, look for its increased acceptance in the near future as corporations and law firms agree that it is the best option to improve the discovery process for large scale engagements.

## **ABOUT THE PRESENTERS**

### **John H. Goselin II**

John H. Goselin II is a member of the law department for ING Americas with primary responsibility for litigation matters involving ING's eight broker-dealers. Mr. Goselin also handles regulatory matters and other complex litigation for the ING family of companies. Prior to joining ING in April 2006, Mr. Goselin was a partner at the Atlanta law firm of Alston & Bird LLP. He concentrated his practice in securities class action and derivative litigation, professional liability litigation and general complex litigation. He participated in the defense of numerous class actions, derivative lawsuits and multi-million dollar complex litigation claims. Mr. Goselin received his J.D. in 1994 from the University of Michigan Law School and B.A. cum laude from Duke University in 1991. Mr. Goselin is admitted to the Georgia, New York and Massachusetts Bars.

Mr. Goselin is co-author of "In the Wake of the Reform Act, Allegations of Accounting Fraud Receive Increasing Focus in Securities Class Action Complaints", Alston & Bird LLP, Securities Litigation: Forms and Analysis, §1:04 (West Publishing Co. 2003). Mr. Goselin has also co-authored "Variable Insurance Products: What's on the Horizon", Alston & Bird Insurance Advisory - Winter 2003; "Variable Annuities: Fortuitous Beneficiaries of the Securities Litigation Uniform Standards Act of 1998", Mealey's Emerging Securities Litigation Report (May 2003) and "Controlling Liability in Litigious Times: Strategies for Investment Advisors", Wall Street Lawyer: Securities in the Electronic Age (August 2003).

### **Caroline B. Keller**

Caroline B. Keller is Assistant General Counsel for Gulfstream Aerospace Corporation in Savannah, Georgia. Prior to joining Gulfstream, Ms. Keller practiced with Alston & Bird LLP and Womble, Carlyle, Sandridge & Rice PLLC in Atlanta where she specialized in securities litigation and complex commercial litigation. Ms. Keller also served in government affairs and public policy for several trade associations in Washington D.C. and on Capitol Hill prior to joining Womble, Carlyle.

Ms. Keller received her J.D. from Georgetown University Law Center and her B.A. from Randolph Macon Woman's College. She was named as a 2009 Georgia Super Lawyer and a 2006 Georgia Rising Star.

### **Joe Mann**

Joe Mann, a managing director of the North East at Navigant, is a nationally recognized leader in electronic discovery advisory and information lifecycle consulting services with over 14 years of experience in the technology and litigation industries. He specializes in the implementation and procedural analysis of complex systems as well as application development, data analysis, document retention services, computer imagery and electronic discovery within complex commercial litigations.

Mr. Mann has both national and international experience advising on such issues as electronic discovery, database development, application software, data analysis, and repository services. He has supported testimony and worked as an expert on electronic discovery issues.