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THE SEDONA CONFERENCE® COMMENTARY ON FINDING THE HIDDEN ROI IN INFORMATION ASSETS

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The Sedona Conference®

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Preface & Acknowledgements

Welcome to a special publication in The Sedona Conference® Working Group Series (the "WGS"®): *The Sedona Conference® Commentary on Finding the Hidden ROI in Information Assets*. The mission of The Sedona Conference® is to bring together lawyers, experts, and academics to discuss cutting edge legal issues, including those arising out of or affected by complex litigation. In furtherance of this mission, the present paper represents the work product of an interdisciplinary, diverse group of corporate officers, lawyers, information management professionals, representatives of legal services, and leading academics in the legal and business communities, who came together with a common interest in thinking strategically about how to improve knowledge-sharing in complex organizations, recognizing the asset value of information.

Against the backdrop of prior "e-discovery related" commentaries published as part of The Sedona Conference® Working Group Series by the Working Group on Electronic Document Retention and Production (WG1), a group of uniquely talented individuals met in December 2008 in Phoenix, Arizona, to discuss how to take the next step beyond merely managing e-discovery risk, to better leverage the enormous value of information caught up within firms and organizations of all types. These discussions led to consideration of a new approach to thinking about information management and information governance issues, based on consideration of the "option value" of information, at the suggestion of Professor Mark Cotteleer at Marquette University. The work of the group went through a series of drafts, and was aided by presentations given by group members at successive annual conferences of the ARMA International, in Orlando in 2009 and San Francisco in 2010.

The paper represents the collective efforts of many individual contributors. I especially want to acknowledge the contributions to the overall success of this project made by Jason R. Baron, Co-Chair of WG1 of The Sedona Conference®, as well as by Professor Steven S. Gensler, and Bennett B. Borden, each of whom supplied invaluable editorial assistance guidance at crucial junctures. The remaining contributing editors also substantially contributed in creating the initial text of the paper, in editing, and in participating in the group's ongoing discussions. On behalf of The Sedona Conference®, I wish to thank everyone involved in devoting their time and attention during the drafting and editing process.

Richard G. Braman

Executive Director

The Sedona Conference ®

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Executive Summary

Since the advent of the Information Economy, we can create information in ways only dreamed of in prior periods. The amount of information existing in the world is almost unfathomable, and is growing exponentially. Today, firms, businesses, governmental organizations and non-profits (which we refer to generally as entities) create massive volumes of information. But it is much easier to create information than to effectively govern it in order to leverage its value beyond the short-term use for which it is created. Not only is its long-term use often untapped, but ungoverned information also can be a significant liability.

In this increasingly information-driven world, it has become all the more imperative that business entities make the effort to "know what they know." The stark reality is that few such entities of any size have a real grasp of the full range of the information over which they are stewards, and fewer still have any institutional knowledge of where it is all located. This fundamental information governance problem is only exacerbated by corporate data environments that, largely by happenstance, discourage information sharing due to the diverse nature of the data repositories, their dispersion across the organization, and the unstructured nature of the information itself that is sorely in need of greater corporate governance.

Conventional wisdom says to manage the risk by adopting strict record retention plans and schedules, and sees information only in terms of its potential for liability. From that perspective, the urge to purge can be difficult to resist. But we all know that information is power. So why throw it away? Is it because the entity has made an informed determination that the risk of the information exceeds its potential benefit? Or is it because few entities have developed processes that allow them to know what they have, where it is kept, how it is being used, how it is *not* being used, and – most importantly – how it might *additionally* be used to be of benefit.

The solution does not lie in bigger and faster computing. In many ways, all of those new computers have caused the problem: generating and storing massive amounts of information sent to isolated silos and known to only a few. Rather, a possible solution lies in engaging the entity's personnel – drawn from across a wide range of functions – to develop entity-specific methods for determining when information is not being used to its full potential. And, chances are, most of the assets an entity needs to do that are already in place.

The purpose of this paper is to provide an approach through which an entity can better identify, calculate and leverage the "hidden" value or return on investment (ROI) of the information it creates. We call this the *option value approach* to emphasize the importance of recognizing the long-term, strategic value of using or re-purposing an entity's information in new and additional ways. We also provide a method whereby that value can be measured to help justify an investment in information governance schemes.

In Part One of this paper, we discuss how information systems typically develop within an entity, and how this development often results in an environment that works against information sharing and the leveraging of the long-term value of information.

Part Two of this paper makes the business case for adopting an option value approach to information governance. We examine how information systems are usually viewed contrasted with the option value approach. Information management systems and records management initiatives are often viewed from the actuarial perspective: they often are instituted in order to reduce an entity's risk of negative outcomes. Some of these outcomes include the substantial transactional costs of *ad hoc* processes for identifying and accessing information in response to regulatory or litigation requests; sanctions from courts or regulators for failing to properly identify and produce information; lost opportunities to adequately evidence present claims or defenses; and possible violations of statutory requirements regarding record retention and data privacy and security, among others.

In contrast, we propose an option value perspective of information. Effectively governing information not only keeps an entity out of trouble, it can provide greater ROI in information systems and the expense of instituting effective information governance policies and procedures. Information can be more effectively shared with other individuals and groups within an entity so that the value of that information can be extended beyond its original use. We go on to describe the benefits of re-purposing information, and provide several real world examples.

In Parts Three and Four, we describe the steps an entity can undertake to begin realizing the option value of its information assets. Information governance must be viewed as a value proposition, in which entities fully engage themselves in assessing the potential, untapped value of their information assets before making cost-based decisions about what to do with that information. A critical step in this process is the formation of an interdisciplinary team consisting of key players drawn from across the entity's functional groups to help identify its information assets, developing ways of leveraging their option value, and instituting policies and procedures to realize it. No single person knows everything about the entity's information assets, and no single person knows all of the ways in which existing information assets can be re-purposed to extract value.

In Part Five, we set out a framework describing the steps an entity can undertake to calculate the unrealized value of its information assets, and in Part Six, we discuss how an information governance scheme, focused on realizing value, can be implemented through the use of C-level champions and stakeholders, and various techniques including project management and active monitoring.

Introduction

The world is awash in information, and is becoming increasingly so. Two professors at Berkeley estimated that between 1999 and 2002, the amount of electronic information doubled to five exabytes –the equivalent of adding half a million digital repositories the size of the Library of Congress.[1]   In 2008, an IDC whitepaper[2] predicted that by 2011, the amount of digital information will be 10 times the size it was in 2006. This accelerated growth in electronic information is in part due to the ease by which electronic information is created, and the increasingly creative and diverse ways in which it is utilized. The world of email, simple documents and databases has been enriched (and complicated) by the introduction of collaborative technologies, social networking, interactive GPS applications, and the like. In short, organizations are accountable for an increasingly diverse and voluminous body of data,[3] and they are spending millions of dollars, and in some cases, billions,[4] on IT infrastructure and information management projects to understand and utilize this data. But, it is much easier to create electronic information than it is to effectively manage and govern it, let alone leverage it to the benefit of an organization.

As recognized in *The Sedona Guidelines: Best Practice Guidelines & Commentary for Managing Information & Records in the Electronic Age* (2d ed. 2007), "the fundamental transition to an electronic data environment in most organizations has resulted in an increased need for better information and records management controls and programs."[5] The *Sedona Guidelines* went on to note that as a result of "several converging forces, the top management in many organizations," including C-level executives, are "increasingly aware that identifying and managing information and records should be a business priority."[6]   However, the problem of optimizing the value of particular information assets goes much deeper than simply agreeing to the adoption of enhanced records management practices and procedures: it is rather a core issue of *information governance* that needs to be looked at in a new way.

Gartner defines the emerging discipline of *"information governance"* as including "the processes, roles, standards and metrics that ensure the effective and efficient use of information in enabling an organization to achieve its goals."[7] Information governance is a broader concept than focusing alone on any one discipline, i.e., information management, information protection and security, records management, knowledge management, and/or electronic discovery practices and protocols --

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[1]   Peter Lyman and Hal R. Varian, "How Much Information?" (2003), http://www.sims.berkeley.edu/how-much-info-2003.
[2] IDC, "The Diverse and Exploding Digital Universe: An Updated Forecast of Worldwide Information Growth through 2011." (2008). http://www.emc.com/collateral/analyst-reports/diverse-exploding-digital-universe.pdf.
[3]   George L. Paul and Jason R. Baron, "Information Inflation: Can The Legal System Adapt?," 13 RICHMOND J. LAW & TECH. 10 (2007), at ¶ 1 n.2 ("Organizations have thousands if not tens of thousands of times as much information within their boundaries as they did 20 years ago").
[4]   See. e.g., Ben Bain, "NASA plans to spend billions for IT services," *Federal Computer Week* (Sept. 18, 2009), http://www.washingtontechnology.com/Articles/2009/09/18/Web-NASA-IT-Services.aspx.
[5]   *Id.* at 11.
[6] *Id.*
[7] *See* http://blogs.gartner.com/debra_logan/2010/01/11/what-is-information-governance-and-why-is-it-so-hard/.

although each of these may play a vital constituent part in an organization's overall information governance strategy or framework.

Organizations commonly become painfully aware of their looming information governance problem when they attempt to delve into their data to comply with regulatory or litigation requirements. Requests from shareholders or regulators, as well as e-discovery demands, often lead to frustrating and/or fervent efforts to understand where an organization's data exists and what it contains. Organizations often see their stores of electronic data through a glass darkly, and the infrastructure supporting it primarily as a costly means of managing and avoiding risk (i.e., staying out of trouble). Yet hidden within an organization's often siloed data stores lies valuable information assets that, when properly assessed and governed, can be leveraged to great benefit beyond mere risk avoidance.

In this paper, we introduce the concept of adopting an *option value approach* as one key to doing better in meeting the information governance challenge -- by identifying, calculating and leveraging the option value of corporate information assets.   Option value, as defined here, is simply the long-term strategic value of such assets. Organizations typically leverage information fairly effectively over the short-term: e.g., e-mail for current communications, financial data for the latest reporting periods. They are also better at leveraging structured data than over unstructured data.[8]   But once the data's short-term use is expended, the data is often stored away and rarely reassessed for any long-term strategic value. Left ungoverned, this potentially valuable asset is not only wasted, it also may become a significant liability. Through proper information governance, however, organizations can realize additional benefit from their information assets, thus increasing the option value of those assets while reducing potential risk. This option value increases the return on investment (ROI) from the technological and human resources employed to create and manage an organization's information.

The option value approach can identify value for a wide range of organizations (public, private, non-profit or governmental), through which they can differentiate themselves. For instance, for-profit organizations can achieve competitive advantage and non-profit ones can increase funding potential and enhance service provision. Organizations can create opportunities to generate new products and services, increase market share, exceed customer expectations and increase the defensibility of their information governance practices.

It cannot be known in advance to what extent an organization's existing information governance practices are leaving value on the table, though in our experience it is often substantial. The only certainty is that organizations cannot know whether they are optimizing the value of their information assets until they go through the option value exercise, ask the right questions, and implement appropriate information governance practices. This paper suggests one method for accomplishing this goal.

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[8] Structured data is data stored in a structured format, such as databases or data sets. Unstructured data refers to free form data which either does not have a data structure or one not easily read without use of a specific program, examples of which are word processing documents and slide presentations. *See* THE SEDONA CONFERENCE® GLOSSARY: E-DISCOVERY & DIGITAL INFORMATION MANAGEMENT (3rd ed. 2010). It is often easier to query, analyze and understand structured data.

Part One: Current State of Information Governance
From An Option Value Perspective

Organizations exist to carry out certain purposes. They do so through the decisions and actions of their executives, managers and employees, and increasingly they make their decisions and perform actions by electronic means. If you want to thoroughly understand an organization, then you must thoroughly understand the information it creates. The stark reality is, however, that few organizations have a real grasp of the full range of information over which they are stewards, much less where it is all located.

Much of this is because of how an organization's informational needs, and the systems that support them, typically have developed over time. Organizations are usually divided into business unit segments tasked with fulfilling certain purposes. These segments, on the whole, create two kinds of information: that which is used internally within the segment (by far the largest in volume), and that which is communicated outside the segment as a deliverable product (such as financial or sales data, or internal audit reports). Because most of the segment's information is used within that segment, IT systems are often designed to focus on sharing information within a segment, and not in spreading it across an organization.

IT systems also tend to develop incrementally as an organization's needs evolve. Sometimes these needs are operational (a new accounting or human resources system is needed, or a new communications system is needed for a sales force). At other times, the needs are regulatory (to comply with Sarbanes-Oxley, FDA reporting requirements, the Health Insurance Portability and Accountability Act (HIPAA) or the Troubled Asset Relief Program (TARP)). Because these needs develop over time, organizations develop specific IT systems to address them, with (at best) only a secondary focus on how the IT system interacts with other systems, and how the information in one system can be leveraged for use across the organization. This piecemeal approach often leads to isolated and incompatible IT systems. Thus, information tends to become "siloed" across an organization.

Finally, because IT systems are expensive, management often requires tight budgets and hard ROI justifications for implementing them. Thus, IT systems tend to focus narrowly on fulfilling a specific information need, and not the larger value that can be leveraged from more integrated information asset management systems. In other words, rarely do organizations actually invest in broad-based approaches to solve the *general* problem of information asset management.

All of these factors contribute to an environment that is unintentionally "anti-information sharing." Yet to realize the full value of its information, and to increase its ROI in the creation of that information, an organization must know that information exists, where it exists, and how to access and leverage it. Only then can it determine its true option value. An organization that doesn't sufficiently understand and leverage its information is leaving money on the table and missing real business opportunities.

Part Two: *The Business Case for Adopting An Option Value Approach To Information Governance*

Sound information governance practices can rectify the problem of disparate, siloed information, can help an organization gain greater option value from the information it creates, and can realize a greater ROI from the resources it uses to create it.   Typically, however, information or records management initiatives are perceived as a means of mitigating an organization's risk, a necessary cost that should be minimized over the long-term. Investment in these initiatives is perceived as representing an insurance policy. This investment perspective becomes *actuarial* in nature, focused on (i) understanding the probability that certain risks might come to pass; and (ii) estimating the potential value of investment based on the magnitude of those risks.

To be sure, an actuarial perspective plays a critical role in an organization's strategy. It is meant to protect the organization in the event of a (sometimes) unpredictable, consequential, and negative outcome (i.e., a so-called "Black Swan" event).[9]   Failing to properly govern an organization's information can lead to the incurrence of substantial transactional costs as a result of *ad hoc* processes for identifying and accessing information in response to discovery or regulatory requests; significant sanctions from courts or regulators for failing to properly preserve or produce relevant information; and, the inability to properly assert claims or defenses because the information supporting them is not readily available.[10]

We argue here for an enhanced perspective that recognizes that information has a value (usually untapped) beyond mere risk mitigation, i.e., that information likely has a use beyond that for which it was originally intended. The same data that should be "actuarially" managed to reduce risk can also generate important "options" for the generation of additional value and/or competitive advantage. For example, a technological application can be used in an electronic discovery process to analyze employees' e-mail to discern what they knew (and when) concerning potential defects in an organization's product. The proper use of this same technological application – and the data derived from it -- might allow the organization to realize significant option value through the early detection of problems or defects to allow for modification of a product prior to it becoming a significant issue. It could also be used to identify creative customer service solutions in use by employees that could be leveraged and applied across the organization.

This simple example can be applied across a myriad of circumstances. Systems that collect and analyze the contents of stored information can be used to more readily share that information across business units. An employee who begins drafting a sales pitch should be able to find and use valuable content from similar documents created in other parts of the organization, resulting in increased efficiency, higher quality deliverables, and a decrease in the redundant (and thus wasted) use of resources. In short, when information originally created for one purpose can be re-purposed

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9 Nassim Nicholas Taleb, THE BLACK SWAN: THE IMPACT OF THE HIGHLY IMPROBABLE (Random House 2007).

10 *See, e.g.,* Shira A. Scheindlin and Kanchana Wangkeo, *Electronic Discovery Sanctions in the Twenty-First Century,* 11 MICH. TELECOMM. TECH. L. REV. 71 (2004), available at www.mttlr.org/voleleven/scheindlin.pdf.

and re-used, i.e., when employees do not have to "re-invent the wheel" when doing their jobs, the result is additional value to the organization through increased efficiency.

Capitalizing on the option value of information requires a move away from mere information management to information governance. As described more fully below, this requires an organization to undertake an option value exercise to understand the information it creates and the purposes to which it is being put. It can then begin to understand what other valuable uses can be derived from it.

Consider these real-world examples:

- A large international company accumulated an incomplete, disjointed and often outdated conglomeration of information repositories related to customers, best practices, market data, tools, and training materials - all intended to support customers' marketing and sales. Recognizing the option value of this information to multiple segments in the company, the company created a one-stop portal for customers to access all needed information. The audience using the portal is in excess of 7,000 individuals representing multiple groups, located in more than 120 countries. The use is more than had been anticipated and continues to grow beyond those who work directly with customers due to the ease and low cost of adding new repositories.

- A not-for-profit social service agency with a U.S.-based child adoption program generated documentation that prevented complete post-adoption service provision related to reunions between consenting birth parents and adult adoptees. Recognizing the option value of the adoption file in facilitating this service, it modified its file creation practice, thus facilitating reunions among consenting adults.

- A multi-national packaged food company used thousands of suppliers to provide the constituent ingredients for its products. Each food packaging plant used its own suppliers, and the records for each purchase from the suppliers were kept in a separate system for each plant. After the company centralized these supplier records, it identified extensive inefficiency and overlapping requirements. The company used this information to streamline its supply chain resulting in a 17% annual decrease in costs as well as a significant increase in profits.

- A major consumer electronics chain operated a customer support call center. Customer service representatives entered customer complaints into a database, but the database could only create basic summary reports. The company invested in an analytical application that scanned the contents of the complaint files to find trends and commonalities. The company used this information to improve certain of its products and to replace others with less problematic ones. It was also able to create standard help instructions for customer service representatives to use on calls related to similar issues.

Here are some additional potential benefits in using an option value approach:

- *Enhancing retrieval for e-discovery and other purposes by identifying and incorporating additionally useful metadata.*

- *Protecting and increasing market share by identifying patentable ideas and products, the need for trademarks and copyrights and the potential for expanding the uses of existing intellectual property.*

- *Increasing competitive advantage and enhancing service provision by reviewing documents to identify gaps (e.g., missing functions that are critical to quality), and mitigating those gaps.*

- *Creating new markets or increasing market share by identifying potential new markets.*

- *Increasing customer satisfaction by ensuring that customer feedback is shared with business units that can initiate improvements in products or services.*

- *Increasing product and service quality and efficiencies (e.g., reduced market cycles) by identifying opportunities for information sharing and enhanced workflow.*

- *Achieving economies of scale by identifying cross-business requirements that could be solved at reduced cost in a centralized manner.*

- *Increasing product and service quality by identifying gaps that can be improved through work-flow redesign.*

- *Strengthening data security by evaluating process documentation to identify patterns in employee conduct or behavior.*

- *Enhancing business ethics by identifying opportunities for improvement.*

- *Leveraging the use of third party work product for use in aligned business areas.*

- *Enhancing the ability to be certified and hence improving reputation and marketability (e.g., creating documentation for activities that are practiced, but not properly documented). This can help to ensure consistent practice and facilitate certification, including for ISO, CARF (Rehabilitation Accredition Commission) and others.*

Part Three: Using Interdisciplinary Teams & Processes

Implementing effective information governance practices through an option value strategy requires a collaborative, enterprise-wide effort. No one person or discipline has all of the knowledge or skills necessary to analyze and determine the value of an organization's information. This is also true for the work that is needed to conduct the analysis (outlined in Part Four) to determine the option value of information assets. If not addressed properly, such information governance efforts can be duplicative, and at cross-purposes with one another, and ultimately wasted.
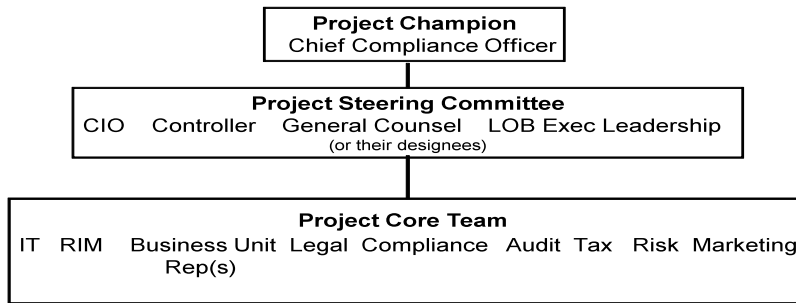
Finding the option value (i.e., the untapped strategic information value) in corporate information will require harnessing the efforts of a variety of disciplines, including data governance, business intelligence, enterprise content management, knowledge management and records and information management.

Interdisciplinary teams ("IDTs") can function in a variety of ways, depending on the needs of the organization. In most cases, an overarching multi-disciplinary governance infrastructure combined with project-based teams will significantly increase the probability of success of any information governance effort. They should bring together end users, subject matter experts, mid-level managers (to develop and refine strategy), and finally C-level executives (to allocate resources and act as advocates at a senior level).

The question of whom to include in cross-disciplinary information governance teams will depend on the unique circumstances and readiness of each organization. Additionally, some organizations already may have existing governance structures that they can leverage for this purpose. Most option value IDTs should include at least the core participants of IT, Compliance, Legal, Records and Information Management, and a select number of Business Units. Each of these groups brings expertise that is essential to successful information asset management. Other disciplines that bring value to the option value initiative and should be considered for inclusion are: Marketing, Risk, Internal Control, Security, Privacy, Audit, Tax (Finance), Information Research, Libraries and Archives.

The following sample organization charts illustrate how an interdisciplinary team might be set up, either on a project basis or as a standing governance structure.

Sample Information Asset Management
Project Management Structure

Project Champion
Chief Compliance Officer

Project Steering Committee
CIO   Controller   General Counsel   LOB Exec Leadership
(or their designees)

Project Core Team
IT RIM   Business Unit Legal Compliance Audit Tax Risk Marketing Rep(s)

Sample Information Asset Management
Governance Structure

Chief Executive Officer	Audit Committee (As Appropriate)

C-Level Champions	Risk Mgt.
IT Legal Bus Unit(s)	

Steering Committee
IT   Business   RIM   Compliance Litigation Risk Marketing Unit(s)

Core Team
IT RIM   Audit Privacy Archives Libraries Marketing

IM Coordinators	Bus. Units/ Depts.
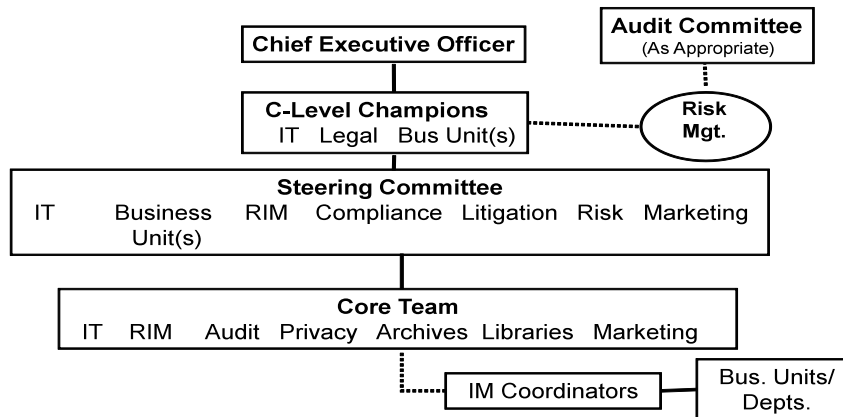
These charts are intended only as examples; the exact makeup of the team will differ depending on the organization and the project.

Part Four: Identifying and Assessing Option Value Opportunities

How can organizations make informed choices about getting a greater ROI return, both as a short-term (tactical) and long-term (strategic) matter?   Additionally, how much "hidden" value is being left on the table by an organization's failure to even attempt to make such a calculation?

One known method of showing strategic value is by quantifying the estimated return on investment that would be generated by leveraging the untapped value of one's corporate information assets. In this context, ROI means the return (profit or loss) on the investment in IT, records and information management and other initiatives (e.g., marketing) relative to the amount of money so invested to generate new value.

Once the IDT is assembled and the right members are at the table, its goal is to determine if option value has been considered and if there is any value that has not been recognized by past, current or planned information governance initiatives. This analysis ensures that all possible opportunities are uncovered so that the IDT can leverage the results.

Key Team Focus

- To identify the primary uses of content in information repositories (silos). This information may already exist or may need to be linked or gathered.

- To identify any situations in which existing information is not used to perform its primary function, such as where information is collected but is not adequately reported, or reported as required (e.g., information is gathered by a not-for-profit about client metrics, but not provided to funding agencies).

- To identify situations in which information can be utilized for a secondary purpose to provide additional ROI.

- To identify gaps in information capture and retention – i.e., information that does not currently exist, that could provide additional value to the organization.

- To leverage and quantify the option value related to the above areas.

The following questions will help unearth the issues that need to be addressed.

How well does the organization gather, share and use the data it already creates?

This is the evaluation of: the source of the information; where does it come from; what is its intended purpose; and is there a need to share the information with others? Is the information

created for only one, specific purpose, or could additional value be found in re-purposing or re-using all or part of the information for another reason? This can lead to assessing the levels of success or failure that each information system achieves in its role and function as information conduits. In order to define the option value of its information, an organization must understand the specific current purpose for the information, as well as where the information intersects with other information created for a different purpose.

Where else might the organization extract or generate more value?

Many organizations utilize distributed technology systems, including the use of third party providers for many of their technology applications. In many cases these applications are not utilized by other areas of the business and are considered to be siloed or inaccessible. As an example, one may have reports from a marketing group that breaks down the sales of a product by area that could be re-used to help the manufacturing group determine production levels. Siloed systems and applications often frustrate an organization's ability to mine the maximum value from information that may be useful to other areas of the business. This is where the IDT needs to analyze how the information is used, where it is captured and for what purpose, and how other segments of the business can re-purpose the information to create new value. Once the IDT understands this, the IDT can begin exploring the entire life-cycle of the information assets when first developing or implementing applications. The ultimate goal, of course, is to determine if the information can be utilized by other areas of the business before the data is deleted or destroyed.

In organizations that do not exploit option value, information contained in separate segments or component parts sees little re-use. This is because retention and disposition policies usually relate only to the primary purpose of the information - typically the reason for which it was created. The potential for additional information sharing, re-purposing and re-use are not considered.

In many organizations, information tends to be over-retained (and mismanaged) when retention schedules are not consistently implemented and enforced. As an illustration, legal demands (such as subpoenas and other information requests related to litigation, regulatory investigation and inquiry) arise that require the preservation, collection, analysis and – if required - production of information.. Often that information sought is located throughout and across the entire enterprise architecture, consisting of all data types, resources, security classifications and geographies.

Current practice is to segregate and collect this information for each and every new legal matter, and (hopefully) to solve any informational inconsistencies or gaps along the way.   This process frequently also involves groups that are not a formal part of the organization, such as outside counsel, third party experts, and vendors. The steps are often repeated with each new legal demand that hits the organization resulting in numerous business interruptions and opportunities for errors. In some organizations, even once collected, the data (original or copies) is often kept in perpetuity without being re-used or -- in the case of originals -- recycled back into the enterprise architecture. This practice frustrates the existing information management practices within the organization and does not promote efficient use. In other organizations, originals remain in native repositories and

copies are retained for preservation, review and production purposes. In both cases, information collected for one matter is not optimally leveraged for use in other cases, often requiring recollection.

Looking at the situation from an option value potential provides opportunities for efficiency and cost reduction. It also enables risk reduction, as organizations can be more secure in the knowledge that it is producing the same information in response to similar questions for the same time periods for the same matters.

Most information can be leveraged to achieve the greatest use when it is in a collaborative environment and allowed to flow in logical patterns, to relevant users, in a manner that is optimal for each specific purpose. Information that lacks visibility or access from other relevant areas of the organization may end up being recreated several times, using several different methods. This can provide inconsistent results, resulting in improperly informed stakeholders, as well as information that is used in an inefficient manner and that is being destroyed before maximum value can be extracted. For organizations within highly regulated industries (e.g., securities and investment banking) and/or with critical competitive interests (e.g., automotive manufacturing and pharmaceuticals), this collaboration must be driven by requirements related to proprietary and confidential information.

The two prior questions should help identify areas where the organization might be leaving value uncaptured. To do this, the IDT must first determine how value is currently assessed (e.g., if only related to the information's primary value) to determine if there is value that it not currently leveraged. It then must determine not only the different ways in which suggested unleveraged value can be measured, but also the costs for executing the process for measuring and leveraging it. Realizing that this will demand continuing effort and dedicated resources, the organization will need to choose the best manner and timeframe in which to best achieve the outcome. Each organization embark on this in its own unique way, taking into account such things as the current financial strength of the company, competing demands for resources, and the overall environment of its culture and performance.

Part Five: A Framework For Calculating the Option Value of Information Assets

Once the IDT has addressed the high-level questions in Part Four, it can begin the process of determining the option value of an organization's information assets, through a multi-step process. For example, the following questions are useful:

- What additional revenue can be generated annually by applying a marketing strategy (using all relevant information assets) to a business unit or segment that could greatly benefit from it?

- How can the cycle time for certification be shortened by documenting information that up to now was only communicated verbally (e.g., ISO certification) in order to generate additional business (contracts, clients). How does that shortened cycle time translate to in terms of dollars generated through additional business?

- How much revenue can be generated (e.g., within the next five years) by applying patents generated in the US to identified opportunities in international markets?

The risks and costs associated with development and implementation must also be assessed and the opportunity costs of not proceeding with this new initiative must be calculated.

The following process is derived from writings in the information asset management field:[11]

Step 1: Map the sources of potential information asset value: The IDT needs to determine where the organization's most valuable information reside, and whether those assets add value from a strategic perspective (addressing a long-term vision or plan) or a tactical perspective (addressing short-term goals or objectives).

Step 2: Identify all of the different "loci" of value (i.e., locations where information resides), and "dimensions" of value (in terms of, e.g., service delivery, staffing, quality, inventory, cycle time) for the information assets: The IDT needs to identify where, how, and by whom each information asset is currently used, the current value placed on the information related to that use, and how it could be further leveraged to create additional value. The IDT needs to determine how much potential value can be quantified through leveraging the information asset for other purposes within the organization.

Step 3: Compute the perceived net potential value of the information assets: Based on the analysis conducted in Step 2, the IDT needs to estimate the costs associated with managing the assets that

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[11] *See Supplemental Reading, infra.*

will be utilized when leveraging them to attain additional value, as well as any risks and contingencies associated with each information asset.

Step 4: Compute the option value currently being "left on the table" by the organization: For each information asset and each locus and/or dimension of value, the IDT must compute potential cost reduction opportunities, "misperceptions" of risk, and opportunities to minimize contingency costs. By subtracting the sum of those costs from the figure calculated in Step 3, the IDT can identify the value being "left on the table" by the organization. Actual value being left of the table consists of that figure, minus the costs associated with leveraging resources to attain the actual value.

Part Six: Implementing An Option Value Governance Initiative Within The Organization

Executive sponsorship from the CEO, CIO, CFO and other C-level champions drives implementation and execution. No matter where initiatives or ideas come from within an organization, conventional and proven wisdom shows that without leadership from the executive level, most initiatives are either doomed to fail or fall short of expectations. This effort is no different, especially since it seeks to reach all organizational levels across all business units. Successful implementation demands that executive leadership not only champion and drive the effort but also maintain a strong role in measuring success and keeping the focus on core goals. Additionally, in this case, a critical success factor will be that C-Level management views having an information sharing culture as a high priority. From executive leadership comes the foundation for successful execution and accountability.

Once executive sponsorship has been secured, it is incumbent upon the leadership to identify all stakeholders (including the IDT, lines of business, and other relevant parties). It will be imperative to communicate the process and goals to them, along with executive leadership's expectations, to ensure buy-in and execution from each stakeholder.

Finally, a plan must be created that incorporates processes and tools for project management, status reporting, communication, training and audit. Successful execution plans encompass iterative stages and clearly identify the tasks to be accomplished in each stage. For example, the initiative can begin in one business unit, and then roll out to additional units as success is demonstrated. The information acquired, experience gained, and lessons learned in one stage can be leveraged for use in the next (and in other projects and initiatives across the enterprise).

Monitoring the process and measuring outcomes are critical to sustained success. Once the initial stages of implementation take place, the IDT should transition into a standing governance group to oversee the ongoing measurement and monitoring of outcomes and results. This will also allow for change management of the process when necessary as systems, practices or business needs of the organization change. Creating a permanent governance body that includes a focus on the option value concept, will provide a clear message in the organization that maintaining and further seeking the option value of the organization's information is important.

Conclusion

This paper has provided a business case for C-level executives to take an integrated value approach to finding hidden ROI in organizational information assets. They can do so by strategically thinking about and championing efforts to identify the option value of information, i.e., the additional value that information assets can generate for the organization. An interdisciplinary team led by a C-level champion should be used to identify and quantify opportunities and related risk and cost. By gathering information and asking a series of questions related to core information assets, the team will be able to identify untapped strategic value in the entity's information assets that can be used to accomplish a variety of objectives. For-profits will be able to identify opportunities to increase revenue through increased market share, customer base, products, services and customer satisfaction. Not-for-profits will be able to increase their funding base and enhance client service provision. Government entities will be able to improve service provision to its citizenry. All organizations can add to the bottom line by uncovering new potential for economies and efficiencies in information management. This approach to information governance – based on a focus on *option value --* may also reap secondary benefits, including but not limited to the entity getting a better handle on short-term risk due to the presence of current, ongoing legal and compliance demands.

One mission of The Sedona Conference® has been to foster new ways of thinking about the digital world we find ourselves in, with its exponentially increasing volume of information for institutions and individuals to confront across many disciplines. Just as lawyers and judges are confronting a new reality in litigation with respect to the presence of electronically stored information in a myriad of new formats and applications, C-level executives also increasingly realize that this new environment demands new approaches, including strategically thinking about information governance issues of all kinds. The option value concept presented in this paper has the potential to significantly contribute to efforts in this arena. As the subject is so closely tied to the concerns of the legal community, we intend to continue to work with organizations and institutions of all kinds in advancing new methods and approaches in the area of information asset management and governance.

Supplemental Reading

Mark Cotteleer, "A Process-Based Approach to Business Cases," *Cutter Consortium Business-IT Strategies Executive Report,* Vol. 7, No. 2 (2004), www.cutter.com.

Michael J. Davern & Robert J. Kauffman, "Discovering Potential and Realizing Value from Information Technology Investments," *Journal of Management Information Systems,* Vol. 16, Issue 4, pp. 121-143 (March 2000).

Paul P. Tallon, Kenneth L. Kraemer, Vijay Gurbaxani, "Executives' Perceptions of the Business Value of Information Technology: A Process-Orientated Approach," *Journal of Management Information Systems,* Vol. 16, Issue 4, pp. 145-173 (March 2000).

The Sedona Conference® Working Group Series℠ & WGS℠ Membership Program

The Sedona Conference® Working Group Series℠ ("WGS℠") represents the evolution of The Sedona Conference® from a forum for advanced dialogue to an open think-tank confronting some of the most challenging issues faced by our legal system today.

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The WGS℠ begins with the same high caliber of participants as our regular season conferences. The total, active group, however, is limited to 30-35 instead of 60. Further, in lieu of finished papers being posted on the website in advance of the Conference, thought pieces and other ideas are exchanged ahead of time, and the Working Group meeting becomes the opportunity to create a set of recommendations, guidelines or other position piece designed to be of immediate benefit to the bench and bar, and to move the law forward in a reasoned and just way. Working Group output, when complete, is then put through a peer review process, including where possible critique at one of our regular season conferences, hopefully resulting in authoritative, meaningful and balanced final papers for publication and distribution.

The first Working Group was convened in October 2002, and was dedicated to the development of guidelines for electronic document retention and production. The impact of its first (draft) publication—*The Sedona Principles; Best Practices Recommendations and Principles Addressing Electronic Document Production* (March 2003 version)—was immediate and substantial. *The Principles* was cited in the Judicial Conference of the United State Advisory Committee on Civil Rules Discovery Subcommittee Report on Electronic Discovery less than a month after the publication of the "public comment" draft, and was cited in a seminal e-discovery decision of the Southern District of New York less than a month after that. As noted in the June 2003 issue of Pike & Fischer's *Digital Discovery and E-Evidence, "The Principles*...influence is already becoming evident."

The WGS℠ Membership Program was established to provide a vehicle to allow any interested jurist, attorney, academic or consultant to participate in Working Group activities. Membership provides access to advance drafts of Working Group output with the opportunity for early input, and to a Bulletin Board where reference materials are posted and current news and other matters of interest can be discussed. Members may also indicate their willingness to volunteer for special Project Team assignment, and a Member's Roster is included in Working Group publications.

We currently have active Working Groups in the areas of 1) electronic document retention and production; 2) protective orders, confidentiality, and public access; 3) the role of economics in antitrust; 4) the intersection of the patent and antitrust laws; (5) *Markman* hearings and claim construction; (6) international e-information disclosure and management issues; and (7) e-discovery in Canadian civil litigation. See the "Working Group Series℠" area of our website www.thesedonaconference.org for further details on our Working Group Series℠ and the Membership Program.

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