

“The best way to reduce the amount of data — delete it.”
— Sheila Childs, Research Vice President, Gartner

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Introduction

90% of the data in the world was created in the last two years. We have reached a tipping point: the growth rate of information now far exceeds IT budgets and the processes for governing that information. CIOs everywhere are shedding costs as rapidly as possible, and reducing IT spend as a percentage of revenue to align with shareholder goals and revenue compression. Accumulating, storing and litigating data without value is no longer rational for the CIO, GC, line of business leaders, or shareholders.

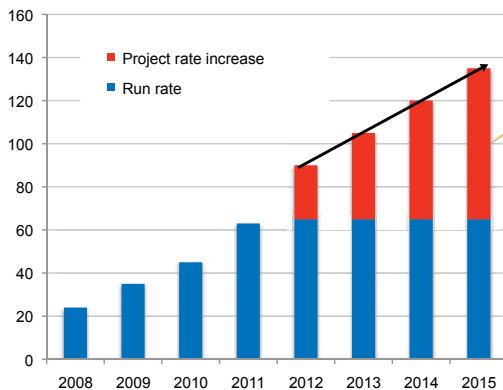


90% of the data in the world was created in the last two years.*

Today, companies and their Information Governance leaders are rapidly working to define and operationalize programs and improve processes that enable defensible disposal of unnecessary data. This effort can curb storage growth, dramatically lower IT and legal costs and lower the organization's risk profile systemically.

Run rate costs double quickly if volume grows >30%

Storage Costs (\$M)

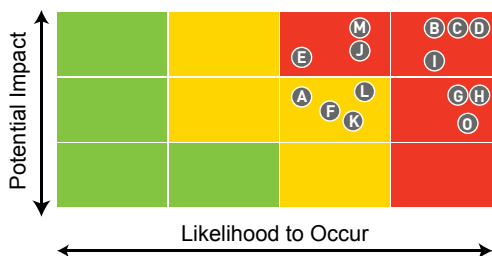


Information volume overwhelms information governance processes

Governance processes have not matured at same pace as volume, specifically how organizations:

- » Define and execute legal holds and data collection
- » Apply retention schedules to electronic information
- » Align storage and manage information based on specific legal obligations and business value
- » Provision, decommission and dispose of data

High Risks and Mitigation Burden



This leads to excess data and operational challenges that in turn contribute to risk:

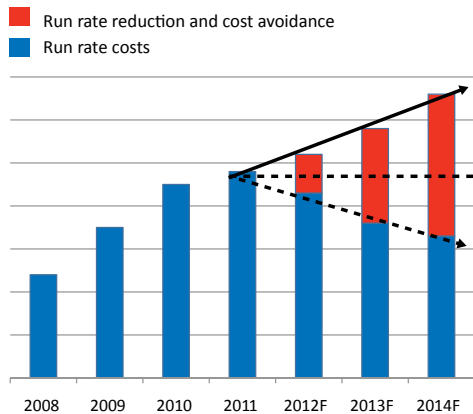
- » Difficulty disposing of unnecessary data
- » Complexity in applying legal holds
- » Inefficiencies in data management and governance

For most organizations, information volume doubles every 18-24 months. In a typical company in 2011, storing that data consumed about 10% of the IT budget. At a growth rate of 40% (and even with a 20% decline in storage unit costs), storing this data will consume over 20% of the typical IT budget by 2014, which is an untenable situation for CIOs. That means 15 petabytes in 2011 will be 39 petabytes at the end of 2014 – which will flood ediscovery processes, increase risks, wash away improvements in legal review economics, and obviate out-moded retention and disposition processes. Most companies have failed to dispose of unnecessary data accumulated over the last decade, and have excess applications, servers, data, back ups, storage and tapes that no longer have any utility but which add cost and risk.

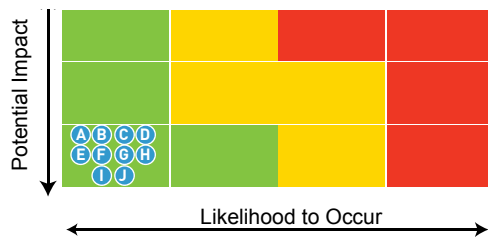
* Big data: The next frontier for innovation, competition, and productivity McKinsey & Company, 2011 Study

Curbs storage growth, lowers run rate permanently

Storage Costs (\$M)



High Risks and Mitigation Burden



Program leadership, process improvement and technology

Information Lifecycle Governance Program

- » Comprehensive program and charter for enterprise initiative
- » Processes, capabilities and accountability to achieve cost and risk reduction benefits through



1. **Value-Based Archiving & Defensible Disposal**
 - » Archive to shrink storage, align cost to value
 - » Dispose rather than store unnecessary data
2. **Extend and automate retention management**
 - » Include electronic data that has business value in addition to records for regulatory requirements
 - » Automate retention schedules across all information to enable reliable, systematic disposal
3. **Automate the legal holds and ediscovery process**
 - » Structure and automate legal holds process to lower risk, increase precision, enable disposal
 - » Analyze in place to reduce unnecessary collection, processing and review

Today, companies and their Information Lifecycle Governance leaders are rapidly working to define and operationalize programs and improve processes that enable defensible disposal of unnecessary data, increase ediscovery efficiency, and ensure regulatory obligations for information are satisfied. This effort can curb storage growth, dramatically lower IT and ediscovery costs and lower the organization's risk profile permanently. While spot "clean up" is helpful, the growth rate of data is a mandate for addressing the systemic issues and for instrumenting defensible disposal into the fabric of information management.

An effective ILG program improves information economics and reduces risk by disposing of data debris and modernizing key governance processes to reflect information facts. This Leaders' Guide is an invaluable tool for helping organizations and governance leaders succeed in improving information and ediscovery economics; like the CGOC 2010 Information Governance Benchmark Report, it reflects the wisdom of the CGOC community which is now over 1,600 corporate practitioners strong. The 2010 Report confirmed CGOC members viewed defensible disposal as the most essential outcome of a good governance program but revealed challenges with funding and cross-organizational cooperation that impeded program launch or effectiveness. This Guide now provides members with a construct for how to operationalize an effective program and overcome these barriers, including how to:

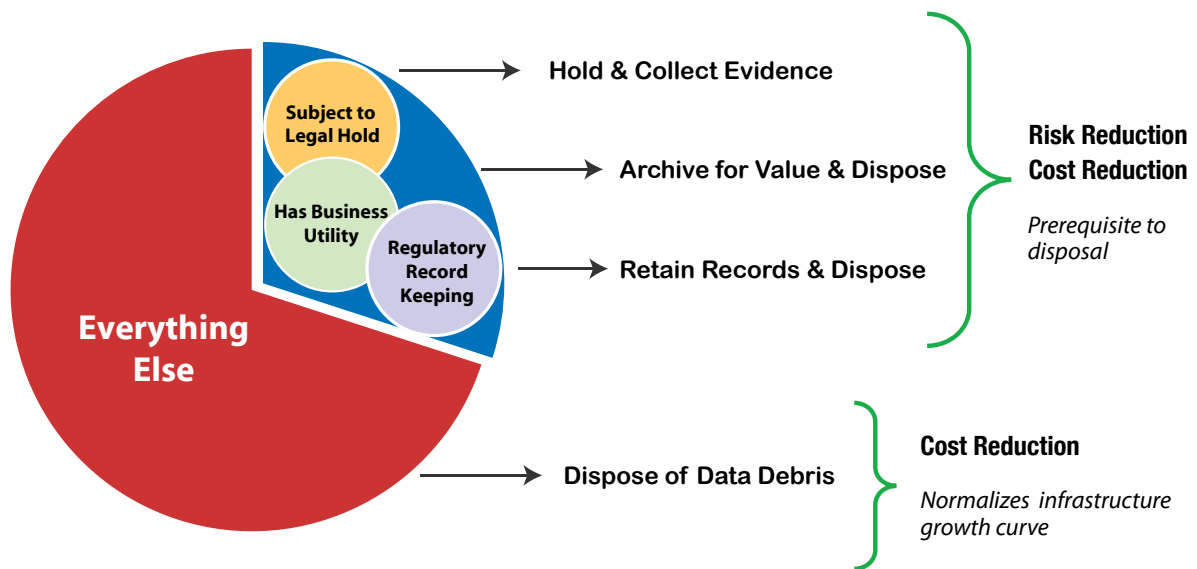
- » Define the economic and business objectives of an information governance program to quantify savings and ensure appropriate funding for change
- » Establish a program strategy
- » Structure an organization that aligns functional silos to ensure savings and business objectives are achieved
- » Identify and improve the business processes for defensible disposal and risk reduction
- » Audit these processes to ensure systemic, sustainable change

We hope that you find this guide useful to launch or accelerate your efforts and that you take advantage of and contribute to the dynamic CGOC community as you lead and learn.

Defining Program Strategy

Strategic Focus

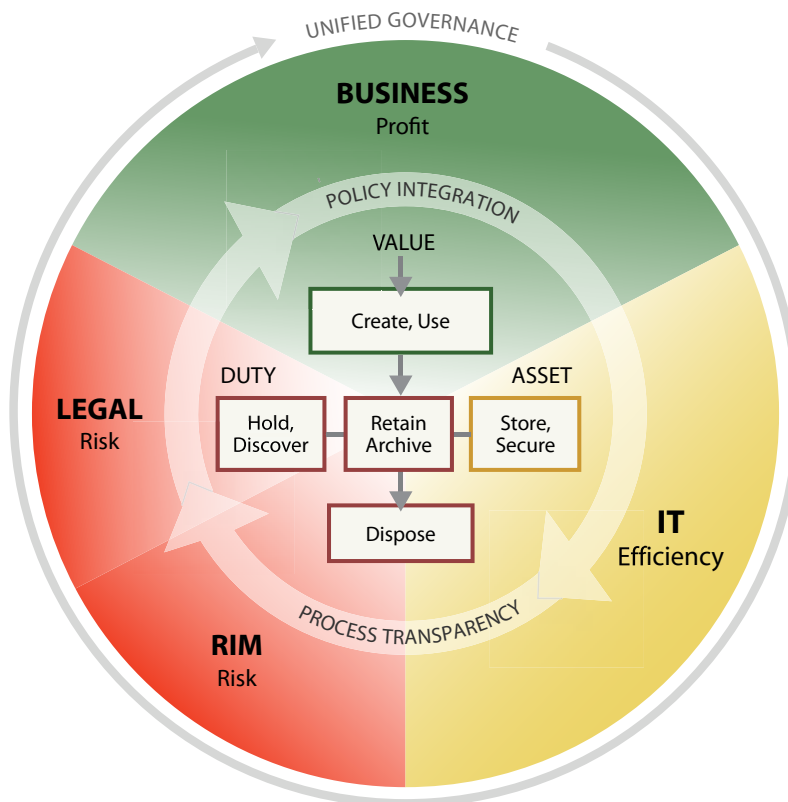
There is a simple strategy that can dramatically change information and ediscovery economics: **dispose of unnecessary data**. To achieve the strategy, legal, records, business and IT organizations must work in concert to more precisely and efficiently determine what information should be preserved as potential evidence in litigation and collected, what information has ongoing business value and should be retained in the lowest cost manner while it does, and what information is required for regulatory purposes and for how long. The remainder can then be deleted and the infrastructure reclaimed; as information utility expires, it too is deleted to achieve a “steady state” where capacity is applied to new, useful information as older, useless information is deleted.



Information Governance Reference Model (IGRM)

Unifying disparate and siloed processes and practices in legal, records, the business and IT is the means of achieving cost and risk reduction goals. While these stakeholders have different agendas and responsibilities, no individual stakeholder can be truly effective or efficient without working in concert with others. Very often communications break down over whether risk mitigation or IT efficiency or business profit are the most important objectives, and this reference model clarifies that all three objectives are important and to achieve them, policy and process transparency and a unified governance model are required across joint information stakeholders.

The IGRM diagram provides a framework for defining a unified governance approach to information and underscores the importance of linking information duties and value to the data assets IT is storing and managing. This linkage is critical to ensuring availability of valuable information, reducing risk, and enabling disposal of unnecessary information. The IGRM is a responsibility and logical model rather than a document or case lifecycle (such as EDRM or models from ARMA and AIIM). It helps to identify the stakeholders, define their respective “stake” in information, and highlights their intersection and dependence upon each other. More importantly, it exemplifies the effective, efficient governance the program seeks to achieve.



Duty: Legal obligation for specific information

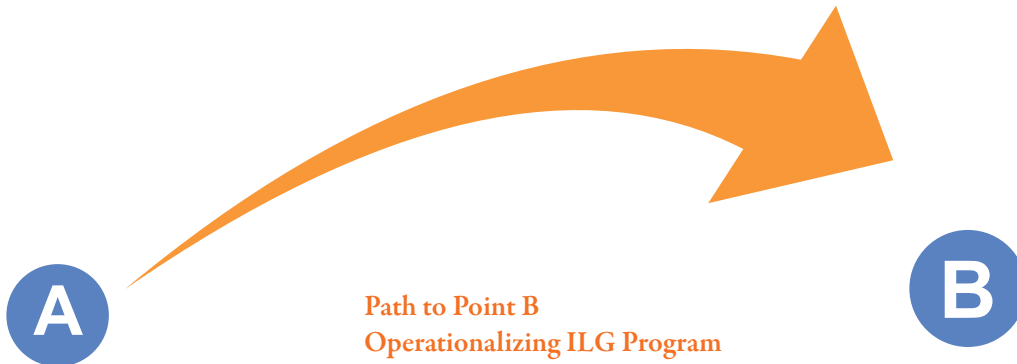
Value: Utility or business purpose of specific information

Asset: Specific container of information

Information Governance Reference Model / © 2011 / v2.1 / edrm.net

Benchmarking Current Situation, Establishing Objectives and Targets, and the Path to Achievement

With the end state cost and risk reduction goals and the program model and strategy defined, benchmark the current state of the organization's costs, risks and processes and establish the pace of improvements and path to goal achievement.



Excess Cost and Risk

Accurately assess where the organization is today

- » Data volume
- » IT cost
- » eDiscovery costs
- » Risk and the current cost of risk mitigation
- » Processes across legal, records, privacy, business and IT

Means of Achievement

Define the governance framework, operating structure and action

- » Organization, responsibilities, and decision making models
- » Measurement periods, reporting cadence and accountability
- » Processes involved and improvements required to achieve objectives
- » Capacity and capabilities required to operationalize process improvements
- » Execution plans by process and workstream responsibilities
- » Tools and instrumentation that provide capacity and capability
- » Communications and training program
- » Audit onset

Value Created by Lower Cost and Risk

Define the specific cost and risk reduction objectives and fiscal milestones for achievement

- » IT run rate cost reduction and cost avoidance targets by fiscal period
- » eDiscovery cost reduction and avoidance targets by fiscal period
- » Risk reduction target by process and pace of achievement (including lowering the cost of mitigation)
- » Quarterly and annual financial impact of the program and the process improvement and instrumentation activities that will drive achievement

Setting Quantifiable Cost and Risk Reduction Goals

An Information Lifecycle Governance program complements data governance and compliance efforts and can significantly improve the costs of information management and ediscovery as well as reduce risk. Because an effective program both defines policies for when to keep data and instruments governance policies across data and infrastructure, it enables companies to realign information management and infrastructure with information value in a comprehensive and systematic way – this is a tremendous cost reduction lever for the enterprise.

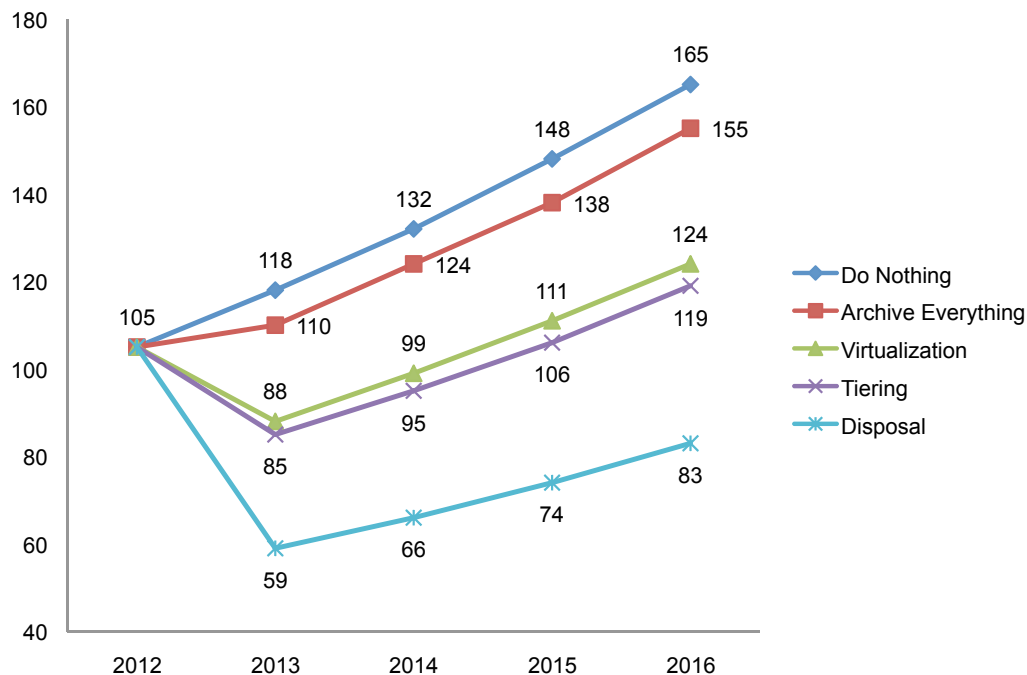
To break through organizational and budget barriers, the program should highlight the value to enterprise stakeholders with primary focus on how to quantify and achieve:

1. Lower storage and infrastructure costs from defensible disposal
2. Lower risk through improved governance instrumentation
3. Lower ediscovery costs through governance instrumentation and lower enterprise data volume

For organizations with rapid volume growth, the only way to contain and control the costs of storage and ediscovery over a five or ten year horizon may well be disposal of unnecessary data. For any organization considering “big data”, this may be true over a two year horizon.

Storage Cost Projection

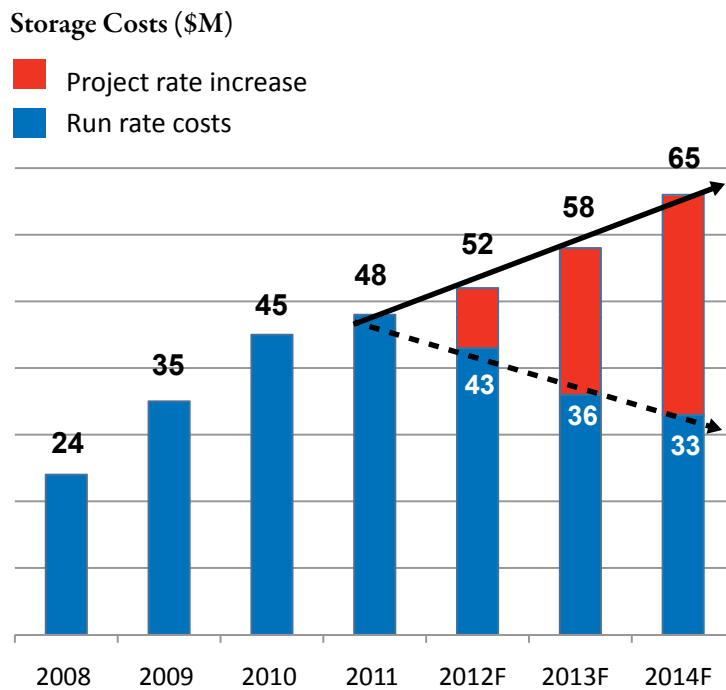
5PBs at 40% Volume Growth with 20% Unit Cost Growth



While there are many nuances to these primary program goals, thorough analysis and framing of these three create executive relevance for your program, will galvanize initial action and become the focal point for ongoing measurement of goal achievement.

Storage Cost Reduction

As companies defensibly and consistently dispose of unnecessary data, they find that a significant amount of data stored was in fact debris – often 50% or more of the total storage and stored data. Conversely, as data volume grows year over year and without disposal of unnecessary data, it creates a compounding cost dynamic that is not sustainable. Disposal creates a tremendous dividend for IT because almost all IT costs are a function of the amount of data, applications, and hardware in the environment. As retention schedules are aligned with and instrumented on applications and servers, storage allocation can also be rationalized with the business need for information and the duration of that need. The costs include the direct procurement costs of storage and storage refresh which tie proportionately to total storage required, and other costs like bandwidth, storage management staff, server and software which scale with data stored. Often, the most effective means of communicating and measuring cost and defining savings targets to a CFO is to focus on direct procurement spend.



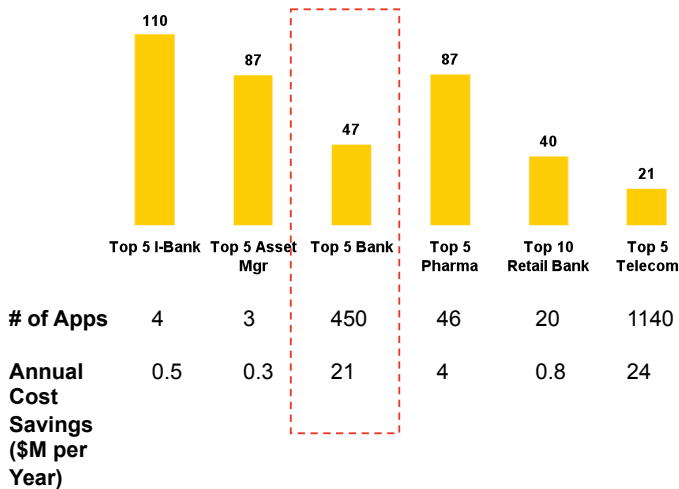
Application Decommissioning Cost Reduction

With visibility and instrumentation for retention and ediscovery in the data and information environment, applications that no longer contain information of utility and duplicate or redundant systems for which there are no duties to keep data can be completely decommissioned. This produces savings from the hardware and software stack on which these applications sit as well as the storage they consume – all of which can be terminated, ending leases, cancelling licenses or re-using them where they add value.

Annual cost savings estimates \$40K per application is a conservative estimate for industry norms

Potential for incremental cost savings

Cost Savings per Application Estimates Application Decommissioning Projects (\$K per App.)



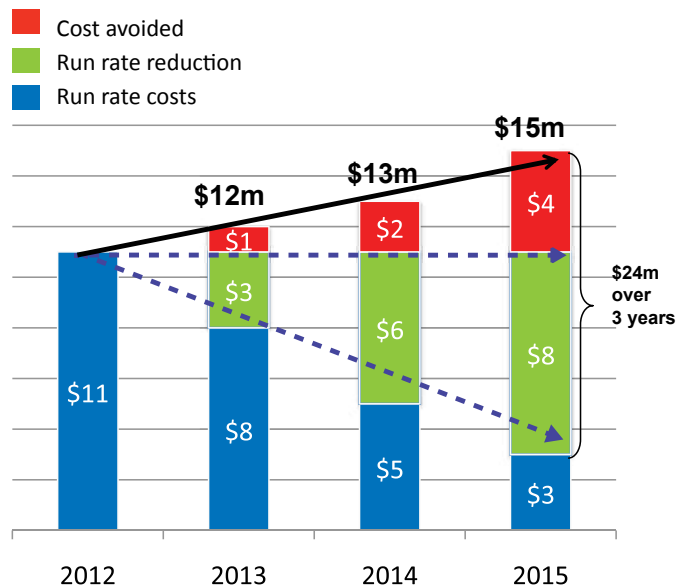
App. Decommissioning Annual Savings per App. (\$ K per year)			
COST	Small App. (4 cores, 0.5 TB)	Large App. (12 cores, 1 TB)	Avg. App. (8 cores, 0.75TB)
S/W Costs			
Oracle DB	14	43	\$14K
H/W Costs			
Servers	25	75	\$25K
Storage	0.5	2	\$0.5K
Total Cost	40	120	\$40K
# of Apps	40	100	70
Cost Savings per year (\$M)	\$1.6M	\$12M	\$7M

eDiscovery Cost Reduction

Much like IT cost, legal ediscovery costs are also largely a function of information volume. Matter duration and run rate legal fees are another key cost component that is influenced by ediscovery scope and cost because the optimum settlement point is often when costs and risks continue to dispute and outweigh the risk and costs to settle or otherwise resolve. Excess ediscovery cost can lead to poor settlement dynamics while lack of insight or visibility to true ediscovery costs leads to late settlement decisions and excess run rate costs. (It is important to note the 97% of all matters settle before trial and of the 3% that go to trial, 1.5% settle before the trial concludes.) Improvements in the ediscovery process increase transparency, enable defensible disposal of unnecessary data, and reduce outside legal fees considerably.

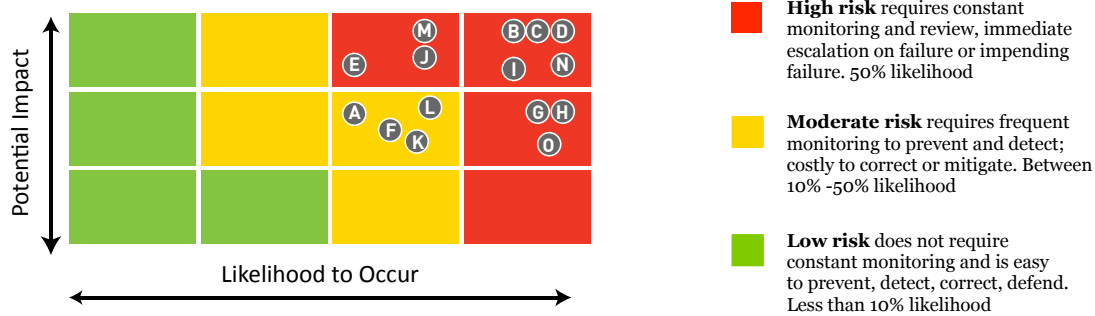
Volume	Value	Metric
Matters	500	# per year
Active Matters	260	# per year
Collection Volume	66	GB/matter
Collected Volume Increase	10	% per year
Reduction Drivers		
Volume Reduction due to Disposal	20	% GB
Volume Reduction due to Accurate Culling	20	% GB
Matters settle early	5	% matters

eDiscovery Costs (\$M)



Risk Reduction

As data volume grows, it not only outpaces the IT and storage budget, it also overwhelms governance processes and creates operational complexity that, in turn, increase compliance and financial risk. Historically, keeping more data was perceived as an effective risk mitigation strategy, but for most organizations this is no longer true. By assessing specific information lifecycle governance processes across legal, records, IT and the business, the risk reduction benefits of the program and the risks of inaction can be communicated internally in a more quantified manner.



	PROCESS	RISK POSED BY PROCESS
A	Employees on Legal Holds	Custodians are not identified and potentially relevant information is inadvertently modified or deleted
B	Data on Legal Hold	Actual, rogue or IT managed data sources missed in hold execution, potentially relevant information is inadvertently modified or deleted
C	Hold publication	IT or employees migrate, retire or modify data because they lacked hold visibility
D	Legal Interviews	Dynamic, diverse Information facts not considered in preservation and collection planning, data is overlooked; no follow through on information identified in custodian interviews
E	Evidence Collection	Collection failure from overlooked source, departing employee, incomplete prior collection inventory, communication and tracking errors
F	Evidence Analysis & Cost Controls	Material issues in dispute are poorly understood until after strategy established and expenses incurred. Excessive data causes litigation costs to exceed dispute value
G	Legal Record	Unable to readily assemble, understand or defend preservation and discovery record. Failures in custodian and data source management. Preservation, collection detected long after occurrence and cause unnecessary remediation cost and risk
H	Master Retention Schedule & Taxonomy	Company is unable to comply or demonstrate compliance with its regulatory record keeping obligations. Disparate nomenclatures for records make application of retention schedules/procedures difficult to apply and audit.
I	Departmental Information Practices	IT 'saves everything' which increases discoverable mass, complexity and legal risk; IT disposes of information of business value undermining enterprise operation. Procedures for retention/disposal difficult to articulate and defend and unapplied by LoB.
J	Privacy & Data Protection	Access, transport and use limitations are not understood by employees with information custody or collections responsibility and customers or employees rights are impacted
K	Data Source Catalog & Stewardship	The type and nature of data in a system or process is poorly understood, leading to incomplete or inaccurate application of retention, preservation, privacy, and collection and disposition policy.
L	System Provisioning	Systems are unable to comply with or execute defined procedures for retaining, preserving, collecting, protecting and disposing of information, exposing the company to significantly higher costs and risks
M	Disposal & Decommissioning	IT is unable to dispose of data and decommission systems causing significant unnecessary cost and risk; IT improperly disposes of data causing unnecessary risk and legal or business expense
N	Legacy Data Management	IT is unable to associate data with business stakeholders or ensure legal duties are met, leading to oversight in collecting evidence and unnecessary legal and operating costs
O	Storage Alignment	Storage is over-allocated, misaligned with business needs and consumes unnecessary capital; IT is unable to reclaim storage and eliminate cost after data is deleted causing unnecessary cost.
P	Audit	Unable to demonstrate reasonable efforts to establish and follow governance policies and procedures increases sanctions risks, penalties and judgments and erodes customer trust

Operationalizing the Strategy

Translating strategy into tactics and turning goals into results requires clear connection between the business objectives, the processes and actions required to achieve them, the capacity to execute those actions, and measurement for accountability.

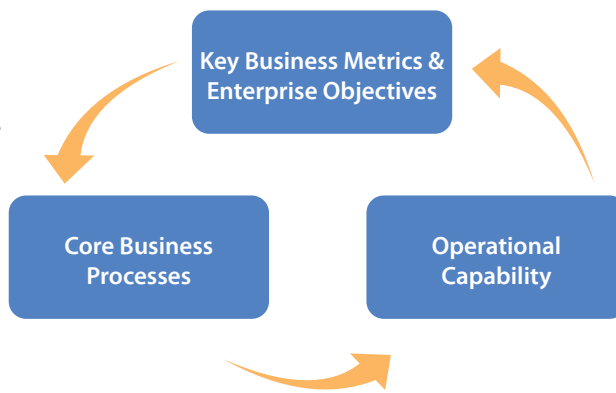
Business Goals ⇒ Relevant Processes ⇒ Process Capacity ⇒ Metrics Against Goals

Defined business objectives for the program and how achievement will be measured over time

- » Cost and risk reduction through value-based information management, rigorous compliance, and defensible disposal

Defined business processes and practices required to achieve the business objectives

- » 16 specific processes that institutionalize defensible disposal, value-based archiving and retention, and rigorous compliance



Ensure accountability for outcomes and provide visibility to operational issues that impede results




- » Vehicle for management support and issue resolution aligned with clear business goals


Defined staff and instrumentation required to enable core business processes to perform as required to achieve objectives

- » People and tools necessary for processes at target operating maturity

Governance Processes Required to Lower Cost and Risk

There are 16 specific business processes across legal, records, privacy, the business and IT functions that collectively dictate information economics and which must operate at high maturity and reliability to defensibly dispose of unnecessary information and mitigate risk.

Process		Brief Process Description	
 LEGAL	A	Employees on Legal Holds	Determining employees with information potentially relevant to an actual or anticipated lawsuit or government investigation
	B	Data on Legal Hold	Determining information, records and data sources that are potentially relevant to an actual or anticipated lawsuit or government investigation
	C	Hold publication	Communicating, syndicating and executing legal holds to people, systems and data sources for execution and compliance
	D	Legal Interviews	Fact finding and inquiry with employees with knowledge of a matter in dispute to determine potentially relevant information and its whereabouts and sources
	E	Evidence Collection	Collecting potential evidence in response to an agreed-upon request with an adversary or government agency
	F	Evidence Analysis & Cost Controls	Assessing information to understand dispute and potential information sources and for determining, controlling and communicating the costs of outside review of relevant information
	G	Legal Record	Documenting the custodians and data sources identified, the legal hold and collection activities over multi-year matter lifecycle
 RIM	H	Master Retention Schedule & Taxonomy	Defining an information classification schema that reflects the business structure, cataloging laws that apply to said classes and business areas in the various operating jurisdictions and for determining the appropriate record retention requirements
 BUSINESS	I	Departmental Information Practices	Interviewing business organizations using the information taxonomy to determine which organizations generate or store which classes of information, where they store it and how long it has utility to them; results in retention schedules for information and enables data source-specific retention schedules that reflect both business value and regulatory requirements.

	Process		Brief Process Description
CPO	J	Privacy & Data Protection	Assessing privacy duties by data subject and data location, including overlapping obligations for information and information elements and a means of communicating these requirements to those employees who generate, use, access, and store information
	K	Data Source Catalog & Stewardship	Establishing a common definition and object model for information and the people and systems with custody of it for use in determining, defining, communicating, understanding and executing governance procedures
	L	System Provisioning	Provisioning new servers and applications, including associated storage , with capabilities for systematically placing holds, enforcing retention schedules, disposing, collecting evidence, and protecting data elements subject to privacy rights.
	M	Disposal & Decommissioning	Disposing data and fully decommissioning applications at the end of their business utility and after legal duties have elapsed.
	N	Legacy Data Management	Processes, technology and methodologies by which data is disposed and applications fully decommissioned at the end of their utility and after legal duties have elapsed.
	O	Storage Alignment	The process of determining and aligning storage capacity and allocation to information business value and retention requirements, including optimizing utilization targets, storage reclamation and re-allocation after data is deleted to link storage cost to business need for data stored
I/A	P	Audit	Processes and testing to assess the effectiveness of other processes, in this instance the processes for determining, communicating, and executing processes and procedures for managing information based on its value and legal duties and disposing of unnecessary data.

Strategy Check

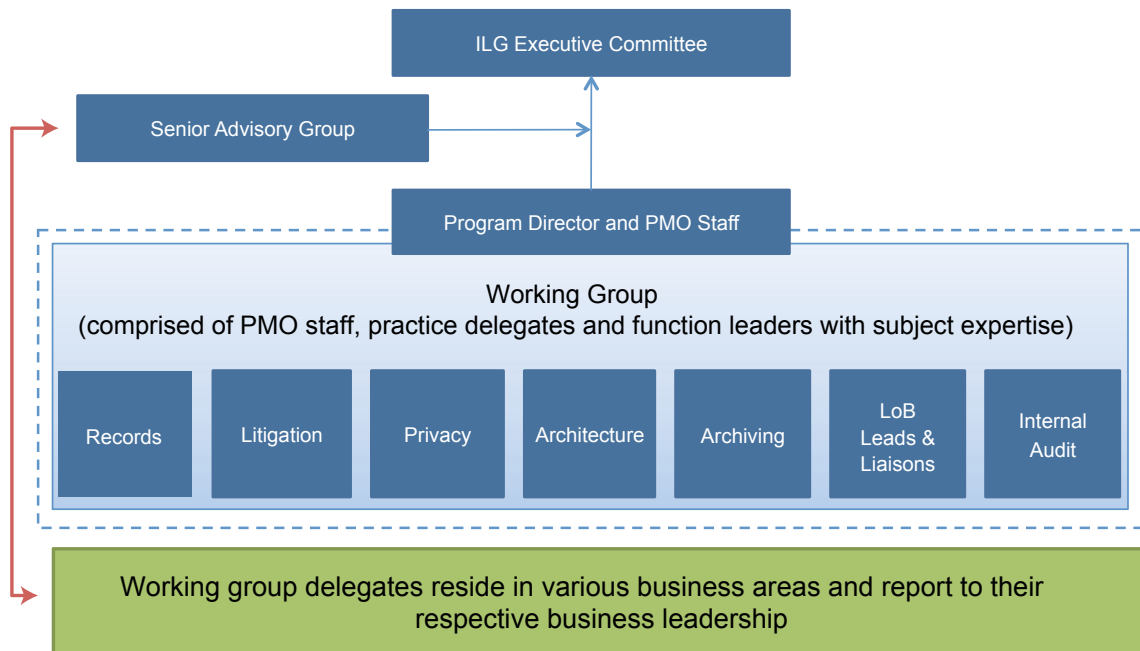
Programs and projects often fail in institutionalizing information lifecycle governance to improve information economics is a significant undertaking that touches many areas of the organization. Validate that your strategy and tactics address the common causes of failure:

1. Lack of clarity or metrics on the desired business outcomes – no “Point B”
 - » No clear cost reduction and risk reduction goals established so the organization and management in particular lose interest in execution
 - » No way to measure progress toward goal or hold people accountable so initial value is never achieved
2. Lack of clarity on which processes and levers drive “Point B” cost and risk reduction outcomes
 - » No translation of objectives and outcomes to the work and processes required to achieve them so results are not achieved
 - » Missing processes and levers that are pre-requisites to results or to practical operational achievement are not addressed, undermining the effort
3. Lack of capacity and capability to execute or operationalize processes or pull levers required to achieve “Point B” cost and risk reduction outcomes
 - » Lack of capacity to operate required processes at the target maturity level necessary to achieve the objectives
 - » Lack of capability from insufficient process maturity or failure to instrument processes to the level required to achieve cost and risk reduction goals
 - » Lack of tools to sustain or execute processes or selection of tools that don’t function at required level of maturity to achieve cost and risk reduction targets and timing

Program Leadership

Organization Model

To achieve the cost and risk reduction goals of the ILG program, executive sponsorship and accountability are required along with program leadership that unifies once-disparate practices and delegates from the various functional areas that own or operate the processes involved. The Executive Committee should include the CIO, CFO, General Counsel, and other officers. A Senior Advisory Group comprised of line of business leaders (division executives) should be assembled to provide the staff and support needed for goal achievement and they should be routinely apprised of progress and issues. A Program Office and its leader and staff drive and measure progress toward goals, directing the efforts of a Working Group that matures and instruments the relevant processes.



Achievement Measurement and Accountability

Consistent measurement and reporting is perhaps the most critical success factor. The program cost and risk reduction goals and the timeline for their achievement are the basis for executive dashboards, management reports and accountability. Align reporting timing and content to fiscal periods, clear financial goals and compare against both prior period measurement and the initial targets defined.

Summary of Highest Volume Top Applications (Top 11)					
App	Actual	Target	Diff	Percent	Report
1000	1,000	1,000	0	100%	10/10
1001	1,000	1,000	0	100%	10/10
1002	1,000	1,000	0	100%	10/10
1003	1,000	1,000	0	100%	10/10
1004	1,000	1,000	0	100%	10/10
1005	1,000	1,000	0	100%	10/10
1006	1,000	1,000	0	100%	10/10
1007	1,000	1,000	0	100%	10/10
1008	1,000	1,000	0	100%	10/10
1009	1,000	1,000	0	100%	10/10
1010	1,000	1,000	0	100%	10/10
1011	1,000	1,000	0	100%	10/10
1012	1,000	1,000	0	100%	10/10
1013	1,000	1,000	0	100%	10/10
1014	1,000	1,000	0	100%	10/10
1015	1,000	1,000	0	100%	10/10
1016	1,000	1,000	0	100%	10/10
1017	1,000	1,000	0	100%	10/10
1018	1,000	1,000	0	100%	10/10
1019	1,000	1,000	0	100%	10/10
1020	1,000	1,000	0	100%	10/10

Data Volume and IT Costs

- Storage Volume & Cost by Business
- Actual vs Target Costs, Volume for Period

Legal Costs

- eDiscovery Costs & Data Volume Discovered
- Actual vs Target for Period

Risk Reduction

- Current Risk Assessment & Monitoring
- Actual Risk/Burden vs Target for Period

Operational Capacity

- Process Maturity Levels, Actual vs Target for Period
- Process Capacity Actual vs Target for Period

Avoid the pitfall of measuring performance without also measuring the capacity to perform. All too often, goals are set (often by management) without the operational wherewithal to achieve the intended results. Capacity planning and monitoring are critical because resource issues and allocations can undermine results—especially in cross-functional projects. The composition of the Executive Committee and Senior Advisory Group combined with the reporting cadence are a primary means of anticipating and addressing these issues.

Operational capacity is measured for each of the 16 processes and looks at both maturity level (process capability) and the people and/or tooling required to perform or operate the process at the target maturity (process capacity); combined these are key indicators of how the processes will perform in the future and leading indicators of where failure to deliver cost or risk reduction results will occur.

Achievement Measurement & Accountability

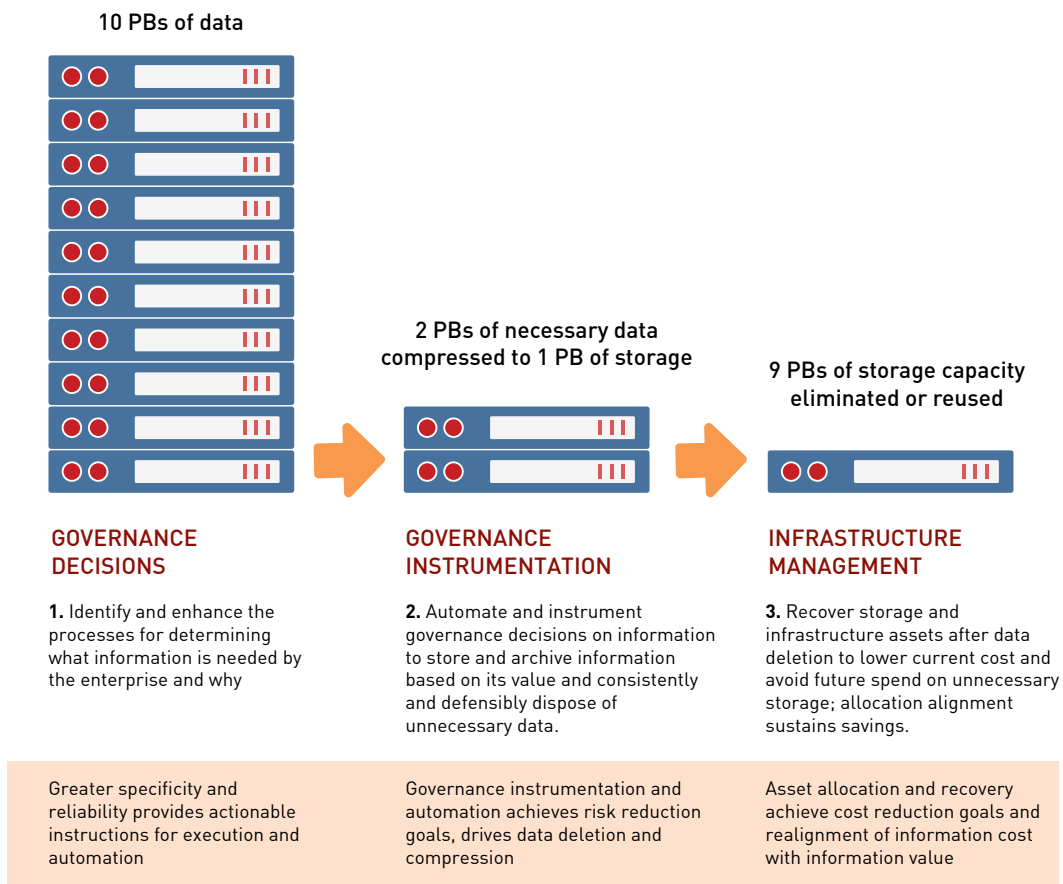
Because the savings from a lifecycle governance program are often material financially, the Executive Committee and Senior Advisors will be motivated to enable progress and hold their organizations accountable for outcomes. Frequent, consistent measurement against established goals ensures appropriate progress and helps identify and remove obstacles that impede progress and outcomes.

	Executive Committee	Senior Advisory Group	PMO Leader	Working Group Delegates	
Quarterly Business Review	✓	✓	✓	✓	Cost, risk and capacity status by period and against established targets <i>until goals are achieved</i> . Issues unresolved in monthly operations dialogue.
Monthly Operations Status		✓	✓	✓	Summary progress reporting on workstreams. Issues unresolved at PMO level.
Bi-Weekly Project and Workstream Status			✓	✓	Detailed project and workstream status reporting including deliverable status, action items, and issues requiring resolution.
Exception Reporting	✓	✓	✓	✓	Issues and road blocks that may impede achievement of expected cost and risk reduction targets and/or the timing of their achievement.

Once lifecycle governance is institutionalized and instrumented, Internal Audit provides after-the-fact reporting on process failures, can help identify failure cause and ensure organizational accountability for remedying process, instrumentation, or monitoring issues (discussed in the next section). Audit criteria should be designed into the program as a core part of strategy and is one of the essential processes in and of itself.

From Policy to Savings

To achieve the risk and cost reduction objectives of the program, it is essential to move beyond documenting and publishing governance decisions and policies via email and the intranet to ensuring and instrumenting execution. Decisions made by legal, the business and records staff on what information to keep must be specific and actionable, they must be executed on data itself, and the information, storage and infrastructure assets must be managed commensurate with the decisions including recovering and allocating assets. This transition beyond governance policy to governance instrumentation is the mechanism for achieving risk reduction goals and the vehicle for data deletion; allocating and recovering storage and infrastructure by information value and after its deletion and compression are the mechanisms for achieving cost reduction goals and aligning information cost to value.

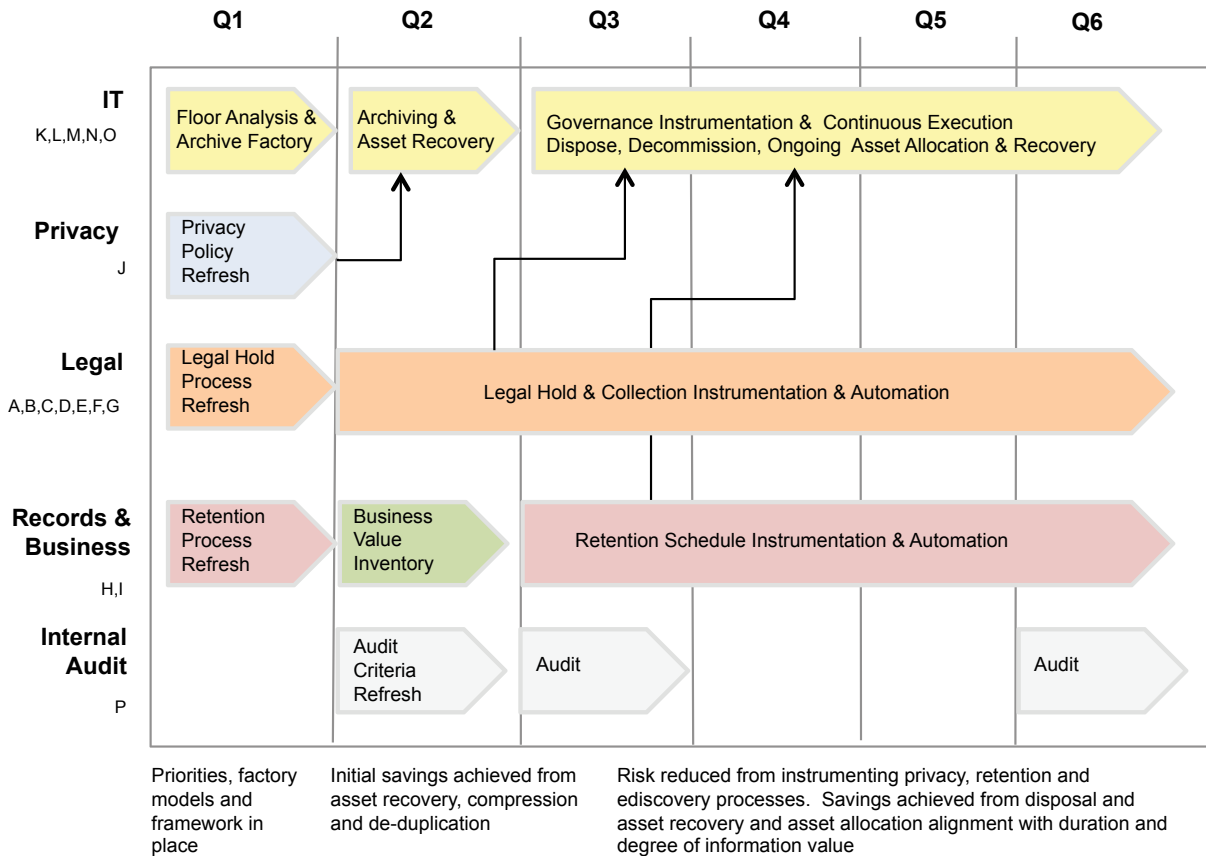


There are three competencies that must co-exist to maximize cost and risk reduction benefits:

1. **Governance policy management** which ensures precise decisions on what data is needed and why are available and actionable both the people and systems with the data
2. **Governance instrumentation** and policy execution in the data environment to ensure that data is stored, tiered, managed, accessible and deleted based on its specific utility to the organization
3. **Asset allocation and recovery** to optimize the deployment of storage and infrastructure commensurate with data value, eliminate or recover infrastructure as data is deleted, and continuously align infrastructure costs with information utility

Execution Timeline

Achieving cost and risk reduction goals will require parallel efforts and multiple threaded workstreams directed by the PMO. Analysis of the data environment and establishing an archive and tiering factory should commence in parallel with improvements to legal hold, records and retention and privacy processes to enable defensible disposal and complete governance instrumentation and automation for sustained savings.

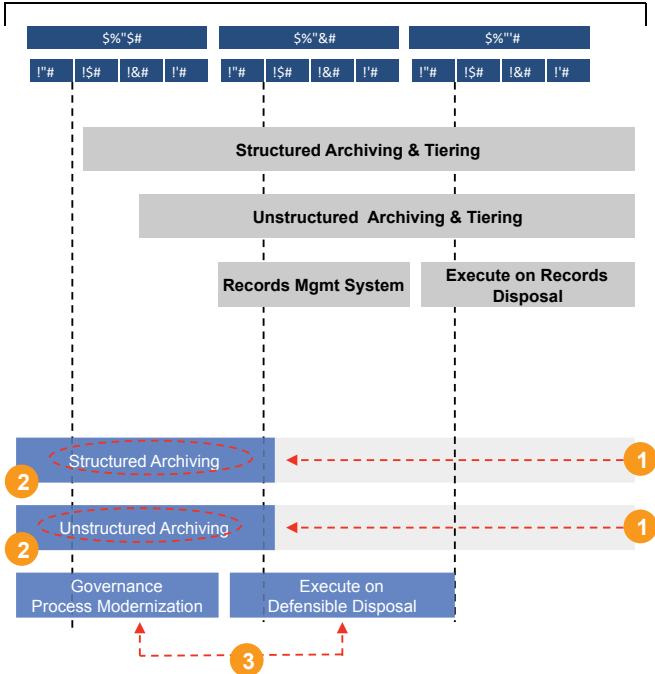


Time is one of the most potent levers for lowering cost because storage costs recur and grow annually; rapidly lowering the amount of data stored not only saves money faster, it saves more money over time.

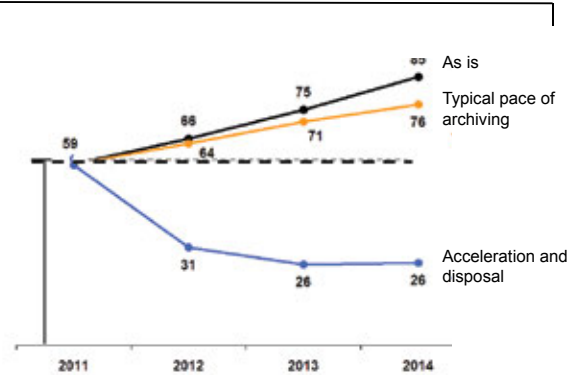
3 Savings Levers

- 1 Accelerate time to and total value by compressing the program from 3 to 2 years
- 2 Expand the scope of data addressed by the program to achieve faster, greater run rate reduction
- 3 Defensibly dispose of unnecessary information by managing data by its value

Acceleration vs Steady Progress



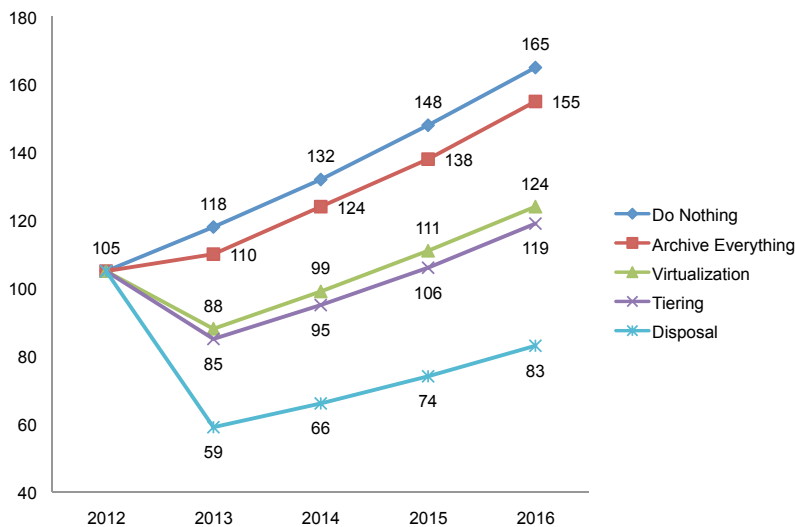
Financial Impact Comparison



Because data volume compounds year over year, slower paced programs or those that don't defensibly but aggressively dispose of unnecessary data will likely fail to achieve cost reduction goals or sustain cost reduction over time. With the data volume, cost and growth assumptions shown in the chart below, disposal produces \$139M in savings over a five year period with significant run rate reduction immediately and sustainably lower run rate costs (continuous savings) over time.

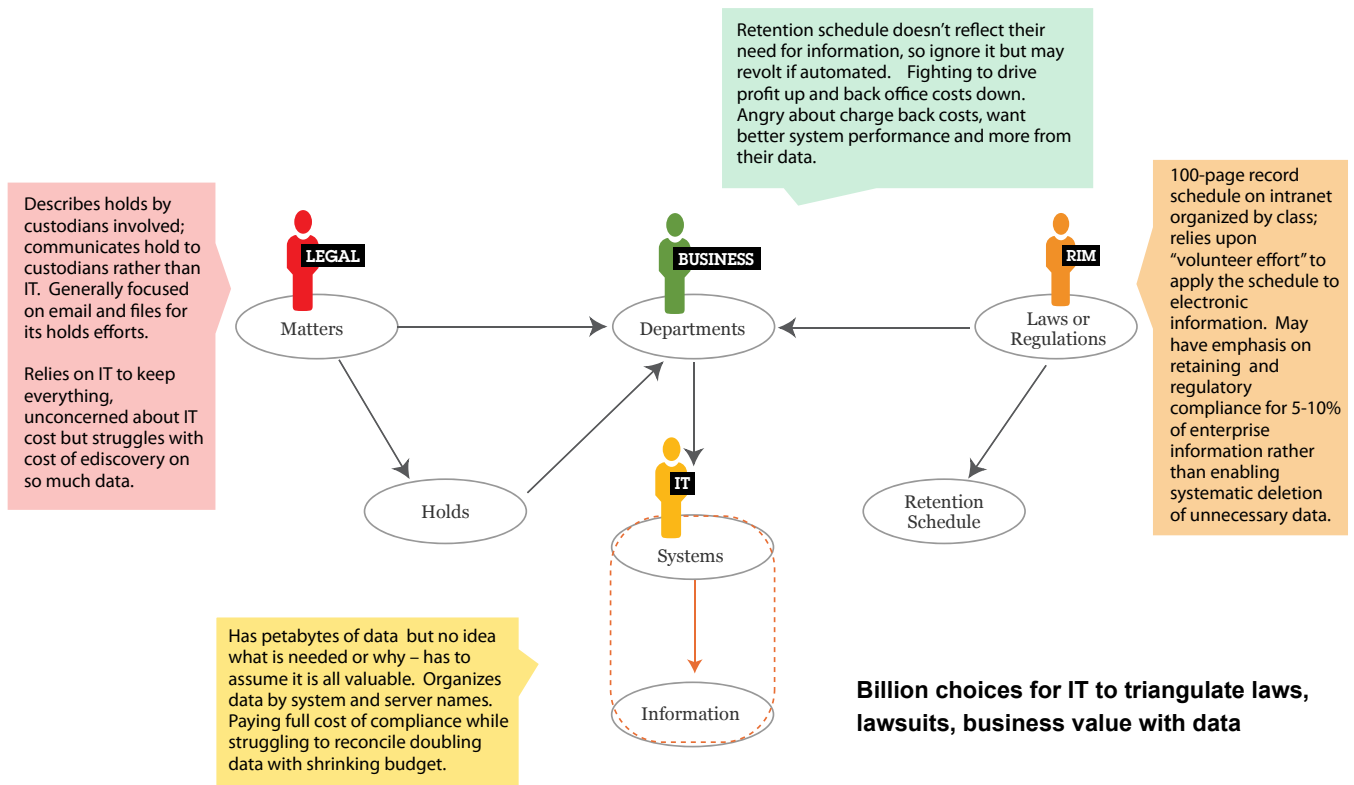
Storage Cost Projection

5PB's at 40% with 20% Unit Cost Growth



Process Maturity and Management

For most organizations, the root cause of excess data and the cost and risk it creates is the inability to consistently and systematically associate information value and obligations with information assets. This is difficult in practice because the form and scope of legal holds and retention schedules don't readily align with the form in which information is managed, the volume and growth of it, and the operational dynamics this creates for IT organizations. While policies and requirements may be formally published, they are often not instrumented on data itself – as data volume doubles and IT budgets contract, policy is very difficult to execute consistently.

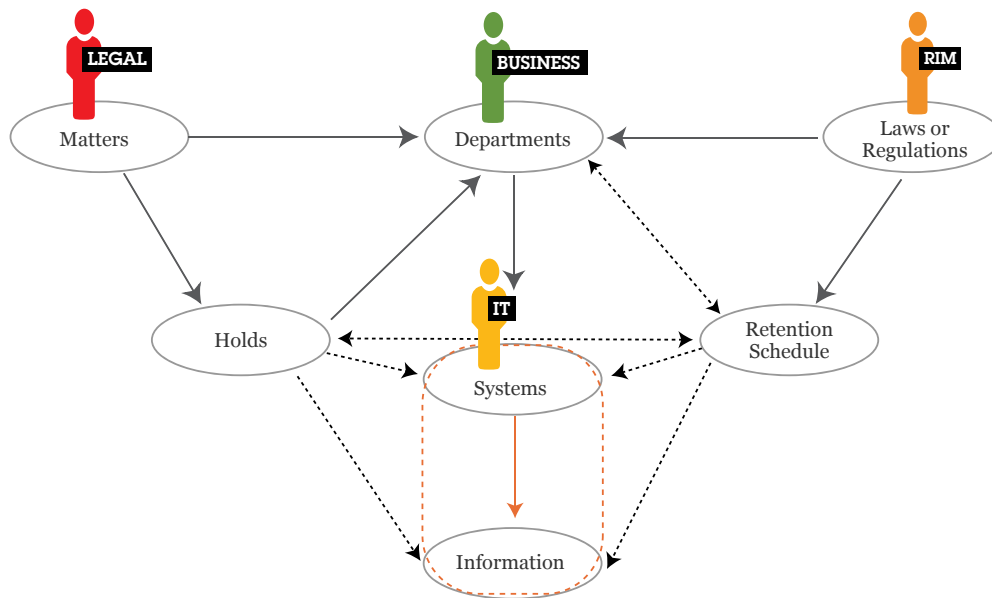


To achieve the cost and risk reduction benefits an ILG program offers, legal hold and retention practices must be extended and enhanced so they can be automated on the vast majority of enterprise information. Systematically applying retention and disposition to structured data often drives substantial savings, particularly when combined with tiering and archiving to further compress the remaining data with value. Legal and records staff are often surprised to learn that messaging and files may comprise a relatively small portion of total storage and data; the sources of cost are critical factors in determining the priorities for process improvements and governance instrumentation.

To achieve savings, IT needs accurate schedules that can be automated across the petabytes of data they manage. The focus of retention schedules then shifts from physical records to broadly-applicable schedules that can be reliably instrumented on data.

To effectively instrument and execute retention schedules, privacy policy must be instrumented as well. The processes by which systems are provisioned and decommissioned and assets are allocated and recovered must also be improved. A shared data source catalog across policy makers in legal, records, the business, and compliance and the organization that must execute them is a backbone process for information lifecycle governance.

The PMO and Working Group should assess process maturity and establish the timeline for process improvement to achieve the target operational maturity aligned with the cost and risk reduction goals established. This will include enhancing the scope and form of legal holds and retention schedules so they can be consistently and automatically applied to data, incorporating business value more holistically, and instrumenting the linkage of holds and schedule to information assets to close operational gaps.



LEGAL
Modernize eDiscovery Process
<ul style="list-style-type: none"> ✓ Precise, reliable legal holds ✓ Assess evidence in place, collect less ✓ Lower legal risk, cost

IT
Optimize Information Volume
<ul style="list-style-type: none"> ✓ Dispose and retire unnecessary data ✓ Optimize storage based on value ✓ Lower information cost

BUSINESS
State Information Value
<ul style="list-style-type: none"> ✓ Guidance on information utility ✓ Participate in volume reduction ✓ Align around value

RECORDS
Modernize Retention Process
<ul style="list-style-type: none"> ✓ Address electronic information ✓ Executable schedules can be automated ✓ Lower legal risk, cost

Process	
A	Employees on Legal Holds
B	Data on Legal Hold
C	Hold publication
D	Legal Interviews
E	Evidence Collection
F	Evidence Analysis & Cost Controls
G	Legal Record
H	Master Retention Schedule & Taxonomy
I	Departmental Information Practices
J	Privacy & Data Protection
K	Data Source Catalog & Stewardship
L	System Provisioning
M	Disposal & Decommissioning
N	Legacy Data Management
O	Storage Alignment
P	Audit

Process Maturity Levels that Drive Cost, Risk

A clear understanding of maturity levels and current process maturity will help frame the work effort and change management required.

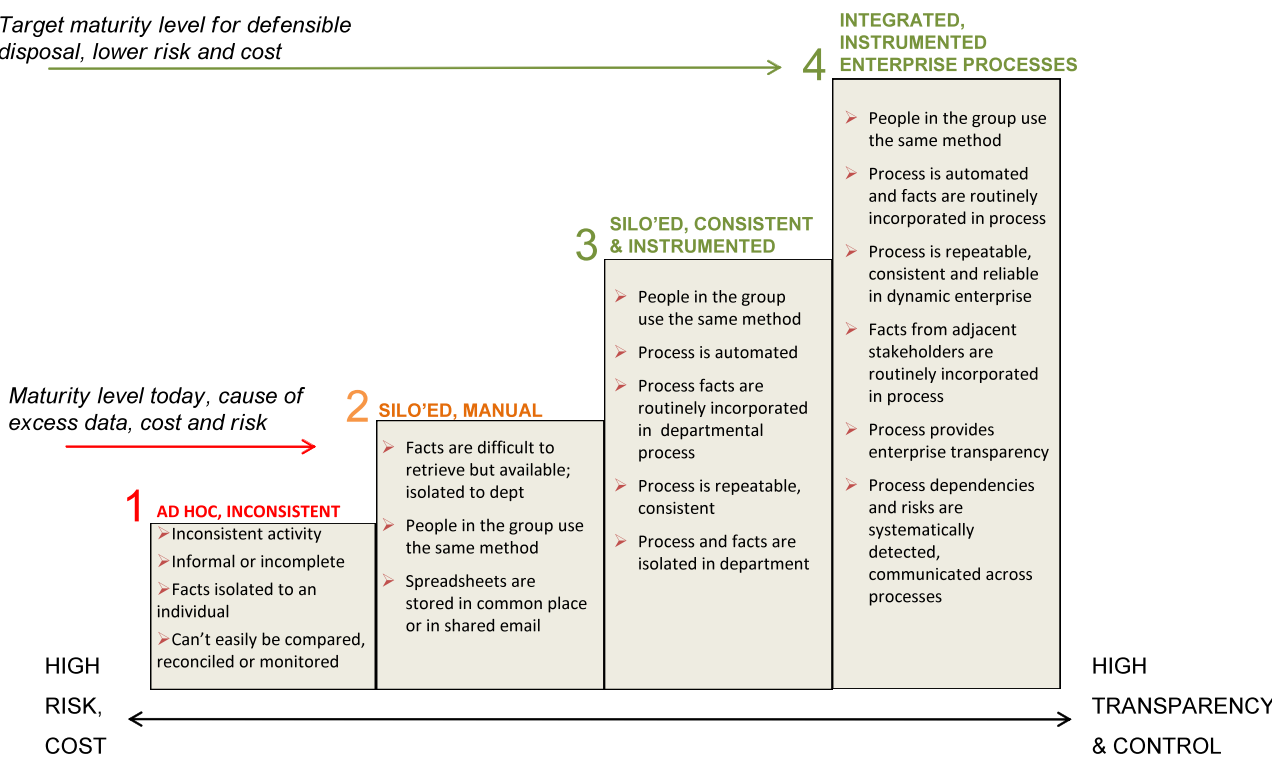
Level 1 is an ad hoc, manual and unstructured process performed differently by each practitioner; only the individual practitioner has access to the process facts or results. These processes are highly unreliable and difficult to audit.

Level 2 is a manual process with some consistency in how it is performed across practitioners within a particular function or department; only the department has access to the process facts and results, and often these are embedded in multiple spreadsheets and seldom accessed. These processes can be more reliable, but still very difficult to audit.

Level 3 is a semi-automated process performed consistently within a department with process facts and results readily accessible to departmental stakeholders. Stakeholders beyond the department who participate in or are dependent upon the process are not integrated. These interdepartmental processes are more consistent and can readily be audited; however audit results may reflect their lack of intradepartmental collaboration.

Level 4 is an automated and cross-functional process that is performed consistently with inclusion of dependent stakeholders across multiple departments. Process facts and results are readily available across organizations. These processes have the lowest risk, highest reliability and are readily and successfully audited.

Target maturity level for defensible disposal, lower risk and cost



Maturity Assessment

	Process	1: Ad Hoc, Manual	2: Manual Structure, siloed	3: Instrumented, siloed	4: Instrumented, Integrated
A	Employees on Legal Holds				
B	Data on Legal Hold				
C	Hold publication				
D	Legal Interviews				
E	Evidence Collection				
F	Evidence Analysis & Cost Controls				
G	Legal Record				
H	Master Retention Schedule & Taxonomy				
I	Departmental Information Practices				
J	Privacy & Data Protection				
K	Data Source Catalog & Stewardship				
L	System Provisioning				
M	Disposal & Decommissioning				
N	Legacy Data Management				
O	Storage Alignment				
P	Audit				

Mapping Effort Required to Outcomes and Ensuring Capacity

The PMO and Working Group establish workstreams and plans to mature and instrument processes. The pace of these efforts must tie to the pace of cost and risk reduction defined in the business goals and program financials.

As a part of the process maturity and improvement effort, responsibilities for each process owner should be defined to reflect the level of maturity, integrity and reliability required to achieve the cost and risk reduction goals. Each workstream will likely include policy revisions, process and practice improvements and technology to sustain better practices and ensure transparency and integration across stakeholder processes.



To support the business objectives of the ILG Program, the Legal organization will:

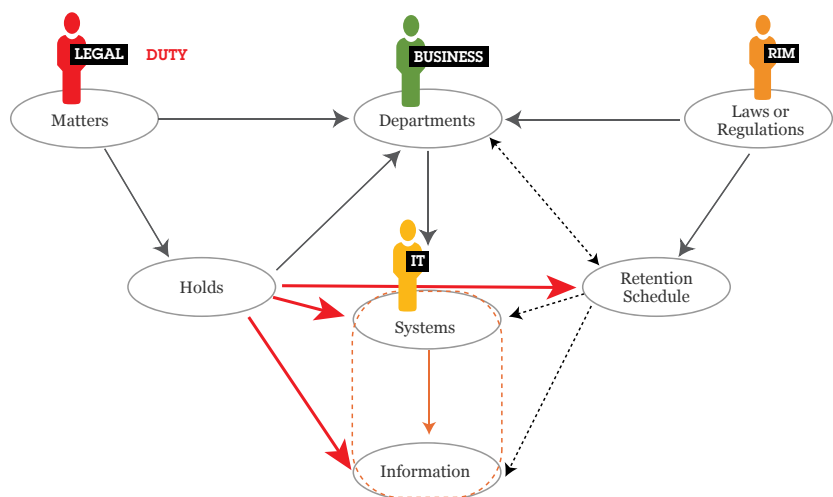
- » Maintain an accurate inventory of legal obligations for information by case and scope of obligation including individuals involved, information scope (dates, terms, elements), and relevant records. The inventory should indicate whether the duties have been satisfied fully or partially and how
- » Precisely and timely define and clearly communicate specific requirements to preserve potential evidence to IT, records and business stakeholders for each matter including the individual employees, records and ranges of data that must be preserved as potential evidence
- » Provide real-time, continuous transparency to current legal obligations for information that can be readily understood and acted upon by stakeholders in IT, records and business units
- » Affirmatively communicate to and receive confirmation of compliance from employees, records managers or IT staff are relied upon to preserve information in their custody
- » Timely notify IT, records and business stakeholders when evidence for a particular matter no longer needs to be preserved
- » Ensure the defensibility of its process through complete, accurate, timely record keeping and closed loop communications with custodians, IT and records staff
- » Enable defensible disposal of information through precise, consistent and timely communication of obligations to individuals, IT and records staff when the duty arises and as it changes over the course of a matter
- » Work with Internal Audit to assess enterprise preservation procedures

Capabilities for Legal to Define Holds by People, Records, and Data Involved to Hold, Collect & Produce More Effectively & Efficiently

LEGAL

Modernize eDiscovery Process

- ✓ Precise, reliable legal holds
- ✓ Assess evidence in place, collect less
- ✓ Lower legal risk, cost





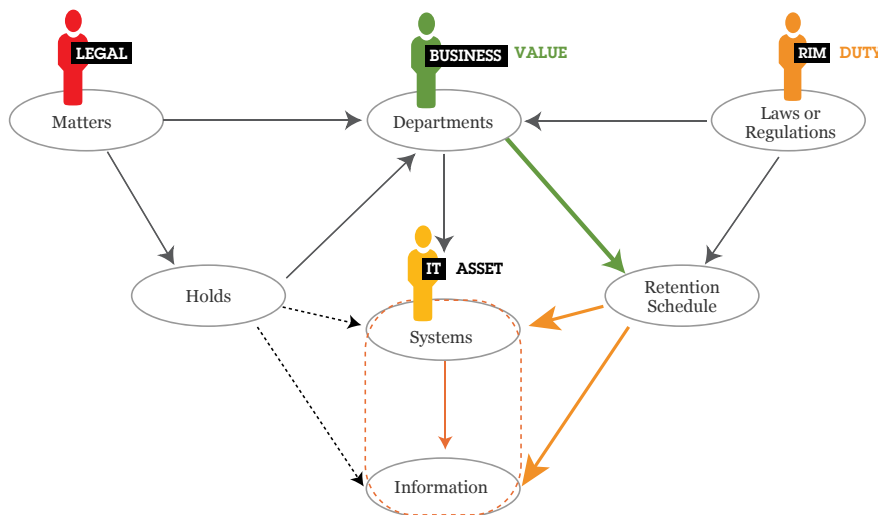
To support the business objectives of the ILG Program, the RM organization will:

- » Author and distribute a records management policy and provide training materials to employees or contribute content to corporate ethics training program
- » Provide an information taxonomy that can be reliably used across business, IT and legal stakeholders to define and characterize business information and information required for regulatory obligations
- » Maintain an inventory of regulatory requirements for records updated annually and identify which laws apply to which classes of information by country or jurisdiction and business area
- » Provide actionable retention schedules that can be routinely and automatically applied by IT and business stakeholders on electronic information to ensure proper record keeping, safe guard information of value to the business, and timely disposal of information without value or regulatory duty
- » Maintain a network of records liaisons across the business to coordinate and communicate policy, taxonomy and schedule needs and changes; provide management visibility to who these liaisons are and where no liaison has been appointed
- » Collect and dispose (or cause to be collected and disposed) electronic and physical records in accordance with the schedule
- » Enable defensible disposal through consistent, documented and precise execution of the retention schedule on records regardless of their form
- » Ensure timely response to regulator inquiry
- » Enable Internal Audit to test records and retention procedures on physical and digital records



To support the business objectives of the ILG Program, Line of Business organizations will:

- » Ensure a business liaison for governance is identified and able to participate in the Program and its processes
- » Using online tools and taxonomy provided, participate in an bi-annual value inventory to articulate what information is generated by business teams or departments and the duration of its value to enable IT, records and legal stakeholders to manage accordingly
- » Work in concert with IT to optimize the archiving and storage of information based on its utility and management cost in the interest of shareholders, regardless of charge back procedures
- » As business processes and practices change, proactively initiate changes to the taxonomy, records and value procedures to reflect business practices and needs
- » Enable timely disposal of information without value and active participation in the governance program via business leader transparency and accountability for the total unit cost of information (its storage, management, and ediscovery)
- » Participate in Internal Audit on business value inventory procedures



BUSINESS

State Information Value

- ✓ Guidance on information utility
- ✓ Participate in volume reduction
- ✓ **Align around value**

RECORDS

Modernize Retention Process

- ✓ Address electronic information
- ✓ Executable schedules can be automated
- ✓ Lower legal risk, cost

PRIVACY OFFICER

To support the business objectives of the ILG Program, the Privacy organization will:

- » Establish a catalog of privacy laws and policies that is accessible to litigation, records and IT staff
- » Coordinate with RM to associate privacy requirements during retention of records and business information
- » Coordinate with litigation in advance of data preservation and collection to ensure that appropriate measures are used for data subjects and jurisdictions
- » Provide education and training to litigation, records, IT and line of business staff on current and emerging privacy obligations in the US and rest of world on a periodic basis
- » Enable Internal Audit to effectively test privacy procedures

INTERNAL AUDIT

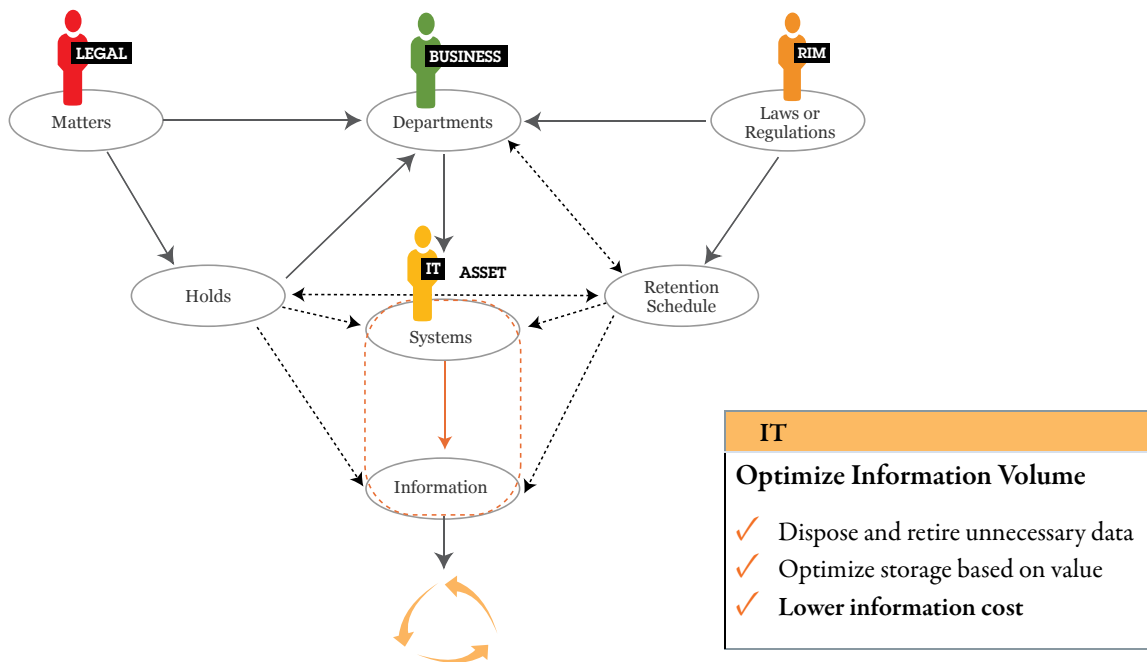
To support the business objectives of the ILG Program, the Internal Audit organization will:

- » Establish and conduct testing procedures for records management to assess the proper retention and disposition of physical and electronic records to ensure timely regulatory response, defensible disposition and minimize company risk
- » Establish and conduct testing procedures for business value inventories to ensure that information assets are properly defined and retained until their value expires
- » Establish and conduct testing procedures for legal matters to ensure preservation duties are properly communicated and executed and legal holds are released in a timely manner to reduce company risk
- » Establish and conduct testing procedures for data sources to ensure that information is retained while it has business value or is subject to a legal or regulatory obligation, privacy requirements are met during its retention and it is timely disposed when there is no longer a business need or legal duty based on established processes for communicating information duty and value
- » Work with executive management and practice leaders to determine audit readiness and onset
- » Work with the executive committee to summary reporting on audit findings and with practice leaders on remediation plans



To support the business objectives of the ILG Program, the IT organization will:

- » Retain and preserve information based on its value to the business and legal obligations and according to procedures/ instructions provided by legal, RM and business, including aligning technique and technology to value
- » Timely dispose of information no longer needed to lower information costs and related risks
- » Author and follow back up and disaster recovery policies that limit the retention of back up media to the shortest necessary period to effectively recover from a disaster or failure
- » Maintain an inventory of systems with current business value retention, record requirements and legal hold obligations for data contained in said systems or stores and ensure that staff involved in provisioning and decommissioning have access to this inventory in the course of their work
- » Establish and provide a common data dictionary for organization and department, data source, employee, information classification, system classification, law, lawsuit for use by legal, records, business and IT in the governance program execution
- » Provision new systems, servers and storage with automated or manual processes for imposing retention, preservation and disposition of information in the ordinary course of operation (revise SLDC policies, procedures)
- » Align systems and stores with the value of information contained in them, including security, privacy, confidentiality, regulatory, business, and litigation requirements
- » Develop protocols for disposal of data and protocols for storage and disposal of customer data and PII (in concert with information security and privacy stakeholders)
- » Enable Internal Audit to test retention/disposition, preservation/collection and privacy procedures



Audit Processes to Embed Improvements into Ongoing Operations

Internal Audit is an important lever in institutionalizing better governance processes and sustained enterprise benefits from the program. Ongoing internal audit of the 16 processes helps ensure that:

- » Disposal is and continues to be defensible and it continues to occur
- » Compliance with regulatory and legal obligations is achieved
- » Assumptions cease to drive decisions on what data must be kept for how long
- » Improved processes have been embedded in the operation and continue to function as intended for sustained risk and cost reduction
- » Failures in one process that will affect performance of the other 15 at some point in the future are timely identified and remedied

Audit reporting is critical to management and management should:

- » Hold IT, legal, records and business leaders accountable for audit findings and failures at least annually
- » Give both under and over retention equal attention as risks to shareholder value

Design audit criteria as you design process maturity and improvement levels and before instrumenting governance. The test criteria should test the levers for achieving the cost and risk reduction objectives specifically so audits are useful to both the function leaders and to management. Any lifecycle governance program should focus test criteria on defensible disposal and decommissioning of data as these are the primary savings drivers; very often this requires a complete change in audit programs that were focused on ensuring retention but not ensuring disposal when retention is no longer required.

<p>Records Compliance Sample testing of organizations and record class for retention, hold placement, and prompt disposition. Example: 6 organizations, 2 records classes each, 100 records per class sampled from first year and last year of retention period.</p> <p>Interval: twice annually Conducted by: internal audit Exception handling: 21 days to respond with remediation plan, 90 days to remediate</p>	<p>Holds Compliance Sample testing of matter pool for notice issuance, hold execution, affirmative compliance by employees, records and IT, and hold release at matter disposition Example: 25 matters and all custodians and sources</p> <p>Interval: quarterly Conducted by: internal audit Exception handling: Immediate notice to corporate counsel, 2 days to respond and remediate</p>
<p>Business Value Catalog Sample by organization and data source for currency and accuracy of business value inventory, value statements, and sources/stores identified Example: 6 organizations, all information classes</p> <p>Interval: twice annually Conducted by: records management and LOB leader Exception handling: 21 days to respond with remediation plan, 90 days to remediate</p>	<p>Data Management Sample testing by data source for currency of business value inventory, hold placement, retention schedule execution and disposal, back up and DR methods and media, and security protocols Example: 10 sources</p> <p>Interval: twice annually Conducted by: internal audit Exception handling: 21 days to respond with remediation plan, 90 days to remediate for over-retention; 2 days to respond and remediate and immediate notice to corporate counsel for under retention or legal hold failure</p>

Lifecycle governance uniquely requires processes across different functions to perform well to lower cost and risk – a single functional stakeholder who slips back to siloed processes and practices or who fails to achieve the necessary level of maturity and transparency can undermine all processes and goal achievement. Audit is an excellent mechanism to ensure that function owners are accountable for their enterprise impact.

Conclusion

Information Lifecycle Governance can create tremendous value for an organization by substantially improving information economics and aligning information stakeholders across legal, records, privacy, the business and IT to lower systemic risks. CIOs, GCs and CEOs who are challenged to drive financial performance today must drive cost and risk out of their operation to achieve that performance – which makes an ILG program an important lever for these executives and a significant career opportunity for ILG leaders.

The cost and risk reduction results from defensible disposal – and the implications of compounding data costs and risks of business as usual – are intuitively obvious to corporate officers and executive leaders (who both see the big picture and are the frequent targets of discovery requests). However, achieving those results requires cross-functional change and the transition from disparate, siloed practices to a joint-stakeholder model. Strategy anchored in material business outcomes and buoyed by a multi-level governance organization, strong program leadership, precise definition of process improvements required and the capacity and accountability to achieve them are a map for organization success.

Policy and Process Integration Across Information Stakeholders Enables Disposal, Lowers Cost and Risk

Strategy and Execution Drive Business Outcomes with Structure, Defined Processes, Metrics, Capacity & Accountability



STRATEGY

Governance Program Driving Savings and Risk Metrics

Charter, directive and accountability for enterprise program. Savings achievement cadence and reporting.

Program Office to Coordinate Stakeholders, Drive Benefit Achievement

Ensures cross-silo engagement and progress toward maturity targets and financial objectives, change management

Technology Provides Capacity to Improve and Integrate Processes, Consistently and Defensibly Dispose, Decommission

Automates processes, ensures transparency, provides capacity. Accelerated deployment to drive faster save.

EXECUTION

Reclamation Removes Excess Storage, Infrastructure
Savings-prioritized reclamation and recovery of infrastructure to drive P&L benefit

\$100M enterprise value creation through lower legal and IT costs, reduced risk

About CGOC

CGOC (Compliance, Governance and Oversight Council) is a forum of over 1600 legal, IT, records and information management professionals. CGOC conducts primary research, has dedicated practice groups on challenging topics, and hosts meetings throughout the U.S. and Europe where practice leaders convene to discuss discovery, retention, privacy and governance. Established in 2004, it fills the critical practitioners' gap between EDRM, ARMA and The Sedona Conference. For more information go to www.cgoc.com

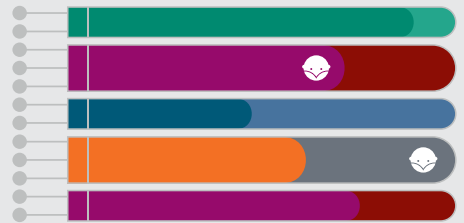
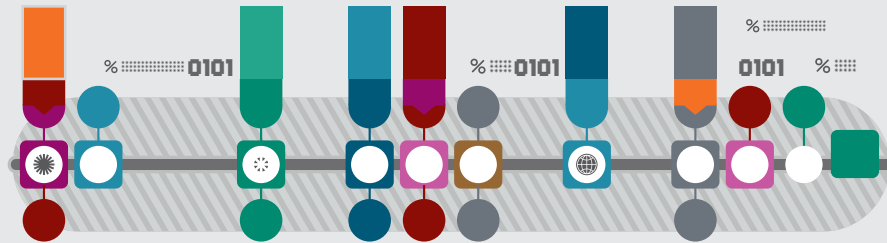
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