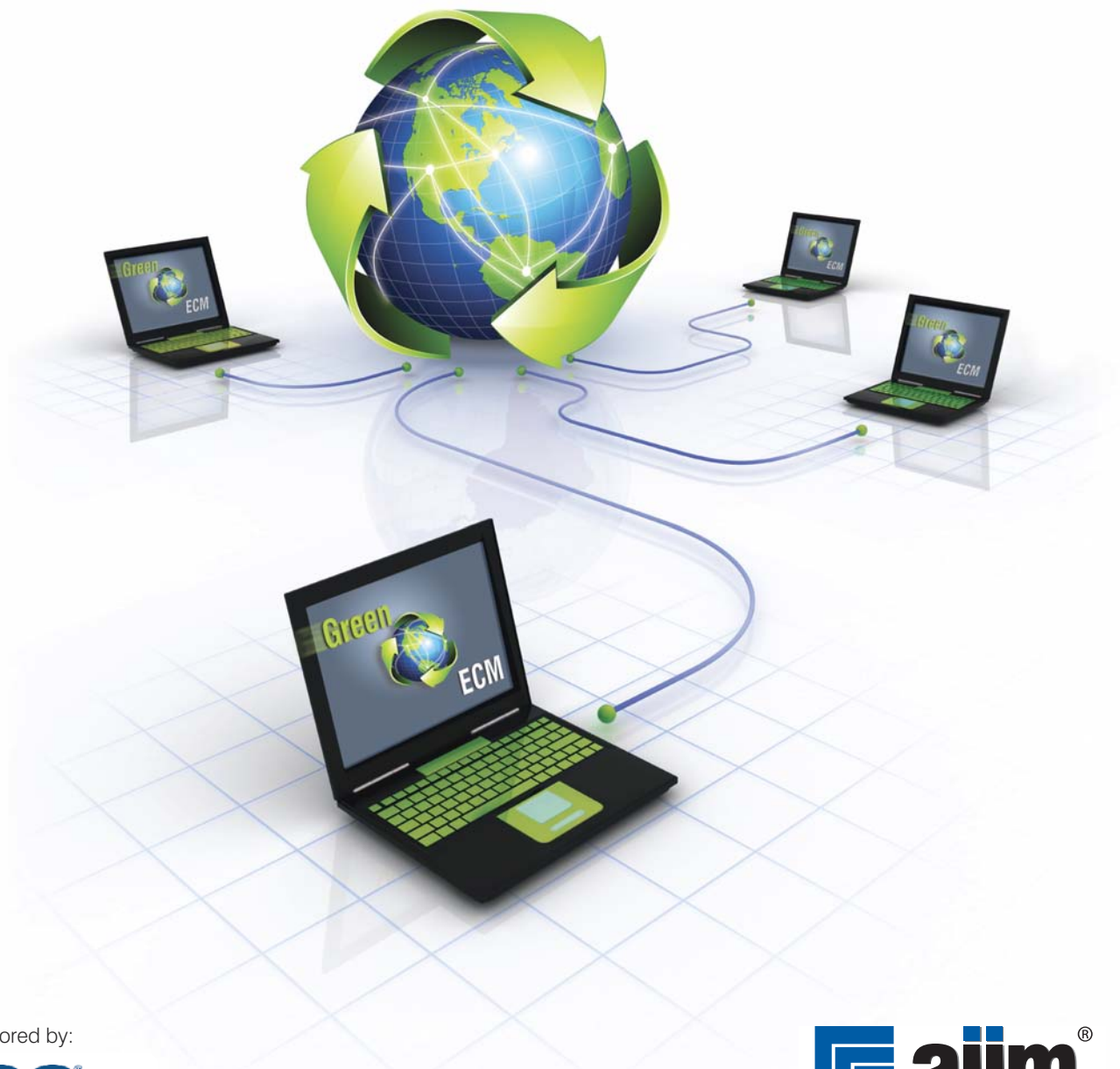


Going Green with Content Management - saving more than trees



Sponsored by:

ASG[®]
Software Solutions

 **aiim**[®]
Find, Control, and Optimize
Your Information

About this White Paper

As the non-profit association dedicated to nurturing, growing and supporting the ECM (Enterprise Content Management) community, AIIM is proud to provide this research at no charge. In this way, the education thought leadership and direction provided by our work can be leveraged by the entire community. Our objective is to present the "wisdom of the crowds" based on our 65,000 strong community.

We are happy to extend free use of the materials in this report to end-user companies and to independent consultants, but not to suppliers of ECM products and services, other than ASG Software Solutions and its subsidiaries. Any use of this material must carry the attribution – "© AIIM 2010 www.aiim.org / © ASG Software Solutions 2010 www.asg.com"

Rather than redistribute a copy of this report to your colleagues, we would prefer that you direct them to www.aiim.org/research for a free download of their own.

Our ability to deliver such high-quality research is made possible by the financial support of our underwriting sponsor, without whom we would have to return to a paid subscription model. For that, we hope you will join us in thanking our underwriter for this support:



ASG Software Solutions
1333 Third Avenue South
Naples, FL 34102 USA
Phone: +1 800.932.5536
Fax: +1 239.435.2200
Email: sales@asg.com
Web: www.asg.com

About AIIM

AIIM (www.aiim.org) is the community that provides education, research, and best practices to help organizations find, control and optimize their information. For more than 60 years, AIIM has been the leading nonprofit organization focused on helping users understand the challenges associated with managing documents, content, records and business processes. Today, AIIM is international in scope, independent and implementation-focused, acting as the intermediary between ECM (Enterprise Content Management) users, vendors, and the channel.

About the author

Paul Mullen is the Managing Director of COR Concepts, a specialist consultancy focusing on Enterprise Content and Records management. He has been involved in the industry since the 1980's and has seen the evolution from basic scanning systems through to full-blown Enterprise Content Management. His primary focus is to assist organizations in both the private and public sectors to create and implement content-based strategies. He is a frequent speaker at industry events and is involved in development of international standards for content and records management..

© 2010
AIIM
1100 Wayne Avenue, Suite 1100
Silver Spring, MD 20910
301.587.8202
www.aiim.org

© 2010
ASG Software Solutions
133 Third Avenue South
Naples, FL 34102
800.932.5536
www.asg.com

Table of Contents

About this White Paper:

About this White Paper	2
About AIIM	2
About the author	2

Introduction:

Introduction	4
The environmental impact of poorly managed content	4
The business impact of a Green Content Management project	5
Beyond the "Paperless Office"	5

The role of ECM in reducing our environmental impact:

The role of ECM in reducing our environmental impact	6
Reduce the volume of paper used	6
Identify and implement the appropriate ECM technology	7
Facilitate working from home - where appropriate	8
Store only what is required, and for an appropriate period of time	8

A planned approach to implementing ECM for reducing carbon footprint:

A planned approach to implementing ECM for reducing carbon footprint	9
---	---

Conclusion and recommendation:

Conclusion and recommendation	11
--	----

Underwritten in part by:

ASG	12
AIIM	12

Introduction

All organizations manage large amounts of content. Whether it exists in paper, electronic or other formats, it is an essential part of every business or governmental body. This content is created, received, stored, managed, distributed and preserved in order to satisfy a number of potentially conflicting corporate objectives.

Profitability, efficiency, productivity, compliance, corporate governance, social responsibility, customer service, employee welfare and more recently, environmental impact are all terms that appear boldly in strategy plans and as key elements of corporate scorecards and annual financial reports.

Enterprise Content Management (ECM), with its various tools and processes, has developed over the past decades to the extent that it is now a well-established part of the IT and business infrastructure. Implemented effectively, ECM has been repeatedly shown to assist organizations in meeting many of the typical objectives they face today. As those objectives have changed over the years, ECM has evolved to meet these new demands. The latest executive mandate is to reduce the impact the organization is having on the global environment. Legislation, social pressure and good corporate governance are all demanding that every company takes steps to reduce its carbon footprint and better utilise resources.

In this white paper, we will first review the impact that poorly managed content has on the environment, and clarify exactly what is meant by "going green." This will be followed by an analysis of the role that ECM can play in helping organizations improve this situation, and finally the steps that need to be taken to achieve this.

The environmental impact of poorly managed content

If enterprise content is not brought under tight control, the impact on the environment can be significant:

- **Unnecessary printing and usage of paper**

There are few organizations today that have completely eliminated the use of paper as a primary source and store of information. Not only has the use of paper not been reduced, in many instances its use is increasing. From an environmental perspective, this presents numerous challenges. The creation of the paper in the first place has an obvious immediate impact on the number of trees being cut down. But it is the use of the paper in business processes that creates additional environmental impact. Copies are made so that they are readily at hand, but they in turn need to be stored. Storage consumables such as files and cabinets are made from paper, plastic or wood derivatives. Buildings are created to house the stored paper, and these need to be air-conditioned or heated.

- **Process inefficiencies, transportation and office impacts**

All of this paper is used in business processes, and ultimately travels between suppliers, internal departments, and finally to customers. Not only are paper-based processes inefficient and costly, but they have a significant impact on the environment. The inherent design of these processes requires extra office space, lighting, heating, cooling, temporary storage facilities in cabinets and parking facilities for staff members. Paper movement throughout the value chain from supplier to customer requires fuel, vehicles, additional paper usage for envelopes, and creates more traffic on already congested roads. In many instances, staff members are required to travel to their offices on a daily basis purely because they need access to paper flowing through a business process.

- **Unnecessary storage of paper and electronic content**

Day-to-day processes generate vast volumes of paper originals; this volume is exacerbated by multiple copies being made and stored. Originals – and their copies – are then kept for too long. Content such as e-mails and other electronic documents are also sometimes printed and stored in paper format - in addition to the electronic original. To further add to the challenge, organizations are reluctant to define retention periods and destroy records and documents according to a planned retention schedule, resulting in a constant increase in the amount of paper stored.

If the volume of paper initially printed can be reduced, unnecessary copies eliminated, processes improved, and content only stored for the period required to satisfy business and legal requirements, organizations can make a significant and positive difference to their environmental footprint.

The business impact of a Green Content Management project

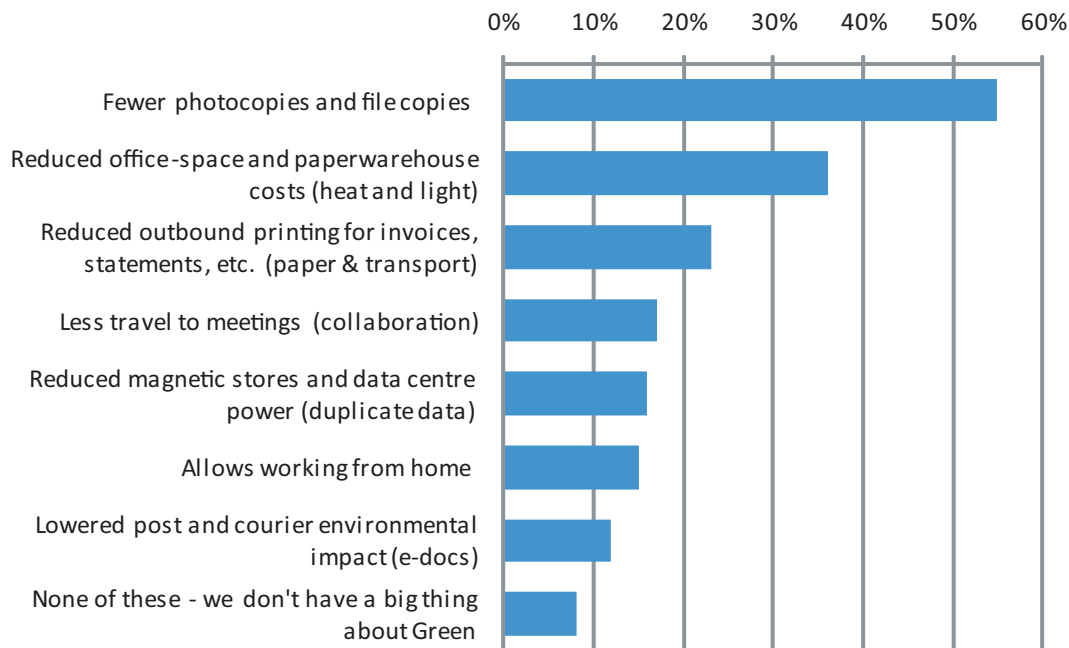
At the top level, environmentally conscious and socially responsible businesses achieve a higher stakeholder value than others.¹ A pro-active green policy is a sign of good governance. It gives a favorable brand association and a positive image for staff. It is also good business management to reduce waste, scrutinize process efficiencies and enhance staff effectiveness.

In particular, a green policy for enterprise content management that drives paper out of the business will also speed up document-centric processes, facilitate flexibility of process location, increase resilience and compliance, and improve collaboration and knowledge access for staff.

Beyond the “Paperless Office”

In many respects, ECM has always provided the opportunity to “go green” – and the call for the “paperless office” to save trees has been around for many years. Since those early days, our understanding of the impact that we make on the environment has increased significantly, and we are now in a far better position to make a meaningful, deliberate effort in ways that extend far beyond merely scanning documents. The resource consumption and carbon footprint of storage warehouses, office buildings, freight, printers, print materials and staff travel can all be reduced with wider use of ECM. Even with electronic documents, good data management and duplicate file reduction can shrink storage farms, saving on electricity and cooling.

Figure 1: Thinking about possible “Green” benefits from ECM, which two would you consider to be the strongest drivers in your organization? (AIIM Industry Watch, ECM, March 2010 ²)



The role of ECM in reducing our environmental impact

The examples highlighted above provide some indication of the ways in which existing paper-based processes damage the environment. If we wish to make a difference, organizations need to identify ways to rectify or reduce their environmental impact. There are, however, two key points that need to be considered.

- The first point is that whilst the focus of this white paper is on the environment, this does not mean that “going green” should conflict with any other organizational objectives, such as profitability or improved customer service levels. On the contrary, improving the environmental impact in most cases will also result in processes that are faster, lower cost, and more efficient.
- The second key point is that in order to derive the potential environmental benefits that ECM can deliver, a fundamental change needs to be made to the way that an organization thinks about the use of paper. This is not a trivial exercise, yet without an organization-wide awareness of the implications, and a willingness to change, the benefits cannot be maximized.

There are a number of very specific ways in which we can use ECM to address some of the issues already identified:

Reduce the volume of paper used

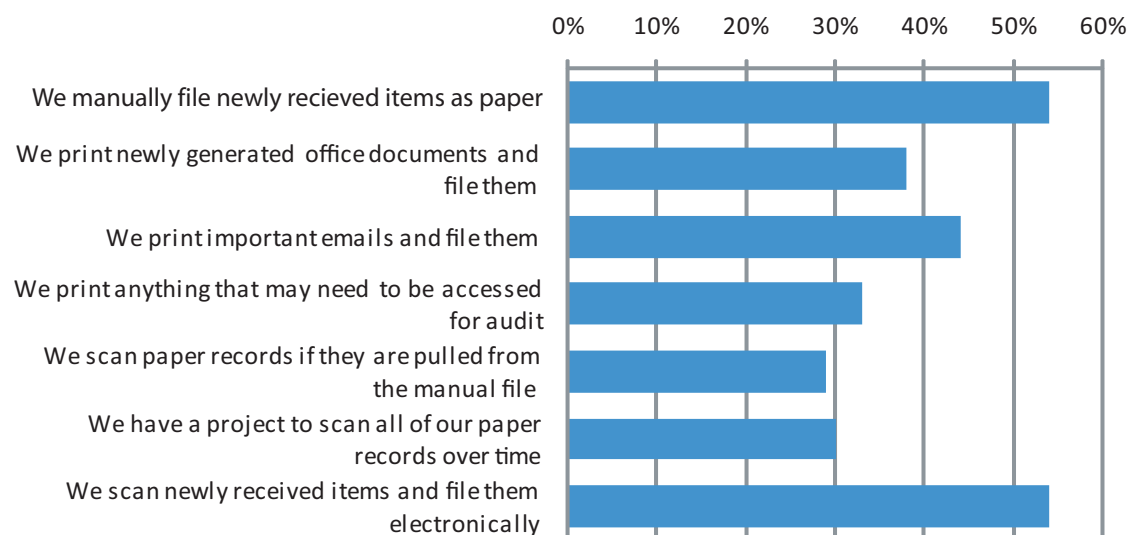
These reductions can be realized in many ways, and can have significant impact on the bottom line, as well as on your organization's carbon footprint:

Identify which processes are major consumers of paper.

These could be internal processes, but often result from inputs into the organization from external companies, and are exacerbated by sending mail to external parties. An 80:20 approach could be used to quickly identify the 20% of processes that generate the majority of paper. These should become the immediate focus for modification. Start with internal processes and identify where paper is unnecessarily used. The causes will often be easy to locate:

- Copies are made for easy reference
- Duplicates are made for signature purposes
- Staff members are so accustomed to using paper that it has become a corporate habit to work with paper (see figure 2)
- Large volumes of paper are sent out on a regular basis, to customers, staff members or other stakeholders
- Paper copies are made of electronic documents for filing purposes - and e-mail is the largest culprit here
- Documents are printed so that they can be read in meetings

Figure 2: Which of the following policies and practices do you generally apply to paper records?
(AIIM Industry Watch, ERM, September 2009 ³)



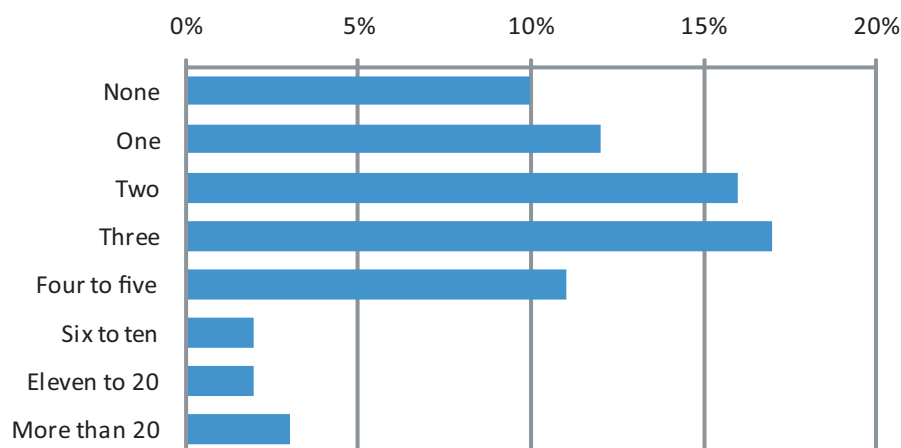
Identify and implement the appropriate ECM technology

Organizations are starting to think about the ways in which ECM can be used to deliver environmental benefits, and these need to be explored for each specific business process to determine exactly where the benefits would come from, and where the greatest return on investment can be gained.

In all instances noted above, the volume of paper printed can be significantly reduced through the use of ECM technology. Those documents which start their lives electronically should be kept in digital format, and should be stored as such. A central ECM repository should be used to manage these digital documents. Copies do not need to be made, as the digital version is easily and instantly accessible by all those who require access in any geographic location. As the volume of information stored electronically will likely increase significantly, the ECM repository must be highly scalable whilst still ensuring acceptable performance levels.

Documents can be signed digitally. Although some people may argue that a "wet" signature is necessary, in many cases this is not required. A thorough investigation should be undertaken to determine the legal status of digital signatures in your jurisdiction, and based on the results, those documents that do not require physical signatures should be converted to a digital signature. An example of this may be policy and procedures documentation. Instead of printing and signing these (and then scanning them back so they are accessible by all on the corporate intranet), these could be digitally signed and the digital version made available to all.

Figure 3: On average, how many additional photocopies or fax copies of documents in your main processes are needed in order to collect signatures? (AIIM Digital Signatures White Paper, February 2010 ⁴)



E-mails should never be printed and stored physically. They should be tightly managed in an e-mail archiving system, which ensures that they are available when needed, yet also archived as required, so that they do not clutter up user in-boxes. A further benefit of an e-mail management system is that duplication of e-mails is eliminated, with a "single-instance" of an e-mail and its associated attachments being retained. This has the added environmental benefit of reducing the size of the servers, disks and back-up media required to manage multiple duplicate e-mails.

Large reports should not be printed unless absolutely necessary. These should be managed digitally and distributed in this format. This reduces the volume of paper, but in addition, using an electronic enterprise report management system makes it far easier for staff members to search through large reports to find the information they require.

As with reports, outgoing documentation should only be printed when absolutely necessary. Invoices, statements, contracts and forms are all notorious paper consumers, and in most cases are not required to be printed. With the ease of use and prevalence of the internet and e-mail, most clients are willing to accept electronically distributed documentation. Electronic distribution could have one of the most important environmental impacts of all. The volume of paper is reduced and shipping costs associated with physical document distribution can be completely eliminated.

Printer and copier management software should be installed to determine the amount of paper consumed and copied, and rules implemented to reduce volumes of paper printed. Duplex printing and other mechanisms of limiting volumes should be investigated to determine their benefits.

Scanning is a useful ECM component but assumes that the original is in paper format. The use of scanned images during processes should become an integral part of the way that business is conducted. Scanning alone though is often not enough, and processes should be automated wherever possible using BPM (Business Process Management) and workflow to route images to the next steps in the process. At all times, images should be stored in central, tightly-controlled repositories to ensure that duplication is kept to a minimum, and that multiple paper copies aren't merely replaced with multiple digital ones.

Imaging and Business Process Management can be powerful tools that can fundamentally change the way the organization operates, permitting even more environmental benefits to be realized.

Facilitate working from home – where appropriate

If content is managed electronically, there is often no need for workers to travel to the office every day. With appropriate broadband access to administrative documents, most office-based knowledge workers could spend one or two days a week working from home. In many industries (such as banking and insurance) with high volume content-driven processes, and communication-intensive customer interactions, many business process operators can work effectively from home. Scanned forms, web forms and inbound correspondence can be accessed electronically from central repositories or via e-mail, and the worker has no need to travel to the office.

Working remotely presents obvious benefits of reduced fuel consumption and carbon emissions, but also provides additional benefits of reducing the office space required, minimizing furniture purchases, and lowering office heating and air-conditioning costs.

In addition to being able to complete repetitive processes from home, the number of meetings that workers need to attend in person can also be reduced using collaboration technologies. As above, through the access and use of digital documents, there is no need for physical presence in a meeting room.

For international companies, or those involved in international projects, major savings in their carbon footprint from air travel are possible if a robust and effective team collaboration system is established and then facilitated by good communications mechanisms and interactive document management.

Store only what is required, and for an appropriate period of time

Many organizations store too much information, for too long, and in the wrong format. Implementing records management (RM) systems with carefully thought-through retention policies and procedures is a powerful tool for reducing the volume of information stored, regardless of whether it is in paper or digital format. Retention periods, with appropriate disposition rules, allow organizations to keep only the information that is required, and to destroy it when it no longer has any value for legal, business or evidentiary reasons. This provides a number of environmental benefits:

- Duplicates are destroyed early in the process, so far less paper is stored
- The paper that is required to be retained is held for a shorter period of time
- Storage space is reduced by a significant amount – with the associated environmental benefits
- The records are stored in only one format (paper or electronic, or even microforms where appropriate)
- Decreased back-up media requirements
- Reduced computer heating and electricity requirements
- E-mails are maintained in their original format in a controlled environment, and paper copies no longer consume limited storage space

Forms and templates should be created and retained electronically, and only printed when populated (if at all). Many organizations have large storage rooms filled with pre-printed forms. Not only are these costly, but many are discarded when the organization changes or when processes change. In most instances, the use of the form is limited to capturing data. Once the data has been captured, the form is stored in a filing area, and kept unnecessarily. Forms management and coordinated document assembly and delivery (potentially coupled with workflows) should be key items identified early in the search for tools to assist with reducing environmental impacts. Forms management should be coupled with print-on-demand thinking and tools to ensure that only that which should be printed actually ends up in paper form.

A planned approach to implementing ECM for reducing carbon footprint

ECM can be used in a number of ways to deliver a host of benefits. The extent to which this is achieved will be largely determined by the careful manner in which this new way of thinking is introduced into the organization. The steps outlined below provide guidance:

- **Build a team that is committed to the initiative.**

Senior executives should be a part of this team, and need to be committed to ensuring that the staff under their employ know and understand the rationale and benefits of the environmental drive. Included in the team should also be members of the compliance or corporate governance unit, legal, IT, records management and affected user departments. External auditors should also be consulted. If an environmental champion has been appointed, they need to be a key figure on this team.

- **Develop a business case, taking into account all the benefits of the ECM implementation.**

As with many governance or compliance initiatives, it may be difficult to quantify the environmental benefits of ECM. The team should analyze the potential environmental impact, and then create a business case which highlights the complete Return on Investment. This analysis should include cost and space savings, compliance with legislation (both internal and external), customer service enhancements, employee satisfaction and the reduced impact on the environment. Improved access to information, while more difficult to quantify, should also be considered when developing the ROI.

- **Build and implement a change and communications program.**

For the initiative to be successful, there needs to be a cultural shift in the way the organization views and uses technology to manage business processes and reduce paper consumption. This will not happen without a deliberate, comprehensive and ongoing change management program. This needs to be driven from the top and must filter down to all levels of the organization. This is not a one-off exercise: paperless processes must become a part of the organization's corporate culture.

- **Ensure that a robust framework of policies, procedures and technology is in place to support the effort.**

These corporate instruments should send a clear message of commitment, so that "green" becomes embedded in the ethos or culture of the organization. The policy framework is essential if staff members, clients and suppliers are to be comfortable about conducting business electronically. This should incorporate records management retention and destruction policies to ensure that records are not kept for too long.

A robust repository and associated integrated systems should form a key part of the drive, as these technologies will support all following initiatives, and ensure that the organization is capable of accommodating the anticipated volumes.

- **Implement electronic records management systems and processes.**

In order to meet compliance requirements, records need to be retained in a manner that maintains the records integrity, authenticity, reliability and accessibility. An electronic records management system should be implemented early in the process to ensure that all records are properly and immediately stored, retained and protected. As the organization migrates to greater use of electronic documents and records, these will be stored directly into the records management system. As users become comfortable with the ease of access and reliability of the system, they will develop greater trust that the records do not need to be kept and stored in paper format.

- **Implement scanning into those processes that will deliver clear benefits.**

Chose processes carefully to deliver quick wins on improved productivity, lower costs and improved service delivery. It must be stressed to affected departments that scanning alone does not improve the environment, as the source documents are still in paper format. The source documents need to be formally destroyed and recycled for benefits to accrue. Before destroying originals, ensure that rigidly developed and applied policies and procedures are approved by the legal team. Other than recycling, scanning does play an important role in that staff become accustomed to conducting business digitally. It may also allow staff to telecommute.

- **Find a relatively risk-free internal process, and go digital from start to finish.**

Once staff members (and the organization) are comfortable with handling digital documents instead of “trustworthy old paper,” find a process that can be completely digital. This will normally be an internal process such as applying for leave, or claiming expenses. Implement e-forms processes, and make it impossible for staff to revert to the printing and signing of forms. Many organizations already have e-forms technology as part of their corporate platforms, so the cost of implementation could be minimal.

- **Implement digital signatures.**

Many complex processes, or those which involve multiple parties, may require signatures of some kind. Note that the regulatory environment surrounding digital signatures needs to be thoroughly understood first. The legal team and all participants involved in the process must agree to the use of digital signatures. Involve major suppliers and customers, and identify where digital signatures can be used. Signing of contracts, and agendas or minutes of meetings may prove to be ideal opportunities to use this technology.

- **Implement e-forms technology where possible.**

The steps described above should have provided a clear indication as to how a process can be implemented digitally without ever producing a paper document. Take a process approach, and identify a process that will benefit all concerned by making it easier to populate forms via the internet. It is unlikely that all customers or suppliers will be willing to move to a purely digital world, but a large percentage is likely to embrace the new processes.

- **Provide a controlled mechanism for email archive.**

Review auto-delete policies and mailbox size limits, as limits that are too restrictive may encourage a “print and file for safety” mentality for emails. However, you must provide a trusted alternative, preferably with a straightforward way to move important emails to an ECM or RM system, which itself must be capable of scaling to receive the anticipated volumes.

- **Implement output management.**

Reduce the volume of paper printouts by offering customers electronic invoices and statements. Once again, involve the legal team to ensure that this meets any regulatory requirements, and then encourage recipients of your output to accept electronic information. Identify opportunities to reduce internal printouts, possibly by saving the output directly to ECM repositories.

- **Monitor, track, evaluate and market the benefits.**

If the organization is deriving benefits, and no one knows about it, it will have little value. Enumerate methods of monitoring the effectiveness of the changed processes, and report these benefits to compliance and environmental officers, as well as to senior management. Apply principles and technology to new processes, and then roll them out across the organization. Market your green success to all stakeholders of the business.

Conclusion and recommendation

Going green is the new imperative, and executives worldwide are looking for ways to reduce the impact of their organizations on the environment. ECM technologies are uniquely positioned to meet this challenge, yet need to be implemented in a cohesive fashion, taking into account the specific capabilities of the various parts of the ECM toolkit. Scanning alone may provide a small part of the solution, but needs to be coupled with other ECM components in order for the full benefits to be achieved.

The environmental benefits of ECM can be felt in all aspects of this challenge:

- Reducing carbon emissions
- Minimizing usage of paper and other potentially finite resources
- Limiting fossil fuel usage
- Decreasing environmental waste

To implement all ECM components and to achieve associated environmental benefits is a major project and it will need to be undertaken in a carefully planned and implemented manner. A strategy should be developed and adopted, and include all major stakeholders. This is a challenge that cannot be left to a single department, but rather must become a key driver throughout the organization.

The benefits are not limited to the environment impact. These measures will also save cost, provide better efficiencies and potentially a more satisfying working environment for staff members. "Going Green" should become a way of life, and the ECM toolkit is a critical part of that future reality.

References

- 1 The Economist Intelligence Unit "Doing good: Business and the sustainability challenge" February 2008.
- 2 AIIM Industry Watch, "State of the ECM Industry," March 2010 www.aiim.org/research
- 3 AIIM Industry Watch, "Electronic Records Management - still playing catch-up with paper," September 2009 www.aiim.org/research
- 4 AIIM White Paper, "Digital Signatures for Document Workflow and SharePoint" February 2010 www.aiim.org/research

Underwritten in part by:



ASG's enterprise content management portfolio enables business users and infrastructure technology management of all skill levels to quickly and easily access, manage, and own all essential business information. ASG's enterprise content management portfolio includes:

ASG-ViewDirect® is a powerful enterprise content management and archiving solution that captures, indexes, stores, links and publishes content, in any format (Microsoft Word, Email, PDF, JPEG, XML, HTML, etc.), from any source, and delivers it throughout your enterprise.

ASG-Total Content Integrator™ (TCI) incorporates authentication, federated search, index normalization, and content transformation services. ASG-TCI can be supplemented with an optional module, ASG-TCI for MOSS, to integrate and augment the capabilities of Microsoft® Office SharePoint® Server (MOSS) 2007.

ASG-WorkflowDirect® incorporates process automation for integrating content with business processes, people and computer systems, while coordinating, managing, automating, and measuring content-centric processes independent of underlying applications.

ASG-ViewDirect® E-mail Manager is a complete email management solution based on the world's most powerful content repository. ASG-ViewDirect E-mail Manager captures, archives, indexes and applies retention to email from user mailboxes or from journal capture points.

ASG-Records Manager™ provides comprehensive life-cycle management for all electronic records in their original format, including holds, automatic folder structures, and advanced retention—with parametric events that automatically execute from line-of-business applications through standard Web Services. ASG-Records Manager has been tuned specifically for managing records in high-volume environments. Classification, retention and disposition management activities can be automatically performed or coordinated by authorized users depending on individual record type requirements.

ASG-Cypress® is a comprehensive document assembly and delivery system. It captures and stores any document or image, regardless of format, application, or environment in which it was created. Once captured in the powerful and secured DocuVault repository, documents, individual pages or images can be easily searched, retrieved, assembled, and delivered via distributed print, fax, e-mail, PDF attachment, Web, PDA, etc.

www.asg.com



AIIM (www.aiim.org) is the community that provides education, research, and best practices to help organizations find, control, and optimize their information.

For over 60 years, AIIM has been the leading non-profit organization focused on helping users to understand the challenges associated with managing documents, content, records, and business processes. Today, AIIM is international in scope, independent, implementation-focused, and, as the representative of the entire ECM industry - including users, suppliers, and the channel—acts as the industry's intermediary.

© 2010
AIIM
1100 Wayne Avenue, Suite 1100
Silver Spring, MD 20910
301.587.8202
www.aiim.org

AIIM Europe
The IT Centre, Lowesmoor Wharf
Worcester, WR1 2RR, UK
+44 (0)1905 727600
www.aiim.eu