

Go Green With Oracle Content Management

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INTRODUCTION

Organizations are constantly looking for ways to cut costs, but don't realize that those cost cutting measures may also have positive environmental effects that can increase goodwill and shareholder value. Oracle Fusion Middleware solutions provide tremendous return on investment, but also make your organization more environmentally conscious or "green" by cutting the consumption of electricity, paper, fossil fuels, and the emission of greenhouse gases. Many organizations and even governments around the world are utilizing IT solutions to realize their green initiatives. To quantify these efforts, Oracle has created the Oracle Document Management Green Calculator. This online tool, and the accompanying spreadsheet, will enable you to see how your organization can effect environmental change by moving printed information online. This document will help explain the tool and provide background information on how these figures were arrived at.

"While data center greening hasn't really become a play in this software sector yet, the reduction of information and content in various formats that are moved into digital storage shows what ECM can offer green initiatives,"

John William Toigo, Information Week (2007)

There are many government-sponsored green initiatives currently underway already. For instance, in 2003, the United Nations Economic Commission for Europe enacted a strategy to form a "Roadmap for Paperless Trade."¹ This sought to eliminate the paper bottlenecks created by customs during the trading process. The commission discovered that by moving from paper document processes to electronic technologies, they increased security and transparency in supply chains and provided both government and private sector with higher revenues and costs savings of billions of dollars a year.¹

"Green IT: This is a path that more and more companies are taking as a socially responsible strategy."

Carl Claunch, Gartner Group (2008)

Several local governments within the European Union have also adopted similar green initiatives. In 2005, Styria, Austria, launched its green initiative for reducing paper in favor of managing content electronically. Styria reduced the time consuming and expensive generation and circulation of paper used during the parliamentary process. Additionally, this enhanced the transparency of parliamentary processes and public access to documentation. It was the first workflow program in Europe which allowed parliamentary work without the use of any paper. In other words: Parliamentarians use this program from the first day of a new idea or (legislative) initiative until the final decision (voting) of the parliament. This program saves up to € 200.000 per year and hastens the legislative

process by reducing the average amount of time for producing new laws from two months to two weeks.

Another effective example of government green initiatives can be found in Germany, which has established an eGovernment-system for the handling of the “Ordinance on Records of Proper Waste Management,” now mandated by German law. Using this green paperless system, a formerly very complex administrative procedure containing a high number of forms and handwritten signatures was replaced by a manageable, completely electronic method. This method contains a qualified electronic signature methodology as well as the mandatory archiving of digital certificates, thereby improving workflow. The rationalization and simplification caused by the project benefits both the public and private sector. A nation-wide deployment could lead to savings of approximately 50 M.€ (\$63.6 Million US) per year, 80% of this sum being saved in the private sector.

Oracle Content Management Solutions:

Universal Content Management

Universal Online Archive

Universal Records Management

Imaging and Process Management

Information Rights Management

ORACLE CONTENT MANAGEMENT

Oracle Content Management enables organizations to control the creation, routing, approval, and publishing of documents. Many organizations use documents in paper format such as invoices, patient records, insurance forms, and corporate policies. These documents are typically copied and dispersed to wherever they are needed—often to many disparate locations. By converting these paper based documents and processes to electronic procedures, a single copy can be accessed electronically from any location without it being printed, shipped and then later archived or discarded.

Calculating Return On Investment

With content management, return on investment is typically calculated based upon processing speed. An accounts receivable group will show how cash inflows or days sales outstanding have improved. An accounts payable group will demonstrate how invoices are paid faster, taking advantage of discounts for early payment. A large real estate company reduced invoice processing from \$33 per invoice to \$2.75 per invoice using Oracle Content Management. Another company reduced A/P cycles by 20+ days, reduced their billing cycle by months, are saving at least \$100,000 annually, and have been able to provide substantial ROI within months

Call centers will show how customer call times have dropped based upon faster answers to customer questions, and how leaner staffing can address the same call volume. A large telephone utility cut call center times by as much as 75% by implementing content management.

There are other ways to show return on investment as well – paper costs, shipping costs, and storage costs, while not necessarily the largest returns, can nonetheless contribute to the overall return on investment a company can realize from content management. Furthermore, these areas have direct correlation to an organization’s

green initiatives by reducing the usage of trees and oil, and reducing the emissions of carbon.

CUSTOMER PROFILES

Embry Riddle

Embry Riddle is an aeronautical university with 130 locations worldwide. Universities are highly information intensive – applications, financial aid forms, insurance documents, transcripts, housing information – admitting and tracking each student generates a tremendous amount of information. Embry Riddle typically kept a copy of each document at the campus where the student attended, and forwarded a copy to the central office. Often these documents would also have to be duplicated at other offices. By implementing Oracle Content Management, Embry Riddle was able to have a centralized server to store the information, where any location could access it. This made student, loan and payment processing faster, and also cut paper and shipping costs.

Paper Costs

Applicants, 2007	15,473	
	Average Pages	
Application	30	
Transcripts	10	
Institutional Supporting Documents	20	
Other Supporting Documents	5	
Total	65	1,005,745

Accepted Students, 2007	10,315	
	Average Pages	
Financial Aid Forms	5	
Transfer Credit Documents	5	
Academic Evaluations	5	
Military Approvals	5	
Total	20	206,300

Existing Students, 2007		27,421	
	Average Pages		
Intercampus Transfers	5		
Web Based \forms	5		
External Documents	5		
Total	15	411,315	

Duplicate Copies At HQ			
Student Folder		1,005,745	

Total Pages		2,629,105
Paper Rate	\$6/Ream	\$0.012
Other Print Costs (ink, maintenance)	\$3/Ream	\$0.006
Total Paper Cost		\$47,324

Embry Riddle also estimates a \$100,000 annual savings in shipping costs.

Swedish Medical

Swedish Medical is a care provider collection of 4 hospital locations and 70 clinics located in Seattle, Washington. Content produced includes photocopies of insurance cards, consent forms, paper records, reports; patient health information and business information. At Swedish, paper documents were shipped and stored; faxed and couriered between clinics, hospitals, and offsite storage. With Oracle Content Management, electronic faxes are ingested into their content management system, resolving redundancy, image quality and access time issues.

While implementing Oracle Content Management, Swedish, along with their partner ImageSource, also integrated it with their Epic Electronic Medical Records System. Switching to Epic required a vast amount of retraining of their personnel. Rather than printing, shipping, and storing training materials, they created a dynamic training system that enabled users to select the training they required.

Paper Costs

Training	1,400,000
Documentation	93,000
Patient Information	373,000
Other Supporting Documents	134,000
Total	2,000,000

Total Pages		2,000,000
Paper Rate	\$6/Ream	\$0.012
Other Print Costs (ink, maintenance)	\$3/Ream	\$0.006
Total Paper Cost		\$36,000

Swedish also estimates that they save about \$200,000 in shipping costs annually.

Standard Forwarding

Standard Forwarding Company was started in 1934 and has grown from a dedicated contract carrier for John Deere to a diversified Midwest regional LTL (Less Than truckLoad) carrier. Their fleet of 300 tractors and 790 trailers operated by 430 drivers allows them to provide a variety of effective transportation services. Standard Forwarding's commitment to state-of-the-art information technology meant they wanted to provide a reliable and scalable content management solution to minimize the duplication of efforts in company processes and procedures. In order to meet these specific goals, Standard Forwarding, along with partner Midland Information Resources, integrated Oracle Universal Content Management with their Carrier Logistics software to automate invoice processing and enable secure e-mails. This saved the company more than \$150,000 annually by automating the invoice process and eliminating associated manual processing and postage costs

Paper Costs

Invoice	290,152
Supporting Documentation	435,228
Envelopes	145,076
Total	870,456

Total Pages		870,456
Paper Rate	\$6/Ream	\$0.012
Other Print Costs (ink, maintenance)	\$3/Ream	\$0.006
Total Paper Cost		\$15,668

Postage cost savings	\$ 60,932
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Emerson Process

Emerson Process is a diversified global technology company that provides products and services for a wide range of industries, commercial markets, and end-users, including consumers. Emerson wanted easy global search and retrieval capabilities for Engineering and Quality Documentation and hoped to eliminate millions of pages of documents that were being printed each year. Emerson’s implementation was done with the help of Oracle partner Midland Information Resources. “Emerson started out with one implementation of Oracle Content Management,” said John Klein, VP of Business Development for Midland Information Resources. “When they saw what it could do, it quickly expanded to many more projects.” Today, Emerson has over 200 applications using Oracle Content Management.

Based on a Forrester study¹, one application at Emerson will realize a total savings of \$574,354 in printing costs and \$158,074 in shipping costs including gas, tires and vehicle maintenance in one year.

GREEN CALCULATOR

Paper Savings

The savings realized by these companies can be translated into positive effects on the environment. The Oracle Document Management Green Calculator works on commonly accepted figures:

- 1 tree makes 16.67 reams of copy paper or 8,333.3 sheets
- 1 ream (500 sheets) uses 6% of a tree

<http://www.conservatree.com/learn/EnviroIssues/TreeStats.shtml>

Calculating Swedish’s paper savings	
Total Pages	2,000,000

Reams of Paper (500 sheets/ream)	4,000
Number of Trees Saved (17 reams/tree)	235

Oil and Carbon Savings

The industry standard percentage for fuel as the cost of hauling is 43.5 percent.

http://www.mlive.com/businessreview/western/index.ssf/2008/06/shipping_costs_manufacturers.html

After removing 6% of Emerson's shipping cost for profit, we take 43.5% of the remainder for our calculation (40.89% of the original number). We are not calculating the cost of oil and tires to run the trucks, but that is an additional area that could be calculated.

Calculating Emerson's oil savings:	
Cost of shipping	\$158,074.00
Total gas cost (40.89%)	\$64,636.46
Total gallons of gas(gallon of diesel, \$5.15)	12,550
Total barrels of oil (9 gallons/barrel)	1,395

After accounting for how many barrels of oil have been used in shipping, you can calculate how many pounds of carbon were released into the atmosphere. There are 9 gallons of diesel fuel in each barrel of oil, and each gallon of fuel burned releases 22.2 pounds of carbon.

Calculating Embry Riddle's carbon savings:	
Cost of shipping	\$100,000.00
Total gas cost (40.89%)	\$40,890.00
Total gallons of gas(gallon of diesel, \$5.15)	7,940
Total pounds of carbon (22.2 per gallon)	176,264

Overall Results

When we add the results for all of these customers, we see savings of thousands of trees and barrels of oil, and tons of carbon emissions avoided.

	Emerson	Embry-Riddle	Swedish Medical	Standard Forwarding	Total
Dollars Saved In Printing Costs	\$ 574,354	\$ 47,324	\$ 36,000	\$ 15,668	\$ 673,346
Dollars Saved In Shipping Costs	\$ 158,074	\$ 100,000	\$ 200,000	\$ 60,932	\$ 519,006
Trees Saved	3,754	309	235	102	4,401
Barrels of Oil Saved	1,395	882	1,764	538	4,579
Pounds of Carbon Emissions Avoided	278,627	176,264	352,527	107,401	914,819

OTHER BENEFITS

Real Estate

Not storing paper has two benefits regarding real estate – paper storage space and office space. Swedish is targeting 60% cut in storage costs – a \$600K annual savings – by not having to store documents in paper form. This is space that would require energy consumption for heating, lighting, and humidity control. Beyond that there is also the impact on the environment of using the physical space as a warehouse as opposed to, say, a wetland reserve.

Another example of the real estate impact of storing physical documents is the fact that a paper document is only available at a single location. By storing documents electronically, they can be access in multiple locations, even simultaneously. PG&E (Pacific Gas and Electric) is implementing electronic documents because users can access them from home, further saving on real estate by reducing necessary office space.

Lifestyle Benefits

As well as reducing real estate requirements, putting documents online reduces the number of employees who are commuting to an office. This has tremendous impact on the environment, but also on employee lifestyle.

Some organizations are beginning to assign lifestyle scores to projects. While analyzing return on investment and other facets of a project, organizations can assess the impact on employee lifestyle. Raising lifestyle benefits makes a company a more attractive employer and helps organizations with recruiting.

Culture Change

Making these kinds of changes in your organization can require a huge culture change. As Nancy Richards of Swedish Medical Centers put it “In the healthcare industry, it’s not real if it’s not on paper.” Many organizations have had similar concerns and even hesitation to change their current standard operating procedures in favor of green initiatives. Presenting a clear ROI by adopting green initiatives to the Chief Compliance Officer or other executives, or arming your CEO to publicize these efforts with shareholders at earnings meetings can have a positive impact. The key is to find other constituents, possibly in other departments, such as facilities or operations who would also find clear advantage in

benefits such as lowered real estate and or storage costs. Going green always means good press, so you should take up the subject with your organization's PR and AR departments to see how well such initiatives would resonate within your industry, potentially leading to a competitive advantage.

CONCLUSION

From various examples we have seen how companies can report to their shareholders, employees, and customers the impact they have had on the environment using Oracle Fusion Middleware solutions. Organizations which use Oracle Fusion Middleware solutions are also well-positioned to meet their business challenges as they now have a scalable and manageable technology platform which is hot-pluggable – meaning it can be integrated with other standards-based applications and tools.

More and more, we are seeing materials written for executives of all ranks, industrial designers, and laypeople eager to learn more about eco-friendly products and business practices and the benefits gained from their implementation. Oracle Corporation proudly stands among organizations committed to bettering our environment through green initiatives— both as a provider of leading technology solutions to meet green initiatives at all levels around the globe, as well as an implementor of initiatives throughout our own organization.

Sources

¹ “A Roadmap towards Paperless Trade”, United Nations Development Account; 2003

² [“Total Economic Impact Of Oracle Universal Content Management”](#)
– Forrester Research, Dec 2007

The Oracle logo, consisting of the word "ORACLE" in a bold, red, sans-serif font.

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