

**Building Highly
Effective
Digital Workflows**

*Strategic considerations for
executives, department heads
and IT professionals*



Contents:

- **Building Highly Effective Digital Workflows**
- **Characteristics of Efficient Workflow**
 - Compatible
 - Comprehensive
 - Consistent
- **It's Not About Printing**
- **Key Dynamics**
- **Océ PRISMA Environment Solution Sets**
 - PRISMA for Transactional Printing
 - PRISMA for On Demand Printing
 - PRISMA for Networked Office
 - PRISMA for Central Reprographics Departments

Building Highly Effective Digital Workflows

The technology of putting toner on paper is a well established process that has matured over the past 40 years. In the 1960s and 70s, reliability was not yet an issue as the mere presence of a copier was a point of celebration. By the 1980s and 1990s the major defining factors became faster speeds, quality and reliability. Today, all of these features and more are expected, available and common place. In fact, nearly every ounce of productivity and cost savings has been squeezed out of the printer in isolation.

The good news for business is that there is more opportunity for productivity enhancements and cost savings than ever before when the process as a whole is taken into consideration. According to InfoTrends/CAP Ventures, the actual cost of putting toner on paper is only 8-17 cents of every dollar spent on producing printed documents. The vast majority of cost, and therefore the richest area of potential savings is the workflow leading up to printing, and the finishing, archiving and distribution of the finished document. Workflow is the last bastion of inefficiency, the final refuge of hidden costs, a source of competitive advantages, and a prime spot from which to fatten up the bottom line. It's also where print services providers can add value for their customers and clearly differentiate themselves.

Convergence Demands New Workflows

The demand for all kinds of documents to be readily produced on everything from high-speed roll-fed or cut-sheet print engines to workgroup copier/printers sparked the need for digital workflows that:

- Accommodate multiple job types from a universe of sources
- Can route jobs to different types of print engines, regardless of the manufacturer
- Can adapt to produce increasingly complex applications
- Are scalable to handle jobs of any run length
- Are capable of supporting many combinations of different work flow steps

Meeting these needs is far beyond the scope of closed, proprietary print systems. Only open workflows that are adaptive, flexible and scalable can provide the efficiency businesses need when producing multiple types of documents.

Developing the optimal workflow for a print operation requires detailed planning that addresses current operational and business issues, and considers tomorrow's possibilities as well. Broad, one-



size-fits-all solutions cannot deliver the operational efficiencies, cost-savings, added value, and competitive advantages businesses need to achieve their goals. Proprietary data streams, job tickets and device-specific command sets are unacceptable for the long run because they limit future choices. The best workflow tools are those created to address specific needs and which can be customized and integrated with existing systems to meet the needs of individual applications and companies.

Characteristics of an Efficient Workflow

Successful workflows share three key characteristics. These are based on a foundation of independence so the workflow can be used effectively to support equipment from one, or many manufacturers. Only an independent workflow that is designed from the ground up as an integrated architecture can deliver the flexibility, versatility, adaptability, scalability, openness, and breadth of capabilities print providers need today. Independence lets you do more, do it more easily and lets you go farther than any other approach. The next three characteristics—consistency, comprehensiveness and compatibility—are the keys to building an optimal workflow solution for your operation.

3 Characteristics of Highly Effective Workflows

- **Compatible:** Works with current investments and streamlines existing work methods
- **Comprehensive:** Automates more completely across more departments in more places
- **Consistent:** Makes printing simple, reliable and cost-effective

Compatibility

Does your workflow software work for you—or do you work for it? Is your data center, CRD or service bureau a bureaucracy governed by the limitations and restrictions of your workflow tools? Or are you in charge, using workflow software with the flexibility to manage jobs created using different tools and route them to the most efficient output devices regardless of make or data stream? In these times of tightened corporate belts and mantras of “Do more with less” and “Outsource! Outsource!” these are not idle questions. You need to know you can get the jobs produced by whatever means possible, which requires having the highest possible level of compatibility in your print production workflow.

The Compatibility of Technology Tools

One of the key drivers of efficiency is how well the various technological tools you use work together. Some infrastructure-level technologies—such as Windows, Linux, or Ethernet—have become standardized and widely adopted. Similarly, common file formats work across various computer platforms and applications. This is essential in our increasingly interconnected world, but it can be fraught with challenges on the production floor.

It is one thing to print a single copy of a 30-page report on a desktop inkjet printer or nearby workgroup printer. But it can be quite another to send that document to the CRD and produce 500 duplex-printed copies with tabs and covers. In many cases, the supporting workflow is inadequate, so the job is prone to errors, requires manual intervention, multiple phone calls, takes longer than expected, and costs more to produce. Likewise, the mixed print environments common to many data centers and service bureaus result in many types of jobs being “strapped” to certain machines because the proprietary workflow to pre-process and route the job lacks flexibility and common access to run the job on several different devices. This creates bottlenecks that jeopardize delivery commitments by overworking some devices while others sit idle.

So What Does Compatible Mean?

A compatible workflow works with the equipment and investments you have today, streamlines the work methods already in place and should be easy for your staff to learn and understand. There should be minimal overlap or redundancy with existing tools, with value added by providing new capabilities and automation that deliver magnitudes of efficiency improvements.

In a data center, for example, a compatible workflow will draw together, automate and streamline common steps that are already being done manually. It could encompass job ticketing and secure

data transfer as the file comes in, preparation of the job for the most appropriate printer, verification of the job as it is printed, and controls that ensure data-to-mail integrity.

In a CRD, a compatible workflow can begin upstream of the print room, at creation and continuing through proofing, imposition, printing, finishing and binding. Using a single compatible workflow for all these tasks, documents can be created and produced with less effort and better coordination.

In a commercial print business, a compatible workflow could have a web interface supporting online estimation, file submission, rush job and premium pricing options, job ticketing, and job changes, such as quantities, paper stocks, and finishing. This system would then automatically produce job ticketing and command sets that could be translated into device-specific PDLs for output.

This same workflow could route a job to the best machine available, leading to better equipment utilization. This might be one of several different machines in a data center, or a local desktop device, workgroup printer, or a color printer in the CRD. In such an environment, that 30-page report can be easily produced on various printers in an enterprise reducing manual interventions and expenses.

Key Advantages of Compatibility

Investment Friendly: Buy what you need, as you need it, without having to make major modifications or replace an entire workflow infrastructure.

Multi-vendor integration which enhances the way you utilize all your existing print engines and keeps future options open.

Process-friendly: Work the same way you do now, using the same or familiar tools, but with an optimized workflow that saves time and increases throughput.

Comprehensive

A favored software marketing strategy is claiming a product-line is comprehensive. The various software suites for everything from graphic design to video editing to high-speed print production are all said to be comprehensive—which means covering completely or broadly—but it is the details that make the difference. For digital print engines, a comprehensive workflow system must span the document lifecycle from creation through distribution. Its functionality should provide an IT infrastructure that encompass the four primary business environments: transactional printing, on-demand printing and publishing, CRDs, and networked offices. More importantly, functionality must transcend and interconnect the traditional boundaries of these once distinct environments, enabling documents to be produced wherever and whenever needed.

Crossing Boundaries

The ability to cross departmental boundaries makes implementing a comprehensive document production workflow a strategic business decision. It enables IT professionals and CIOs to ultimately source for software that can span the enterprise instead of multiple systems supporting each departmental silo from a single vendor. It requires a strategic partner for addressing new business opportunities. Finally, it imparts an integrated, architected systems approach so that the infrastructure works for you, enabling work to be generated and produced in different parts of the company on a variety of output devices.

Such work shifting is no small advantage in these convergent times. Consider, for instance, the high-speed cut-sheet and continuous-form printers in the average data center. In many cases these machines are under-utilized for the two or three weeks each month they're not producing bills or statements. Meanwhile, the company has on-demand printing or publishing requirements—several thousand prospectuses, policies, customer letters or marketing materials, for example—that are handled by outsourcing, because the software in the data center doesn't support both mainframe and high-resolution PDF-based workflows. But since modern high-speed printers are capable of producing all manner of on-demand jobs, those idle machines can be more fully utilized when comprehensive workflow software is used to support both transactional and the on-demand documents; and it's not just limited to local printing. High-speed network connections enable machines to be used across a local campus, or across a nation. This provides a stronger and faster ROI on those printers, and a robust yet simple back up capability while reducing or eliminating the need for outsourcing.

Upstream of the CRD

Similarly, high speed corporate reprographics departments or CRD's, often mandated to do more with less, increasingly find themselves running over capacity and having difficulty in meeting deadlines. Yet if the software that runs the big production printers in a CRD can also run more modest machines upstream in office

networks, then 100 of the 500 training manuals that are overloading the CRD's schedule can run on office network printers during second shift, when office workers are home, giving the CRD additional capacity and ability to make tight deadlines via access to underutilized equipment. Convergence has made many of the features built into modern workgroup printers—both color and black and white—virtually identical to those on their larger, faster cousins in the CRD. Comprehensive software leverages those capabilities by enabling jobs to run on either type of machine.

From a CIO's perspective, these examples mean you can ship work to wherever it can be done most efficiently, utilizing the entire printing capacity of your enterprise. It saves time, money and increases the value of your investment, while over time, decreasing the total investment required.

No More Silos

The critical value of comprehensive workflow software results in the elimination of functional silos. Unique workflows for certain jobs or individual vertical applications are less and less needed. Equipment no longer need be dedicated to specific jobs or applications. Comprehensive workflow software enables all print engines throughout a corporation, data center, service bureau, or commercial printing operation to be used in concert to produce documents efficiently, when and where they are needed.

Comprehensive Workflows...

Enable all types of jobs to be produced across an enterprise with greater control and automation.

Foster efficient use of print engines real estate and staffing for more purposes, increasing ROI.

Eliminate costly work-around processes and the need for specialized silos of systems, support staff and operator knowledge.

Provide a basis for business growth through greater efficiencies, increased capabilities and lower costs of production.

It's Not About Printing – A Quick Start to a More Productive Workflow.

Whether a business has acquired a new printing system, is trying to maximize usage of existing equipment, seeking to derive a competitive advantage by offering new services, or all three, workflow must be a top-of-mind priority for executives. But document complexity and differences in applications and print environments mean there can't be a one-size-fits-all workflow. So how do you begin creating the productive workflow that's right for you?

Begin by ensuring your staff is well-trained and that your operations can adapt to the different types of jobs you encounter. Beyond that you may need to rely on outside expertise. In choosing, look for a company you can truly partner with; one that takes your success as seriously as you do. Four guidelines help define a partner that can develop the workflow you need.

The goal is to improve your business.

The partner should strive to gain a thorough understanding of your business, how it works, the applications involved, where the pain points are, and where you want to go. They should use that knowledge to develop the most appropriate workflow strategies for meeting your goals. For example, suppose you produce basic statements but want to add value with data-driven graphics and personalized content and have the same information available on the Internet. The new workflow—which is really about information being moved through your system—must have the adaptability to handle graphics and produce both print and electronic versions. The partner must be able to integrate the necessary processes across your entire workflow and train your staff how to leverage your newfound capabilities.

The focus is on your success.

Your partner should see the big picture for your company and understand the complete document lifecycle for your operation. Where data comes from, the formats it is in, how documents are created, who creates and accesses them, how they are printed and distributed, and how they are archived and more are all parts of a big picture. To achieve success, look for partners that focus on your needs first, not what they have to sell you.

Trusted expertise.

The partner should be able to consult with you on the overall workflow and individual components. But because the partner is as good at building and implementing productive workflows as you are at your business, and has taken the time to learn about your operation, they should be able to anticipate your needs and work in your best interest without needing to involve you or your staff in evaluating each option. If a workflow module will give you needed functionality, you should expect them to identify it, explain the benefits and include it as part of the solution.

Think beyond today.

The partner should have the knowledge and expertise to take you beyond where you are today. A partner should have knowledge of business trends, industry specific regulations and new technologies that could help you leverage those to your benefit. Based on this knowledge and an understanding of your operation and your goals, they should be able to provide workflow elements that make adding new capabilities and efficiencies a straightforward process.

Consistency

Imagine a world where nothing worked the same way more than once or twice in succession. Everything we know, see, hear or do would be subject to a randomness that would bring all our endeavors to a halt. When it comes to document creation and production, your tools must work the same way every time, across converging business environments, whether it's an AFP or LCDS statement, a Postscript booklet or a direct mail post card using PCL. Consistency depends on three interrelated traits:

Intelligent Automation

Intelligent automation of workflow steps assures consistent print accuracy and operational efficiency while minimizing costly errors. For example, a direct marketing campaign comprising a series of postcards, letters and brochures and produced over several weeks must retain the same look and feel. Intelligent automation provides the framework for setting up a job once, then having it work exactly the same way every time the job is run, no matter the type of document, data required or operations staff. As a result, finished materials will be higher quality, contain fewer errors, and the overall appearance will be consistent from one document to the next, time after time. Such automation has clear implications for reductions in costs, staffing, training and inspection of output.

Integrated Design

Because no single print engine or software vendor can possibly develop, test and produce the best of everything, most rely on partners to provide software tools for specific functions. The most effective workflows draw on *integrated* third-party tools that are designed to work together and have a consistent interface. This fosters ease-of-use by minimizing learning curves and the need for specialized knowledge. In multi-vendor environments, for instance, it's not uncommon for machine operators to be experts on one manufacturer's software or knowledgeable on running only certain applications or equipment. But when using consistent, integrated workflow software that supports print engines from all major manufacturers, there is no need for such dedicated specialized knowledge. This enhances overall efficiency and ultimately, profitability and also reduces your dependency on specific individual experts on your staff.

Time-tested Integration Solutions

Intelligent automation and integrated design don't happen by magic. All too often, print providers invest in systems or tools to perform certain tasks only to find themselves locked to the limitations of the very systems that promised efficiency and flexibility. This has made many print providers understandably reluctant to invest in new technologies or less familiar products. To avoid the stresses and costs of developing work-arounds for not-quite-compatible tools, look for workflow software that ensure the system will work for you (not the other way around), that don't inhibit creativity, and can grow with your needs. In particular, you want proven, time-tested solutions which other experts count on for their simplicity and power. The tools should fit tightly into a proven architecture, giving you power without boundaries, and a reliable robust service organization that understands your needs, and supports where you want to go—each step of the way.

Consistent workflows comprising these three traits help ensure your printing operation—regardless of its size, complexity or how many different applications are involved—will operate as efficiently as possible.



Key Industry Dynamics

Four key business dynamics are driving the need for more efficient workflows linked to these three characteristics. These dynamics affect businesses across the board, driving the need for suppliers to provide a proactive approach to document workflows that can be applied to the unique needs of every company.

KEY DYNAMIC	BUSINESS IMPACT
Rapidly changing technology	Accelerated investment Obsolescence
Growth, Expansion Mergers & Acquisitions	Duplicate, incompatible systems and processes
Increasing digitization of enterprise print	Increasing demand for targeted 1:1 documents
Continued economic pressures	More competitive and pricing pressures

In addressing these dynamics in print-for-pay and corporate environments, Océ North America has combined the essential characteristics of consistency, compatibility and comprehensiveness to address the four core business environments:

- **Transactional Printing** (Production Data Centers and mid-range EDP)
- **On Demand Printing** (Commercial and Publishing)
- **Networked Office**
- **Central Repographics Departments**

Within each, the primary goal is to improve a company's business, making it stronger, more agile and more efficient. Océ begins by identifying the company's operational issues and current business priorities. Particular attention is paid to relationships and potential conflicts within these areas and how an improved workflow can help solve these challenges.



Next, existing workflow(s) are documented, and equipment and systems are evaluated. Management and line operators are interviewed with respect to the strengths and weaknesses of current operations and how well they support operational goals and priorities. Shortcomings here are often related to operational issues that have become out of sync with business priorities.

Finally, this understanding is used to develop an efficient, simplified, customer-centric workflow solution that connects disparate parts of the organization, helping the company achieve their goals with new levels of efficiency and cost effectiveness.

Océ PRISMA Environment Solution Sets

Based on the Océ PRISMA™ family workflow management software, Océ North America has defined core workflow solution sets for the four key horizontal business environments. Like all PRISMA software:

PRISMA for Transaction Printing is attuned to the needs of corporate data center and EDP print environments. These high volume and mid-range operations typically have equipment from multiple manufacturers in one or many locations, and need to manage many jobs per shift, often with very different production requirements. Complete control of documents is necessary throughout the workflow, which may extend from document creation through mailing and archiving. Key Océ PRISMA capabilities include:

- Powerful application and resource creation tools
- Accurate e-Proofing and data alignment to pre-printed forms
- Central control and management for Océ and non-Océ printers
- Powerful indexing and document management
- Simple reprint of complete or partial jobs
- Connectivity, multiple PDL support and investment protection available
- Software, professional services and servers included
- Can be tailored to match your specific needs



PRISMA for On Demand Printing meets the changing needs of Commercial and other print-for-pay environments. Comprehensive composition, make-ready, and imposition tools are essential for on-demand printing and publishing, backed up by soft proofing to facilitate optimal approval and production cycles. To ensure flexibility, jobs must be able to be shifted quickly and easily to different print engines and the workflow must be integrated with finishing and binding operations. Key Océ PRISMA capabilities provide:

- Powerful composition and integrated Make-Ready and imposition
- Accurate e-Proofing with front-to-back alignment
- Central control and management for Océ and non-Océ printers
- Easy reprints to minimize inventory and waste
- Connectivity, multiple PDL support and investment protection available
- UP³i support for intelligent control of finishing and bindery
- Software, professional services and servers included
- Can be tailored to match your specific needs

Océ PRISMA Software

PRISMA for Transactional Printing	▶
PRISMA for Networked Offices	▶
PRISMA for On Demand Printing	▶
PRISMA for Central Repro Departments	▶



PRISMA for the Networked Office delivers new levels of productivity for corporate office printing across an enterprise. With virtually all documents being created and distributed digitally, creation, management, control, accounting, and tracking are essential. Throughout an office network and across an entire enterprise, key Océ PRISMA attributes enable:

- High productivity scan-back to desktop, PDF, e-mail and application
- Accurate, simplified charge-back
- Central print control workflow to drive Océ and non-Océ printers
- Scan to archive and integrated submission to CRD
- Software, professional services and servers included
- Can be tailored to match specific needs

PRISMA for Central Reprographic Departments brings aspects of office and commercial printing together for high-volume, in-house printing and duplication and quick and franchise printers. Comprehensive software tools that manage job ticketing and routing are essential to control costs and produce both simple and complex jobs accurately and on time. Océ PRISMA modules for CRDs deliver:

- Increased print volumes through integrated office job submission and job status
- High productivity scan-back to desktop, PDF, e-mail and application
- Scan to archive and CD
- Accurate, simplified charge-back
- Central print control workflow to drive Océ and non-Océ printers
- Software, professional services and servers included
- Can be tailored to match specific needs

Modular Tools and Expert Service

Océ PRISMA solution sets are comprised of modular software tools and expert professional services that support device-specific capabilities on a wide range of print engines. The tools can be applied to one or several steps of document production throughout the lifecycle of a document, including:

- Design of resources
- Document design and creation
- Preparation for production
- Submission and Prepress
- Proofing
- Order management
- Production
- Finishing/Insertion/Bindery
- Archiving and reprint

Océ PRISMA Software

- PRISMA for Transactional Printing ▶
- PRISMA for Networked Offices ▶
- PRISMA for On Demand Printing ▶
- PRISMA for Central Repro Departments ▶



Bridging Environments without Compromise

But Océ North America goes further. Océ PRISMA is an open workflow architecture that enables Océ digital printing solutions to accept all types of jobs from multiple sources and datastreams. It also provides robust support of non-Océ print engines from the office to the data center and CRD. In addition, PRISMA modules designed for one environment can be transparently integrated to bridge currently unreachable devices in another environment without compromising operations. This enables a data center or service bureau to print books using modules from PRISMA for On-Demand Printing in off-peak times. It allows a commercial printer to produce statements using components of PRISMA for Transactional Printing to generate new sources of revenues, all with complete end-to-end control, tracking and job integrity.

Furthermore, Océ supports each step of the production process. Strategic business partnerships with leading software providers such as e-Copy®, GMC®, PressSense®, Videk® and others enhance specific aspects of document production. Longstanding alliances with pre- and post-processing vendors such as Roll Systems®, Stralfors®, Böwe Bell and Howell®, Standard Finishing® and others —along with mailing vendors such as Pitney Bowes®, ensure end-to-end workflow solutions that deliver complete systems for every print environment.

Reducing Costs in Production Environments

For every aspect of all of today's fast-paced document production environments, workflows based on Océ PRISMA™ workflow management software deliver reduced costs across the enterprise via:

- Integrated modules for seamless operations
- Less redundancy via unified systems and staffing
- Robust support for Océ and non-Océ output devices
- Improved quality
- Less errors via automation of redundant tasks
- Job tracking and data verification capabilities
- Improved productivity and capacity
- Bridges across proprietary systems and processes
- Reduced training and system maintenance

The fourth generation of Océ PRISMA is the result of over 15 years of expertise and \$300 million of research and development investments. It's modular architecture has steadily evolved into the most comprehensive, consistent and compatible document workflow software available. This development path ensures the reliability and stability you require for bridging proprietary datastreams, and managing workflows across departments and the enterprise. PRISMA is completely integrated and available now, enabling you to turn time into money today!

Learn more at <http://www.oceusa.com/oceprismasolutions>

Océ PRISMA Software

Managing Document Workflows



Océ North America. Digital Document Systems Division

Océ is the leading provider of production-class printing solutions—the trusted business partner that experts count on. Océ hardware, software, and professional and support services deliver the rock solid reliability, application versatility, and cost-effective performance that define production class performance—from the commercial plant and copy facility to the corporate data center and office workplace—backed by more than 125 years of experience.



Océ North America, Inc.
Océ Digital Document Systems
5600 Broken Sound Boulevard
Boca Raton, FL 33487
www.oceusa.com

Océ México S.A. de C.V.
Ave. Prol. Paseo de la Reforma No. 1236 Piso 4
Col. Santa Fe, Delegación Cuajimalpa
México, D.F. 05348
www.oce.com

© Océ 2004. All rights, including rights created by patent grant or registration of a utility model or design are reserved. Specifications subject to change for technical reasons. Delivery subject to availability. All other product, service and company names are trademarks or registered trademarks and are the property of their owners.