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Thought Leadership…Executed Worldwide

Executive White Paper

Digital Mailrooms: Fixing Your Weakest Link *in the* Customer Value Chain

Business case for the centralized digital processing of paper-based mail, business forms, faxes, and email, speeding an organization's overall time to satisfy customer requests for information, order processing, and service fulfillment

Business process benchmarks analyzing faster cycle-time contributions to the customer engagement and revenue pipeline of new customers and existing accounts

KEY TOPICS ADDRESSED

- Lifecycle costs of paper-based mail and customer-generated documents
- Exhaustive inventory of compound documents by industry
- Distributed fast-cycle collaboration with virtual customer engagement files
- Featured use-case productivity models:
  - Loan processing
  - Order processing
  - Accounts receivable
  - Mortgages

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WHAT'S IN THE NAME?

gist \'jist\ n -s [AF, it lies (said of a legal action), fr. MF, 3d pers. sing. pres. indic. of *gesir* to lie, fr. L *jacére* to lie, fr. jacere to throw — more at jet (to spout)] 1: the main point or material part (as of a question or debate) : the pith of a matter : essence (the ~ of a question) <the ~ of all that can be said upon the matter—R. L. Stevenson> 2: the ground or foundation of a legal action without which it would not be sustainable

—Webster's Third New International Dictionary Unabridged

THINK TANK FOR EARLY STAGE-MARKETS

GISTICS constitutes a think tank that speeds the adoption of new technology and disruptive innovations among enterprises and consumers. Founded in 1987, GISTICS Incorporated minimizes the risk of potential buyers through the following:

- **Interviews** with successful early adopters of new technologies
- **Definition** of the critical success patterns of successful early adopters
- **Activity-based analyses** of adoption benefits on supply chains, workflows, and user activities
- **Visual explanations** of how new technologies produce economic value
- **Investment analyses** that justify the purchase of new technical systems
- **Project roadmaps** that break down large-scale organizational changes into smaller two-week to two-month projects
- **Practitioner portals** that clarify the next steps in rapid deployment and payback
- **Certified consultants** that provide essential skills and resources

GISTICS *drives* the emergence of shared vocabularies, the adoption of effective problem-determination methods, and the development of unassailable investment analyses that justify purchases of new technologies or disruptive innovations.

GISTICS *attracts* early adopters and pace-setting solutioneers, demonstrating how they can use new technologies or disruptive innovations to make money by delivering new complex, integrated solutions to enterprise or consumer clients.

GISTICS *develops* breakthrough market-making strategies for vendors of new technologies or disruptive innovations, using industry thought leadership, executive white papers, Webcasts, specialized Websites, and a global trust network of advanced project managers within large enterprises, independent consultants, and small master-class solution providers.

What summarizes the business case for digital mail processing and the deployment of digital mailrooms?

WEAKEST LINK OF CUSTOMER ENGAGEMENT

Most large business-to-consumer and public sector organizations seek better and less costly ways of **serving customers, growing revenues, and reducing exposure to risk.**

This paper makes the case that automating physical mailroom operations supports all three strategic aims, shoring up one of the weakest links of customer engagement: cycle times and mistakes in physical mailflows.

CUSTOMER ENGAGEMENT

The growing preference of customers for online, interactive services continues to drive overall expectations of value and satisfaction, demanding that enterprises improve all customer-facing business processes.

The relatively new term, customer engagement, conveys a new strategic priority and operational capability of the enterprise: how to attract, serve, and keep customers for life.

Networked customers demand faster, more cogent, and transparent fulfillment of their requests for information, service, and satisfaction.

Digital mailroom processing marks the next logical step in improved customer engagement.

SERVICE-FULFILLMENT CYCLES

In the course of interacting with customers, hundreds to thousands of organizational staff, as well as partners, must satisfy a **diverse range of customer criteria** for information or service fulfillment, using all available information sources, including paper-based correspondence, forms, and documents.

The inbound handling and distribution of **individual pieces of mail**—letters, orders, contracts, etc.—often represents the weakest link in the **customer value chain**, adding significant time delays, paper management costs, and barriers to fast-cycle **collaboration among decision-making teams**.

The **manual, duplicated, and physical logistics workflows** or mailflows consist of receiving, sorting, distributing, and using **customer-generated paper-based communications**.

Mailflow processing that includes orders, change orders, complaints, requests for information, and contract amendments (especially compound, multipart documents that require two or more people to review and contribute to an appropriate response to the customer) slows an organization's overall **time to satisfy customers** and potential buyers.

TIME TO SATISFY CUSTOMERS

This paper makes the case that sluggish, error-prone mailflow processing **suppresses revenues** from both new and existing customers, **diminishing overall satisfaction, brand equity, and loyalty**.

The **digital, online, pan-regional processing** of customer-generated paper-based communications—a function of DIGITAL MAILROOMS—speeds an organization's overall time to satisfy **customer criteria** for timely and more personal service fulfillment.

Faster time to satisfy customers unlocks revenues already in **engagement-revenue pipelines**, adding the equivalent of 2.9 days of revenues to the firm.

This paper demonstrates how other productivity dividends (cost and labor savings) fund **enterprise wide digital mail processing and paperless business processes**.

SUMMARY

Digital mailrooms increase revenues, speeding an organization's overall time to satisfy customers in the engagement-revenue pipeline and, thus, funding enterprise wide digital mail processing.

Section 2

Executive Primer: Digital Mailrooms

What's the strategic case for digital mailrooms, automating the digitization and process orchestration of inbound physical mail, email, business forms, faxes, and compound documents?

LIFEBLOOD OF ORGANIZATIONS

Finding and serving customers define the purpose of all organizations, commercial or public sector.

If customers represent the lifeblood of organizations, then communication serves as the heart and workflows as the arteries.

ALL ABOUT CYCLE TIME

This paper makes the case that digital processing of inbound mail, customer correspondence, and compound documents speeds the fulfillment of requests for service and information, creating productivity dividends.

PRODUCTIVITY DIVIDENDS

This paper shows that greater productivity in mail workflows returns its investment in several areas:

Sales pipeline acceleration represents faster buying cycles—the result of faster, more informed interactions with new and existing customers.

Incremental closings represent opportunistic sales—often the result of faster approvals and expedited order processing.

Lower lifecycle costs represent going digital earlier in the document lifecycle, lowering costs of administrative labor, interim paper storage, and long-term business records archives.

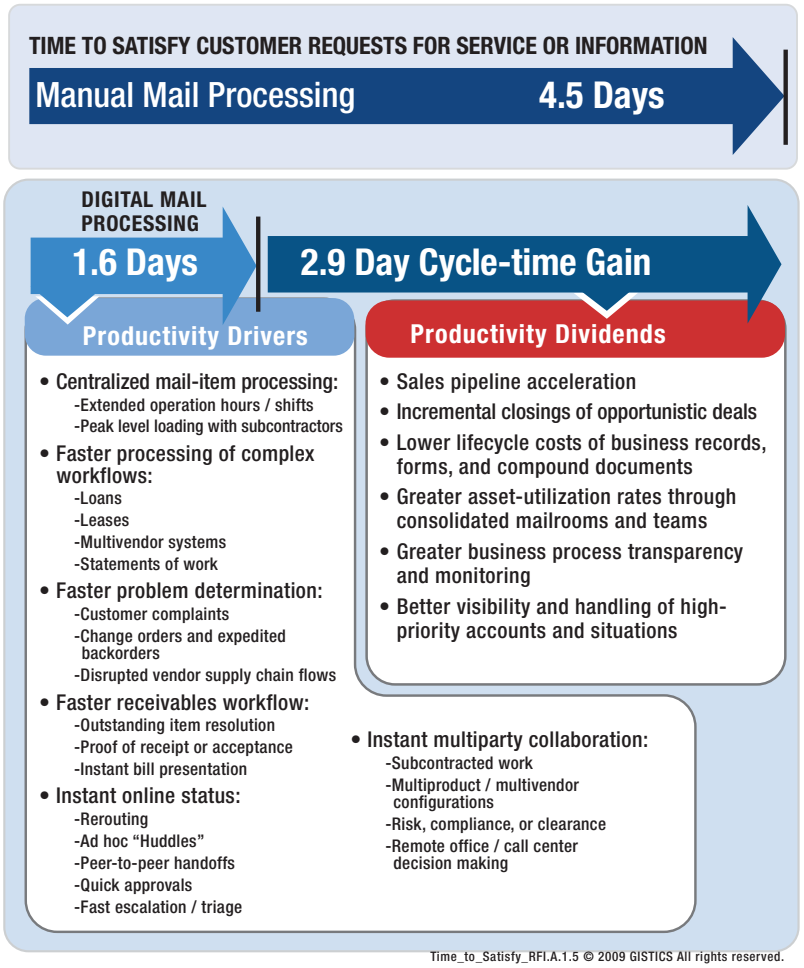
Greater asset-utilization rates represent handling higher volumes of more diverse and complex interactions with buyers and customers—how firms satisfy evolving customer requirements, especially among networked buyers.

Greater business process transparency gives management new operational and data-based insights—how firms can focus on higher value-added opportunities and challenges.

Better visibility of high-priority accounts means senior managers can track and expedite delays in establishing new major accounts or the handling of nonstandard customer requests—how firms can make their quarterly goals without creating a big mess or breaking the system.

Digital mail processing can deliver additional dividends, emphasizing the particular aspects of individual organizations, industry norms, and statutory requirements.

FASTER CYCLE TIME INCREASES SALES, LOWERS COST, AND ADDS PROCESS AGILITY



Faster processing of inbound physical mail and documents saves an average of 2.9 days in the time it takes to receive, sort, and route customer communications to the appropriate internal staff or department, producing a number of immediate economic benefits and longer term process management options.

What assumptions support the case for digital processing of inbound mail, business forms, compound documents, and emails with attachments?

NEXT STEP IN THE JOURNEY OF AUTOMATION

Business IT history reveals that automation of seemingly small units of work throughout a large organization often produces significant, long-reaching effects.

The figure to the right depicts the core assumptions that support the case for digital mailrooms, emphasizing three immediate, long-lasting benefits:

- **Increased productivity** of frontline knowledge workers and trade partners—especially those parties that contribute to revenues and customer satisfaction
- **Improved satisfaction** of customers through faster service-fulfillment cycles and better, more informed answers by frontline workers
- **Enhanced orchestration** of complex, pan-regional business processes—important in the era of consolidation and globalization of a workforce

SERVING CUSTOMERS

As wryly noted by Peter Drucker, the guru on management and knowledge worker productivity, "A firm has no other purpose than to find and keep customers."

Customer value-chain models depict the primary and support activities of a firm, calling attention to the central role that communications, interaction, and handoffs play in finding and keeping customers.

Faster cycle times in customer-facing communications, interaction, and handoffs accelerate the core business process of finding and keeping customers.

TIME TO SATISFY REQUESTS

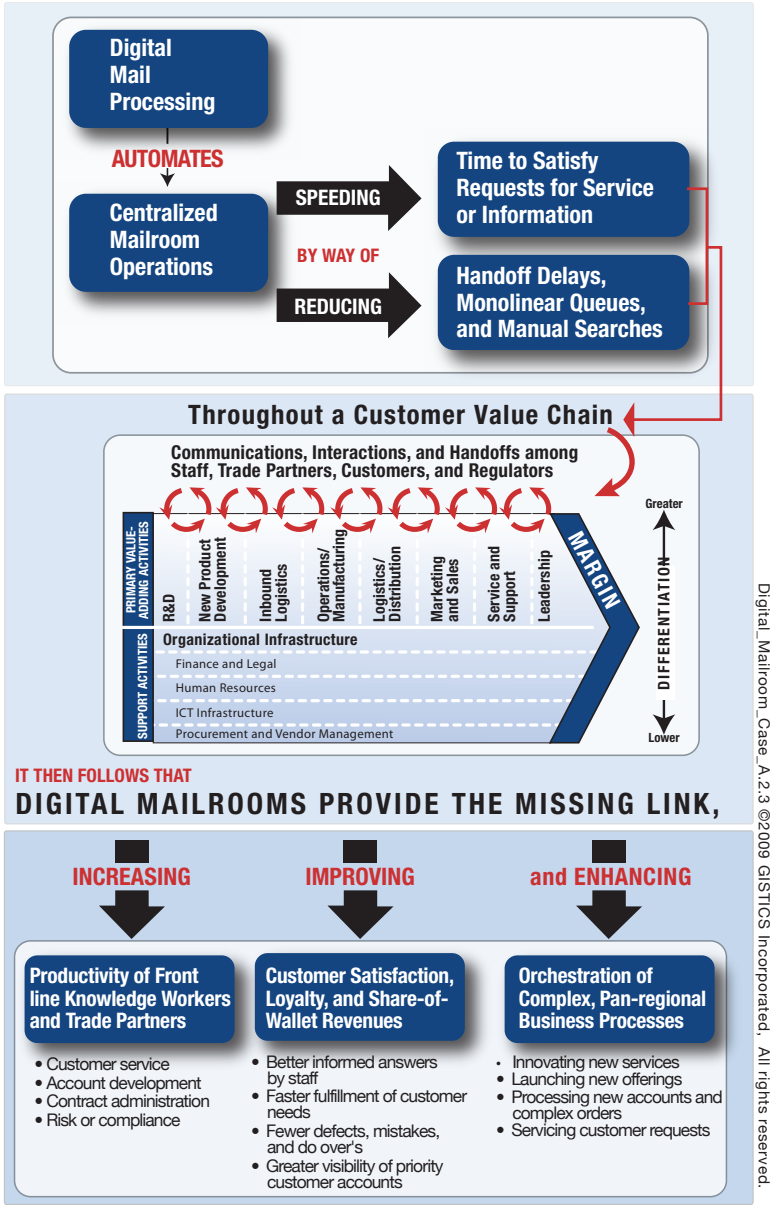
Centralized mailroom operations speed the routing of digitized items, using workflow engines and business records managers—how firms integrate digital mailflows into their core business applications and business records management.

Digital mail processing automates the digitization, profiling, and cataloging of all inbound mail and faxes, including email with attached documents or images, business forms, and complex multipart documents.

This paper explains each of these key assumptions, quantifying the business value of bottom-up automation.

Digital mail processing constitutes the next logical-step in enterprise automation and business process management, speeding the time-to-satisfy requests for service and information by customers and trade partners.

FIXING THE WEAKEST LINK OF CUSTOMER VALUE CHAINS



What areas of a customer value chain benefit from digital mail processing?

VALUE-CHAIN INTERACTIONS

Each organization within an industry or business ecosystem incorporates the value-added products or services of upstream suppliers, adding distinctive value to its own products or services that downstream customers incorporate and pass along to the end-chain customer.

The figure on the right depicts a value-chain business entity, suggesting how digital mail processing might spread throughout many areas of the enterprise.

VALUE CHAIN BUSINESS ENTITY

Michael Porter, the international authority on competition, first introduced the concept of a value chain business entity, emphasizing the value-adding activities of the firm.

In the example shown to the right, the **higher value-adding activities** start with R&D and new product development and conclude with service, support, and leadership.

However, every firm must build and maintain (or access a partner's) **organizational infrastructure**—support activities.

In particular, the **ICT infrastructure** (computers, telecommunications, data centers, etc.) supports digital mailrooms, integrating automated mail processing with existing or newly developed workflow platforms and **records management** systems.

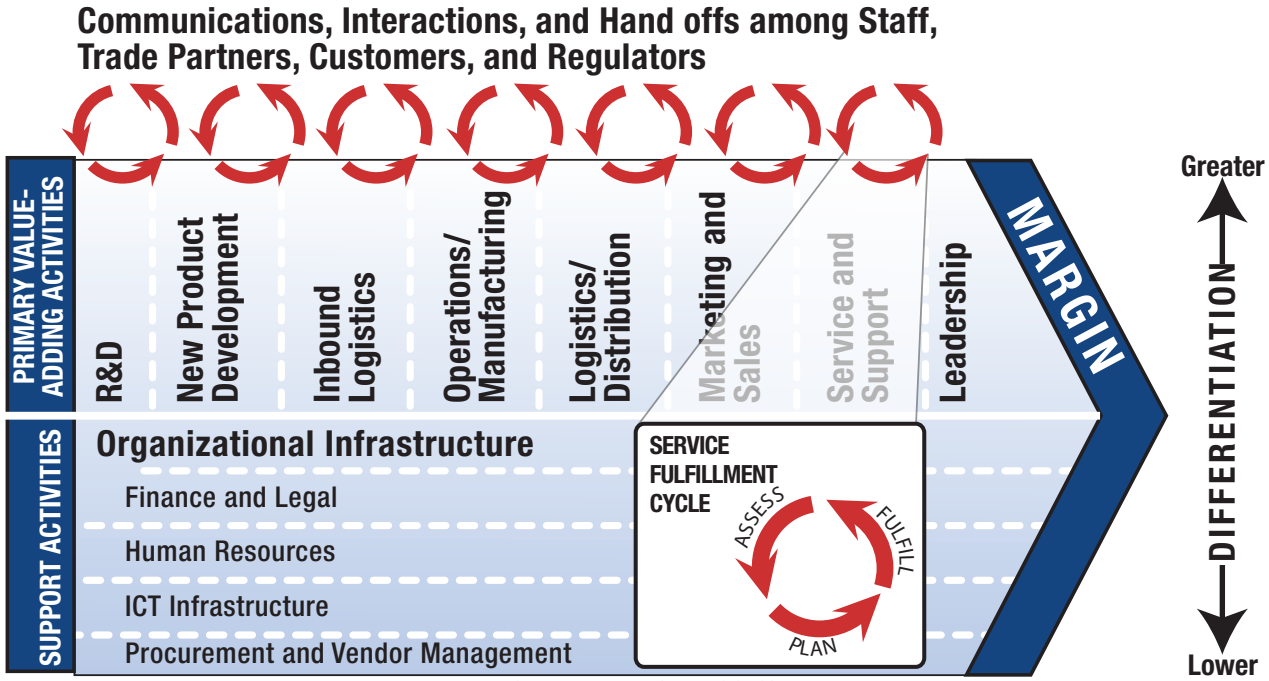
SERVICE-FULFILLMENT CYCLES

Over the span of any business day, a larger enterprise will start and complete a multitude of tasks in service of customers.

Service fulfillment describes the basic work of serving customers and serving those who service customers. The faster a firm completes service-fulfillment cycles represents a primary source of revenue: satisfied customers.

It then follows that faster inputs to those service-fulfillment cycles, coupled with more complete and accessible "answers" increases overall productivity in the customer value chain: increased revenues!

ANY AREA THAT RECEIVES EXTERNAL MAIL OR DOCUMENTS BENEFITS FROM DIGITAL MAIL PROCESSING



Value_Chain_Entity.E.1.2 © 2009 GISTICS Incorporated, All rights reserved.

The elimination of one communication or interaction cycle (follow-up telephone call, fax, email) in the time to satisfy ALL paper-based requests for service or information can add up to tens of millions of dollars in savings and increased revenues.

What constitutes a service-fulfillment cycle, framing the productivity contribution of digital mail processing?

SERVICE-FULFILLMENT CYCLES

Industry benchmarks of business response times to customers using telephone, email, website, online contact center, fax, and physical mail services reveal significant delays for physical mail and faxes.

The figure on the right depicts the common element of all customer requests, a service-fulfillment cycle.

Current condition represents a status quo until a **precipitating event** occurs, initiating a service-fulfillment cycle.

The clarity, succinctness, and form of **requests** often vary, ranging from hysterical complaints (weak, ill-formed requests) to well-reasoned and comprehensive descriptions of the problem, likely causes, and possible solutions.

Assessment may entail a single staff member responding to a customer's need, applying a known policy (or policies) and resources at hand (information and applications) to satisfy the customer—clearly the ideal situation.

However, many service-fulfillment cycles require **internal or external multiparty**, **multistep workflows**, delaying cycle times and contributing to the heightened dissatisfaction of customers.

These multistep workflows may include many iterative cycles and a changing cast of workflow participants across the phases of assess, plan, fulfill, and confirm of the service-fulfillment cycle.

BRAND VALUE

Customer satisfaction represents many aspects of a complex business operation coming together to meet or exceed the customer's expectations and criteria for value and quality.

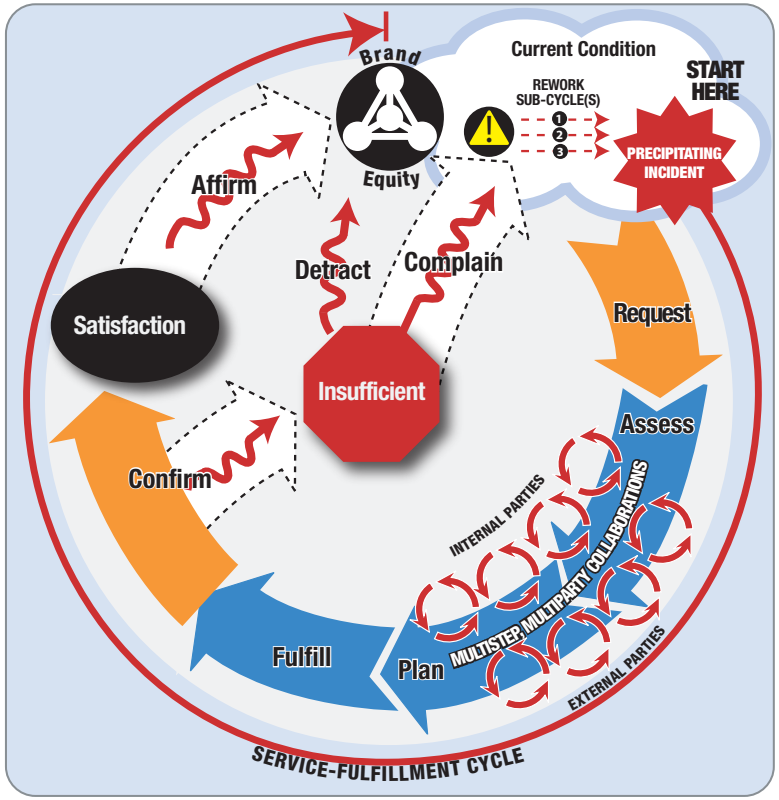
Fast, courteous, well-informed, and effective answers, fulfilled correctly on the first time represent the ideal.

Digital mail processing moves an enterprise closer to that ideal in four ways:

- Digitization of physical mail, forms, faxes, and compound documents creates more potential answer-making resources.
- Secure, searchable, online global repositories enable any number of authorized participants to use answer-making resources.
- Permanent collections of all related information objects and feeds—digital customer files—enable faster completion of service-fulfillment cycles.
- Online service-fulfillment cycles enable account managers and executives to monitor the number of completion rates of service-fulfillment cycles by account, workgroup, and region—a way to manage by exception and marshal resources to achieve a strategic win.

Keeping customers entails answering questions and provisioning services. Faster service-fulfillment cycles of customers' requests increase satisfaction and the likelihood of retaining loyal customers.

FASTER TIME TO SATISFY REQUESTS CREATES NEW BRAND VALUE



Service_Fulfillment_Cycle.A.2.2 ©2009 GISTICS All rights reserved

What types of mail drive the business case for digital mail processing and centralized digital mailrooms?

CRITICAL MAIL ITEMS IN COMPLEX MAILFLOWS

How many important pieces of mail get lost in the daily shuffle of mailrooms and Website communications, delaying sales cycles, creating higher-cost personal interventions by field sales or customer service staff, or putting the firm at risk of noncompliance with regulations?

The sheer volumes of mail and the diverse types of mail make it difficult to answer that question.

In this paper, we make the case that the digital processing of higher added-value mail will deliver sufficient short-term value that the firm will recoup the total investment in a centralized digital mailroom.

The top figure on the right depicts how greater volumes of mailed and emailed items and a greater number of unique types of mail and documents can mask inherent business risks—communications and documents that entail a greater number of workflow participants, decision-making variables, and service-fulfillment steps.

TIME TO SATISFY CUSTOMER REQUESTS

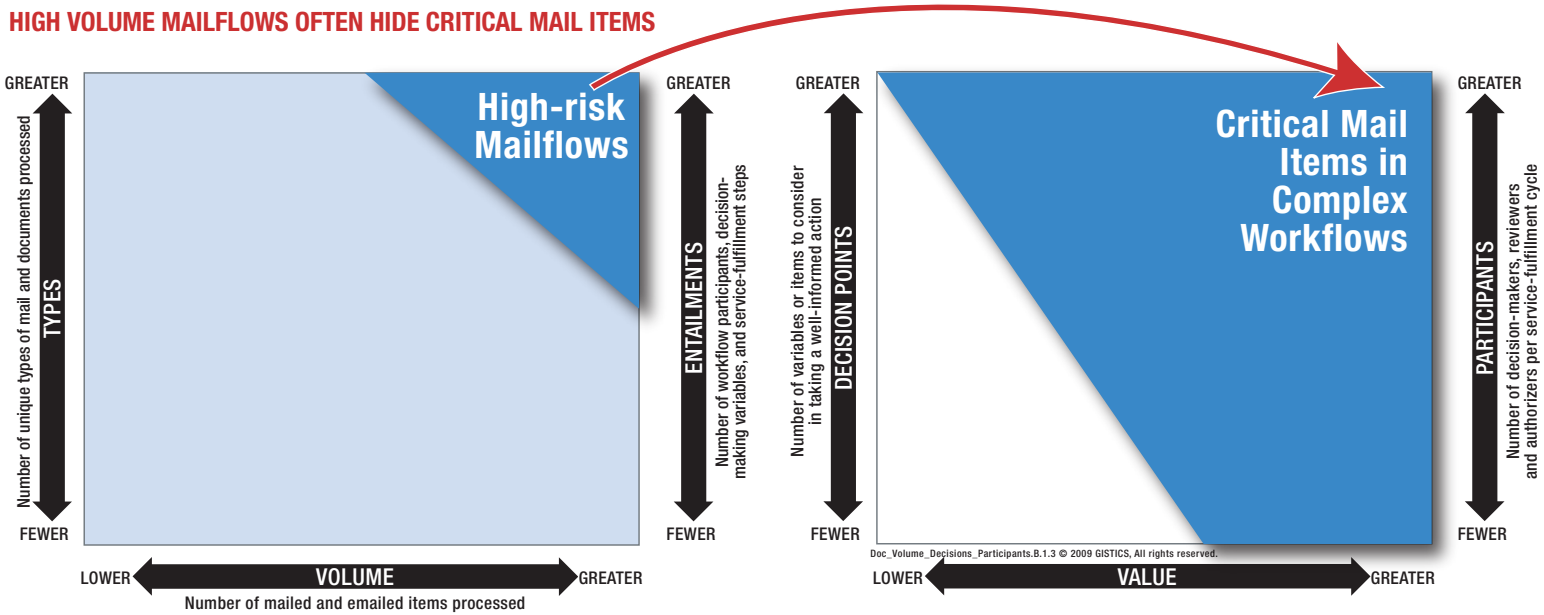
The bottom figure on the right depicts a category of **critical mail items in complex workflows**—a small, often quite diverse, and meaningful portion of all inbound mail that represents considerable **value**: new accounts, orders, and service requests.

The number of decision-making variables or items to consider in taking well-informed actions and the number of participants who engage in two or more decision points all contribute to the complexity of core business processes.

Complex workflows also emphasize what we call service-fulfillment cycles—demand by customers for information related to a buying decision, support related to using a product or service, and service of an account or program.

High volumes of inbound mail can obscure critical mail items. Complex workflows with multiple parties and hand-offs entail additional risks: delay, mistakes, and customer dissatisfaction.

HIGH VOLUME MAILFLOWS OFTEN HIDE CRITICAL MAIL ITEMS



How do faster cycle times of digital mail processing contribute to major launches, customer engagement, and revenue pipelines?

THE VALUE OF ONE DAY'S REVENUE

Frontline service staff's instant access to the pertinent information of a customer's situation—digital account files composed of previous emails, voicemails, and digitalized correspondence, forms, faxes, and documents—speeds completion of service-fulfillment cycles

Faster completion of service-fulfillment cycles can add up to significant positive effects for the firm.

GISTICS' research of digital mail processing reveals that a medium to large enterprise can expect an average net gain of 2.9 days in all business processes that rely upon inbound mail and related documents.

A quick calculation of the 2.9 day cycle-time gain suggests that a firm with $1 billion in annual revenues or roughly $4.5 million per business day (from 220 days in a year) can add up to $13.5 million in incremental revenue—essentially adding 2.9 days to the fiscal year.

The figure below depicts three areas of benefits from a 2.9 day cycle-time gain, calling attention to the pervasive effects of processing inbound mail, forms, faxes, and documents and integrating those native digital objects such as emails and their attached digital files.

VALUE CREATION

The major launch of new products, campaigns, partnerships, or business models often represents the most significant source of new revenue for most firms.

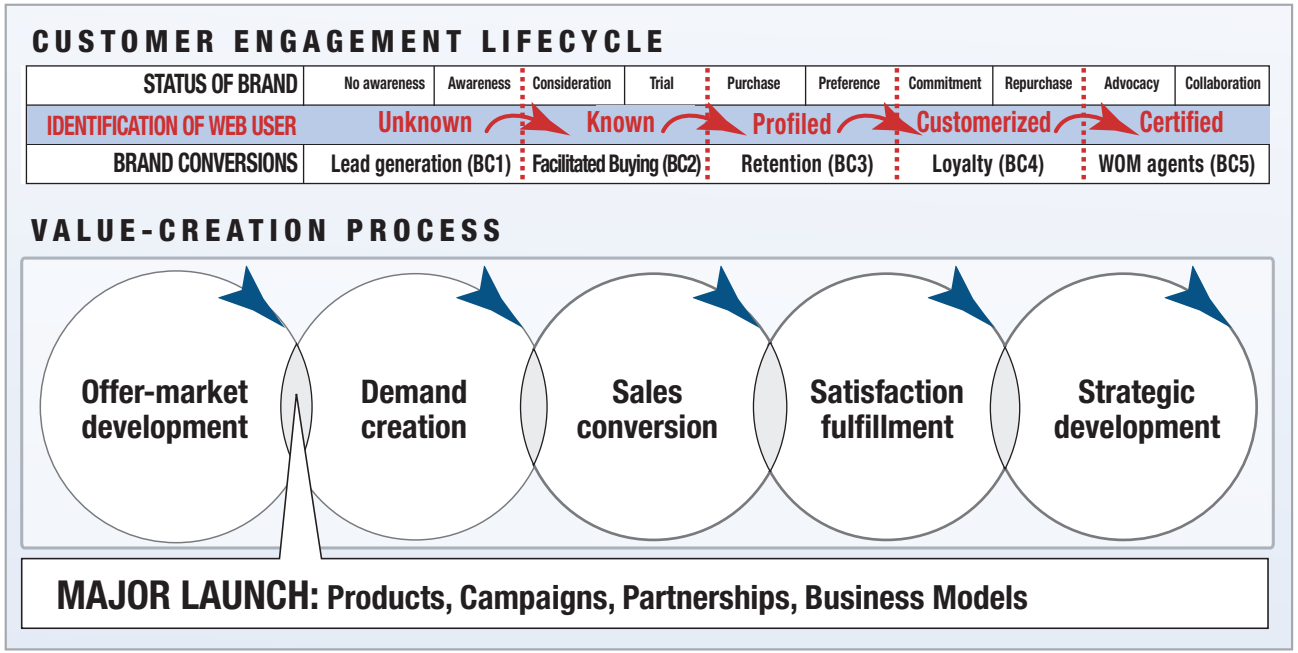
A 2.9 day cycle-time gain in faster fulfillment of customer questions and faster processing of first-time orders correlates to more sales in the product sales lifecycle.

CUSTOMER ENGAGEMENT LIFECYCLE

Today, organizations must re-engineer how they attract and keep customers for life. Online consumers expect more: better, faster, cheaper.

The customer engagement lifecycle model depicts additional needs for a more informed and agile context for communication and interaction.

CYCLE-TIME GAIN IN PROCESSING INBOUND MAIL ADDS VALUE THROUGHOUT THE FIRM



Pipeline_Engagement_Sales.B.1.0 ©2009 GISTICS All rights reserved.

Faster, more informed service-fulfillment cycles, using the digitized objects from digital mail processing, enable frontline sales to close more business, customers to more fully engage in self-service workspaces, and firms to maximize the sales potential of major launches.

Section 3

Digital Mail Processing

What summarizes the basic idea of digital mail processing?

LAST HOLD-OUT OF THE PAPERLESS OFFICE

Successive waves of innovation in IT and Internet technologies drive gains in productivity, business agility, and customer engagement.

Digital mail processing constitutes another meaningful step toward business process automation and the long-time vision of the "paperless office."

The figure below depicts the basis elements of digital mail processing, calling attention to existing digital flows of communications and files.

ALREADY DIGITAL AND READY TO INTEGRATE

Much of the existing communications and messaging already exists in digital form: emails and their attached files, digital dispatches from camera phones, faxes, online file transfers (FTP and HTTP), digital newsletters, and Web posts (Web pages, user-generate content, and Web-user session recordings, etc.)

Digital mail rooms simply bring physical mail and documents into the digital flow of information.

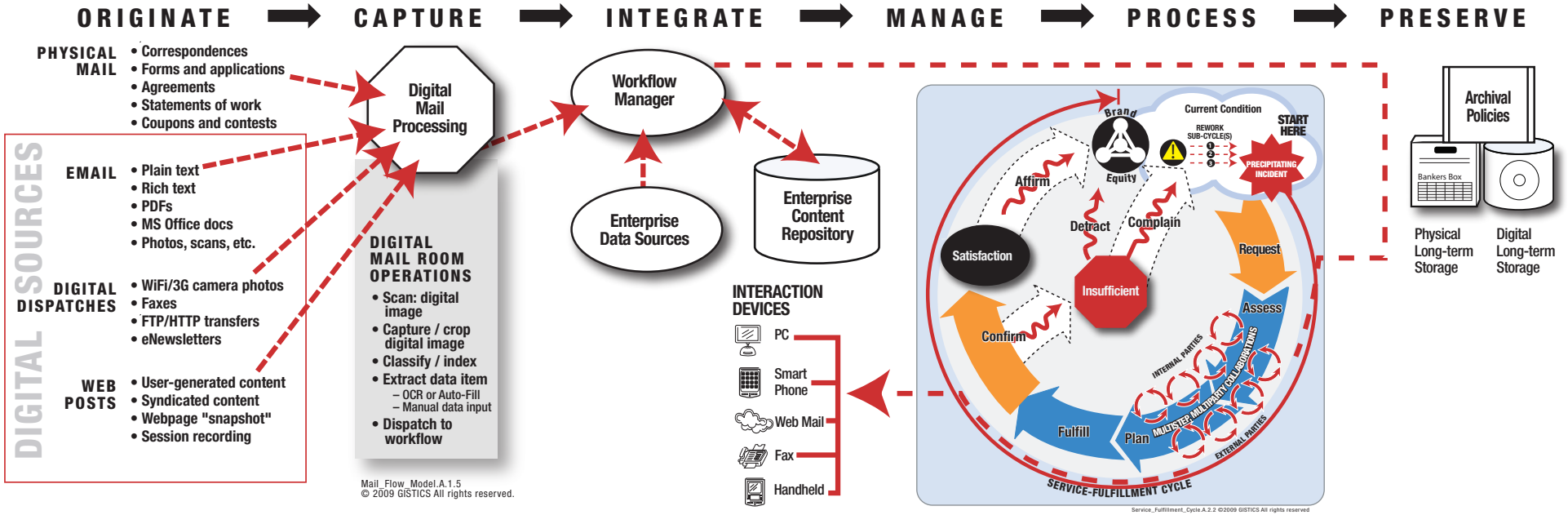
ALL-DIGITAL MAIL FLOWS

Digital mail processing entails the digitization of physical mail and the integration of these newly digitized items with email, digital dispatches, and web content.

Digitizing physical mail upon first receipt pays several downstream dividends:

- Faster, more agile fulfillment of revenue-producing workflows
- Lower labor expenses and physical costs associated with the life cycle of business information and records management

DIGITIZING UP-FRONT REDUCES COST, ERROR RATES, AND TIME-TO-SATISFY REQUESTS FOR INFORMATION OR SERVICES



How can an activity model of enterprise mail flows highlight the value of digital mail processing?

CENTURIES OF HABIT

Organizations have received and handled mail for nearly two centuries without much change in the basic structure or task.

The figure below depicts a general activity model for the typical physical and digital mail flows, calling attention to two workflows: mail transport and service fulfillment.

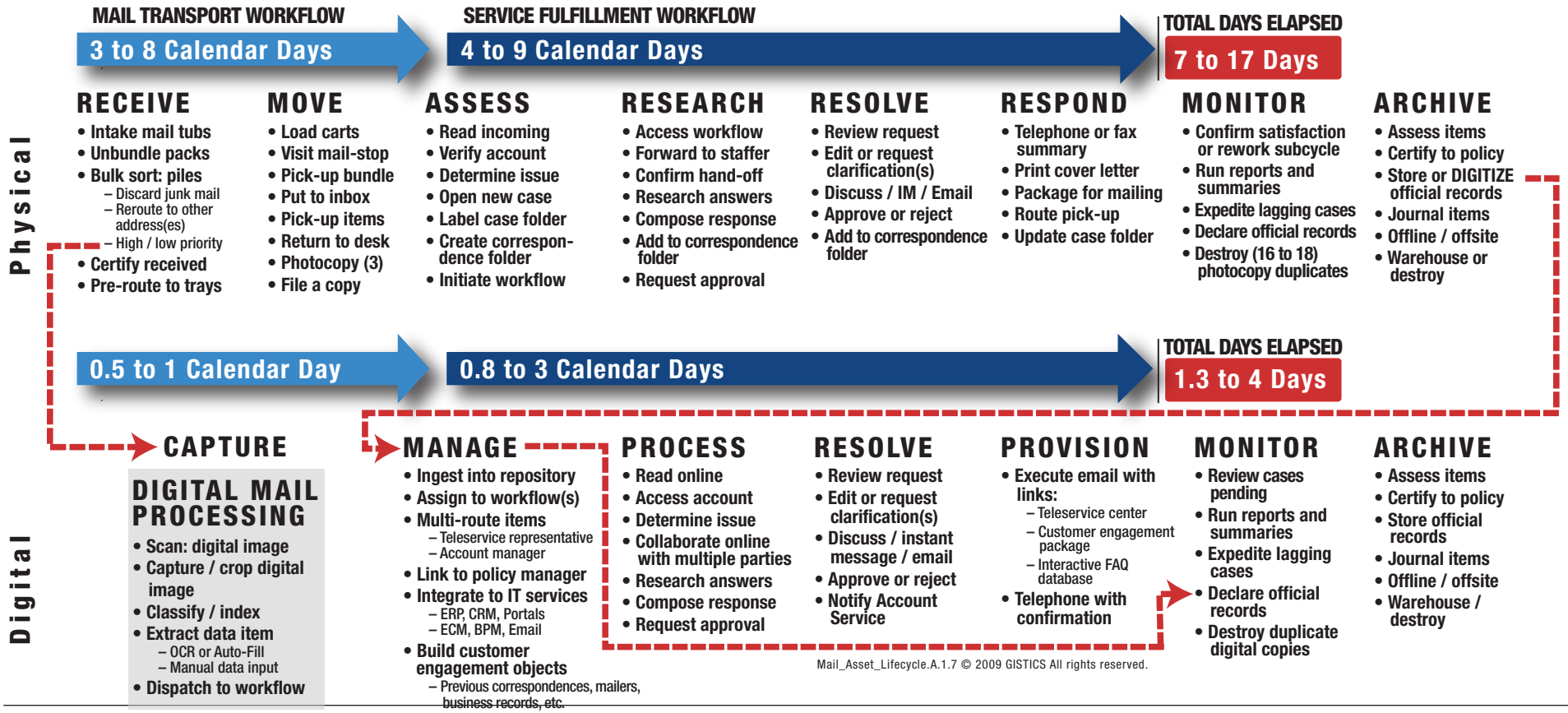
TOTAL ELAPSED END-TO-END TIMES

This activity model shows that physical workflow takes an average of three to eight days to complete **mail transport** within a large enterprise and another four to nine days to complete a **service fulfillment**—the satisfaction of a request for information or service. Digital mail processing slashes the total number of days elapsed (both workflows combined) to 1.3 to three days, saving 5.7 to 14 days.

DIGITIZE NOW OR LATER

This activity model also calls attention to a stunning irony: enterprises will eventually digitize many of their business records and customer communications and incur tremendous costs of a paper-based workflow. This paper makes the now self-evident case to digitize paper-based mail upon receipt, eliminating the costs of duplication, local storage of 9 ± 5 duplicates, the labor of an end-of-lifecycle assessment, and long-term record storage.

ACTIVITY MODEL OF TYPICAL MAIL FLOWS REVEAL SIGNIFICANT OPPORTUNITIES FOR PROCESS IMPROVEMENT



Which of these types of documents flow through your enterprise operations?

MAILFLOWS OF AN ENTERPRISE

The table on the right depicts a partial list of documents that most enterprises process on a regular basis.

Items underlined represent high-risk inbound mailflows for which firms likely pay a high "analog tax" in the form of significant time delays, paper management costs, and barriers to fast-cycle collaboration among teams.

The figure to the right depicts the operational capabilities of attracting and keeping customers for life—customer engagement—calling attention to the two applications of transactional content processing: digital mail processing that speeds in-bound customer communications and requests to the appropriate department and customer portals that provision content and self-service applications to customers, trade partners, and customer-facing staff.

ACCOUNTING
Account Statements
Annual Reports
Financial Models
Financial Statements
General Ledger
Internal Audit Reports
Internal Project Analyses
Invoices
Portfolio Management Reports
Purchase Orders
Pro Forma Statements
Quarterly Statements
Tax Documents

BILL PRESENTMENT / PAYMENT
Account Statements
Invoices
Payment Advice Notes
Payment Orders / Histories
Receipts
Vendor Profile Data Forms

CALL CENTERS
Account Statements
Bills
Collection Notes
Customer Communications
Incident Reports
Notification Letters
Price Lists
Product / Service Catalogs
Receipts
Service Outage Reports
Service Reports / Notes
Service Requests
Termination Notices

COLLABORATION
Agreements
Calendars
Correspondence
Design Drawings
Emails
Historical Documents
Marketing Collateral
Project Logs
Proposals
Schedules
Spreadsheets
Text Documents
Web Documents

MARKETING OPERATIONS
Coupons
General Business Reports
Marketing Reports
Multimedia Presentations
Newsletters
Product Info and Spec Sheets
Product / Service Catalogs
Promotions Brochures
Qualification / Reference Reports
Surveys
Targeted Emails

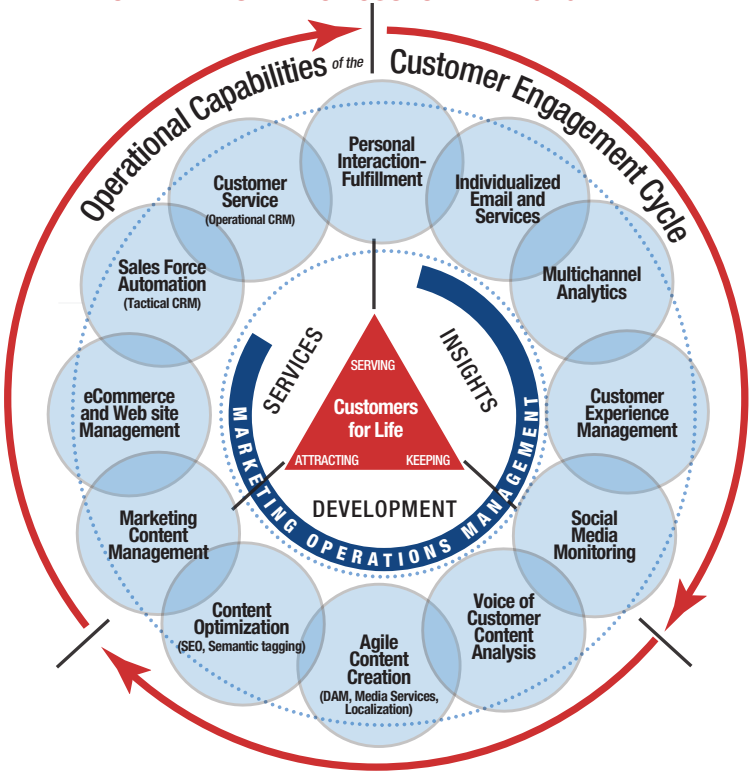
HR AND PAYROLL
Resumes
Cover Letters
Recruiting Collateral
Employment Policy Handbooks
Employee Surveys
Benefit Enrollment Documents
Benefit Claim Documents
OSHA Compliance Docs
Federal/State Compliance Docs
Training Seminar Materials
Workbooks / Online Resources
Salary Surveys
Job Opening Announcements
Skills Matrices
Work Agreements

PROCUREMENT
Agreements
Catalogs
Misc. Analysis Reports
Payable Invoices
Price Lists
Product Manuals
Purchase Orders
Purchase Requisitions (BOMs)
Receipts for Goods Received
RFQs / RFPs
Specification Sheets

PROJECT MANAGEMENT
Assignments
Equipment Maintenance Plans
Equipment Profiles
Equipment Receipts (POP)
Guidelines
Maintenance and Repair Docs
Maintenance History Summaries
Maintenance Records
Maintenance Schedules
Programmed Maintenance (by Mfr.)
Repair Expense Documents
Repair Expense Tracking
Schedules
Tracking Reports

SALES OPERATIONS
Account Statements
Arrangement Letters
Bills of Material
Channel Lists
Commission Reports
Customer Communications
Inventory Reports
Leads Reports
Letters of Intent
Presentations
Price Lists
Product / Service Catalogs
Promotion Materials
Proposals
Quotes
Receipts
Return / Credit Documents
Sales Agreements
Sales Reports

MAILFLOW DELAYS AFFECT CUSTOMER ENGAGEMENT



Engagement_Cycle_Capabilities.A.1.7 ©2009 GISTICS All rights reserved

Which of these types of documents flow through these industries or supply chains?

MAILFLOW NOT SIMPLE

The table below depicts a partial list of documents that flow through particular industries and supply chains on a regular basis.

Items underlined represent high-risk inbound mailflows in which firms likely pay a high "analog tax" in the form of significant time delays, paper management costs, and barriers to fast-cycle collaboration among decision-making teams.

BANKING
Account Agreements
Account Balance Statements
Credit Appraisals
Customer Correspondence
Customer Payments
Loan Applications
Prospects Lists and Information

CONSTRUCTION
Agreements
Closing Statements
Construction Permit Requests
Construction Permits
Construction Plans / Designs
Construction Status Reports
Inspection Certificates
Invoices
Material Requirements Sheets
Purchase Orders
Specification Sheets

HEALTH CARE INDUSTRY
Appointment Books
Doctor Fees Reports
Insurance Applications
Insurance Cards
Patient Records
Payment Invoices
Prescription Slips
Verifications of Insurance Coverage
X-rays

FINANCIAL INDUSTRY
Appraisals and estimates
Customer Trade Orders
Trade Confirmations
Research Reports
Account Balance Statements

INSURANCE
Accident/ Catastrophe Reports
Claims Reports
Cost Estimates
Disputes / Counter claims
Insurance Policy Agreements
Invoices
Lists of Asset Repair Vendors
Payments
Prospects Lists
Repair Work Approvals
Risk Profiling Reports

LEGAL SERVICES
Agreements
Arbitration Agreements
Corporate Filings
Court Filings
Lawsuits
Letters and Reports
New Patent Filings
Proposals
Time and Expense Reports

MANUFACTURING
Bills of Material
CAD / CAM / CAE Drawings
Component Catalogs
Detailed Product Specifications
Inspection Approvals
Inventory Reports
Operating Procedures & Manuals
Quality Specs
Repair Logs
Request Documents
Shipping Tags
Supplier Lists / Info
Test Plans

PROFESSIONAL SERVICES
Agreements
Budget Reports
Invoices
Letters and Reports
Plans and Schedules
Proposals
Purchase Orders
Time and Expense Reports

PHARMACEUTICAL
Chemical Reports
Clinical Test Procedure Manuals
New Drug Application (NDA) Approvals
NDA Filings
Patient Summaries

Research Plans and Schedules
Research Reports
Statistical Analysis Reports
Testing Reports / Records

TAX, LICENSE, & CUSTOMS
Customs Documents
Customs Regulation Manuals
Denied / Restricted Party Lists (for Drawback Documents)
Exports
General Instructions
Import/Export Licenses
Other Regulatory Compliance Docs
Sales and Use Tax Docs
Tariff / Rate Rules
US / VAT Tax Docs

TRANSPORTATION / LOGISTICS
Agreements
Barcode Labels
Bills of Lading / Airbills
Bills / Invoices
Broker / Forwarder Costs

Capacity Planning, Optimization, and Demand Forecasting Reports
Daily Schedules & Inventory
Exception Handling Documents
Feedback / Quality Surveys
General Instructions / Manuals
Landed Cost Estimation Reports
Loss/Damage Claim Documents
Performance Reports
Pickup Request Documents
Price Lists
Quotes
Receipts
Return Documents
Service Level Reports

TRAVEL AND LODGING
Invoices
Itineraries
Reservation Confirmations
Tickets
Travel Preference Reports

WAREHOUSE MANAGEMENT
Agreements
Barcode Labels
Bills of Lading / Airbills
Bills / Invoices / Receipts
Broker / Freight Forwarder Costs
Capacity Planning, Optimization, and Demand Forecasting Reports
Daily Schedules
Exception Handling Documents
Feedback / Quality Surveys
General Instructions / Manuals
Inventory Reports
Loss / Damage Claim Documents
Order and Order Detail Documents
Performance Reports
Pickup Request Documents
Price Lists
Quotes
Reorder Documents
Return Documents

How long must firms store various types of business records and customer communications?

BUSINESS RECORD RETENTION

Digital mail processing helps to reduce the cost of records management, eliminating the surprising and largely hidden costs of labor, physical storage, photocopying, and productivity lost in searching for or re-creating lost or misplaced documents.

According to a published report of AIIM, an international professional association dedicated to information and image management, the average company studied spends.

- **$20** in labor to file one document
- **$120** in labor to find a misfiled document
- **$220** in labor to reproduce a lost document
- **$8** to **$15** to courier or overnight a document
- **$12,000** per year to maintain one file cabinet with four file drawers

AIIM also reports that a typical firm

- Photocopies a typical document **19 times**
- Loses **7.5 percent** of all documents
- Misfiles a remaining **3 percent** of all documents

In addition, AIIM reports, professionals spend **11 percent** of their time reading information and up to **50 percent** of their time searching for pertinent information.

INVESTMENT JUSTIFICATION

The infrastructure of digital mail processing includes records management and workflow—critical elements of enterprise records management.

ONE YEAR

Correspondence with customers and vendors
Duplicate deposit slips
Purchase orders (other than purchasing department copy)
Receiving sheets
Requisitions and stockroom withdrawal forms

THREE YEARS

Employee personnel records (after termination)
Employment applications
Expired insurance policies
Form I-9 (employment eligibility verification)
General correspondence
Help wanted ads
Internal audit reports
Internal reports
Petty cash vouchers
Physical inventory tags
Savings bond registration records of employees
Time cards for hourly employees

SEVEN YEARS

Accident reports and claims
Accounts payable ledgers and schedules
Accounts receivable ledgers and schedules
Auto mileage logs
Bank statements and reconciliations
Canceled checks: general, payroll, payroll taxes
Canceled stock and bond certificates
Charitable contribution acknowledgments of $250 or more
Employment tax records
Expense analyses and expense distribution schedules
Expired contracts, leases
Expired option records
Inventories of products, materials, supplies
Invoices to customers
Notes receivable ledgers, schedules
Payroll records and summaries, including payment to pensioners
Plant cost ledgers
Purchasing department copies of purchase orders
Sales records
Time books
Travel and entertainment records
Voucher registers and schedules
Vouchers for payments to vendors, employees, etc.

LONG TERM

Annual financial statements
Audit reports from CPA / accountant
Business permits
Buy-sell agreements
Canceled checks: fixed assets, income taxes
Cash disbursements journals
Charts of accounts
Contracts
Leases now in effect
Corporate documents (incorporation, charter, by-laws, etc.)
Deeds, mortgages, bills of sale
Depreciation schedules
Documents substantiating fixed asset additions
Employee records: actuarial reports, financial statements, correspondence with IRS and Dept. of Labor, plan and trust agreements
General and subsidiary ledgers and year-end trial balances
Insurance records: current accident reports, claims, and policies
Investment trade confirmations
IRS revenue agents' reports
Legal records, correspondence
Minutes books of directors and stockholders
Payroll tax returns
Property records
Real estate appraisals by external appraisers
Retirement and pension records
Sales and use tax returns
Tax returns and worksheets (not mandated but recommended)
Trademark and patent registrations
Training manuals

NOTE: Document retention regulations and policies vary according to a particular nation and province.

What constitutes a customer engagement package, a logical collection of digital contents of a digital customer file?

TRANSFORMING CONTENT INTO ENGAGEMENT

Frontline staff interacts and communicates with customers throughout the workday, using the best available information to answer questions, render services, and keep customers satisfied.

A closer examination of how frontline staff engages customers and suggests three transformational ideas:

- Live improvisational performances by frontline staff engage customers in problem-solving collaborations.
- A fully informed frontline staff, accessing all pertinent information related to the customer, stands a much better chance of satisfying the customer.
- Integrated collections of all pertinent customer information require digital objects, workflow engines, and content archiving.

The figure on the right depicts a **content services workflow** for improving customer engagement among frontline staff, emphasizing the production and provisioning of **customer engagement packages** to the frontline staffer.

CUSTOMER ENGAGEMENT PACKAGES

An accessible, digital collection of pertinent customer information, enabling frontline staffers to more effectively engage and satisfy customers and trade partners, defines the strategic endpoint of digital mail processing

Similar in structure to virtual case files and digital account files, customer engagement packages may contain emails and attached documents, Web pages from corporate and social networking sites, videos, and photos.

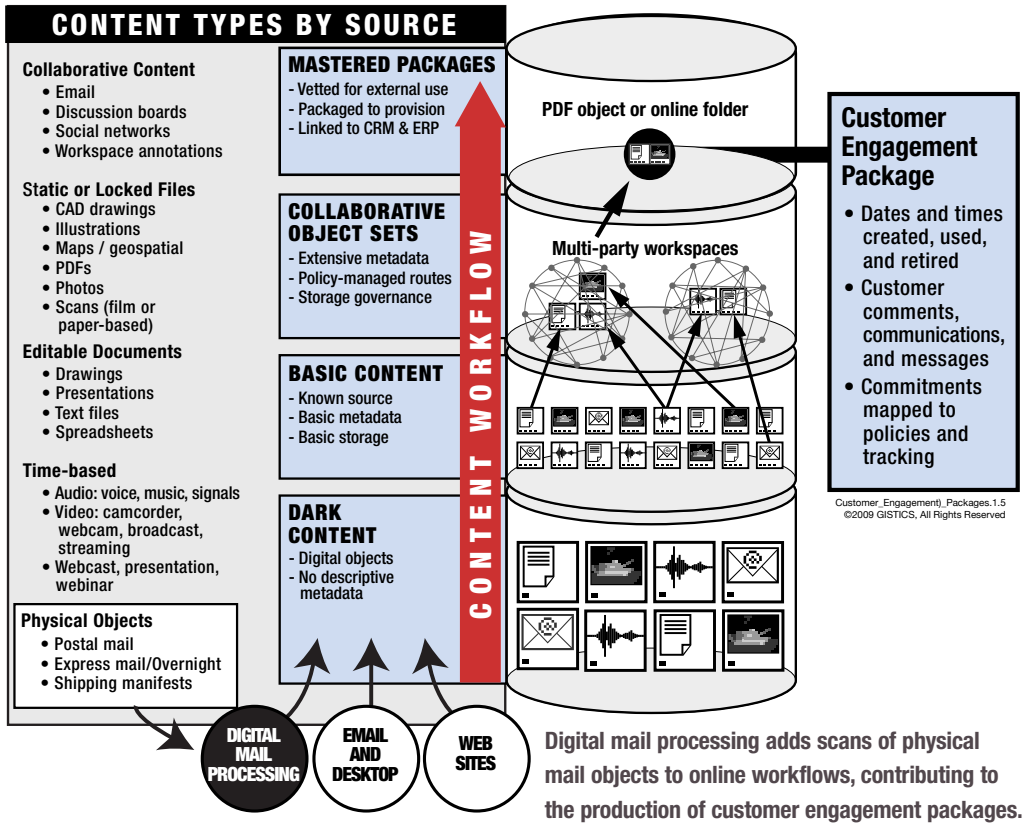
Frontline staff, partners, and managers may **simultaneously access any customer engagement package**, speeding ad hoc collaboration, decision making, and approvals.

PROVISIONING PACKAGES TO CUSTOMERS

A well-designed document archive and workflow platform enables authorized personnel to share portions of customer engagement packages with customers, as well as service intermediaries (maintenance and repair organizations). Authorized personnel can send an email with hyperlinks to view documents, emails, forms, etc. within a service portal, or enable users to download policy-managed PDFs—a customer engagement package.

Customer engagement packages also enable frontline staff, partners, and managers to simultaneously access any customer communication or content—no hand off's, no lost folders, and no delays.

STRATEGIC ENDPOINT OF DIGITAL MAIL PROCESSING: CUSTOMER ENGAGEMENT PACKAGES



Digital mail processing adds scans of physical mail objects to online workflows, contributing to the production of customer engagement packages.

What elements comprise a customer engagement package?

ENTERPRISE CONTENT MASH-UPS

Young adults today grab mash-up content—photos, graphics, videos, music—creating a mixed media file that they subsequently share with friends.

The figure below depicts an example of how an organization might combine emails, forms, videos, and faxes related to a particular account, creating a **customer engagement package**.

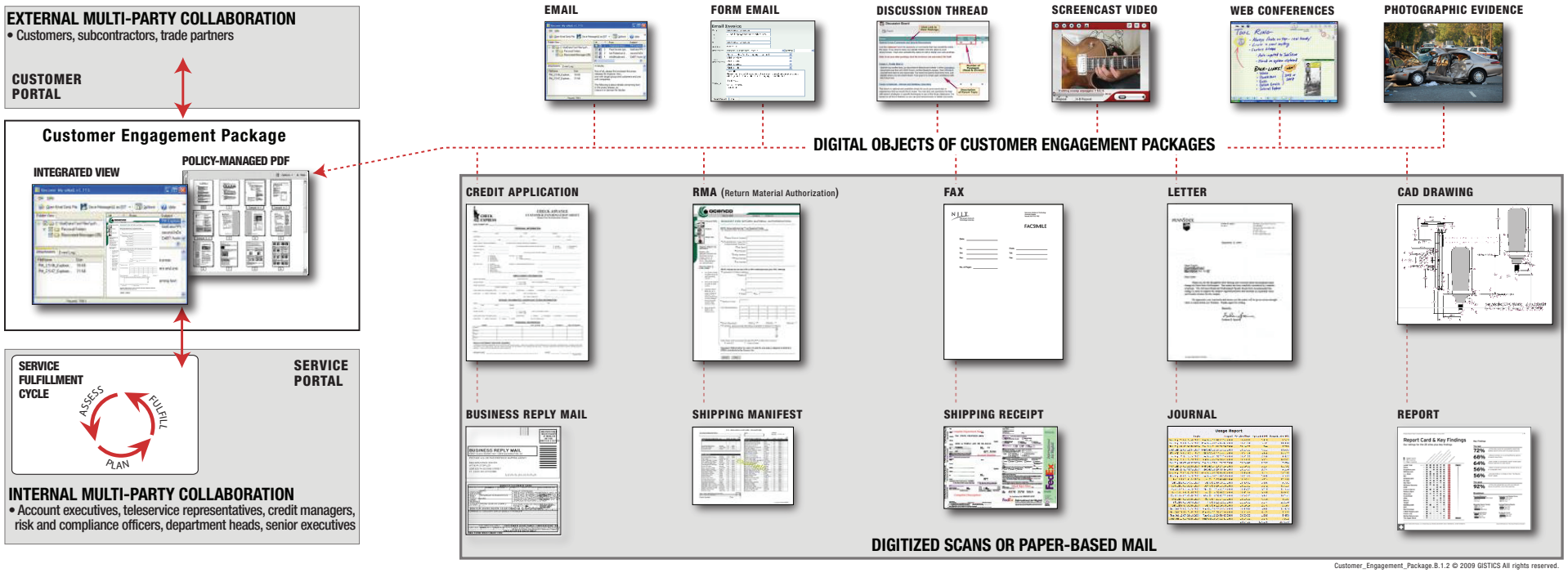
For example, a customer engagement package contains all digital content related to one **open customer case,** including emails, forms, faxes, drawings, receipts, etc.

Authorized users may access customer engagement packages in a customer portal or an internal service portal.

ALL IN ONE PLACE FOR MULTI-PARTY COLLABORATION

The figure below also depicts how multiple parties can examine all or portions of a package in a concurrent or time-shifted basis, adding comments and visual annotations in a specific context of a customer engagement (disputed item on invoice or return authorization). Concurrent, multi-party collaboration can eliminate hours or days in fulfilling a request for service or information.

DIGITAL MAIL PROCESSING SUPPORTS THE TRANSFORMATION PAPER-BASED FORMS AND COMMUNICATIONS INTO MIXED-MEDIA CUSTOMER ENGAGEMENT PACKAGES



Section 4

Strategic Use Cases and Payback Scenarios

What makes an IT investment strategic?

INNOVATION AND MARKETING

Peter Drucker, expert on management, wryly noted, “Only two things create value: innovation and marketing. All else is cost.”

The figure on the right depicts a generic strategy map, emphasizing the practical implementation of Drucker’s dictum.

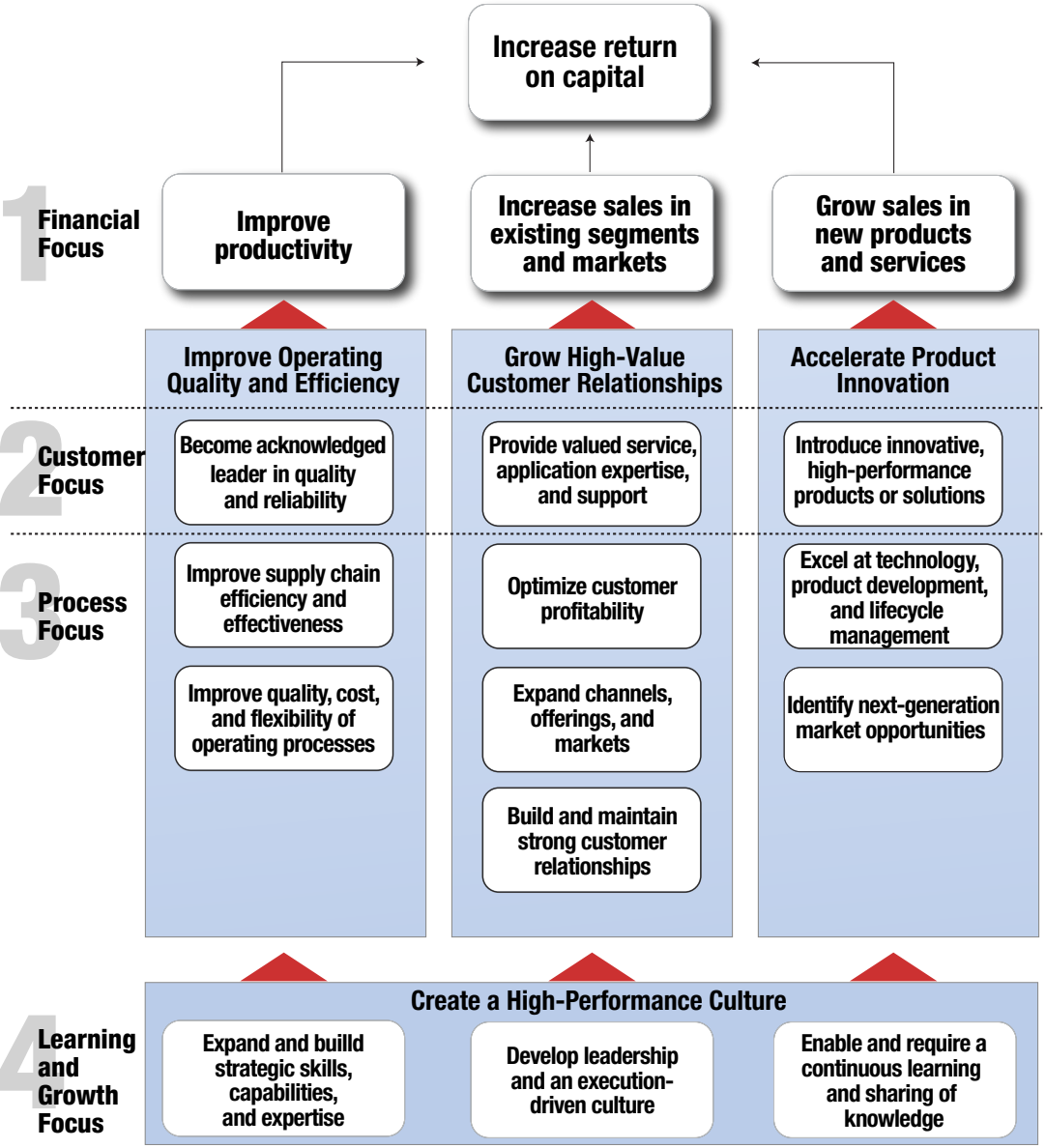
In this paper, we make the case that digital mail processing delivers substantial short-term productivity improvements, increases sales in existing segments and marketing, and supports bringing innovation to market—greater levels of customer engagement and faster fulfillment of requests for information or services.

In this section of the paper, we will examine four strategic use-case scenarios, correlating the criteria as depicted in this strategy map to the following:

- Processing new loan applications
- Closing an accounts receivable
- Processing a new, complex order
- Processing a new mortgage.

In each use case, we will compare the activity costs of current physical mail and service fulfillment workflows with all-digital workflows enabled by digital mail processing.

BASIC STRATEGY MAP DEPICTS THREE AREAS OF RETURN ON IT INVESTMENT



What drives the return on IT investments?

THE PROMISE AND REALITY OF IT INVESTMENTS

Each new wave of information technology arrives with a unique set of opportunities.

The arrival of mainframes gave many firms unprecedented ability to control the fundamentals of their businesses, in particular, inventory and accounting. However, this opportunity demanded mastery of software development.

Minicomputers and packaged software gave many firms the ability to automate specialized business processes and departments, such as human resources and manufacturing. This opportunity required new investments in training.

Personal computers, packaged software, and local area networks enabled many firms to eliminate typing pools and clerical staff. This opportunity required new investments in industry-standard hardware and software, as well as in user support and help desks.

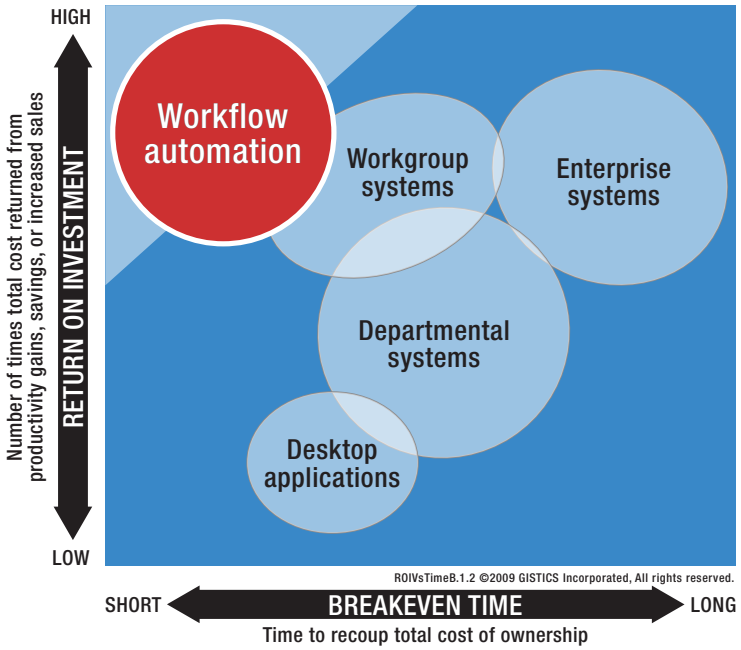
The Internet enables many firms to engage customers worldwide 24x7, reducing costs and time-to-market cycles. This opportunity still requires huge investments in specialized IT infrastructure and in re engineering core business processes.

20-20 INSIGHT

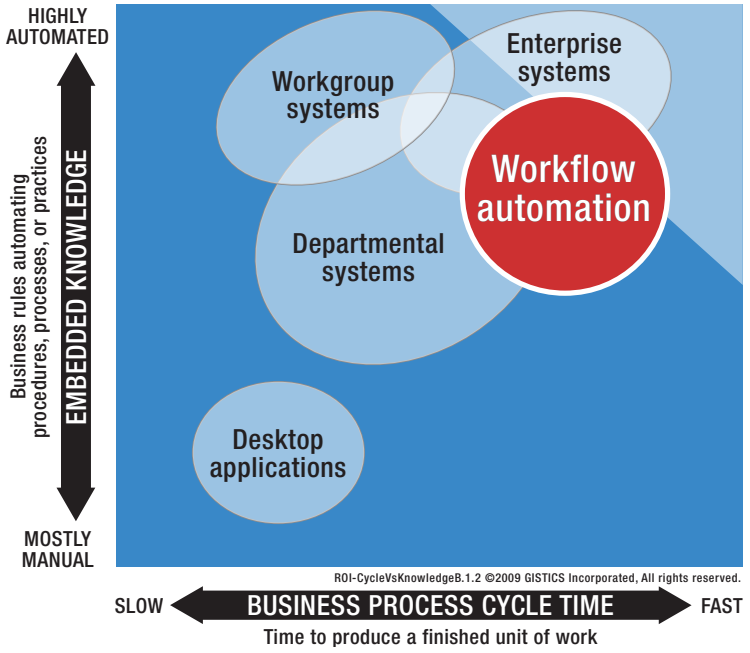
GISTICS' research of hundreds of deployed systems at 15,000+ end-use firms reveals that bottom-up automation solutions yield the highest return on investment when compared to other options. Why? Workflow and workgroup automation rarely addresses more than a small, tightly focused group of users.

The figures below depict the distilled insights of industry research: **The highest return-on-investment for information technology results from quickly deployed solutions (usually in workgroups or departments) that successfully automate a business process.**

WORKFLOW AUTOMATION DELIVERS GREATEST RETURNS



BY SPEEDING CYCLE TIMES FROM THE BOTTOM UP



What assumptions underlie the productivity dividends in mortgage processing, emphasizing the benefits of digital mail processing?

PROCESSING NEW LOANS

Lending institutions make money by lending money to businesses and individuals.

In the particular case of home mortgages, a network of middlemen facilitate the lending process; these middlemen often include mortgage brokers, appraisers, and loan aggregators—with great variation across regional markets (states or nations).

The lending process often entails the production, delivery, and review of 50-plus pages of material: loan application forms, credit reports, legal disclosures, tax returns, appraisals, permits, waivers, etc.

Digital mail processing addresses the **labor- and cost-intensive** process of getting the right documentation to all the authorized individuals involved in the lending process, minimizing delays, errors, and redundant activities of a multi-step, multi-party workflow.

ANNUAL COST SAVINGS

The figure to the right depicts a **net gain of four days** of a lending institution that processes 25,000 loan packages (averaging $185,000) per year, delivering **$11,918,750** in total cost savings from:

- **$10,688,750** in annual labor savings or 75.5 percent reduction labor
- **$1,250,000** in annual cost savings or 100 percent reduction in materials

A lending institution may realize these labor savings in a staff reduction as well as "banking" the operational capacity to handle a significant increase in lending activity.

SOURCE OF INCREASED REVENUES

The payback model estimates potential revenues from realizing **162** extra revenue-producing days from a **greater daily capacity** to process loan applications already in the pipeline:

- Daily processing capacity expands from **68.5** loans per day or 25,000 per year to **123.3** loans per day or 45,000 per year.

Increased productivity in loan processing represents a potential of **$70,191,964** on new revenue from existing lines of business and revenue pipelines, comprise of the following:

- **Receipt of $20,555,556 in incremental revenue from points** (one percent of $185,000 loan package)
- **Activation of a loan four days sooner**, thus earning additional interest income of **$49,636,409** calculated at six percent per annum.

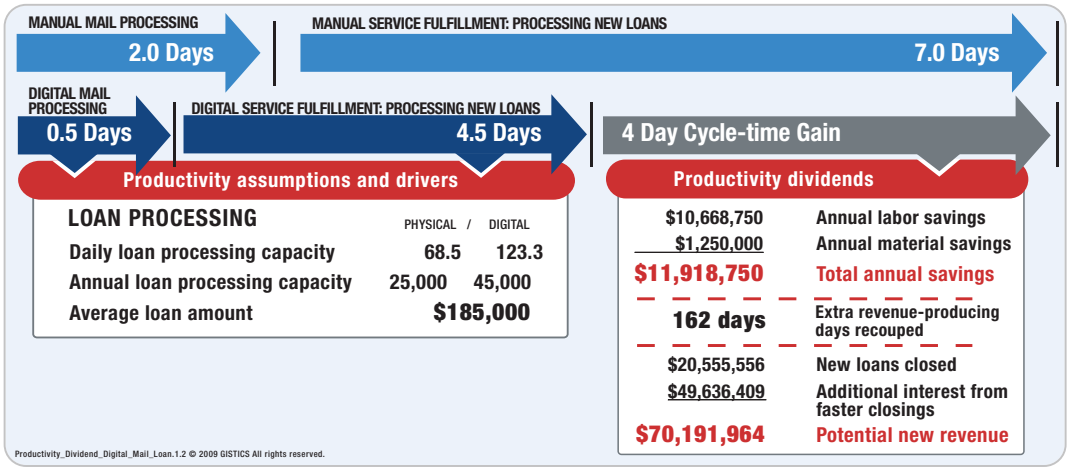
DESCRIPTIVE DATA MODEL

The detail analytic model (SEE two following pages) separates efficiency-based **cost savings** and **revenue gains**, calculating two different payback scenarios.

The activity-based data of the models demonstrate cost savings from current workloads. Increase revenues derive from faster revenue cycles and greater capacity to process more loans.

Unlike many efficiency benchmarks that examine the contribution of workflow automation to a specific operation (such as CRM)—where only a small number of users benefit from the exchange certain types of information—the productivity dividend as described in this paper spreads to every aspect of the enterprise: sales, account management, customer service, HR, legal, administration, etc. Processing loans represents one of several benefits of digital mail process in lending institutions.

FASTER PROCESSING OF IN-BOUND LOAN PACKAGES INCREASES REVENUE IN TWO WAYS



How can digital mail processing of new loans reduce cycle time, emphasizing the benefits of digital mail processing?

Use-case payback scenario: Loan processing agent receives 50-page loan application package, including legal disclosures, forms, applicant financials, and regulatory notices, from independent broker and initiates evaluation workflow.

LABOR TASKS	LABOR / MINUTES		NOTES
SUBORDINATE ACTIVITIES	PHYSICAL	DIGITAL	DESCRIPTION OF ACTIVITIES: *ITALICS INDICATES SYSTEM-ASSISTED ACTIVITIES OF A DIGITAL MAILROOM*
MAIL TRANSPORT WORKFLOW			
Central mail center - receives, processes and sorts mail	**15**	**22**	Mailroom staff receive intake, unbundle, bulk sort (junk mail, periodicals, correspondence, priority, etc.) *Receive, open, sort, categorize, execute digitization process, verify addressee and key reference IDs*
Certify, route and deliver to office location	**10**	**0**	Mailroom staff certifies receipt, pre-routes bundles by location, transports, ships or re-mails to office (often long distance) *No action required, documents have been digitized and ingested and metadata, including addressee, that defines routing*
Inter-office sorting, distribute to inbox, and collecting by employee	**15**	**0**	Office administrator receives, sorts, and fills employee in-boxes, agent retrieves mail periodically at the risk of interruptions and distractions *Loan agent is notified via email or other digital channel (text or in-system message etc.) that package awaits his or her review*
Photocopy and file loan application packages	**45**	**0**	Agent makes 5 copies for: supervisor, underwriter, compliance manager, records management, a working copy and files each *Application is accessible by all relevant parties with varying levels of access rights to all or part of the application package*
Review application package, verify sources, assess issue and determine actions	**60**	**15**	Agent reviews and verifies application, determines issues to resolve accepts ownership of application processing *Configurable views into documents accelerate review efficiency, and offer potential for automation, quality control and governance*
Open new loan docket and set up organizational tools	**18**	**5**	Agent starts new docket, creates various file folders, fills out process tracking forms *Agent opens new loan processing project or workspace in system*
Fill out processing forms, and distribute packages to multiple parties	**45**	**5**	Agent defines routing and workflow, prepares request forms and sends packages to relevant workflow actors *Workflow automation configuration defines actors and distributes e-notifications prompting recipients to action*
Execute parallel, multi-party review and approval cycle	**600**	**150**	Agent executes complex review and approval workflow comprised of 5 participants: agent, agent's supervisor, underwriter, compliance manager, and records administrator *System-facilitated review and approval workflows with collaboration tools and status-based access controls*
SUBTOTAL (minutes)	**808**	**197**	

LABOR COSTS (dollars)	PHYSICAL	DIGITAL	DIFFERENCE BASED ON PORTION OF WORK COMPLETED BY EACH ACTOR
Mailroom Staff (physical)	**$8.33**	**$0.00**	$20 per hour fully-burdened rate
Mailroom Staff (digital)	**$0.00**	**$11.00**	$30 per hour fully-burdened rate
Office Administrative Staff	**$6.25**	**$0.00**	$25 per hour fully-burdened rate
Loan Processor Agent	**$238.00**	**$49.58**	$35 per hour fully-burdened rate
Loan Processing Supervisor	**$85.00**	**$21.25**	$50 per hour fully-burdened rate
Loan Underwriter	**$168.00**	**$42.00**	$60 per hour fully-burdened rate
Compliance Manager	**$45.00**	**$11.25**	$45 per hour fully-burdened rate
Records Management Administrator	**$15.00**	**$3.75**	$30 per hour fully-burdened rate
TOTAL LABOR COSTS	**$566.00**	**$139.00**	

How can digital mail processing of new loans save $11,918,750 in costs, add $20,555,556 in new loans and add $49,636,409 in incremental interest earnings?

MATERIAL COSTS (dollars)	PHYSICAL	DIGITAL	NOTES
Mail transport, shipping, postage	$15.00	$0.00	Blended cost of local or re-route containers, couriers and postage
Photocopies	$5.00	$0.00	250 copies @ $.02 each
File storage overhead and maintenance	$30.00	$0.00	$12K/yr. per 4-drawer file cabinet, assume 0.25% per application package
TOTAL MATERIAL COSTS	$50.00	$0.00	

ANNUAL VOLUMES AND COSTS			
Loan applications processed per year		25,000	
ANNUAL COSTS ($)	PHYSICAL	DIGITAL	NOTES
Annual labor costs	$14,139,583	$3,470,833	Fully-burdened labor costs
Annual material costs	$1,250,000	$0.00	Total material costs associated with process
Annual rework costs	$2,770,125	$312,375	Costs from errors and missed deadlines. 10% reworks physical, 5% reworks digital
TOTAL ANNUAL COSTS	$18,159,708	$3,783,208	

PRODUCTIVITY DIVIDENDS: COST SAVINGS, INCREASED PRODUCTIVITY, INCREMENTAL REVENUE

ANNUAL SAVINGS ($)	SAVINGS	PERCENT	NOTES
Total labor savings	$10,668,750	75.45%	Percent reduction in costs, physical vs. digital
Total material cost savings	$1,250,000	100.00%	Percent reduction in costs, physical vs. digital
TOTAL ANNUAL SAVINGS	$11,918,750		

CYCLE TIME (days)	PHYSICAL	DIGITAL	NOTES
Mail transport workflow	2.0	0.5	Linear workflow to distribute physical packages, per loan processed
Service fulfillment workflow	7.0	4.5	Non-linear workflow - variable routing & alterations, per loan processed
TOTAL DAYS PER LOAN	9.0	5.0	DAYS TO COMPLETE PROCESSING OF ONE LOAN
Loan processing capacity	68.5	123.3	Number of loans that can be processed each day
Annual loan processing capacity	25,000	45,000	Number of loans that can be processed per year
NEW REVENUE GAINS ($)	NEW WORK DAYS	NEW REVENUE	ELIMINATING CYCLE TIME BOTTLENECKS INCREASES CAPACITY, OFFERING POTENTIAL TO PROCESS MORE LOANS
Increased # of loans closed	162	$20,555,556	Revenue generated at closing - assume 1 point (1%) for each average. $185K loan
Increased # of earning days	162	$49,636,409	Interest on additional loans in place each extra day (using average. $185K loan at 6% IO, compounded)
TOTAL NEW REVENUE		$70,191,964	POTENTIAL NEW REVENUE BY LEVERAGING INCREASED CAPACITY

INTANGIBLE GAINS	
Brand Reputation	Reputation among wholesale loan broker market as fast-processing lender - reducing their sales cycles
Brand Reputation	Reputation for fewer errors and reworks - reducing brokers operating costs and headaches
Fewer process failures	Fewer deals lost from expired rate locks, perceptions of incompetence and lack of customer service

What assumptions underlie the productivity dividends in new account establishment, emphasizing the benefits of digital mail processing?

SETTING UP NEW COMPLEX ACCOUNTS

All commercial firms find and serve customers. Digital mail processing addresses the **often-sloppy hand-off** between "finding" a customer and "serving" one.

The figure below depicts a **net gain of six days** of a firm with annual sales of $1B.

The six-day cycle-time gain derives from the operational efficiencies of two workflows:

- **Mail transport workflow**: faster "inputs" to all core business processes
- **Service fulfillment workflow**: faster "resolution" of new account set-up workloads

In a larger or smaller business, savings and revenues would increase or decrease proportionally.

ANNUAL COST SAVINGS

Total cost savings in this model of **$6,807,301** represent less labor and lower material costs needed to set-up **25,000** new accounts: **$5,939,688** or 79.8 percent reduction labor and **$867,614** or 67.1 percent reduction in materials.

SOURCE OF INCREASED REVENUES

The payback model estimates potential revenues from realizing **128** extra revenue-producing days from two sources:

- **Greater daily capacity to convert** new accounts into paying customers by reducing cycle time and labor content needed to activate a new billing cycle:
  - Expanding daily processing capacity from **113.6** account activations to **272.7** accounts activations.
  - We assume that an **all-digital workflow** will enable a firm to convert 25 percent of its greater processing capacity (a total of 128 days of productivity) into **$30,989,583** of incremental sales.
  - In accounting terms, this figure represents **faster revenue recognition**—the result of fewer days needed to activate a revenue-generating service or deliverable.
- "**Getting it right the first time**" enables a firm to recoup of **$6,177,916** or **10 percent** of all revenue from:
  - Resolution of new account activation workflows with fewer errors, reworks, "make goods", and compensatory discounts or fee waivers.

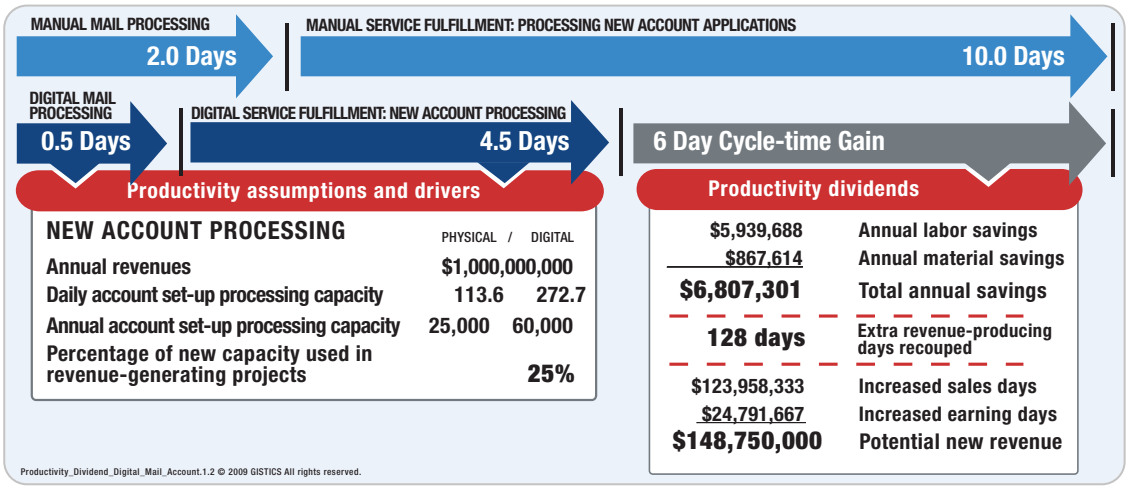
DESCRIPTIVE DATA MODEL

The detail analytic model (SEE two following pages) separates efficiency-based **cost savings and revenue gains**, calculating two different payback scenarios.

The activity-based data of the models supports the claim that most enterprises can realize significant increases new revenue and lower costs from the efficiency gains of digital mail processing.

Unlike many efficiency benchmarks that examine the contribution of workflow automation to a specific operation (such as SCM, CRM, etc.)—where only a small number of users create and exchange certain types of information—the productivity dividend as described in this paper digital spreads to every aspect of the enterprise: sales, customer service, HR, legal, administration, factory floor, etc.

TWO WORKFLOWS PRODUCE PRODUCTIVITY DIVIDENDS FOR NEW ACCOUNT SET-UP



How can digital mail-processing reduce cycle time for new account establishments?

Use-case payback scenario: New account specialist receives account application and first order - including service order form, credit application, customer info forms and copies of relevant permits and licenses - completes account setup and submits order for fulfillment.

LABOR TASKS	LABOR / MINUTES		NOTES
SUBORDINATE ACTIVITIES	PHYSICAL	DIGITAL	DESCRIPTION OF ACTIVITIES: *ITALICS INDICATES SYSTEM-ASSISTED ACTIVITIES OF A DIGITAL MAILROOM*
Central mail center - receives, processes and sorts mail	15	22	Mailroom staff receive intake, unbundle, bulk sort (junk mail, periodicals, correspondence, priority, etc.) *Receive, open, sort, categorize, execute digitization process, verify addressee & key reference IDs*
Certify, route and deliver to office location	10	0	Mailroom staff certifies receipt, pre-routes bundles by location, transports, ships or re-mails to office (often long distance) *No action required, documents have been digitized and ingested and metadata, including addressee, that defines routing*
Inter-office sorting, distribute to inbox, and collecting by employee	15	0	Office administrator receives, sorts, and fills employee in-boxes, specialist retrieves mail periodically at the risk of interruptions and distractions *New account specialist is notified via email or other digital channel (text or in-system message etc.) that package awaits his or her review*
Receive package, make copies, and create new account file	45	0	Specialist makes four copies for: supervisor, credit line manager, records management, a working copy and files each *Application is accessible by all relevant parties with varying levels of access rights to all or part of the application package*
Review application package, verify sources, assess issue and determine actions	60	15	Specialist reviews and verifies application, determines issues to resolve accepts ownership of application processing *Configurable views into documents accelerate review efficiency, and offer potential for automation, quality control and governance*
Open new loan docket and set up organizational tools	18	5	Specialist starts new docket, creates various file folders, fills out process tracking forms *Agent opens new application processing project or workspace in system*
Fill out processing forms, and distribute packages to multiple parties	45	5	Specialist defines routing and workflow, prepares request forms and sends packages to relevant workflow actors *Workflow automation configuration defines actors and distributes e-notifications prompting recipients to action*
Execute review cycle and send services agreement to new customer	120	25	Specialist executes review and approval workflow comprised of three participants: specialist, new accounts supervisor, credit line manager, and records administrator, then sends services agreement to new customer *System-facilitated review and approval workflows with collaboration tools and status-based access controls, and automated generation of outbound electronic or paper mail*
Receive completed services agreement, review approve and place order	60	10	Specialist reviews agreement, secures approval from the new accounts supervisor recovers original order form from file and sends over order for fulfillment *System-facilitated final approval automatically invokes order processing*
SUBTOTAL (minutes)	388	82	

LABOR COSTS (dollars)	PHYSICAL	DIGITAL	DIFFERENCE BASED ON PORTION OF WORK COMPLETED BY DIFFERENT STAFF
Mailroom Staff (physical)	$8.33	$0.00	$20 per hour fully-burdened rate
Mailroom Staff (digital)	$0.00	$11.00	$30 per hour fully-burdened rate
Office Administrative Staff	$6.25	$0.00	$25 per hour fully-burdened rate
New Accounts Specialist	$202.95	$33.71	$45 per hour fully-burdened rate
New Accounts Supervisor	$40.80	$7.93	$80 per hour fully-burdened rate
Credit Line Manager	$32.40	$6.30	$60 per hour fully-burdened rate
Records Management Administrator	$7.20	$1.40	$30 per hour fully-burdened rate
TOTAL LABOR COSTS	$298.00	$60.00	

How can digital mail-processing of new account establishments save $6,807,301 in costs and add $148,750,000 in potential new revenues?

MATERIAL COSTS (dollars)	PHYSICAL	DIGITAL	NOTES
Mail transport, shipping, postage	$15.00	$0.00	Blended cost of local or re-route containers, couriers & postage
Photocopies	$6.75	$0.00	45 copies @ $.15 fully-burdened cost each
File storage overhead & maintenance	$30.00	$0.00	$12K/year to maintain 4-drawer file cabinet, assume 400 account files per cabinet
Digital infrastructure overhead		$17.05	Assume 75,000/year total, 1% assigned to this specific use case
TOTAL MATERIAL COSTS	$51.75	$17.05	

ANNUAL VOLUMES AND COSTS			
New account applications per year		25,000	

ANNUAL COSTS ($)	PHYSICAL	DIGITAL	NOTES
Annual labor costs	$7,448,333	$1,508,646	Fully-burdened labor costs
Annual material costs	$1,293,750	$426,136	Total material costs associated with process, digital side is burdened cost of infrastructure
Annual rework costs	$2,360,363	$174,130	Costs from errors and missed deadlines. 15% reworks physical, 5% reworks digital
TOTAL ANNUAL COSTS	$11,102,446	$2,108,913	

PRODUCTIVITY DIVIDENDS: COST SAVINGS, INCREASED PRODUCTIVITY, INCREMENTAL REVENUE

ANNUAL SAVINGS ($)	SAVINGS	PERCENT	NOTES
Total labor savings	$5,939,688	79.75%	Percent reduction in costs, physical vs. digital
Total material cost savings	$867,614	67.06%	Percent reduction in costs, physical vs. digital
TOTAL ANNUAL SAVINGS	$6,807,301		

CYCLE TIME (days)	PHYSICAL	DIGITAL	NOTES
Mail transport workflow	2.0	0.5	Linear workflow to distribute physical packages, per account processed
Service fulfillment workflow	10.0	4.5	Non-linear workflow - variable routing and alterations, per account processed
TOTAL DAYS PER ACCOUNT	12.0	5.0	DAYS TO COMPLETE ONE NEW ACCOUNT SETUP
Account setup capacity	113.6	272.7	Number of new accounts that can be processed each day
Annual account setup capacity	25,000	60,000	Number of new accounts that can be processed per year

NEW REVENUE GAINS ($)	NEW WORK DAYS	NEW REVENUE	ELIMINATING CYCLE TIME BOTTLENECKS INCREASES CAPACITY, OFFERING POTENTIAL TO PROCESS MORE LOANS
Increased # of sales or earning days	128	$123,958,333	Additional revenue from increased capacity - assumes 25% utilization of new capacity
Increased # of earning days	128	$24,791,667	Reduction in lost sales from clumsy account setup order-processing, recoup 10% of sales
TOTAL NEW REVENUE		$148,750,000	POTENTIAL NEW REVENUE BY LEVERAGING INCREASED CAPACITY

INTANGIBLE GAINS	
Brand Reputation	Reputation among customers for fast-processing new accounts - competent service
Brand Reputation	Reputation for fewer errors and reworks - reducing customer's operating costs and/or headaches

What assumptions underlie the productivity dividends of the faster, more accurate processing of account payables, benefits deriving from digital mail processing?

ACCOUNTS PAYABLES

All organizations buy goods and services from a network of suppliers and service providers. This entails receiving and processing invoices and other forms of demand for payment.

Industry benchmarks indicated that **45 percent** of all invoices correspond to pre-established purchase orders in the accounting system of the buying firm. The remaining **55 percent** of payment demands do not have pre-established purchase orders (also known as "non-PO invoices"), entailing more work and a greater likelihood of errors, duplicate payments, and fraud.

The **account payables** (AP) function of the firm:

- Receives incoming invoices with approximately 15 percent in digital form—PDF or XML datastream—and the remaining 85 percent in paper form.
- Confirms the validity of the invoice or demand for payment, matching four to 14 business facts of the invoice to the terms of the purchase order or internal requisition or communication.
- Posts a cleared payment of the invoice to the accounting system.

Digital mail processing addresses the **inherent inefficiency** of processing paper-based invoices, speeding the delivery of **digitized versions of invoices** to AP staffers.

AP PROCESS ASSUMPTIONS

Our payback model assumes a firm with **$1B** in annual revenues, **$300 million** in resulting annual payables, and **200,000 invoice** workflows per year from a base of **3,000 vendors**, using **14 full-time clerks** and one supervisor.

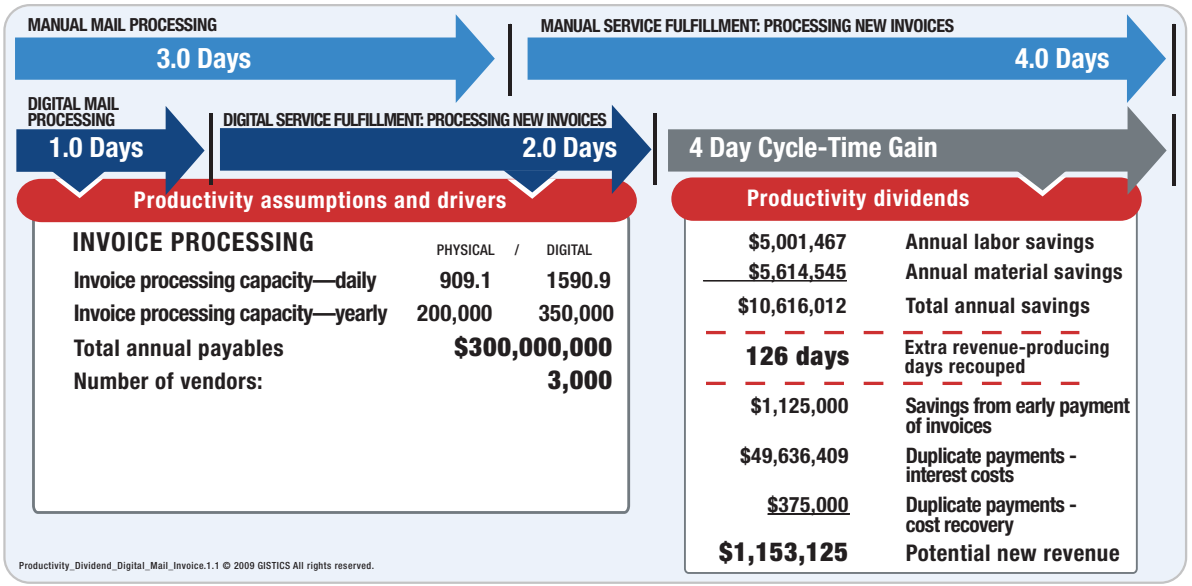
Using industry benchmarks, we assume that an AP clerk can process **1,200 invoices** per month using paper-based invoices and a modern accounting or ERP application. In an all-digital workflow, the processing capacity expands to **3,000** invoices per month.

We also assume that **15 percent** of the current-state account payables offer a **2.5 percent** early payment discount—which due to the inefficiency of paper-based workflows enables the firm to realize only half or 7.5 percent of all payables. An all-digital AP workflow increases both productivity and transparency: we assume that the firm can realize the remaining early payment discounts and, with greater confidence and transparency, negotiate new discount terms for another 15 per of total payments.

PRODUCTIVITY DIVENDEND

Annual labor savings represent doing more with fewer people Material savings derive from: 1) early payment discounts, 2) reduction of fraudulent payment, 3) elimination of interest payment and recovery fees associated with duplicate payments.

PRODUCTIVITY GROWS BY 80 PERCENT AND ANNUAL COSTS FALL BY $10 MILLION



How can digital mail-processing slash cycle times in accounts payable processing?

Use-case payback scenario: Accounts payable worker receives invoices and executes validation and payment workflows.

LABOR TASKS	LABOR / MINUTES		NOTES
SUBORDINATE ACTIVITIES	PHYSICAL	DIGITAL	DESCRIPTION OF ACTIVITIES: *ITALICS INDICATES SYSTEM-ASSISTED ACTIVITIES OF A DIGITAL MAILROOM*
Central mail center - receives, processes and sorts mail	**1.5**	**2.0**	Mailroom staff receive intake, unbundle, bulk sort (junk mail, periodicals, correspondence, priority etc.) *Receive, open, sort, categorize, execute digitization process, verify addressee and key reference IDs*
Certify, route and deliver to office location	**1.0**	**0.0**	Mailroom staff certifies receipt, pre-routes bundles by location, transports, ships or re-mails to office (often long distance) *No action required, documents have been digitized and ingested and metadata, including addressee, that defines routing*
Inter-office sorting, distribute to inbox, and collecting by employee	**1.5**	**0.0**	Office administrator receives, sorts, and fills employee in-boxes, AP worker retrieves mail periodically - at the risk of interruptions and distractions *AP worker is notified via email or other digital channel (text or in-system message etc.) that package awaits his or her review*
Receive invoice package	**4.5**	**0.0**	AP worker locates vendor file or creates new one and makes 4 copies for: supervisor, procurement manage, records manager, and working copy, and files each *Invoice package is accessible by all relevant parties with varying levels of access rights to all or part of the application package*
Check if matched to PO	**2.2**	**1.2**	AP worker checks for PO match in multiple locations defined by operational areas or purchase type, 40% have no PO whatsoever *Like invoices, POs are also found in the system - simplifying and accelerating review efficiency, with potential for automation, quality control and governance*
Identify proper PO owner / approver	**12.0**	**1.4**	AP worker contacts POs owner for approval, or when no PO issues execute search to identify who ordered and who approved purchase *Agent opens PO in system and auto-messages owner for payment approval The number of non-PO'd purchases will decrease dramatically from requirement to post to system to gain approvals*
Secure approval	**13.0**	**3.1**	AP worker executes review and approval workflow comprised of 3 participants: AP worker, procurement manager, PO/purchase approver, records manager, primarily through email and attachments transfer *System-facilitated review and approval workflows with collaboration tools and status-based access controls—consistent notification processes, doc version control etc.*
Update approved status	**3.5**	**0.0**	AP worker completes approval paperwork to update file, then makes 4 copies for: supervisor, procurement manage, records manager, and working copy and files each *None. Approval status is always maintained in the system by definition.*
Execute payment	**6.0**	**1.3**	AP worker collected up all required info from file and execute payment online *One button processing - message sent to payment processor or group*
SUBTOTAL (minutes)	**45**	**9**	

LABOR COSTS (dollars)	PHYSICAL	DIGITAL	DIFFERENCE BASED ON PORTION OF WORK COMPLETED BY DIFFERENT STAFF
Mailroom Staff (physical)	**$0.83**	**$0.00**	$20 per hour fully-burdened rate
Mailroom Staff (digital)	**$0.00**	**$1.00**	$30 per hour fully-burdened rate
Office Administrative Staff	**$0.63**	**$0.00**	$25 per hour fully-burdened rate
AP Worker	**$23.13**	**$3.63**	$45 per hour fully-burdened rate
AP Supervisor	**$2.60**	**$0.62**	$80 per hour fully-burdened rate
Procurement Manager	**$3.51**	**$0.84**	$60 per hour fully-burdened rate
Records Management Administrator	**$0.52**	**$0.12**	$30 per hour fully-burdened rate
TOTAL LABOR COSTS	**$31.00**	**$6.00**	

How can digital mail-processing of account payables save $10,002,376 in processing costs and $1,153,125 in ancillary gains from fewer mistakes and overpayments?

MATERIAL COSTS (dollars)	PHYSICAL	DIGITAL	NOTES
Mail transport, shipping, postage	$5.00	$0.00	Blended cost of local or re-route containers, couriers & postage
Photocopies	$3.30	$0.00	22 copies @ $.15 fully-burdened cost each
File storage overhead and maintenance	$30.00	$0.00	$12K/year to maintain 4-drawer file cabinet, assume 400 account files per cabinet
Digital infrastructure overhead	$0.00	$13.30	Assume 75,000/year total, 1% assigned to this specific use case
TOTAL MATERIAL COSTS	**$38.30**	**$13.30**	

ANNUAL VOLUMES AND COSTS			
New invoices processed per year		200,000	

ANNUAL COSTS ($)	PHYSICAL	DIGITAL	NOTES
Annual labor costs	$6,244,333	$1,242,867	Fully-burdened labor costs
Annual material costs	$7,660,000	$2,045,455	Total material costs associated with process, digital side is burdened cost of infrastructure
Annual rework costs	$3,754,170	$351,176	Costs from errors and missed deadlines. 15% reworks physical, 5% reworks digital
TOTAL ANNUAL COSTS	**$17,658,503**	**$4,253,134**	

PRODUCTIVITY DIVIDENDS: COST SAVINGS, INCREASED PRODUCTIVITY, INCREMENTAL REVENUE

ANNUAL SAVINGS ($)	SAVINGS	PERCENT	NOTES
Total labor savings	$5,001,467	80.10%	Percent reduction in costs, physical vs. digital
Total material cost savings	$5,000,909	65.29%	Percent reduction in costs, physical vs. digital
TOTAL ANNUAL SAVINGS	**$10,002,376**		

CYCLE TIME (days)	PHYSICAL	DIGITAL	NOTES
Mail transport workflow	3.0	1.8	Linear workflow to distribute physical packages, per account processed
Service fulfillment workflow	4.5	2.1	Non-linear workflow - variable routing & alterations, per account processed
TOTAL DAYS PER INVOICE	**7.5**	**3.9**	**DAYS TO COMPLETE ONE WHOLE INVOICE PAYMENT CYCLE**
Annual working days required	220	114	Number of work days required to process the existing volume of invoices
Annual invoice processing capacity	200,000	384,615	Number of new accounts that can be processed per year

ADDITIONAL COST SAVINGS		SAVINGS	NOTES
Savings for early payment		$1,125,000	Increase in payment discounts from on time payments, assume 2.5% terms, 15% of invoices
Duplicate payments - Interest cost		$28,125	Borrow $ to cover cash flow, .5% dupe payments, 4.5 mo. average term @ 5% interest only
Duplicate payments - cost recovery		$375,000	Outsource collections on dupe payments, vendor takes 25%
TOTAL ANCILLARY GAINS		**$1,153,125**	

INTANGIBLE GAINS	
Brand Reputation	Reputation among vendors for fast-processing invoices
Brand Reputation	Results in closer relationships with vendors - more favorable terms and more accommodation in other aspects of doing business
Brand Reputation	Reputation for fewer errors and reworks - reducing everyone's operating costs and headaches
Brand Reputation	Reputation for fewer errors and reworks—reducing everyone's operating costs and headaches

What assumptions underlie the productivity dividends of the faster, more accurate service fulfillment cycles in a public institution, emphasizing the benefits of digital mail processing?

SERVICE CYCLES AND REVENUES

Public institutions deliver a diverse and complex set of services to the citizens and businesses under their jurisdiction.

Digital mail processing can deliver substantial increase in productivity throughout a state or federal agency, department, bureau, or administrative office—any group that now receives in-bound mail, initiates an internal workflow, and communicates or delivers its result to internal or external parties.

Seller's permits enable their holders to buy products at wholesale prices and avoid the payment of retail sales taxes.

Consequently, many individuals or businesses with no intent to resell the goods purchased will nonetheless seek seller's permits as a way of defrauding government of sales taxes.

The six-day cycle-time gain derives from the operational efficiencies of two workflows:

- **Mail transport workflow**: faster "inputs" to all core business processes
- **Service fulfillment workflow**: faster issuance of seller's permits

The figure to the right depicts a **net gain of seven days** of a public institution and, in particular, the office that issues 300,000 seller's permit to businesses and individuals per year. Using a permit fee of $10 each, this institution will earn $4.7 million in additional fees. Moreover, greater workflow accuracy leads to the issuance of fewer fraudulent permits and the collection of additional sales taxes.

ANNUAL COST SAVINGS

Total cost savings in this model of **$28,330,455** represent less labor and lower material costs needed to issue 300,000 seller's permits: **$24,255,000** or 72 percent reduction labor and **$4,075,455** or 95 percent reduction in materials.

SOURCE OF INCREASED REVENUES

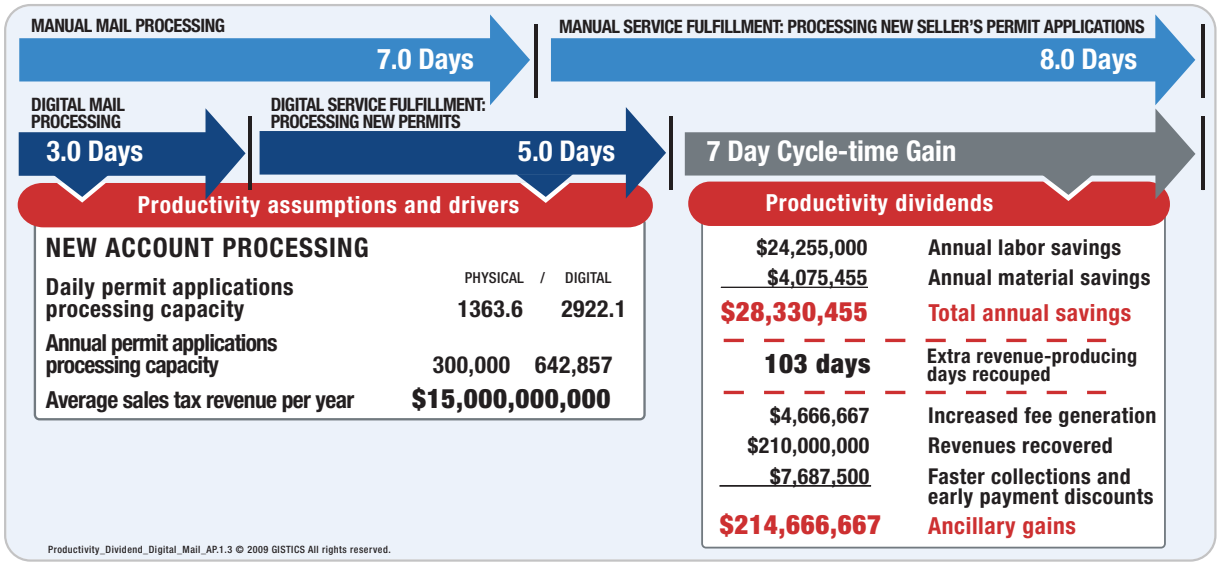
The payback model estimates potential revenues from realizing **103** extra revenue-producing days from a **greater daily capacity** to issue seller's permits:

- Daily processing capacity expands from **1363.6** permits per day or 300,000 per year to **2933.1** permits per day or 642,857 per year.

Increased productivity in issue permits represents a potential of **$215 million** in ancillary gains, and comprise of the following:

- **$4,666,667 in incremental permit fees** from faster processing of permit applications already in the queue—thus a one-time gain.
- **$210,000,000 in incremental sales tax** receipts, a result of issuing 35 percent fewer seller permits to individuals or business that do not qualify as a reseller—a recurring annual gain.

PUBLIC INSTITUTIONS BENEFIT IN FOUR WAYS FROM DIGITAL MAIL PROCESSING



How can digital mail-processing reduce cycle time in the fulfillment of citizens' requests for information or service by public institutions?

Use-case payback scenario: State tax office receives seller's permit application, directs to local field office, where it's processed, permit issued, and recorded by central state tax office.

LABOR TASKS	LABOR / MINUTES		NOTES
SUBORDINATE ACTIVITIES	PHYSICAL	DIGITAL	DESCRIPTION OF ACTIVITIES: *ITALICS INDICATES SYSTEM-ASSISTED ACTIVITIES OF A DIGITAL MAILROOM*
State government mail center - receives, processes and sorts mail	**3.0**	**4.4**	State mail center staff receive intake, unbundle, bulk sort (by agency, general correspondence, priority etc.) *Receive, open, sort, categorize, execute digitization process, verify addressee & key reference IDs*
Route and deliver to central tax agency offices	**2.0**	**0.0**	State mail center operations certifies receipt, pre-routes bundles by location, transports, ships or re-mails to office (often long distance) *No action required, documents have been digitized and ingested with metadata, including addressee, that defines routing*
Inspect, route and deliver to regional office	**3.0**	**0.6**	Central office receiving staff inspects application, flags for delivery to regional office in daily bulk transport *Automated routing suggested based on applicant's location, quick staff confirmation and instantaneous digital routing to regional office*
Inter-office sorting, distribute to inbox, and collect by employee	**3.0**	**0.0**	Regional office administrator receives, sorts, and fills employee in-boxes, seller's permit clerk retrieves mail periodically - at the risk of interruptions and distractions *No action required, digitized documents are routed directly to seller's permit clerks*
Check application for completeness and accuracy	**6.0**	**2.0**	Clerk reviews application package for completeness and accuracy, any gaps denoted in file for hardcopy letter or telephone follow-ups *Clerk's review results are accessible across work teams allowing processing flexibility among staff and avoiding bottlenecks from individual clerk performance or availability*
Check applicant's legal status for dependencies and holds	**3.0**	**1.0**	Clerk verifies business applicant's standing with other government agencies (corp. or LLP/LLC status, county business name registration etc.) - sometimes via fax & phone *Verification, if not completely electronic, is facilitated by joint access to digital application by other agencies and offices*
Acquire supervisor's approval	**6.0**	**1.0**	Clerk submits application to immediate supervisor for approval via inter-office mail, requiring additional copies *Clerk flags application for approval and system automatically routes it to supervisor (or any available approver) for quick review and approval*
Issue perm invoke delivery to applicant and report issuance to central office	**8.0**	**1.6**	Clerk issues permit, completes request for physical certificate printing and delivery to applicant, records at local regional office and reports issuance to central office - multiple redundant data entry events (paper-based and online) *System automatically routes request to certificate production upon clerk's issuance of permit*
Central office records permit issuance	**7.0**	**0.0**	Central office recording staff receives issuance notification, copies and/or attachments, files and records *No action required; documents in system are inherently preserve however may become exposed to the central office only after when permits issued based on workflow-triggered business rules*
SUBTOTAL (minutes)	41	11	

LABOR COSTS (dollars)	PHYSICAL	DIGITAL	DIFFERENCE BASED ON PORTION OF WORK COMPLETED BY DIFFERENT STAFF
Mail Center Staff (physical)	**$5.50**	**$0.00**	$22 per hour fully-burdened rate including government-level benefits
Mail Center Staff (digital)	**$0.00**	**$12.10**	$33 per hour fully-burdened rate including government-level benefits
Central Office Receiving Staff	**$6.88**	**$1.38**	$27.50 per hour fully-burdened rate including government-level benefits
Regional Office Administrative Staff	**$6.88**	**$0.00**	$27.50 per hour fully-burdened rate including government-level benefits
Seller's Permit Clerk	**$73.79**	**$17.97**	$38.50 per hour fully-burdened rate including government-level benefits
Central Office Records Management	**$19.25**	**$0.00**	$33 per hour fully-burdened rate including government-level benefits
TOTAL LABOR COSTS	$112.00	$31.00	

How can digital mail-processing in public institutions save $28,330,455 in processing costs, $4,666,667 in incremental revenues, and $210,000,000 in overall economic impact?

MATERIAL COSTS (dollars)	PHYSICAL	DIGITAL	NOTES
Mail transport, shipping, postage	$4.00	$0.00	Blended cost of bulk transport to regional offices
Photocopies and forms	$3.60	$0.00	15 copies @ $.15 fully-burdened cost each + 6 multi-part duplicate forms at $.05 each
File storage overhead and maintenance	$6.67	$0.00	$12K/yr. to maintain 4-drawer file cabinet, assume 1800 permits per cabinet
Digital infrastructure overhead	$0.00	$0.68	Assume 75,000/yr total, .025% assigned to this specific use case
TOTAL MATERIAL COSTS	$14.27	$0.68	

ANNUAL VOLUMES AND COSTS			
Seller's permits issued per year		300,000	

ANNUAL COSTS ($)	PHYSICAL	DIGITAL	NOTES
Annual labor costs	$33,687,500	$9,432,500	Fully-burdened labor costs
Annual material costs	$4,280,000	$204,545	Total material costs associated with process, digital side is burdened cost of infrastructure
Annual rework costs	$10,251,225	$520,400	Costs from errors and missed deadlines. 15% reworks physical, 3% reworks digital
TOTAL ANNUAL COSTS	$48,218,725	$10,157,446	

PRODUCTIVITY DIVIDENDS: COST SAVINGS, INCREASED PRODUCTIVITY, INCREMENTAL REVENUE

ANNUAL SAVINGS ($)	SAVINGS	PERCENT	NOTES
Total labor savings	$24,255,000	72.00%	Percent reduction in costs, physical vs. digital
Total material cost savings	$4,075,455	95.22%	Percent reduction in costs, physical vs. digital
TOTAL ANNUAL SAVINGS	$28,330,455		

CYCLE TIME (days)	PHYSICAL	DIGITAL	NOTES
Mail transport workflow	7.0	3.0	Linear workflow to distribute physical packages, per permit processed
Service fulfillment workflow	8.0	5.0	Non-linear workflow - variable routing & alterations, per permit processed
TOTAL DAYS PER PERMIT	15.0	8.0	DAYS TO COMPLETE ONE DAYS TO COMPLETE ONE SELLER'S PERMIT ISSUANCE CYCLE
Permit processing capacity	1363.6	2922.1	Number of permits that can be processed each day
Annual permit processing capacity	300,000	642,857	Number of permits that can be processed per year
Annual working days required	220	117	Number of work days required to process the existing volume of permits
ADDITIONAL GAINS		SAVINGS	NOTES
Additional permitting fees		$4,666,667	Greater capacity to process permits generates more fees, assume 1M permits/yr., $10/permit *
Tax revenue recovery		$210,000,000	20% of inaccurate permitting avoided, assume 4% errors $15B sales tax revenue/yr.
Accounts payable efficiencies		$7,687,500	SEE EARLY PAYMENT, INTEREST SAVINGS, AND COLLECTIONS COST GAINS
TOTAL ANCILLARY GAINS		$214,666,667	
INTANGIBLE GAINS			
Economic Stimulus	Macroeconomic: any reduction of government delays to business, especially small business, carries a profound economic benefit		

Section 5

Enterprise Content Processing Infrastructure

What IT elements enable digital mail processing and the production of customer engagement packages?

ENTERPRISE APPLICATIONS AND SERVICES

All modern firms use **enterprise applications** to operate; most large firms also deployed **enterprise content management** (ECM) or several of its components. The figure below depicts the major components of ECM, emphasizing those **components that enable digital mail processing.**

The figure also depicts that digital mail processing can deliver **four different types of customer engagement packages** to seven common types of users.

Customer engagement packages consist of **policy-controlled collections** of communications and transactional content.

Internal-only packages dynamically link to enterprise applications and enterprise content services.

Suitably configured ECM systems and **customer portals** enable access to vetted public-versions of customer engagement packages for customers, subcontractors, or trade partner.

CONTENT WORKERS: DIGITAL MAIL

Account managers	Teleservice representatives	Credit or loan processing agents	Order processing and provisioning agents	Account receivables or payables staff	Risk or compliance managers	Regional or department heads

CUSTOMER ENGAGEMENT PACKAGES

Loan and mortgage packages	New account establishment packages	Trade accounts-payable packages	Service fulfillment packages

CONTENT APPLICATIONS

Marketing portals	Enterprise publishing	Video publishing	Information portals	Video publishing	Digital mail processing	Communities and social media
• Collateral store • Content expert profiles • Presentations • Product demos	• Catalogs • Documentation • Editorial publishing • Marketing collateral	• Corporate videos • Product demos • Training and support • Webcasts	• Agent broker portal • Branch network portal • Independent financial advisors portal • Procurement portal • Trader broker network portal	• Corporate videos • Product demos • Training and support	• Orders • Service requests • New accounts • Marketing campaigns • Claims • Tax returns	• Catalogs • Documentation

ENTERPRISE CONTENT MANAGEMENT (ECM)

Web content management	Media asset management	Document management	Metadata management	Transactional content processing	Business process management	Records management	Email archive management	Collaboration management
• HTML, XML • Production support • Rich media • Stylesheets	• Animations • Audios / podcasts • Images / photos • Video	• Compound documents • Presentations • Spreadsheets • Static items (PDF, TIFF)	• Business objects • Data-entity relationships • Document properties	• Business forms • Correspondence • Digital Credit files • Faxes • Handwritten notes • Invoices	• Business rules • Process monitoring and reporting • Workflow routing	• Business records • Communications • Scanned images of paper, film, or transparencies	• Addresses • Attachments • Contacts and vCards • Emails	• Discussions • Instant messaging • Postings and ratings • Surveys

ENTERPRISE APPLICATIONS

Transaction processing applications: Systems that automate the basic repetitive transactions of the enterprise	**Analytic Applications:** Systems and networks that promote analysis, interpretation, and sharing of information or knowledge	**Transformational Applications:** Systems and networks that change the prevailing business model of the enterprise	**ICT Infrastructure:** Information, communications, and telecommunications technologies and managerial expertise to enable effective delivery and **use of** ICT services

How can digital mail processing support transformational applications?

STRATEGY MAP HIGHLIGHTS INNOVATION PROCESSES

Bringing **game-changing innovations** to market often entails considerable risk and opportunities for considerable reward.

Now more than ever, agile **ICT infrastructure** and **applications** must support the rapid, problem-free launch of new product configurations and novel business concepts.

ECM and **content applications** described in this paper play an evermore critical role in driving innovations to market.

The figure on the right depicts a **strategy map** that calls attention to a relatively new class of applications—**transformational applications**—that change the game.

It seems that each quarter or month brings new wave of innovations, making it impossible to predict which new application or service will disrupt the status quo of markets and customer requirements. However, it remains certain that the pace of innovation will continue to accelerate, bringing change, disruption, and opportunity for the agile.

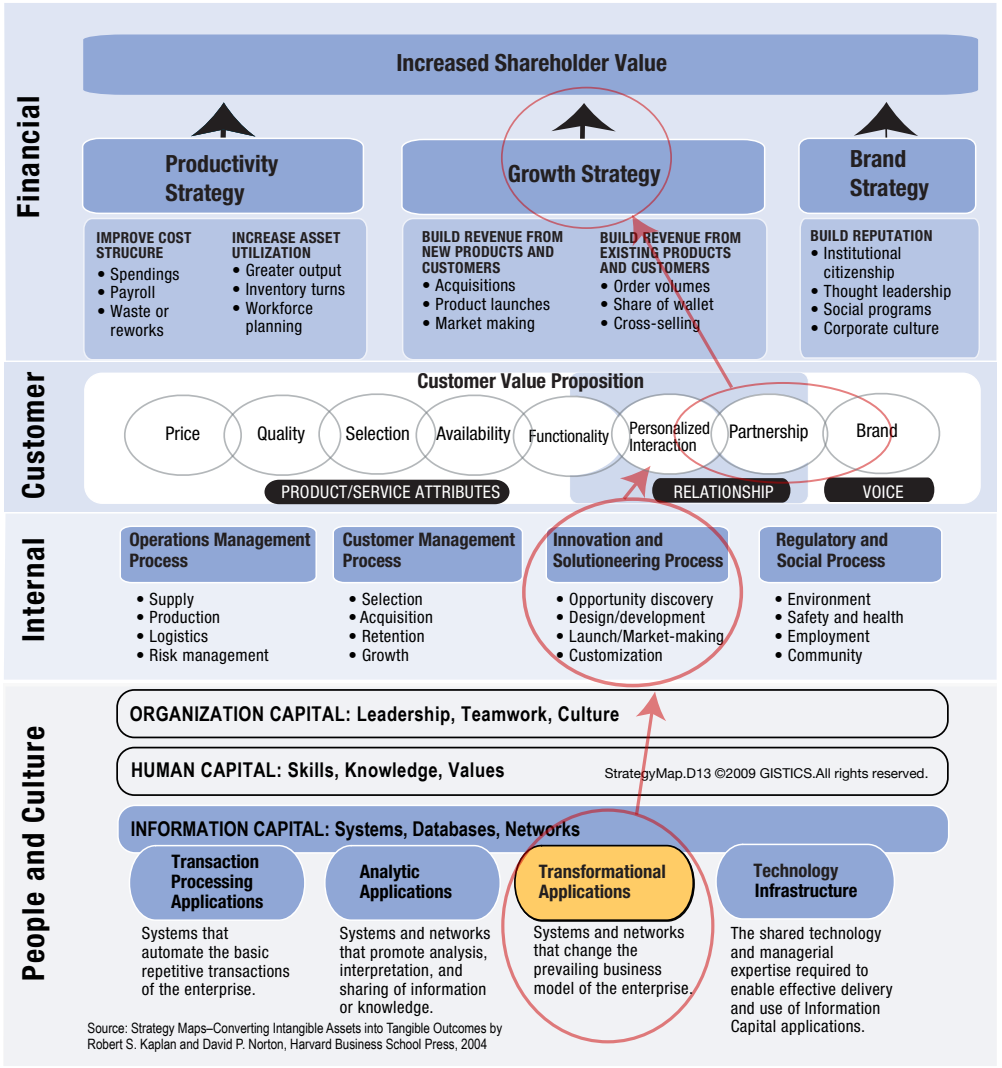
Digital mail processing clearly adds value to internal processes of **operations management**, **customer management**, and **regulatory compliance**, speeding the flow of mail and concurrent multi-party collaboration around customer engagement objects.

Each enterprise of particular industries will have its own opportunities to drive game-changing innovations—transformational applications—to market.

And success will in part result from the firm's information capital and its internal capability to develop and launch new applications.

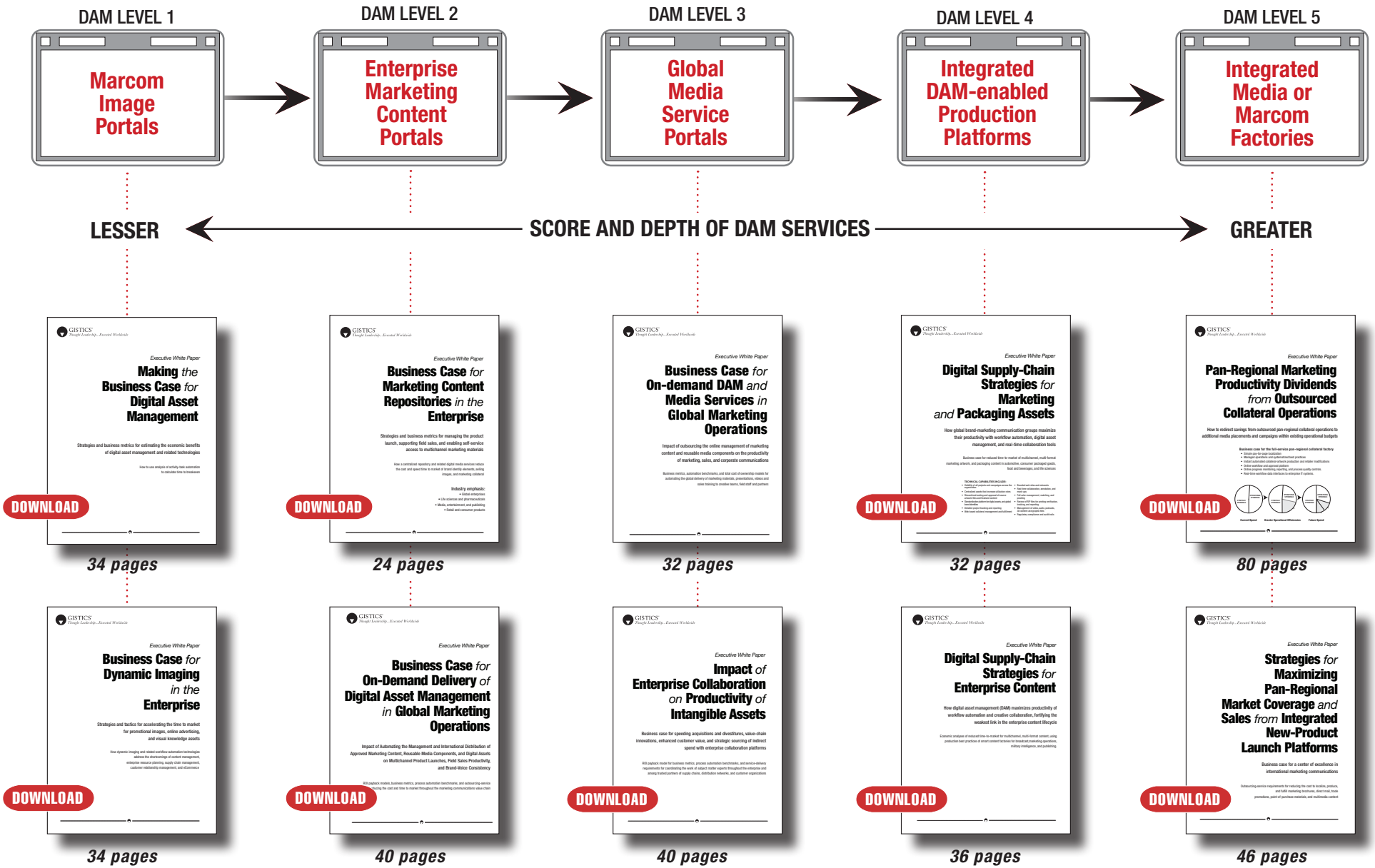
Digital mail processing capability not only mends a missing link in the customer value chain; deployment also supports the deployment of a full ECM capability—that in turn will **support the success of mission-critical, game-changing transformational applications**.

BENEFITS OF DIGITAL MAIL PROCESSING FUND FULL DEPLOYMENT OF ECM AND SUPPORT GAME-CHANGING INNOVATIONS



The strategy map above depicts the central role that transformational applications can play in driving growth.

Thought-Leadership White Papers *mapped to* DAM Maturities



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