

TECHNOLOGY INNOVATION

<CORRESPONDENCE>

Smart Business Document Design and Consolidation
on a Single Platform

Papyrus CCM Business Correspondence Solution

INSIDE

- ▶ Document Lifecycle Solution
- ▶ Digital and traditional documents
- ▶ Business empowerment
- ▶ Enabling in-document editing
- ▶ Batch/online/ad-hoc Web forms
- ▶ Print & e-delivery across channels
- ▶ Reporting and auditing

KEY BENEFITS

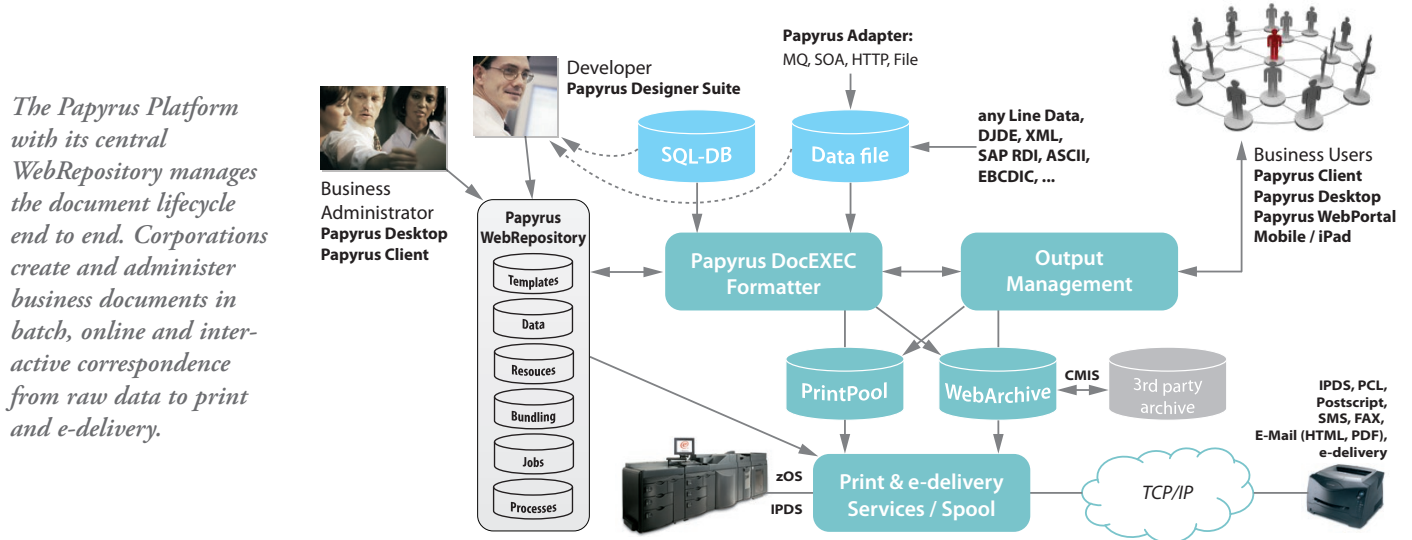
- ▶ Any data type and style directly supported
- ▶ Up to 50% time reduction in design phase
- ▶ Up to 90% time reduction in release phase
- ▶ Reduced number of maintained templates
- ▶ One Company - One Voice
- ▶ WYSIWYG design

One Company - One Voice

Effective CCM Solutions. Efficiently.

One common document lifecycle platform consolidates all enterprise document output supporting multi-channel high-volume, online and interactive business documents.

Business documents can never be standalone applications as they are always tightly linked to business data and business process. Since many organizations want to operate with fewer systems, it makes great sense to standardize on a common platform for business document design, formatting and process management rather than to deploy, integrate and maintain separate systems.



■ Any type, format and style of data from existing backend systems is directly supported by powerful SOA-based, loose-coupled integration.

A broad variety of Papyrus Adapters (file, XML, SOAP, MQSeries, HTTPs, REST) connect the document system with vital business application data from any legacy or mainstream system or application. These platform- and compiler-independent interfaces drastically reduce the amount of time and effort required for interfacing with applications that span multiple systems and require exchange of documents and data between them.

■ One set of definitions and document resources shared between tenants and across templates

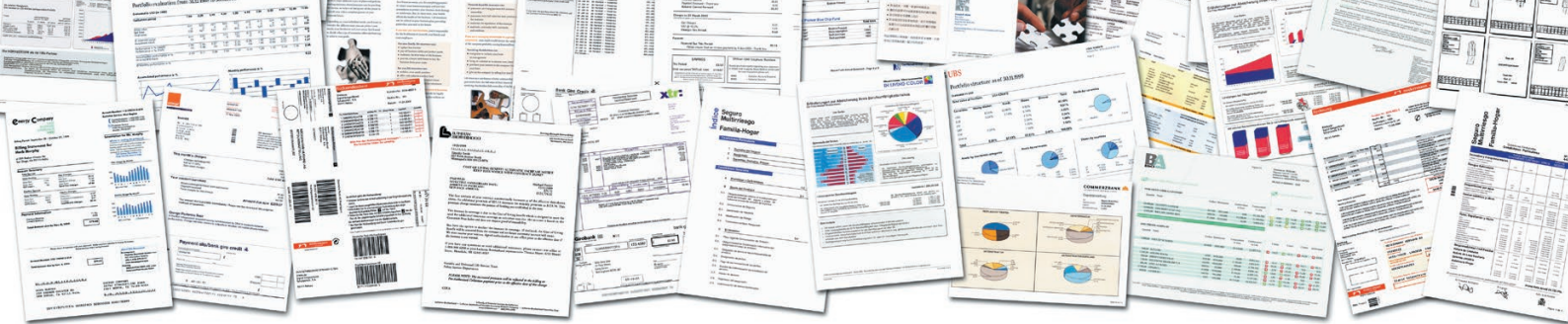
The benefits are enormous in having document building blocks for reuse and standardized corporate fonts and images on one proven formatting engine (DocEXEC) for high-volume, online and single document formatting in interactive mode for a client/server, desktop or Web portal.

■ Long-term stability

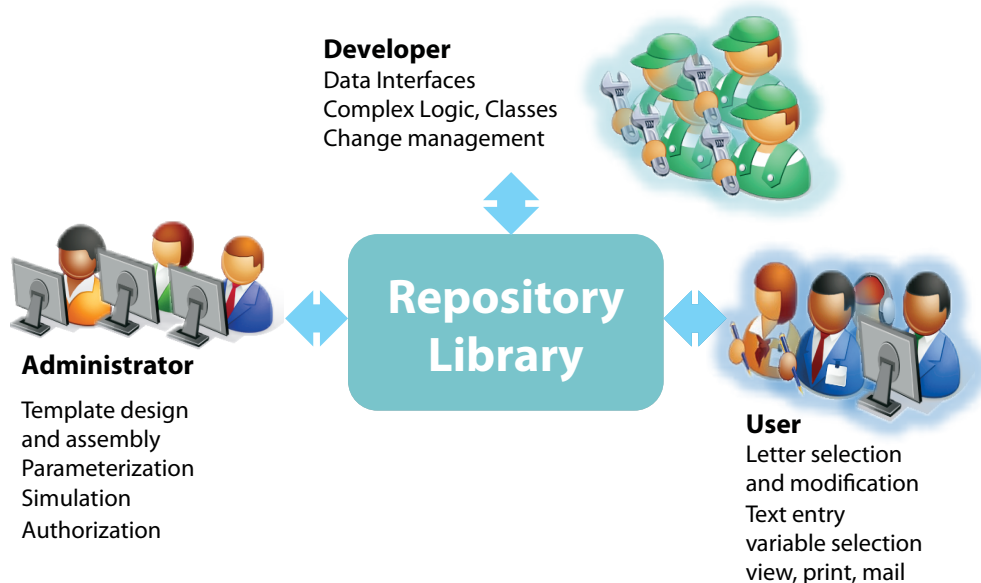
There are no dependencies on hardware, operating system, programming languages, transformation languages, data input formats, printers or electronic output channels. All generated document definitions are kept upward-compatible and platform-independent to be used the same way on a mainframe, server, browser or mobile device.

■ Key Benefits of the Papyrus Platform:

- End-to-end lifecycle platform solution for all corporate document types and messages
- Powerful interfaces for any type of business data
- Simple and fast document design and editing by business users
- Interactive documents with in-document editing on one platform
- Central user management by role and policy (LDAP)
- Change and release management integrated
- Versioning of all objects including data
- Variant/tenant control for branding and languages
- Workflow and process management (sign-off)
- Job, spool, queue, print management / any output channel
- Seamlessly integrated e-delivery / e-mail and portal



Papyrus' strong WYSIWYG design capabilities allow business and IT users to create highly personalized business documents for print and electronic delivery. Substantial cost savings, efficiency and corporate design across all document types are guaranteed. Papyrus integrated output management monitors, tracks and audits all output end to end.

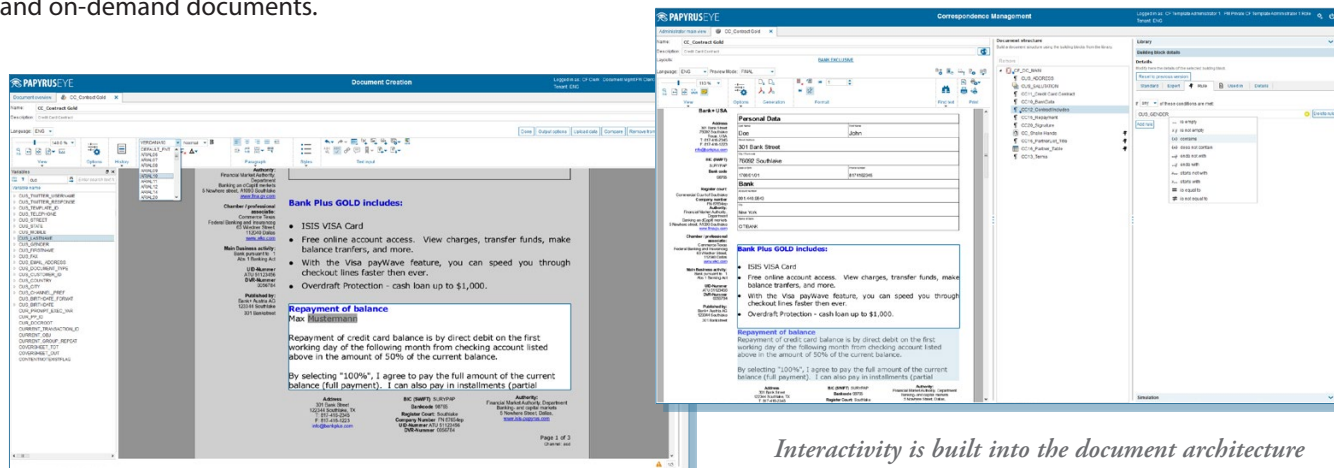


The Papyrus Correspondence Solution links all types of business users to the central WebRepository to share content and, based on their role, to create and maintain text, images and document templates to use across online/batch, interactive/ad-hoc and Web documents.

Powerful formatting features are standard Papyrus functionality, including text styles, variable inserting, prompting, radio buttons/checkboxes, images, color, lines, dynamic page break handling, widow and orphan, columns, tables, multi-language, OMR and barcodes, hyperlinks, stickers, text orientation, dynamic white space management, automatic resizing of images, TOC generation, page re-sorting, headers and footers, Wizards, template and text compare - and more.

Interactive documents with in-document editing on one platform

Papyrus provides interactive document features with in-document editing giving the user WYSIWYG and full word processing capabilities inside the data-driven document. Depending on the document settings and user role, Papyrus provides full control of paragraph selection and editing, font, color and style use, etc. The same templates can be used for batch, online and on-demand documents.



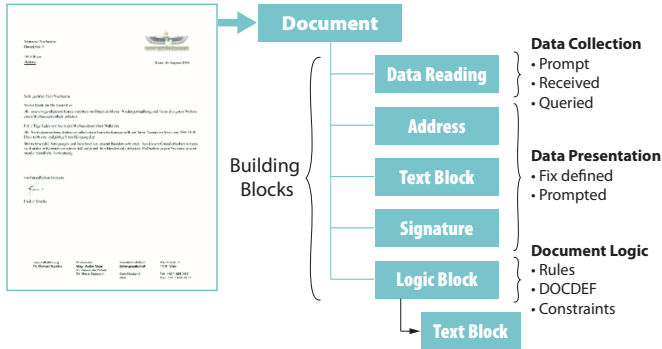
Interactivity is built into the document architecture

Empowered business users control the complete document lifecycle for lower IT workload and business document costs

The Papyrus Platform delivers a compelling Business Correspondence Framework Solution that provides a head-start on defining new document applications. Papyrus EYE/Widgets is a simple and effective user interface for business administrators assembling document templates, creating new document building blocks and defining rules. The administrator role can assign work to business users creating more content such as text, layouts and tables.

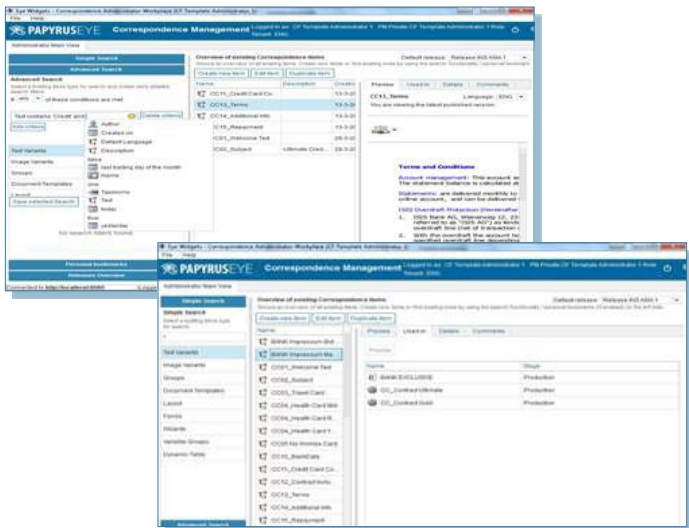
All documents are built with reusable building blocks to reduce maintenance effort and achieve standardization, corporate design and identity. Avoiding duplicated, non-standard, and non-compliant company documents decreases the cost of document template creation and production by over 50%.

Content change and communication formatting requests are no longer IT department tasks



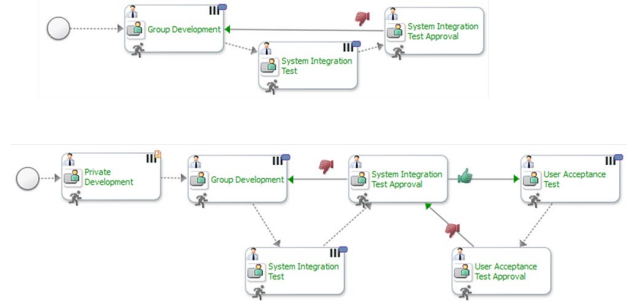
Increased document compliance keeps documents up-to-date with ever-changing regulations

Papyrus advanced search and the powerful 'Used in' administrative GUI provides information on where a building block is used, which version and variants are available and who created it. This guaranteed control allows for easy and fast maintenance and deployment of changes across document resources and across all document types.



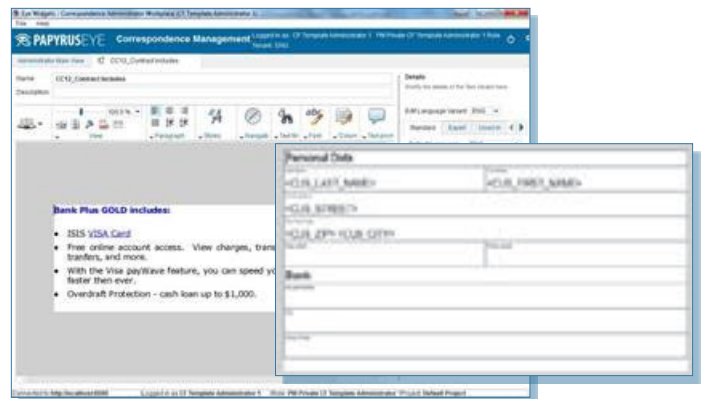
Business users provide document templates for high-volume, batch or interactive in both digital and traditional formats

In daily operations, business users and IT collaborate using the Papyrus Designer and the Papyrus Client/Desktop in the browser to create data interfaces, building blocks with logic and content with business rules for their private projects. Templates and document resources move through the development, test and approval states before being released into production.

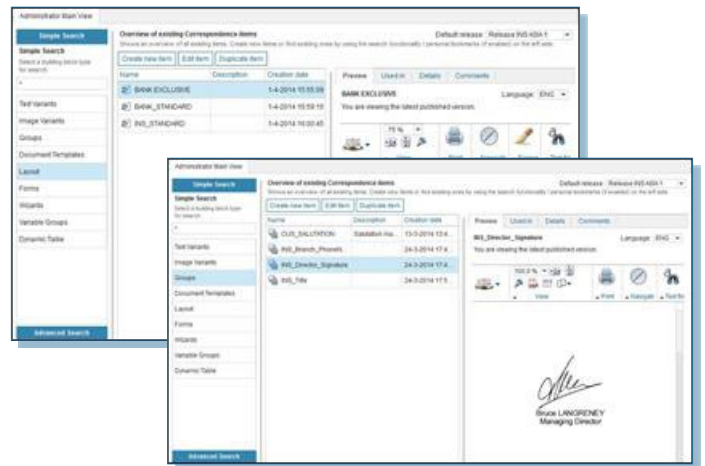


The Papyrus Correspondence Framework provides ready change management, plus versioning and deployment by authorized business users. User authorization is executed by role and privilege of each user and roles can be managed in LDAP and Active Directory.

Business users easily create templates, content, rules and document designs without IT



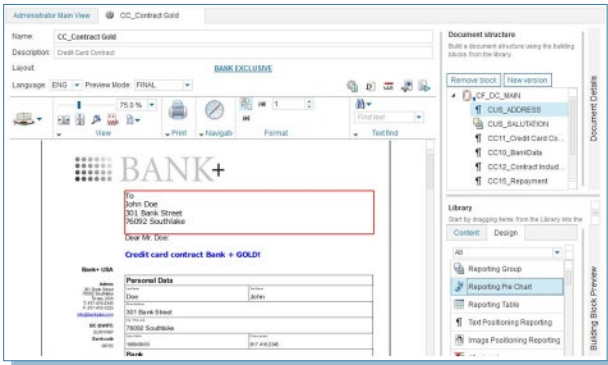
Business users define text with styles and multiple languages, spell check and hyphenation.



Business designs tables with variables and standard layouts, plus group building blocks with signatures.

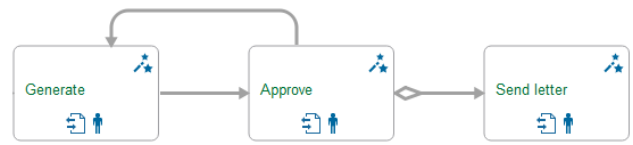
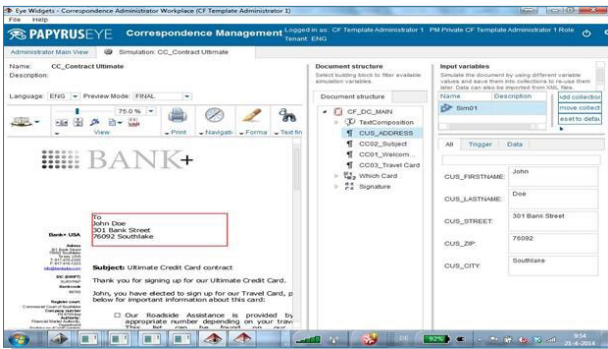
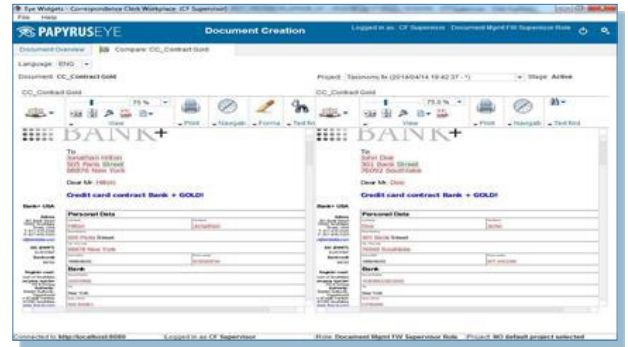
Document assembly and simulation testing with data

Building blocks are assembled by the business administrator into complete templates with cross-referencing, fixed and relative positioning, page breaks and simulation testing with variables.

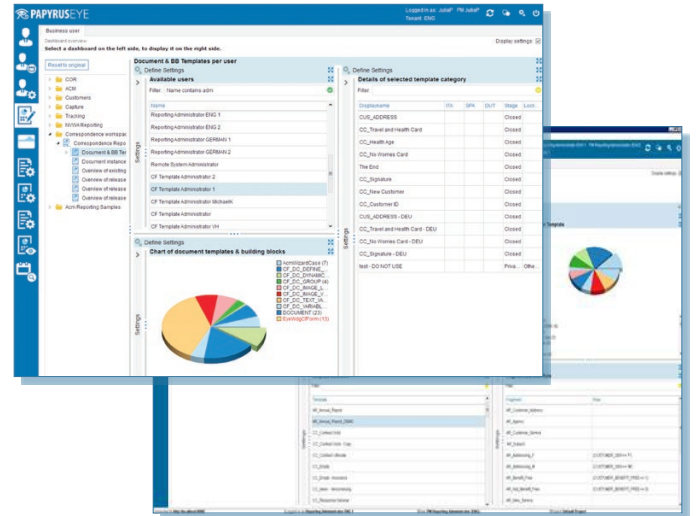


A secure and simple way to ensure that all business documents are in compliance

Compare text and data in a new document or building block version with its previous version. The delivered solution Framework includes integrated approval workflows with electronic stickers for comments, i.e. when rejecting a letter.



Report on templates, building blocks and rule statistics per user



The final formatted document can be produced in high-volume batch and online production on a server or in the front office by end users. In this case 'prompt' controls for in-document editing of the building block are included by the administrator.

Targeted Messaging

Business users can create building blocks in certain sizes. These are placed by specific rules either on a fixed or relative position in the document for **white space management**. Messages can be personalized and include hyperlinks that allow for immediate response management.



The Document Wizard

Enabling interactive and guided communication with clients

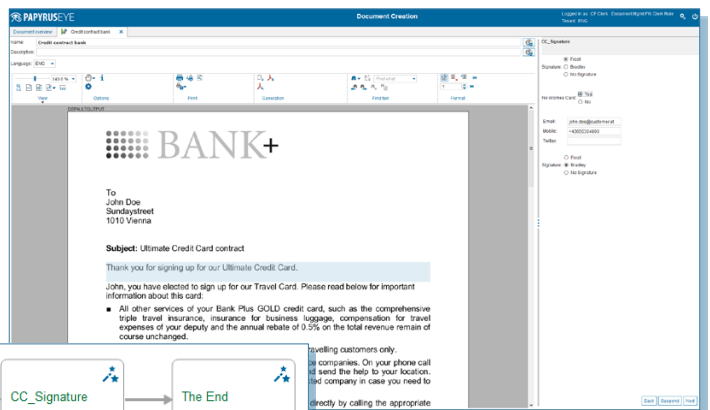
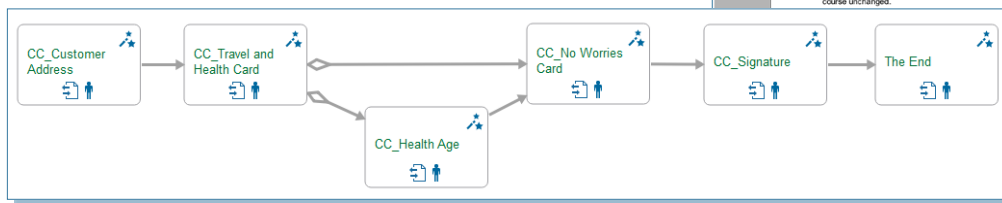
■ Users powerfully and quickly assemble process-driven business documents in real time, step-by-step, without mistakes - for enhanced focus on customer experience

The Papyrus Wizard is a simple but powerful solution assisting the front office or Web/Mobile user in composing complex documents like a policy, agreement, offer, claim or verdict. The Wizard gathers relevant data in real time as the user answers questions in the Wizard forms.

The Wizard forms and questions with validation rules are freely definable by a business administrator using the visual Papyrus Wizard Designer. The user-defined process and rules are executed step by step. The Wizard retrieves data synchronously from existing backend systems using our SOA messaging interface.

The information gathered during the Wizard process is used in the document itself as data variables. The document with

layout, text and other building blocks is assembled in real time, and the user edits paragraphs where in-document editing prompt fields occur. The Wizard allows stepping back in the process to make changes. Feedback to the user is shown immediately as the document will undo previous actions.



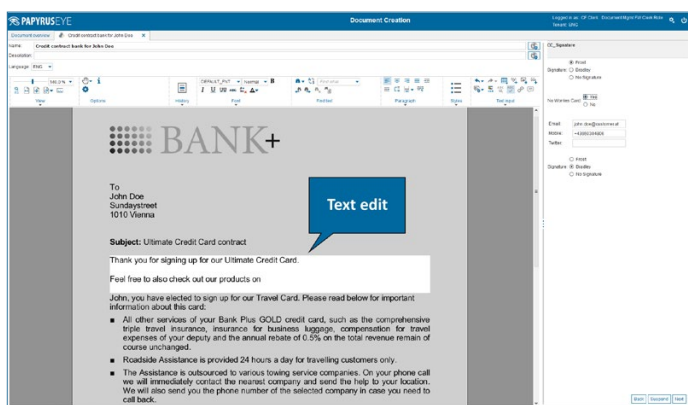
■ Papyrus Wizard Designer enables the administrative business user to create process and rule-driven applications faster, without programming

The business administrative user creates Wizard forms in the graphical Designer. Such forms can contain a combination of input fields (text, date, numeric), radio buttons and checkboxes, text and images. The user creates structured interview/survey processes by simply adding the Wizard forms from the library and defining the business rules for navigation and actions using Natural Language.

Besides forms the Wizard process can contain service tasks, such as to retrieve loan information or credit rating. Multiple users can work on the creation of a complex document. The process can be stopped and continued at a later date and time.

Summary on Key Advantages:

- Business administrators flexibly define document processes and rules
- Release process for template maintenance is managed by the business
- Enables interactive and guided communication with clients
- Speeds response to ever-changing business needs
- Reduces number of maintained templates
- Synchronous data integration from backend systems using Webservices
- Business focus on the customer vs. composing a document



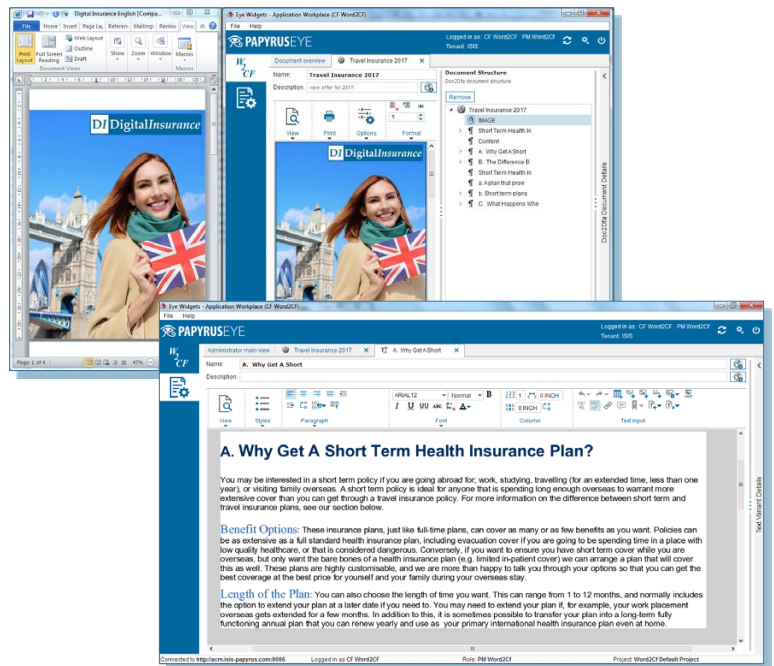
See our case study "Die Mobiliar" and the "Wizard Demo" video on isis-papyrus.com.

Migration

MS Word to Papyrus Correspondence in just a few steps

Microsoft Word is often used for business documents in the front office as a PC island solution. But you've come to a point where you're ready to go beyond its limitations in assuring compliance, the incompatibility of versions and macro programming. A centrally managed repository platform for the design and delivery of all outbound business documents and user correspondence is needed to start consolidating your enterprise business communication and gain full control over digital and print channels.

Papyrus Platform customers have been asking us how to move existing Word documents quickly and without much effort to our single platform. With the 'Papyrus Word 2 Correspondence' solution, Word documents are automatically converted into Papyrus for fast document template creation and seamless integration with the Papyrus Correspondence administrator workplace.



Integration

Document System integration with existing backend systems

The Papyrus Platform is a layer on top of existing business applications, loosely coupling with data files, data messages, databases and devices. Papyrus is SOA-compatible and delivers a variety of Adapters as standard software to allow flexible, definable exchange between business data and document systems. Papyrus Adapters are platform-independent and do not need compilation, Java or .Net programming. Papyrus Typemanagers are database-independent native interfaces.

■ Papyrus Adapters

- MQSeries
- Mainframe – JES 2/3, CICS
- XML & ASCII, EBCDIC File
- SAP Output management (XOM)
- HTTPs / SOAP / REST Json
- E-mail (SMTP, POP3, MAPI, IMAP, SMS)
- Fax
- LDAP for authorization (Active Directory, RACF)
- MS SharePoint
- CMIS (interfacing with 3rd-party archives)
- Social (LinkedIn, Twitter, Facebook, Google)

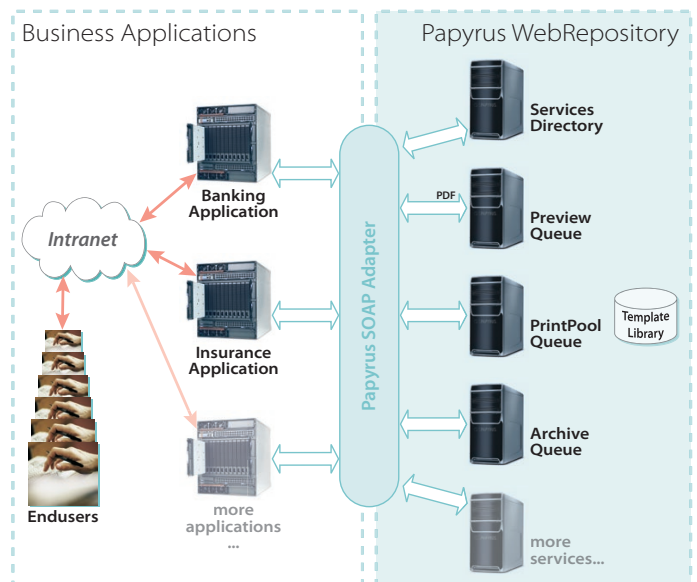
■ Papyrus Typemanagers

- DB/2, Oracle, MS SQL, ODBC

■ GUI Integration

Papyrus offers several options for integration of the user front end:

- Papyrus WebPortal EYE Widget GUI (standard browser plug-in)
- Website integration via iFrame (browser)
- SharePoint Web Parts native integration
- Mobile app (iPhone, iPad and Android)



Papyrus Output Management Platform

All currently existing input and output channels (print, e-mail, fax, Web, SMS, social media, mobile, etc.) are fully supported to close the communication loop, providing immediate 'two-way' interaction and improved customer experience through continuous engagement with the customer.

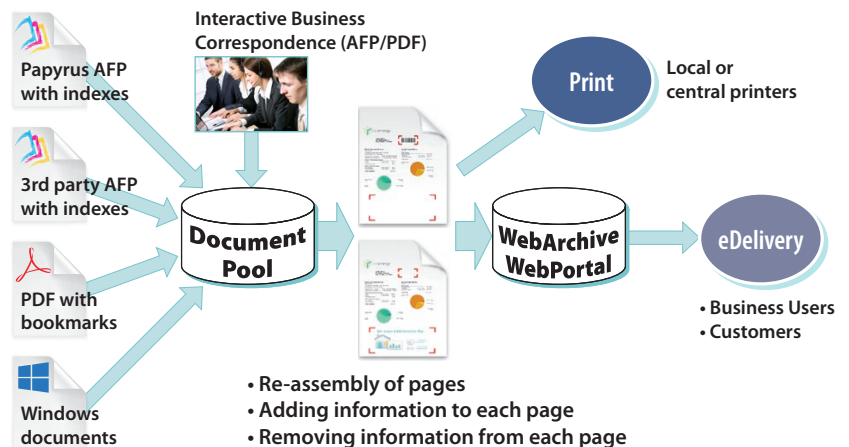
■ Collect all enterprise output and distribute to digital and print

With output channel choice based on customer preference, Papyrus documents share a base layout that is common to all channels and then enhanced with channel-specific items at time of delivery.

- Re-assembly of pages and building blocks
- Adding and deleting information on each page
- Access secondary data sources like SQL DBs, XML files

■ Papyrus Document Pool

The unique concept of document pooling replaces conventional file spooling. Bundling documents includes index and control information and provides distribution, reprinting, OMR and barcoding, banner pages, envelope merging and splitting. The bundling, distribution and postal optimization features provide important opportunities for cost reduction, by reducing the amount of printouts and envelopes mailed and by optimizing the postage per mail piece for discount possibilities. As Papyrus has control and visibility of all resources in the system, postal sort can be applied on the formatted letter, not only on addresses.

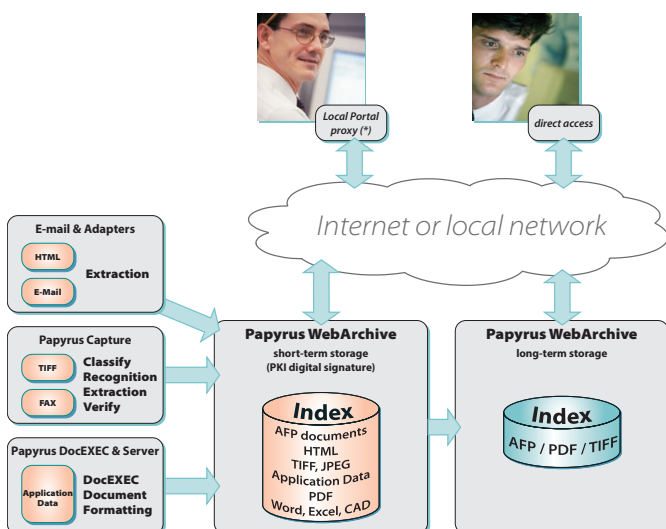


Users may also search the Document Pool for sign-off or for previously sent documents for viewing, re-printing and re-sending to the end customer. Reprints can include a watermark to indicate the document is not the original.

■ Short- and long-term archiving for e-delivery and print

Documents are securely stored in the Papyrus WebArchive in support of the customer engagement cycle - and offered for fast retrieval and viewing in browser and on desktop, tablet and mobile. Companies can choose to provide an Internet-based service, and notify their clients via e-mail or SMS, offering them the option to see their documents and statements using a Web browser and mobile and optionally print them as necessary.

Papyrus WebArchive is fully scalable across platforms and supports distributed storage with central index and sophisticated search capability across different server hardware. It provides short- and long-term archiving with retention policies, and interfaces with the Papyrus WebRepository for all administrative, management and BPM functions. The built-in security provides full access control based on role/policy, along with a means to report on any user action.



■ World-class business documents on every output channel

Papyrus interfaces with any input data file without data manipulation or tagging - and via single-time design and formatting, it seamlessly delivers any business document to print, Web and mobile. Every document is formatted with a document index, and perfect quality is guaranteed on all channels.

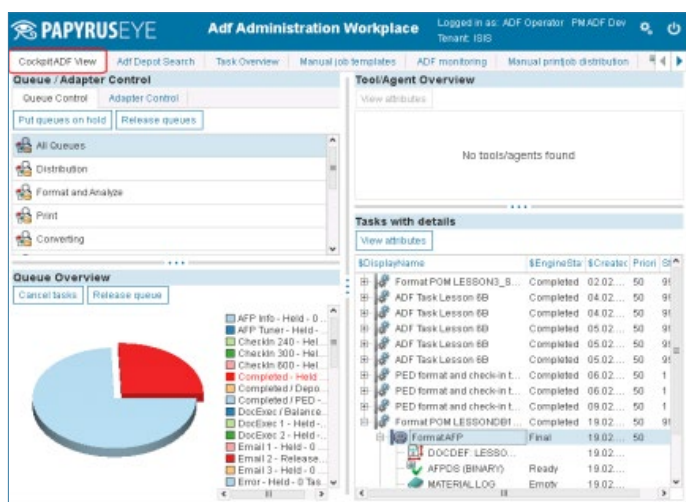
End-to-end Job Administration and Monitoring

Papyrus' proven output management system is designed for transparent and seamless multichannel output to all destinations in the network and online.

Central control and administration of all jobs is performed by the Papyrus WebRepository. Powerful end-to-end monitoring and management of all jobs and across all platforms, devices and output channels is enabled by the Papyrus Automated Document Factory (ADF) Framework solution. The Papyrus ADF provides intelligent, end-to-end automation, tracking and monitoring of print and e-delivery. The ADF includes unique features for complete centralized lifecycle management - of all document resources from data, formatting, printing and post-processing to multichannel delivery and archiving.

■ Papyrus Operator Workplace

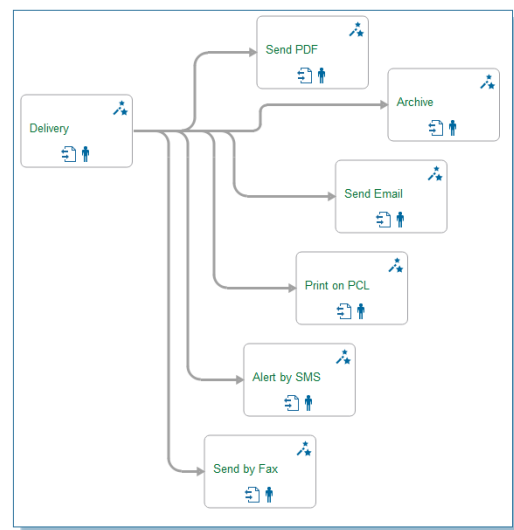
Working from the central workplace, the ADF Operator can start and stop adapters, release queues, view the logs and edit attributes, generate sample jobs, search, open and preview certain documents, manage the priority of tasks, and manually manage workload balance and instantiate jobs, if required. Supported by workload and monitoring statistics, the operator always has the complete information about the status of all ADF components as configured by the administrator (adapters, agents, queues, etc.), and uses interactive charts to quickly drill-down for more detail.



■ Print and e-delivery on customer-preferred channel

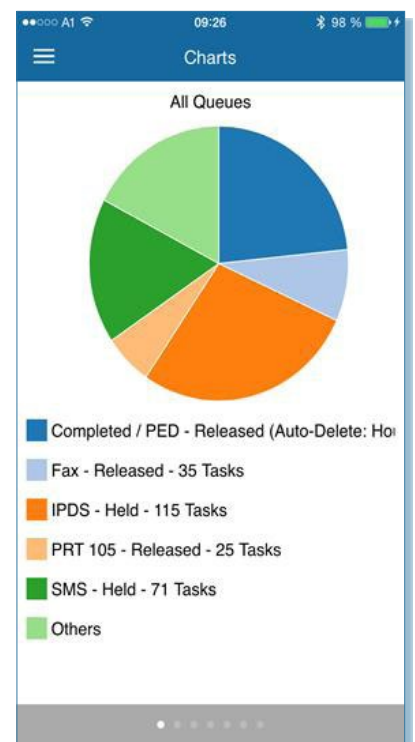
Papyrus provides multichannel delivery (e.g., IPDS, PCL, Postscript, IJPS, PDF, e-mail with HTML or PDF attachment, fax, SMS) based on customer preference, transforming documents to the target channel at distribution time for utmost channel independence. All delivery channels can be integrated directly into Papyrus adaptive business

process architecture while taking all security requirements into account. Documents are flexibly delivered to the customer's preferred channel, resulting in cost savings and excellent customer service.



■ Document monitoring, tracking, auditing and report generation

All communication is tracked seamlessly from receipt/creation over centralized or decentralized printing to final enveloping in the letter shop and e-mail, fax and Web delivery to archiving. All activities are tracked, traced and audited, end-to-end and recorded for a full audit trail of the communication process, with detailed document access and change information provided. The platform provides powerful interactive reporting functionality with dynamic charts, tables and word processing capabilities, displayed as highly personalized dashboards with KPIs and/or generated reports with real-time WYSIWYG report preview for multichannel delivery.



Case Study

Sustainable Innovation through Agile Customer Communication

Adaptive process management boosts productivity at leading European bank

The Business

As one of the largest players in the world with roots anchored in Europe's economic history, the Bank has presence in more than 70 countries and more than 180,000 employees. The Bank is a leader in the Eurozone and a prominent international institution with focus on Corporate & Institutional Banking as well as Retail Banking & Services, with over 30,000 collaborators and more than 2,000 agencies. The Bank garnered the 2016 WfMC Global Excellence in Case Management Award for its new "Banking Correspondence Management System" (BCMS) built on Papyrus Adaptive Case Management and its high-productivity enterprise communication platform.

The Challenge

The Bank was using 2,500 different document templates for customer communication with approximately 20-25 new document templates per month, and planned to further enhance the number of documents by doubling batch output and significantly increasing online (Internet and mobile) production by a factor of 20 to total 400,000 documents a day.

At the same time, with customers moving to digital, the Bank recognized the need to move to smart communication anytime, anywhere and significantly speed production of new modules with quick time to market for new bank products through full digitalization and paper-free processes.



In the initial solution based on Microsoft Word, business users were creating document specifications as input for the document development process performed by IT developers, with both teams working in isolation and duplicating efforts. The communication mainly via e-mail and handling thousands of templates in different languages through the standard file management system prevented linkage between document templates and their language variants and versions. To accelerate the time to production, the communication development approach needed a complete makeover.

Business Goals

- Smart communication anytime, anywhere
- Business user empowerment
- Increasing batch and online production by a factor of 20
- Fast time to market for new bank products
- Digitalization of communication processes
- Reduction of overhead
- Enforcing corporate identity, quality and consistency
- Simplicity and flexibility

Functional Requirements

- Common working environment for efficient collaboration of Business and IT
- Agile cross-department change management
- Unified system for sharing work without e-mail dependence
- Efficient maintenance of thousands of design templates
- Management of document design and related processes for flexible online and batch production in one system
- Reporting and auditing transparency

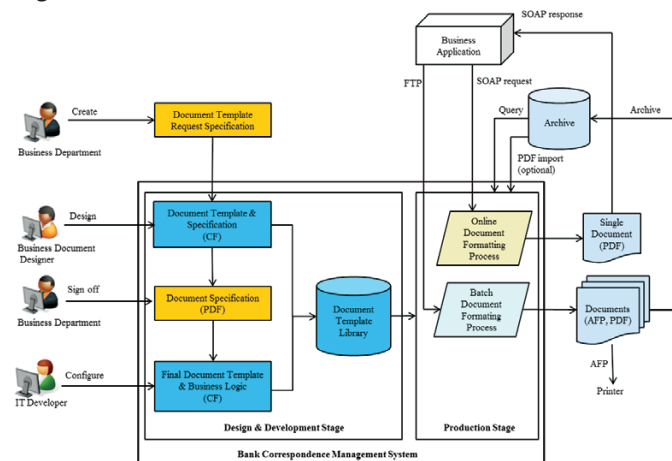
The Solution

After initial considerations, the bank decided to focus on the simplification and flexibility of document management processes as its two primary objectives. The Bank chose to introduce the Papyrus Business Correspondence Solution to enable business users to directly participate in document development and reduce overhead.

Next, the decision was made to leverage the Papyrus integrated framework solutions approach - fitting the entire document design and development solution directly into the Papyrus Adaptive Case Management (ACM) framework would maximize flexibility and transparency in handling the document lifecycle from design through development and deployment into production, as well as production management.

The newly defined Banking Correspondence Management System (BCMS) provides professional document design functions and empowers business users to create and maintain a huge amount of document templates in a flexible manner, with consistency in design and compliance of content. BCMS supports design, sign-off, deployment and production of customized, individual online correspondence, as well as mass batch document production, and applies a fully customizable and adaptive change management that involves the right people for the right work at the right time.

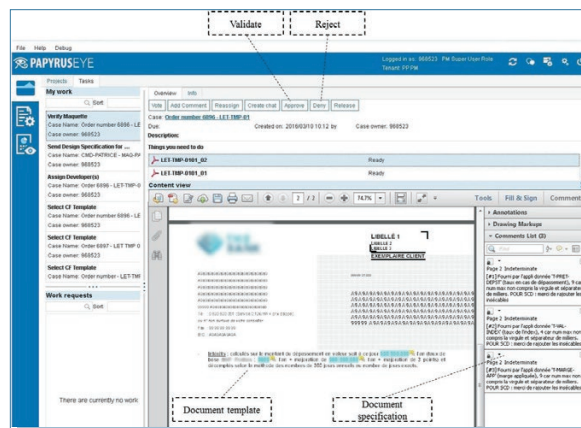
BCMS provides a common working environment for the productive collaboration of Business and IT and now links independent working environments of different departments to facilitate cooperation and teamwork between all knowledge workers.



Overview of BCMS

Business teams work in different user roles specified by roles and privileges, supported by multiple GUIs with full capabilities to flexibly design the correspondence and take control over the document development process. IT assists where required and takes care of technical configurations related to more sophisticated document elements, such as data interfaces for input of business data, complex business rules or dynamic tables.

Document design is managed within a project (case) through a set of predefined steps and related data and enables ad-hoc changes and case re-opening by business departments to react on short notice to changes in the business requirements. Ad-hoc actions are managed and aligned by change management and compliance-checking techniques via ACM. All document design is released into the central correspondence library to be used by all entitled parties. Business users can choose from diverse elements in the library, and create new ones, while freely communicating with other system users through integrated commenting and chat functionalities and making use of the IT assistance where necessary. Finished document templates are sent to project coordinators to verify the development in a document compare view and approve releasing them into production.



Document design validation

Achieved Benefits

- 95% of all communication created & maintained by the business, IT only delivers data
- 50% time reduction in the template development phase
- 90% time reduction in the release phase
- Flexible document release process enabled by cross-department change management
- Consistency paired with efficiency through large-scale reusability
- Reporting and auditing transparency

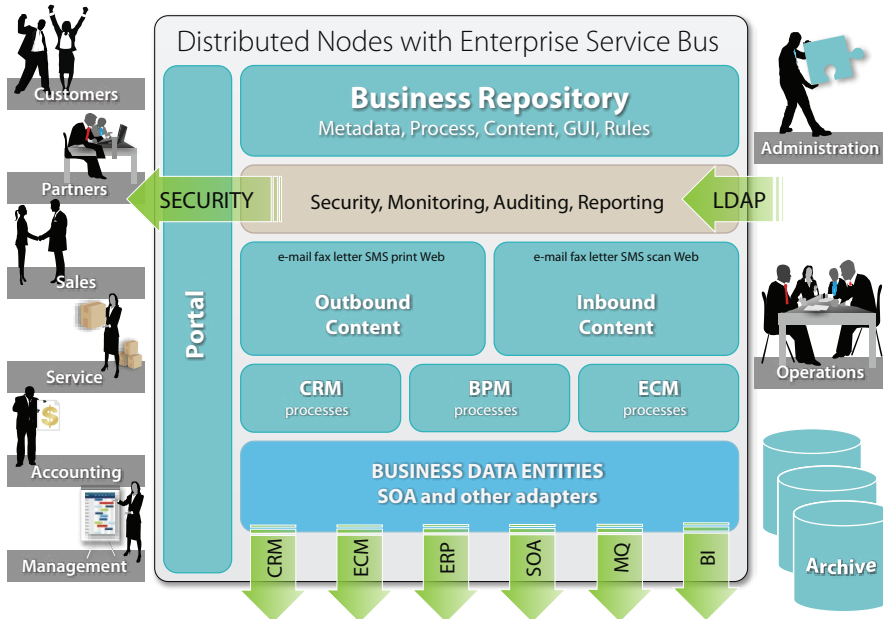
Papyrus Products

- Papyrus WebRepository
- Papyrus Designer Package
- Papyrus DocEXEC
- Papyrus DocEXEC/PDF
- Papyrus Adapter/SOAP
- Papyrus Client

Snapshot

- **Organization:** Leading European Bank (Finance)
- **Business Challenge:** Highly increased volumes of batch and online communication
- **Goals:** Efficient collaboration of Business and IT; flexibility and transparency from design to production; high-quality, high-speed communication creation; quick time to market
- **Integration:** Web Services
- **Solution Frameworks:** Adaptive Case Management, Business Correspondence

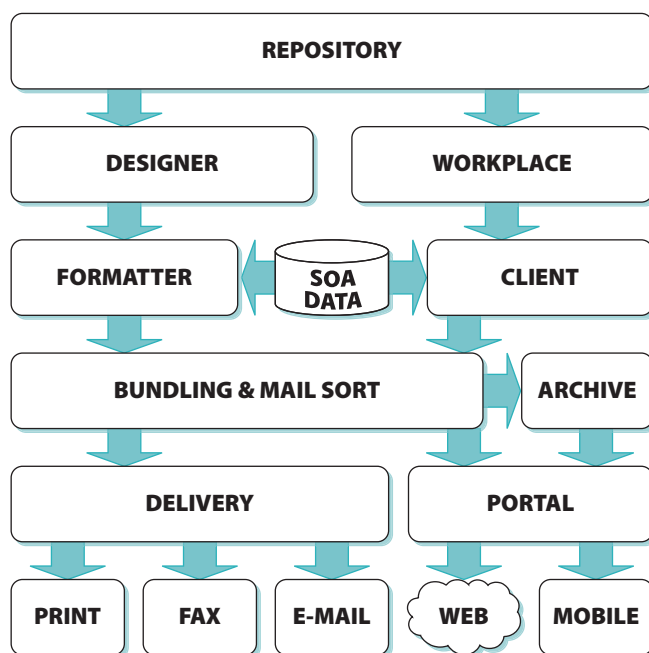
A comprehensive, flexible and scalable solution for consolidated management of inbound and outbound customer communications across channels, departments and systems.



Papyrus Adaptive Process Platform

Organizations can define, measure, and manage process, content and data in complex service environments with a shared customer view and customized GUIs.

Embed **outbound business communication**: The use of Papyrus outbound products closes the communications loop with customers, clients, stakeholders, agents and vendors with high-quality content.



A one-system solution or just the capabilities you need

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