TECHNOLOGY INNOVATION

<ISIS Papyrus>

Inside
Papyrus WebRepository

The Enterprise Communication and Business Process Platform. A new breed of software and services.

Delivering benefits across the entire organization:

- ▶ Take advantage of immediate opportunities to connect content to business processes that enable people to make better, faster decisions in operations, sales and services

- ▶ Increase your competitive advantage through faster business communication development and roll out new products more quickly

- ▶ Time and cost savings through operational efficiencies

- ▶ Easier compliance with regulatory requirements

# The Papyrus Platform is uniquely complete.

The Enterprise Communication and Business Process Platform.
A new breed of software and services.

Papyrus integrates all aspects of ECM, CRM and BPM into a common SOA using the EAI capabilities of Papyrus. Every organization has the strategic need to consolidate business processes on a platform that does not reduce the organization's AGILITY by hard-coding business processes. The essential first step to open up the business process bottleneck is to handle ALL inbound and outbound documents within one environment.

■ Papyrus Inbound Mail Processing Framework Solution

Even at a basic level, intelligent data capture - of documents, e-mails, PDFs, fax, Web, SMS and mobile content - is a remarkable technology: reading document and message content, extracting and interpreting document data, and validating it faster than any human; eliminating bottlenecks in manual workflows and physical document handling; and enabling instant transfer of captured information to the archive and the inbox of your knowledge worker.

Now consider Papyrus cross-channel capture, achieving average field-level extraction of 85% for unstructured information and 99.9% for structured information, handling multiple languages, document and message formats – supporting a complete solution that connects your people, processes and applications with information they need at hand when servicing a customer.
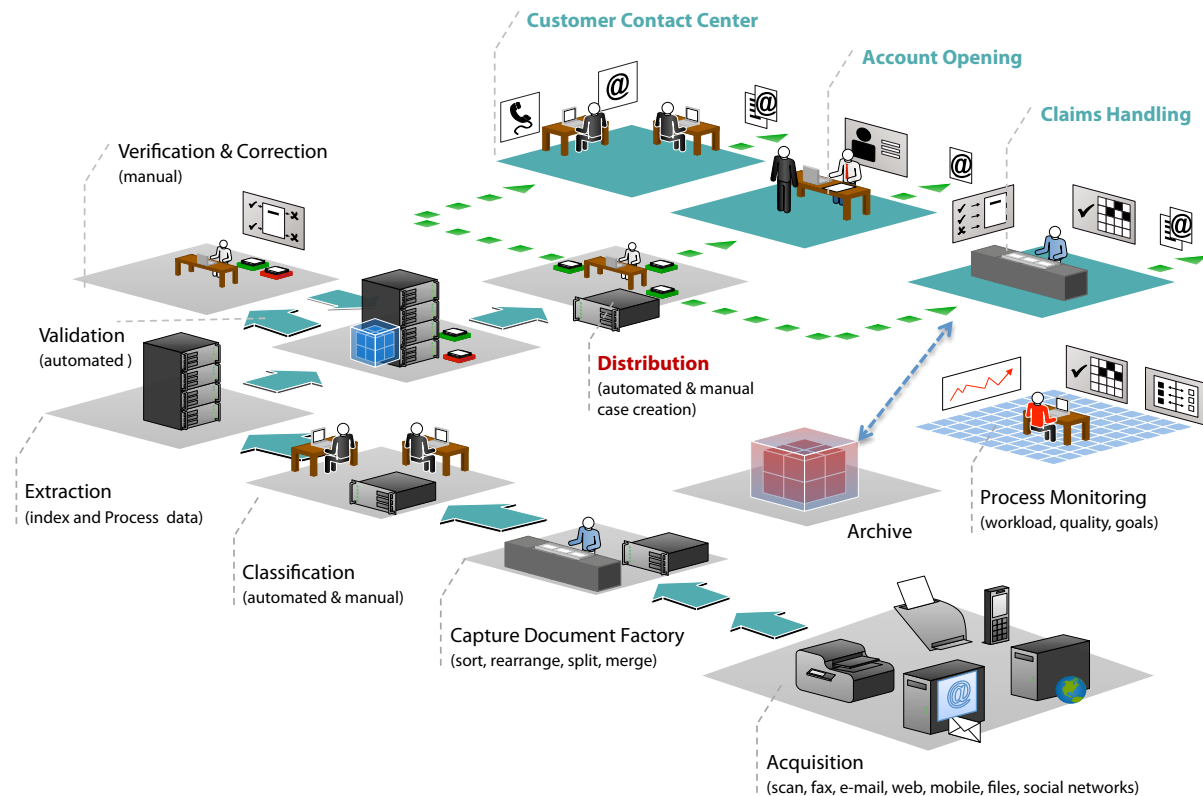
■ Cross-channel intelligent inbound data capture integrated with human workflow

All your inbound communication channels can be commonly managed by one single definition and by events – routing mail through the different steps of classification, recognition and data extraction to validation and then distribution to users in different departments. Our integrated workflow capabilities and the supervised learning of our intelligent data capture technology continuously improve the system to get smarter results in reduced cycle time, lower labor costs and maximized human capital.
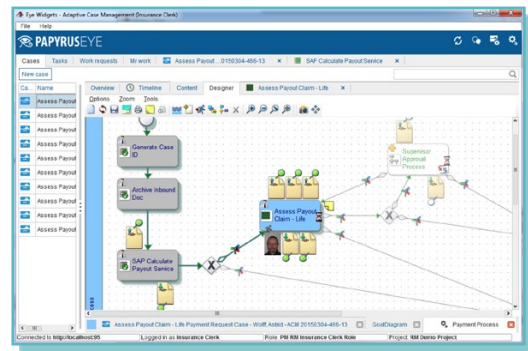
Features and benefits of the Framework Solution:

- Every mail received in the organization is a known incoming event
- An intelligent capture process starts extracting relevant information from structured and unstructured forms
- A new message opens a case automatically, or the message is routed to an existing case
- Authorized Business User opens new case manually
- An automated response management step can be performed based on state or event
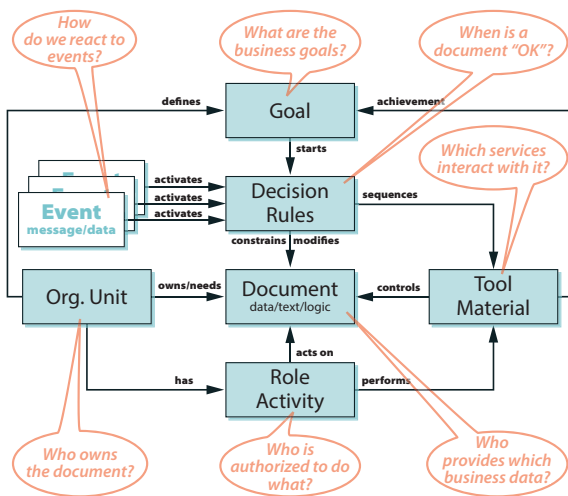- Archiving of complete case, content and process

Customer cases, like inquiries, complaints and exception handling, define customer happiness and are cost-relevant for the corporation. Adaptive Case Management (ACM) prevents time and productivity loss because communication, process, rules and documents are seamlessly integrated with business applications.

■ Papyrus Business Process Management

Communication can be a document, a dialog, a sticker on the document, a data record, an e-mail or a voicemail and all of it is business process-driven. The Papyrus process engine does not use a simplistic procedural flowchart graph to define the process but instead the Papyrus BPM is state- and event-driven to avoid problems associated with parallel activities and the rigid sequence of a procedure. This state- and event-driven process does not require complex decision blocks nor listen-for-event-loops. All process changes are defined in the Desktop and stored in the central WebRepository.

Case Team – Who accepted a Task?

Document = Content = Process

ISIS Papyrus Value Proposition:
Enhanced quality and speed in case completion

- Collaborative work and task management based on user profile
- Adaptive and goal-oriented business processes supporting exception handling
- A holistic, 360-degree view of the client
- Out of the Box – ACM Framework Solution cuts project times and cost in half

Benefits/Gains to be achieved:

- Less process tuning and correction because an unforeseeable event sequence does not invalidate the process
- Changes to the state engine and event definition of one item will automatically update all processes using this item
- Process changes do not require Java coding
- No programming of dialogs required

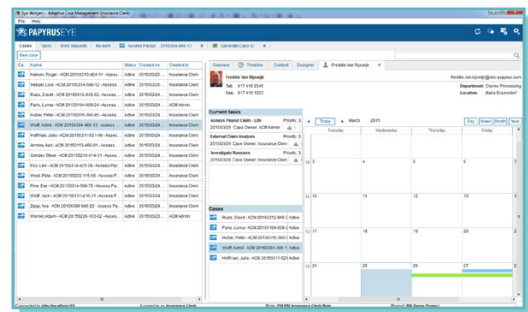**Team Members: Collaborative Work**

■ CASE Work: Knowledge Worker Empowerment

Knowledge workers are under constant pressure to work more efficiently. A holistic, 360-degree view of the client - with status, content, tasks, documents, rules and adaptive processes - achieves the best customer experience. In the Digital Age non-routine, collaborative, knowledge worker-centric activities will dominate how work is done in your organization - exceptions are the norm. The Papyrus platform provides a full range of business solutions using straight-through processes to dynamic processes to completely unstructured processes driven by rules and ad-hoc content arrival, such as scans, e-mail or social media.

■ Typical Use cases

Service Request Cases involve contractual obligations and service-level expectation. These cases are workflow and content-heavy but with a total activity view, annoying search times are gone. The result is comprehensive customer service at reduced cost: Insurance and healthcare claims, warranty and delivery fulfillment and payment processes benefit from control and compliance.

Incident Management Cases are collaboration-heavy and don't happen on schedule. These cases are data-intensive and the process is highly ad-hoc and situational: Car and workplace accidents, disasters, illnesses and patient care don't follow scripts.
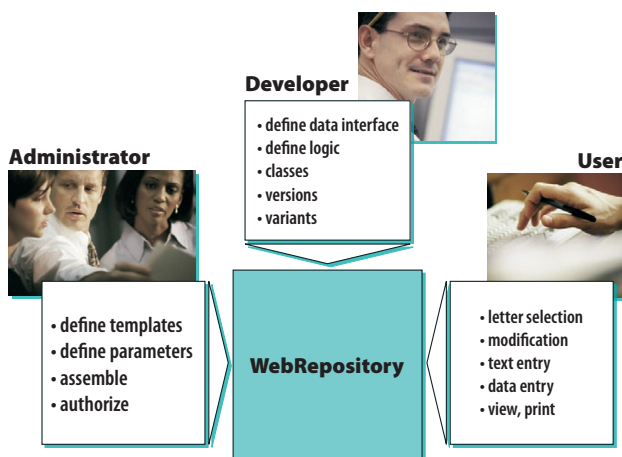
- New Customer on-boarding
- Human Resource on-boarding
- Project Management
- Lead Management – from suspect to prospect to pipeline

Smart Document Design + Cross Channel Delivery + Business Empowerment

Ready Papyrus Framework Solutions guarantee speedy implementations. They let you improve your documents with sophisticated design and smart layout to meet the requirements for the Digital Age with 'two-way' communication across all channels.

■ Papyrus Correspondence Framework Solution

Centralized administration of all document building blocks within WebRepository ensures consistency and reusability. Non-technical business administrators work in collaboration with IT and use the Papyrus Correspondence Framework Solution to create and assemble highly personalized document templates and building blocks. Business professionals require no technical understanding when using the Papyrus Client/Desktop or Web browser.

Developer
- define data interface
- define logic
- classes
- versions
- variants

Administrator
- define templates
- define parameters
- assemble
- authorize

WebRepository

User
- letter selection
- modification
- text entry
- data entry
- view, print

The Correspondence Framework Solution provides capabilities for administrative and end users, relieving IT of time-intensive document support. Business teams are enabled to create and manage content, templates and resources for batch, online, interactive and on-demand production of business correspondence. Smart design of templates and building blocks allow for unique multichannel output with interactivity and real-time feedback loop.

■ Document Composition from reusable elements

Document

Building Blocks:
- Data Reading
- Address
- Text Block
- Signature
- Logic Block
- Text Block

Data Collection
- Prompt
- Received
- Queried

Data Presentation
- Fix defined
- Prompted

Document Logic
- Rules
- DOCDEF
- Constraints
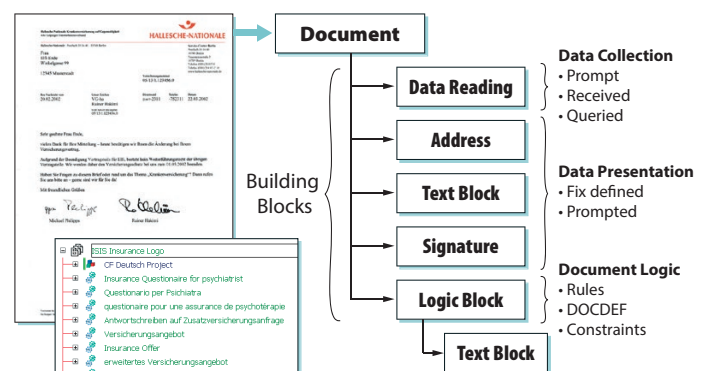
The methodology is an effective and efficient design that allows for the reuse of building blocks (text, tables, forms, signatures, logic, data) across many different business document types. For easy maintenance of building blocks each element is presented where used. An expert search provides information stored as taxonomy such as the author, creation time, language, etc.

Benefits/Gains to be achieved:

- Consolidation of document output
- Business empowerment
- Interactivity is built into the architecture
- Every document generated can also have interactive blocks for editing by the end user
- Intelligent unique design to be reused for batch/online/interactive/on demand documents
- Optimal look and feel for each delivery channel
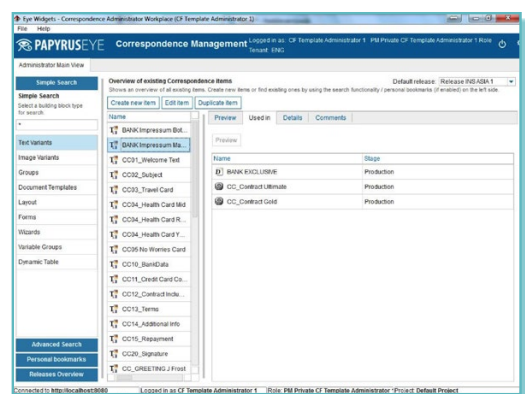
Benefits/Gains to be achieved:

- Forms and templates are greatly reduced via document building block structure
- Corporate Design and Identity is guaranteed by reusing elements
- Changing elements is a one-time effort automatically performed where the element is used
- The 'used-in' function makes for very easy building block maintenance

Change and Release Management - Version and Validation Control

Papyrus change management executes defined user roles (LDAP) and policies based on the version and variant control of the document element (i.e. marketing text valid from/to) Due to WebRepository's use of advanced state engine the document is automatically moved by the electronic agent of the system through certain states and change management processes (private development/public development/test/ sign-off/production). Versioning of all elements ensures that the correct version with its validation is taken into production by the system.
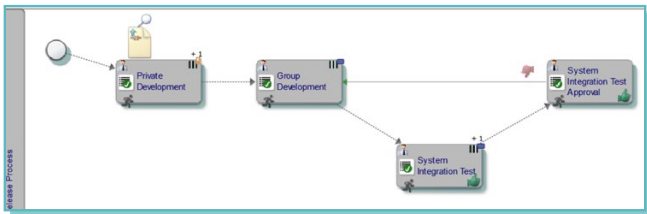
Benefits/Gains to be achieved:

- Absolute control by the system for document application changes at different stages
- Versioning and validation of all resources and building blocks ensure quality output and prevent mistakes
- Optimal timing of work: Any element can be developed, tested and signed off for production at a future date
- An element can be automatically activated for production and deactivated when time has expired

Central Resource Collection and Management of Fonts and Digital Assets

All corporate fonts with their codepages and character sets used in any type of business document are stored in a central resource collection as an object and are used throughout the end-to-end process of the document. Users can only select resources made available by the resource collection. Papyrus supports both SBCS (German/English/French) and DBCS (Chinese/Japanese) language requirements. One document can incorporate multiple languages or the same document can be produced in multiple languages by using the variant control of versioning in the Papyrus WebRepository.

Benefits/Gains to be achieved:

- Connecting with customers regardless of their language
- Fast and simple implementation and execution of different languages for one document

Natural Language Rule Editing

The WebRepository stores and manages all business rules needed for the document and its business process. Business users can set, define and change the business rules in natural language. These defined rules can then be reused across different document applications and their process.

Rules can act on a process or on a variable, rules can modify the document structure and rules can constrain a document.
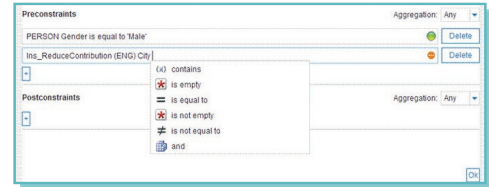
Simulation Options for testing data and rules by the business teams
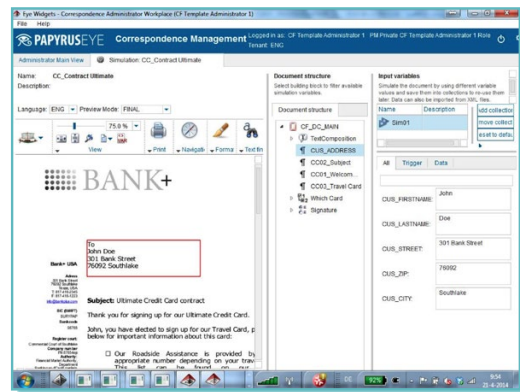
Benefits/Gains to be achieved:

- There is no programming for rules
- IT departments are not required
- Easy deployment of rules
- Rules are maintained and changed centrally
- Rules can be simulated with data and tested in the GUI

Rapid assembly of a new template by business teams
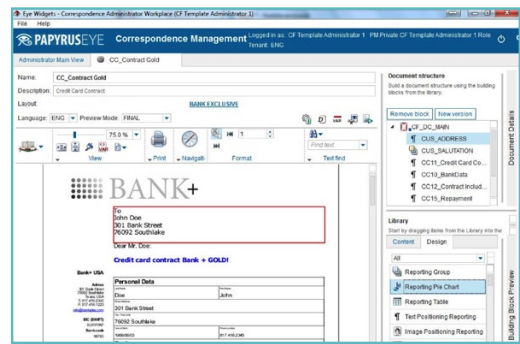
Benefits/Gains to be achieved:

- Rapid document creation using existing and creating new elements
- Any user can create highly personalized business documents
- Simple WYSIWYG letter assembly by the business professional
- Enforcing corporate standards (CD/CI)
- Compliance and regulatory requirements are fulfilled

Powerful Platform Capabilities for enhanced Productivity

Papyrus is designed to enable the enterprise to implement distributed, object-oriented business solutions.

■ Deployment: Automatic Software and Resource Distribution

The Papyrus Platform is a distributed system of objects (peer-to-peer architecture) in which all nodes (computers in a network) may use the same objects residing on the domain controller or any other nodes.

These nodes are managed and deployed from the WebRepository, which also holds the role/policy collection of all user definitions and document resources. When the user goes online, all valid information will be automatically presented. Papyrus software modules run functionally transparent communicating with all nodes across operating systems.
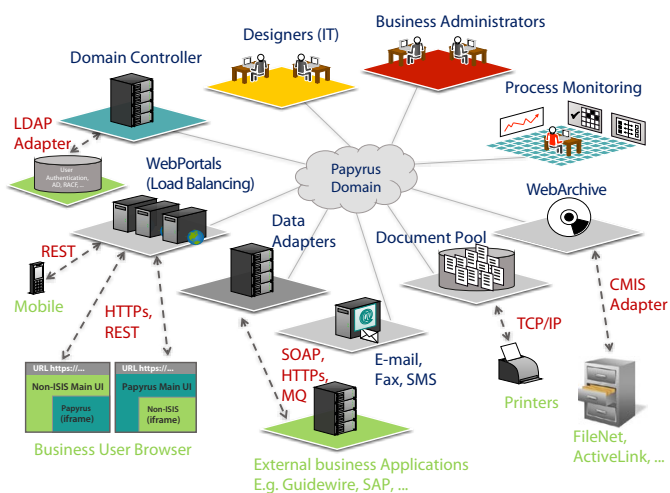
The illustration shows an architecture distributed across different operating systems, which is very common in mid-sized and large enterprises.

Benefits/Gains to be achieved:

- Powerful peer-to-peer capabilities for enhanced productivity
- Full scalability to thousands of users
- Information, data or documents easily shared with another peer in the Internet
- Security model in Papyrus prevents misuse of such a powerful open system
- Fault tolerance
- Operating system independence

■ Security: User Access Management, Audit Trail and Digital Signature

Security today is often external and an afterthought. In Papyrus the security definition must be part of the application and is therefore an integral part of the WebRepository. Papyrus provides auditing and access control capabilities along with Papyrus WebRepository functions that include hierarchical delegated administration, monitoring, digital signatures, data encryption and user authorization and authentication.
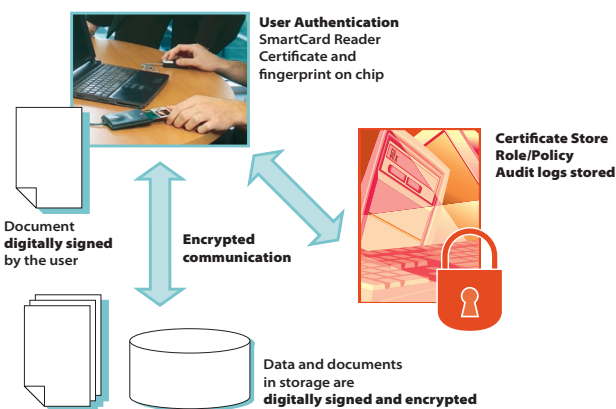
Benefits/Gains to be achieved:

- Papyrus enforces centralized user access policies as companies grapple with compliance requirements (HIPAA, European Data Protection Directive)
- Security is centrally defined
- User information can be read via LDAP from another system
- Full compliance for all business communication

■ Auditing

Auditing can be performed in real time using boundary rules or by post-verification of archived process tasks.

Job Management across platforms - inbound and output channels

Authorized users have centralized supervision and administration of their printing, e-delivery channels and inbound mail by monitoring the processes.
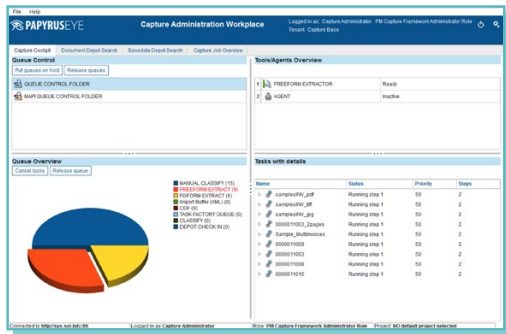

Benefits/Gains to be achieved:

- Central administration and management of all jobs (inbound and outbound mail) across operating systems, platforms and hardware
- GUI simplifies the work for operations - easy-to-learn with far less time and fewer errors

File- and Message-based SOA Integration

The Papyrus platform is fully SOA-compatible and provides a variety of Adapters as standard software to allow flexible coupling between business data, processes and documents. These Adapters are platform- and compiler-independent and do not need Java or .Net programming. Typemanagers are native interfaces and database-independent.
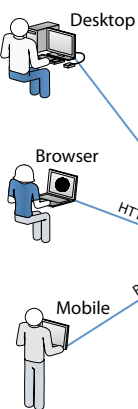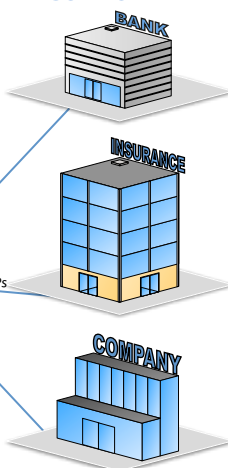
Papyrus Adapters

MQ-Series ■ Mainframe – JES 2/3, CICS ■
XML & File ■ SAP Output management (XOM) ■
HTTPs ■ SOAP ■ E-mail (SMTP, POP3, SMS) ■ Fax ■
LDAP for Authorization (Active Directory, RACF) ■
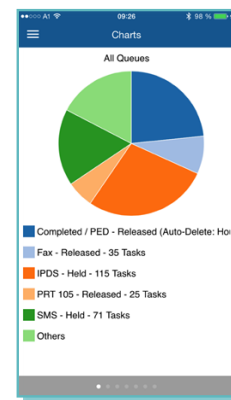SharePoint ■ CMIS ■ VOIP ■ Social, Mobile, REST

Papyrus TypeManagers

DB/2 ■ Oracle ■ MS-SQL

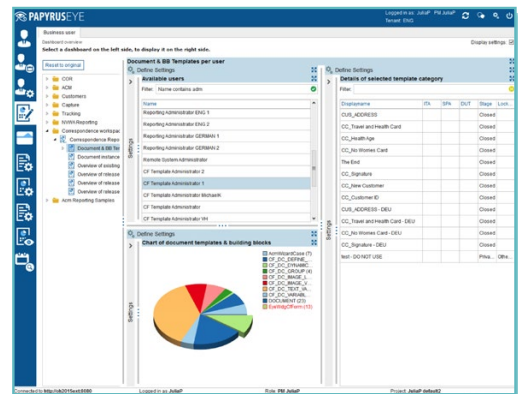## Reporting: Mailing Status Report
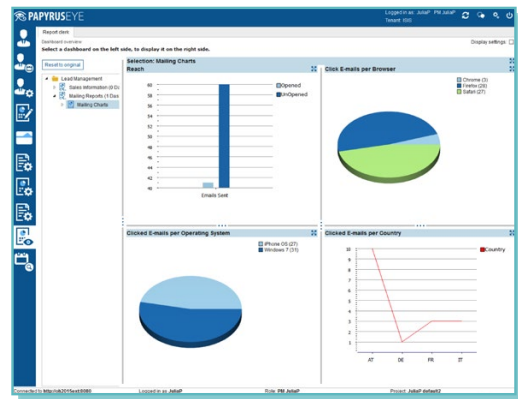
E-mail unique openings ■ Time opened ■ E-mail client
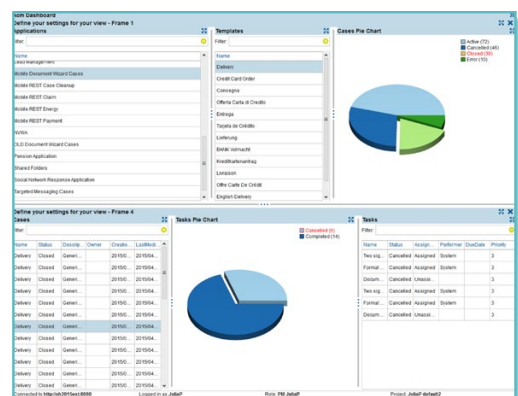■ # Clicked ■ Bounced ■ URL clicked ■ Click time

Reports are also available on the mobile device

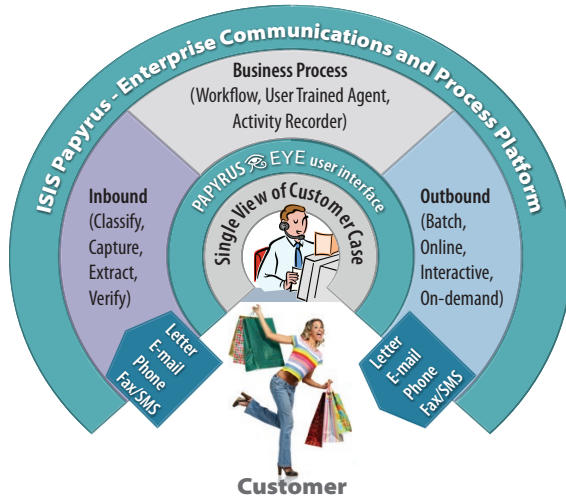## General Reporting per user and template

## Case Management Reports

One Company – One Voice

The Papyrus Platform enables corporations to centrally manage, administer and deploy document resources, data and definitions for all types of business documents and users, so that all outgoing correspondence strictly follows the corporate design and identity.

A consolidated view of your customer

Further, document building blocks are defined once for reuse across multiple document types. By unifying inbound and outbound communications with processes linked to enterprise systems, ISIS Papyrus enables organizations to interact with customers as one company with one voice.

Papyrus Objects is True Innovation.
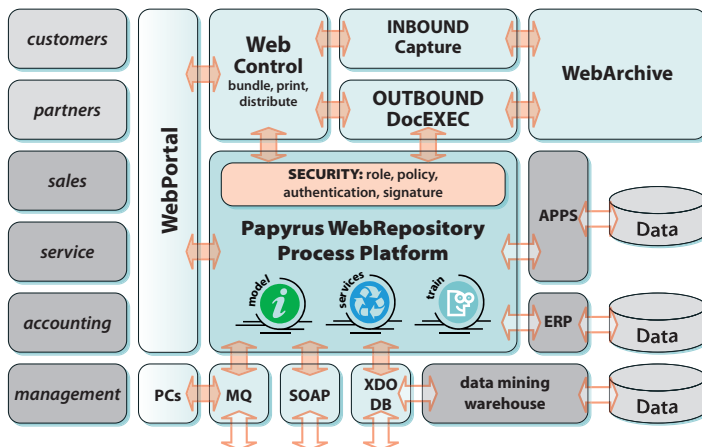
Papyrus WebRepository Consolidation

The Papyrus WebRepository centrally defines, controls and version manages all metadata for all interfaces and all business case items. A Repository is always a management environment for application definitions. It contains metadata only and does not hold instances. An archive, on the other hand, uses index-tables to search for instances but does not manage applications.

Patents:

ISIS Papyrus has two patents for the Papyrus System, one for OO-distributed transactions and the other for the User-Trained Agent.

US Patent no. 6848109
OO-distributed transactions

Patent Pending - 60/865,078
User-Trained Agent

A one-system solution or just the capabilities you need