

Connecting You to
Worlds of Knowledge

DriveU Whitepaper



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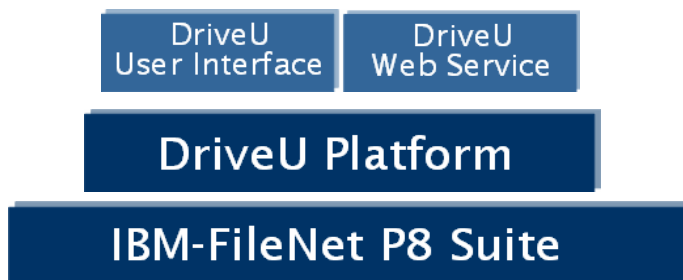


1 Introduction

1.1 Adding Business Logic to ECM

DriveU enables organizations to have a business focused solution suitable for their specific business needs. DriveU provides pre-built solutions that enable quick implementation of an ECM or BPM infrastructure within any organization.

DriveU configuration on top of IBM-FileNet include:



1.2 DriveU Platform- the ECM Enabler

The DriveU Platform, powered by IBM FileNet's P8 product provides cross industry and cross enterprise business templates adapted for different sector's. Pre-built business templates offer unique business added values such as: major savings in time and costs and significant risk reduction.

DriveU's capabilities include:

- Smart filing rules – filing rules determine document storage location according to user defined indexing characteristics for content organization and implementation of working methodologies within the enterprise. DriveU filing rules assist in minimizing user errors and simplifying workflow by creating a common business filing language.
- An innovative user interface/desktop employs advanced AJAX techniques to deliver usability and functionality similar to a desktop client for easy adoption. DriveU enables full user interface customization, quick response time based on low bandwidth usage, minimal mouse clicks, search tab bookmarks to maximize productivity, and Microsoft Office™ integration.



- The DriveU solution enriches and optimizes use of the BPM system by allowing users to view tasks from different queues on a single desktop. An advanced task allocation by qualifications, load balancing, according to the company's organizational structure and more.
Business logic for task assignment improves productivity by permitting users to sort and prioritize jobs and provide relevant information when needed through linking or direct access.
- Additional unique strong features.

These key features will be discussed in greater detail in Section 2 of this paper.

1.3 Business Benefits

Organizations must effectively organize and retrieve enterprise content, optimize customer service and improve staff productivity in order to survive in today's competitive environment. When implementing an enterprise content management (ECM) or business process management (BPM) solution, the organization needs a quick deployment with minimal disruption to its existing environment. At the same time, the solution must be user-friendly for easy adoption and optimization with strong integration with existing organizational systems.

Organizational challenges:

- Improve efficiency, productivity and performance maximization
- Ensure compliance and enforce standardization across the entire organization
- Build and sustain competitive advantage

DriveU's benefits to the organization:

- Proven & Mature solution
- Flexible & Adjustable system
- Dramatic Risk Reduction
- Quick implementation
- Business added values
- Fast ROI



2 Key Features

DriveU platform delivers real business added values on top of IBM's FileNet P8 product suite as well as a rich, web based, user interface, allowing the user to focus on business transactions, increasing end user's productivity by gathering all relevant content and process information in a single point.

2.1 Automated, Rule-Based, Content Filing

The DriveU platform delivers an "Automatic Filing Framework" which allows the organization to define, implement and enforce a common "Business Language" for all users. This powerful capability automatically files any document to its right folder. The automated filling is based on a set of business rules that can be easily configured by the system administrator. Once the organization defined "Customer File", all customer files will look exactly the same in terms of folders, sub-folders and relevant documents filed in each folder.

The automated filing rules framework will allow:

- The Implementation of a filing methodology across the entire organization.
- The Ease of use (changes & scalability).
- To create a Common Business Language.
- Flexibility & Scalability to organizational methodology.
- Avoiding filing errors.

The automatic filing framework allows the business administrator to define "Filing templates" which define the exact logical structure of a "Customer File" or a "Policy File" for an insurance company or a "Mortgage File" or a "Loan File" for a bank.

Example "Customer File": in an insurance company:

Customer John Smith

- Policy 123
 - Contracts
 - Financial
 - Claims
 - Claim 1234



- Legal Documents
 - Medical Documents
 - Claimant 12345
 - Claimant 12346
 - ...
 - Claim 5678
 - ...
- Policy 456
- ...

In this example the "Customer File" is the "run-time" representation of a specific customer, "John Smith". In the filing rules framework this customer file will be defined, using the following features:

2.1.1 Using meta-data for folder names

Each sub-folder of the customer's file might have a fix name or a combination of a fix name including relevant meta-data properties. For instance the Customer's root folder will be defined as "Customer <CustName>" where "CustName" is a meta-data property taken from the customer's folder class.

2.1.2 Folder Cardinality

The filing rules framework allows defining Minimum occurrences and Maximum occurrences of folders and sub-folders within the customer's file. Setting Max=0 means unlimited.

Let's take a few combinations of folder cardinality using the above John Smith's example:

- ❖ **Policy 123, Policy 456** will be defined as a single folder in the Customer's file template, e.g.: Policy <PolicyNum> where PolicyNum is a meta-data property taken from the "Policy" folder class. This folder will be defined with **Min=0, Max=0** – a customer might have 0 or more policies during his lifetime, and the number of policies is unlimited.
- ❖ The folder **Contracts** under each policy will be defined with **Min=1, Max=1** – this folder will be created as soon as its parent policy folder will be created. Once created – only once occurrence of this folder will exist.
- ❖ The folder **Legal Documents** under each **Claim** folder will be defined with **Min=0, Max=1** – this folder will be created only if legal documents will indeed be filed to the claim's file. Once created – only once occurrence will exist.



2.1.3 Business Filing Rules

Under each and every folder template in our customer's file filing template, the business user will define one or more "business rules" which comprise of one or more "Mandatory Properties" – specific configured meta data properties, from the document class, that are essential to the determination of the filing of the document. Usually such a relevant property will be the: "Document Type" (usually associated to a choice list).

Under each folder, the business user might define rules based on mandatory properties. Such as "Document Type=27" and "Loan Amount > 10,000" etc.

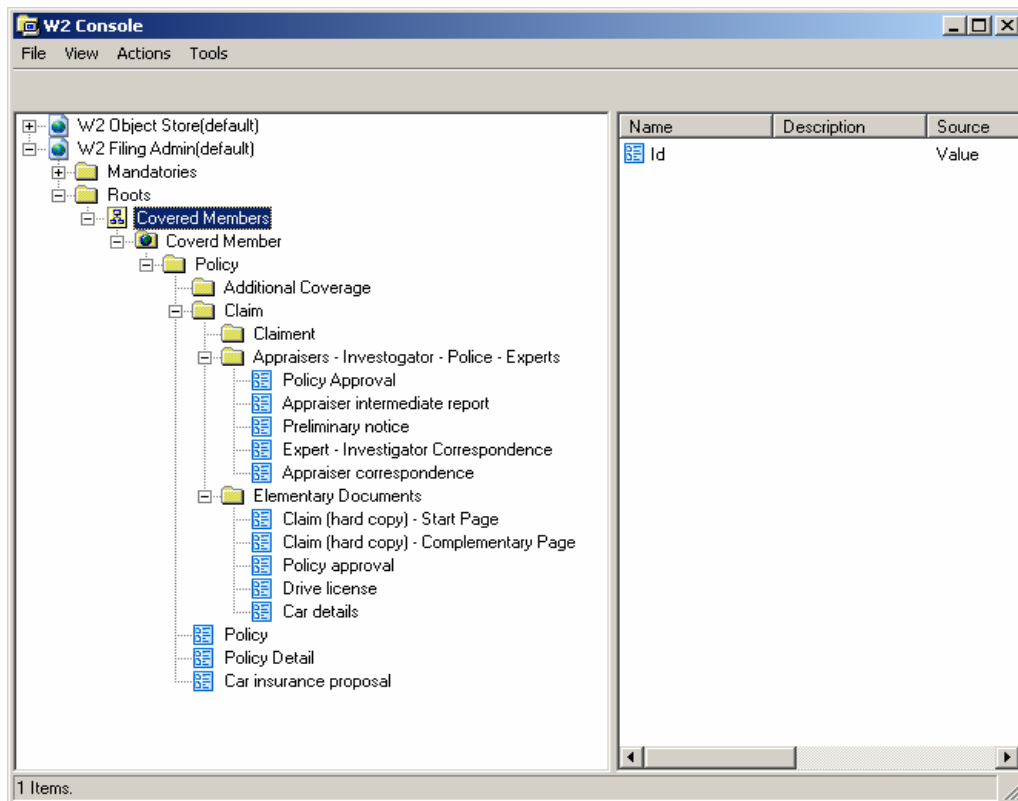


Figure 1. Filing rules console for the business user

2.2 Single Platform – Multiple solutions

The DriveU platform allows the implementation of various vertical solutions, for different vertical markets, such as: Insurance, Banking, Telecom, as well as vertical corporate units such as: HR, Finance and Marketing, in addition DriveU provide a complete solution for the entire enterprise.



2.2.1 Different Vertical Markets

The DriveU solution suite has several predefined solution packages, ready for use, based on IFN's knowledge and know-how gathered over the past 14 years. Ready-to-use solutions are installed within DriveU with a large set of assets, providing our customers and partner a quick boost in starting an ECM & BPM project.

A pre-defined solution package includes the following assets:

- Business Processes.
- Document Types.
- Filing Rules.
- Management & Monitoring Reports.
- Correspondence business templates.
- Legacy systems integration templates.

The following example is taken from the "Insurance Package" solution named: "DriveU Insurance":

Claim Processes

- Insurer's claim
- Third party claim
- Reporting to re-insurers
- Subrogation
- Collection of deductibles
- Salvage procedure
- Litigation
- Vehicle theft
- Escalation

Document Types

- Claim form
- Third party claim form
- Appraisers report
- Claim reporting form



- Police report
- Investigator's report
- Invoices
- Receipts
- Driver's license
- Car keys

Management Reports & Monitoring

- Avg. Claim Processing Time. (Per Department/Team/User)
- Avg. Claim Activity Processing Time
- Work Load (Per Department/Team/User/Activity)

Correspondence templates

- Missing documents form
- Appointment of legal counsel form
- Appointment of investigator form
- Deferral of claim letter
- Referral to appraiser
- Notice of subrogation
-

Advanced Legacy Systems integration templates

- Data validation & verification
- Alerts: Fraud risk, Insurer's Debts
- Automatic filing of documents that are created in the legacy system.
- Automatic creation of work objects based on reports created in the legacy system.

2.2.2 Enterprise Solution

While the DriveU solution is usually picked to implement one of the enterprise's core-business departments, the same solution can be deployed to different departments of the same enterprise. This way, while the "DriveU Insurance" solution was chosen to solve the ECM & BPM challenges of the core-insurance departments, the enterprise can use the same solution for its HR department,



legal department, Compliance departments as well, enjoying the same look & feel, the same business features and the same IT infrastructure.

The following features allow the ease of deployment of DriveU across the enterprise:

- "Organizational structure" manager – this module (later described) can help personalize the end user's desktop for different department/users.
- Definition and implementation of Sophisticated Organizational Unit Relations ("The manager of", "The Replacer of")
- Role-Based Security driven by the organizational hierarchy
- DriveU Web-based management:
 - SAT (Site Administration Tool)
 - Access rights & Decentralization – supports different access rights for different levels of administration. Some of the administration can be done by the business managers.

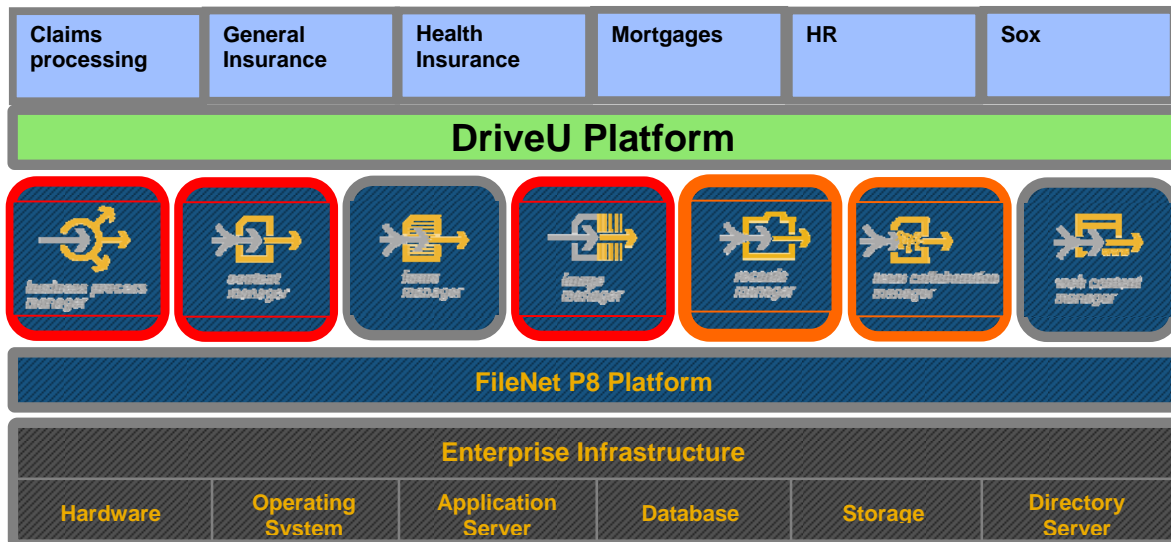


Figure 2. DriveU Platform and solutions - as part of the P8 product suite



2.3 Increase productivity & efficiency

The **user interface** in DriveU allows the end users to focus on their business tasks, increasing efficiency and productivity. The DriveU interface is based on ease of use, and “Just in time” information architecture, providing the end user the exact information he needs, in the exact point in time he needs it.

2.3.1 Flexible user interface

- MS Outlook look & feel
- Allowing style customizations: Colors, fonts and size.
- Supporting Layout changes.
- Allowing packaging a "Theme" for every customer.
- Minimal mouse clicks.
- Tab views tracing bookmarks increase productivity.

2.3.2 AJAX++ technology

The DriveU user interface empowers AJAX technology:

- Desktop user experience: no web blinks and page refreshing.
- Quick response time.
- Use low bandwidth – only small fraction of "Screen Changes" only are transmitted to the browser.
- Maximize performance – the low bandwidth usage allows opening a secure solution to the internet as well.
- User friendly – the rich experience is very similar to a Client desktop application.

2.3.3 Personalized Content View

The DriveU solution allows the customization of personalized user desktops, defining the desired content to be seen at the main "DriveU Portal" page for every organizational Group/Role/Unit/.



The DriveU portal page consists of **Applications** each showing a predefined content search result allowing navigation between different views of the same content. Each view supports the following features:

- The *set of fields* shown in the view and their *order*.
- *Static tabs* – Grouping the data in the view with **predefined** categories, for instance showing "Customer Files" in 2 tabs: "Private Customers", "Business Customers" based on meta-data attached to the customer.
- *Dynamic Tabs* – Grouping the data in the view based on the distinct combination of one or more fields in the view. For instance, grouping the customer files view by: "Region" and "City" will provide an ad-hoc tree view presentation of the customers, based on the different regions (e.g. North, Center, South) the result includes, and for each region splitting to the different cities the customers reside, all based on the meta data of the content retrieved and presented to the end user.

2.3.4 Quick Search Bar & Navigation Tabs

Each **view** in the selected **application** might have **stored searches** attached. A stored search can have **parameters**. A stored search with zero or 1 parameters allows submitting an immediate query on the stored search, using the "Quick Search" bar in the DriveU main portal page. When the stored search has a single parameter the user can enter its value similar to the "Google quick search bar".

The search result will open a new result tab showing the search result, thus allowing the user to remain focus on his previous business tasks, usually used for ad-hoc tasks, such as phone conversations allowing the user to close the search results tab upon finishing, and immediately view the previous business task.

2.4 Enhanced ECM Capabilities

While leveraging existing ECM capabilities using the IBM FileNet P8 content manager, DriveU adds new business added-values to the ECM category:



2.4.1 Introducing Bundles – New content object

The bundle content object enables gathering of few documents that have a common subject from one hand, but then allows *filing* of the same bundle in multiple folders. This business need is often used, and can be implemented in the following scenario:

A Bank organizes his customers in "Customer Files" which have a folder for every loan request requested by the customer. At the end of every month the bank gathers a "Loan Approval Committee" to approve/reject all the loan requests of the previous month.

In this scenario, the bank will open a new **Bundle** object for every assembly of the committee, for instance a bundle called: "Loan committee April 2007" and will file all relevant different customers document into this bundle. But, this bundle will also be filed as a content object in all relevant customer files.

2.4.2 Bulk Meta-Data Update

Some of the meta-data in an ECM system is replicated from different legacy systems. This meta-data is chosen as the minimum meta-data required retrieving and identifying the different content objects in the ECM system.

It is very common that some meta-data in the ECM content system needs to be changed to affect changes made in the different legacy systems.

The Bulk Meta-Data update feature allows the authorized users (subject to special privileges) to choose the target content objects to be changed and enter only the information needed to be changed. The Bulk update is performed asynchronously by the server while the user can continue to work on other business tasks.

2.4.3 Content Collaboration with External Users

Working in a fully integrated ECM environment often makes it difficult to share information with users that are not connected to the ECM system.

The **Export** and **Send Mail** features allows DriveU users, based on their permissions, to send information from the ECM system to 3rd party users, which are usually not connected to the ECM



system. This capability allows the **multiple** selections of content objects (such as entire multiple "customer files") and exporting or sending it by mail.

The site administrator can configure the system to block exporting large amounts of content in a single request by setting a "Maximum" content size to be exported (or sent by mail) to control network traffic during production hours.

The content can be exported / sent by mail using 2 additional features:

- **Hierarchical/Flat** – The user can choose to maintain the hierarchical structure of the files/folders being exported or to export the content files in a flat output.
- **Compressed/Uncompressed** - The user can choose to compress the exported content to a single compressed file compliant with the Microsoft Windows XP compressed folders or any commercial or freeware software's such as: WinZip or 7ZIP.

The user can combine Hierarchical/Flat and Compressed/Uncompressed output and the only restricted combination is Hierarchical and uncompressed while sending information by mail.

At every export, an XML file is created. This XML file represents the entire meta-data set of the exported content. This XML file can be used by automated systems receiving such content on a regular basis allowing importing that content automatically.

2.4.4 Correspondence Templates

One of the organization's business challenges is to share correspondence with 3rd party users not connected to the online ECM system. One way is to export / send by mail **existing** content from the ECM system.

Another way is to create **new content** and send it to those 3rd parties. This newly created content is usually based on predefined correspondence templates that dramatically reduce the time to produce this content.



The solution supports defining special folders to hold content templates, based on Microsoft Office templates (such as Word/Excel etc.). These templates can be ordered in subject-based sub-folders having appropriate security access to different users in the organization.

During the process of creating a new content in DriveU, the system allows to base the new content on an existing "Correspondence Template". In that case, the system performs the following:

- Copies the content of the template to the content of the newly created document.
- Copies meta-data information from the template to the newly created document (Match by name).
- Updates bookmarks in the content file (e.g. MS Word file) having the same name as meta-data properties. Meta data information can be taken either from the document properties and/or from the folders of the filing properties.
- Additional information can be retrieved from legacy systems to the bookmarks in order to complete the automation of the process.

2.5 Enhanced BPM Capabilities

While leveraging existing BPM capabilities using the IBM FileNet P8 Business Process Manager, DriveU adds new, business added-values capabilities in the BPM category:

2.5.1 Sophisticated Task Allocation Mechanism

One of the major enhanced capabilities of DriveU within the BPM module is the ability to have the **optimal match** between business tasks created in the different business processes and their designated responsible owners.

The solution supports different matching algorithms based on **system matching** and/or **business rules** matching.

The task allocation mechanism strongly relies on the "Organizational Chart" manager which defines the relations between the business units, the roles and groups in the system and the membership of users within the different roles and organizational units within the chart.



The "**System Based**" matching matches between a process task and the designated organizational entity and it is based on the following combination:

- **Role:** can be one of the following:
 - **Originator:** holds in run time the user that initiated this process.
 - **Last:** holds in run time the user that has completed the previous task.
 - **Any other named role:** the system allows to define "logical" roles participating the process and then map those roles to specific organizational units in the chart (users/groups/departments/roles)
- **Algorithm:** can be one of the following:
 - **By Load:** allocates the task to the user having the minimum business tasks in his queue among the users who are members of the selected Role.
 - **Exclusive (Round Robin):** allocates the task equally between the users who are members of the selected Role.
 - **One Of:** allocates the task to the entire selected organizational unit as a "group assignment". The first member of the group will pick it up and lock it from other members in the group.
- **Match:** The user will be selected within the "same" organizational unit as the previous user dealing with that process, up to 3 levels (e.g. The same department and the same branch)

The "**Rule Based**" matching matches between a process task and the designated organizational entity and it is based on the following combination:

- **Rule:** a Boolean phrase such as "LoanAmount > 10000" where the "LoanAmount" is one of the fields defined in the business process.
- **Role:** can be one of the following:
 - **Originator:** holds in run time the user that initiated this process.
 - **Last:** holds in run time the user that has completed the previous task.



- **Any other named role:** the system allows to define "logical" roles participating the process and then map those roles to specific organizational units in the chart (users/groups/departments/roles)

The task allocation mechanism in DriveU supports programming interface allowing the further customization of the task allocation mechanism based on other business rules which might reside in legacy systems. In such cases, the system's "recommendation" is transmitted to the programmer which might override and allocate the task using different algorithms that match the organization's business logic.

2.5.2 Increase BPM productivity – Rich & Unified work queue

Now that the work is being routed to the right people at the right time, based on the sophisticated task allocation mechanisms, this is not enough. Although the user's desk now is electronic, and not paper based, how can he navigate quickly throughout his entire queue, to enable quick and efficient work?

The user still might have hundreds of tasks in his queue, and not necessarily he can process them all. This is where DriveU adds the following features to increase the user's productivity:

- **Prioritizing** the work, both manually and automatically by a set of predefined rules.
- **Filtering** the work, for instance, dealing only with claims in a state of "Submitting for Appraisal" in order to send work to his appraiser.
- **Sorting** the work by Priority or Entry Time or Claim Damage Estimation to deal with the "light" claims first for instance.
- **Quick Search** for a specific task in my work queue or in another user's queue whenever a customer is calling over the phone.
- **Group** tasks by common set of fields.

2.5.3 Increase BPM productivity – Postpone & Full Kit

Now when the users' desk looks more organized, DriveU still needs to make his life easier. Sometimes, the user would require documents from a 3rd party, either from the customer, appraiser, Lawyer or others. In all those cases, we would like to automatically remove from the user's inbox, any



tasks that he is not capable to perform at this point in time - due to missing external or internal information.

The “**postponed queue**” feature allows postponing tasks until a given date in which the user believes the relevant information would arrive. In some cases the task is postponed due to a **lack of several pieces** of information required **from different sources**.

The “**Full Kit**” feature allows defining a set of business rules that arriving documents might correspond to. Let’s take, as an example, the “**Estimate Damage**” activity in the process: the insurance clerk requires:

- The agent's **incident report**.
- The **appraiser’s report**.
- The **police report** for body injuries.

The claims clerk would like to postpone the claim until all those documents arrive. When they **all arrive** – we call it a “**Full Kit**”.

But there are always **exceptions**:

- The **Appraiser’s Report** can be defined as an “**Important Document**” which will return the task right away from the postponed state.
- We can also define a **2 weeks timeout** for the kit which will return the task automatically after 2 weeks.

Even though cases are postponed, the clerk can always browse for them in his postponed queue.

2.5.4 Decision Support – All in one screen

The user dealing with business process task needs to have access to **different sources of information**, usually located in different systems and places. In order to perform the task efficiently, having made the right decisions, on time, one should have access to all relevant information in order to perform the task.

DriveU's presentation of the “Tasks Handler” screen will gather information from all relevant sources:



- The **incoming documents** of this step in the process. Those are the documents that usually initiated the process.
- The whole **customer folder** to see historic information about the customer.
- **Process related data**, such as instructions for this task, allocated time to perform the task, etc.
- **Customer's related** data coming from **legacy systems**.

2.5.5 Process Collaboration – Correspondence Module

While working in a BPM environment, the end user is often required to collaborate and share information with his colleagues, managers and other 3rd parties. This information is crucial in order to make the knowledgeable, accurate decision for the case.

The correspondence module, within the "All In One" screen allows adding notes to the case. Each note has a target audience which can be:

- **"Everybody"** – Means all the users participating in the process.
- Specific **"Organizational Entity"** – any user, group, role in the organizational chart. In this case this note will be visible only to members of the selected organizational entity.

The system allows different **"Correspondence Categories"**, such as: FYI, Warning, Message, etc. each having its own relevant icon representation to draw the desired attention.

The system automatically records the user name and date/time, allowing other users (in the same step, or in other steps of the process) to see a chronological list of all notes written for this case (the ones he is allowed to see).

While the case might expire, some of the notes written during its lifetime are extremely important, and it is crucial to record it in an accessible place. During the process of adding a note to the case, DriveU allows to mark this note as a "permanent note" (flag saved as a **user preference**) to be added to the



attached customer's folder as an annotation. In such a case, the remain at the customer's file view in the "properties" screen.

As the ECM system contains a powerful **content search** engine, all such notes are searchable through **content search**.

2.5.6 Impersonation

This feature allows, usually for managers, upon appropriate access rights, to impersonate as another user. The administration module defines the matrix of "**Impersonation Relations**" within the organizational structure manager. The impersonation relation can be set between any 2 organizational entities, e.g.: user to user, user to group, group to group, etc.

While user A impersonates to user B, he will see users B entire tasks list, he will inherit his access rights and will act on behalf of user B.

This feature is usually necessary for:

- Managers to see "what's going on" in his employees work queues.
- Impersonating to absent users and forwarding their tasks to others.

DriveU Administration

The DriveU administration module manages the configurations of the following DriveU modules:

- DriveU ECM
- DriveU BPM
- DriveU Organizational Chart & Permissions Manager

2.5.7 DriveU ECM Administration

The DriveU ECM manages a wide array of content entities such as: Files, Folders, Bundles and Documents. Those entities are managed in a logical structure determined by the filing rules framework or free filing made by end users. The system allows creation, retrieval and display of the content entities using a flexible and rich user interface that derives its configuration from definitions made in the administration module.



The ECM administration module includes the following features:

- Configuration of a full user's desktop ("Environment") including its applications, views, grid layouts, etc.
- Configuration of all data entry layout screens in the different processes of content entry and retrieval.
- Configuration of toolbars and menus in the different DriveU screens.
- And more.

2.5.8 DriveU BPM Administration

The BPM administration module is responsible of the following features:

- Configuration of the different views of the user's queue – "My queue", "My Postponed Queue", "My teams queue", etc.
- Configuration of task allocation algorithms per every step in every process.
- Optional configuration of user fields data entry layout in the "Task Handler" screen (instead of "**standard layout**").
- Optional configuration of the user fields exposed in each step in the process: Read/Write, Required or not.
- And more.

2.5.9 Organizational Chart Manager

This DriveU module turns thee DriveU administration module into an enterprise solution. Using this module the system administrator can define the following:

- **User** - An organizational unit describes an active DriveU user – can be derived from the LDAP server. This object does not contain any other objects.
- **Role** – An organizational unit - can contain only users.
- **Group** – An organizational unit. Can contain other groups or can contain specific users. This organizational unit can be associated with a "Unit Type" which can be: Company, Division,



Section, Branch, and Geographic Location. These types are used for visualization purposes (different icons) and also can be used within the "Task Allocation" mechanism where one of the matching rules to an organizational unit could be: "In the same **Branch**".

- **Relations between entities** – the system allows defining relations between the entities, such as: "User A is the **Manager Of** Group B".
- **Permissions** – A set of **system functions** the entity is entitled to carry out in DriveU, such as "Create File", "Add documents to bundle", "Run reports", etc.

2.6 DriveU Capture - High Volume Incoming Documents Processing

Enterprises today manage huge amount of unstructured data that must be captured and routed according to enterprise business rules. Such documents, whether generated internally or from external sources, may come in the form of paper-based mail, electronic mail or fax transmissions.

DriveU Capture is a comprehensive solution for document capture and routing which incorporates three powerful modules:

DriveU Mailroom - Capture, index and routing of paper-based document.

DriveU Mail Router - Capture, index and routing of electronic incoming mail.

DriveU Import Capture - Index and routing of electronic documents.

DriveU Mailroom

With a proven ROI, DriveU Mailroom is designed to support large scale, high production, in house scanning of day-to-day incoming documents and existing physical archives. Based on the FileNet capture product, DriveU Mailroom's key features are:

- Indexing prioritization control.
- Support for patch codes and barcodes as page separators to speed up the scanning process.
- Identification of barcode to save precious time during the indexing phase.
- Ensured data integrity via indexing validation against existing legacy system.

DriveU Mailroom, with its "Box Management" functionality, facilitates remote physical archiving of paper, thereby saving expensive storage space for local archive needs.



DriveU Mailroom performs a full audit logging of every activity, from initial scanning to fill out of boxes and indexing, thus enabling production reports as well as tight management control on DriveU Mailroom performance.

Key Benefits

- Reduced cost per incoming page versus outsourcing solutions.
- Streamlining the indexing process through reuse of shared information between documents.
- Full capture process control.
- Professional and accurate indexing performed by in-house specialists.
- Documents remain in-house, ensuring availability and security.

DriveU Import

DriveU Import is a background service that captures and indexes electronic documents, whether generated in-house or received from a third party. By working as a listener over one or more Windows folders DriveU Import captures electronic documents from those folders and sends them either directly to the indexing phase or commits them directly to the content server. Then DriveU Import uses the same mechanism as DriveU Mail Router to empower decision makers to route each captured electronic document to the appropriate person or working group.

DriveU Import Benefits

- Eliminates labor – intensive scanning of in-house documents.
- Allows automated capturing of electronic third party document and their indexes.
- Fully automated indexing based on legacy system information.
- Complete auditing trail of imported documents

DriveU Mail Router

DriveU Mail Router is a background service that captures and indexes the enterprise's valuable incoming mail. By working as a listener over one or more of the mail server mailboxes, DriveU Mail Router processes all mailbox incoming mail, sending them either directly to the indexing phase or committing them directly to the content server.

Designed for maximum control, DriveU Mail Router empowers decision makers to route each incoming message to the appropriate person or working group.



DriveU Mail Benefits

- Leverages enterprise Fax investments.
- Lowers cost of handling faxes and incoming mail.
- Automatic indexing based on mail attributes.
- Full searchable record of incoming mail.
- On-line support for statistical analysis.

2.7 DriveU Back-Office Server

It is very common that some of the ECM & BPM related business tasks are carried out in offline mode. Such system activity can include:

- Auto generation of documents from legacy systems and importing it into DriveU.
- File format rendering to PDF/HTML based upon business logic.
- Automatic bulk update of meta-data according to changes made in the legacy systems.

The DriveU solution supplies a back-office server framework which is used as the infrastructure to carry out all those offline business tasks (jobs). This environment supports the following features:

- Scheduling different jobs to run as separate threads of the BackOffice Service.
- Scalability – The BackOffice server can be installed on different machines, to balance the work load.
- Configuration of "System Offline" hours, to allow postponing jobs during backup.
- Full logging of jobs activity to a database allowing filtration of the logs by different criteria.
- Mechanism of sending mails to system administration if attention is required.
- Console with "MMC look & feel" to enable configuration and control tasks remotely.
- Ability to connect to multiple back-office servers from a single console.



2.8 Reports and Statistics generator

DriveU incorporates the fully features "Crystal Report Generator" developed by "Business Objects". The of the shelf DriveU system is geared with few demo reports, the organization can easily generate its own reports using any standard authoring tool of .rpt files (such as Crystal report designer or Microsoft Visual Studio – both require separate licensing).

Once reports are created and deployed, using DriveU Site Administrator module, reports can be attached to different grid views in the system.

DriveU stores reports as ECM objects in the FileNet Object Store, object authorization can be applied to the reports allowing visibility of specific reports to specific users/groups.

Authorized users can run the crystal report engine directly and the result are displayed in a rich web page with DHTML capabilities, such as collapse/expand different levels if grouping was using, displaying charts – all based on the report designer.

The output of a report can be also saved to standard formats such as PDF, Excel or Word.

2.9 Interception Framework – Open Architecture for connectivity

The DriveU interception framework is the main channel of connectivity with the customer's IT environment. This framework exposes the DriveU kernel source code enabling almost unlimited flexibility, changes and customizations, required in order to fully integrate fit the DriveU solution to the customer's environments and customer's legacy systems.

Without having the source code of DriveU, programmers can use the interception framework to "Intercept" almost any piece of code (**Method** level), based on configuration only, and have control in the following scenarios:

- **Before** - Perform business tasks before the original DriveU Method is executed.
- **After** - Perform business tasks after the original DriveU Method is executed.
- **Instead** - Perform business tasks instead of the original DriveU Method.
- **Before and After** can be combined to perform both.



Configuration	Module selection	Overridden code
A set of override-able methods	Assemblies	public void X (parameters)
	Namespaces	<pre> . <customization c# code> . . base.X (parameters); . . <customization c# code> </pre>
	Classes	
	Methods	}

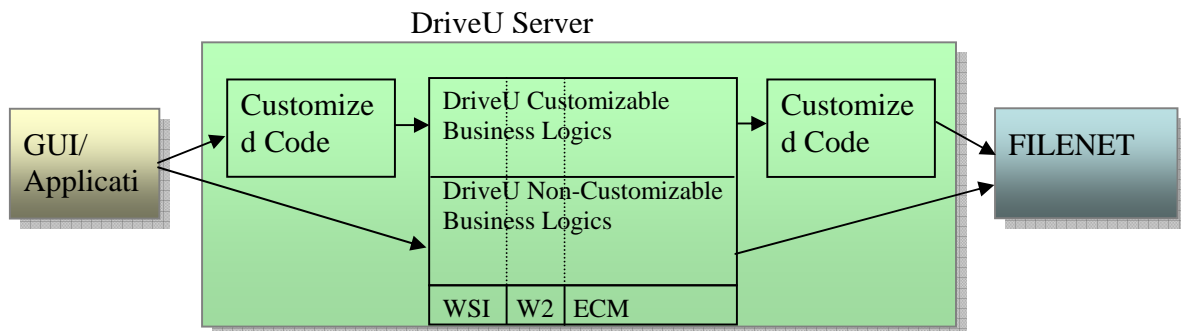
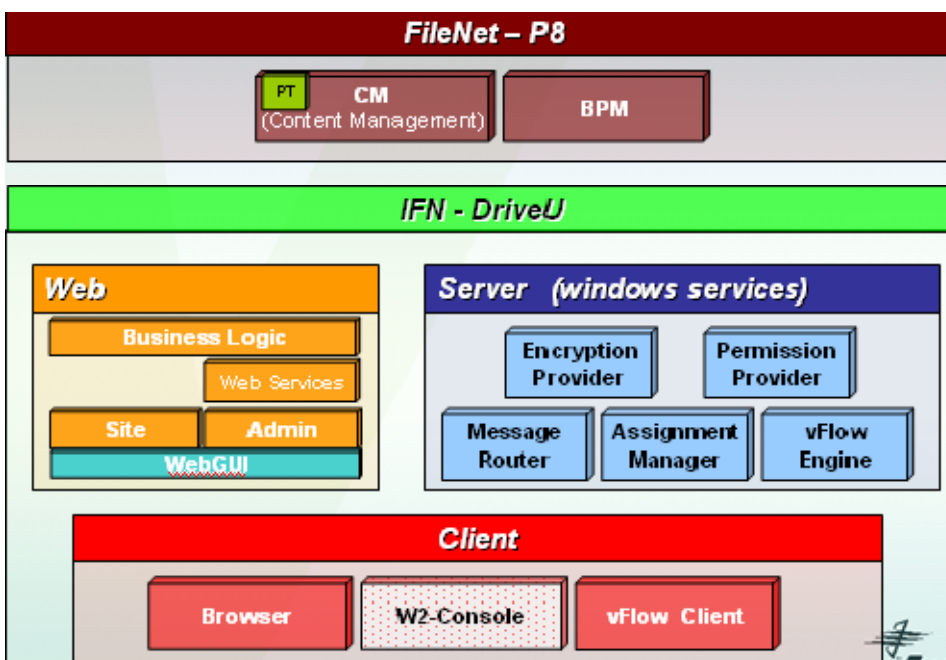


Figure 3. Interception Framework Schema



3 Technical Architecture

DriveU high level architecture





DriveU Web Components

Web Site	Web application for the end user
Site Administrator	Web application for the system administrator of DriveU as well as business administrator, used for the system's configuration and maintenance
Business Logic	.NET Assemblies that represent the entire DriveU business logic. In the next version those components will be moved to the "DriveU Server" side, and left only as "Interfaces" on the web server.
Web Services	A set of ECM & BPM high level API's exposed through web methods reflecting the entire DriveU business logic

Server Components (Windows services)

Encryption Provider	Provides RSA Encryption/Decryption services used for carrying the user/password in the execution context object. Service must be running in order to perform logon to DriveU.
Permission Manager	This service holds the entire organizational structure loaded either from a file system provider or from a P8 Content repository. The organizational structure holds: Users, Groups, Organizational Units and the relations between them, as well as permissions of each entity to perform system functions in DriveU. Service must be running in order to perform logon to DriveU.
vFlow Engine	The alternative workflow engine of IFN, instead of FileNet BPM.



Server Components – cont.

Message Router	<p>This service is responsible for the asynchronous work of DriveU. The service works with the MSMQ technology and each type of message sent to a queue is carried out by a different handler. The supported messages by this service are:</p> <ul style="list-style-type: none"> *perform audit log of all relevant actions in DriveU. *perform workflow task assignments for newly created tasks in the BPM *perform "AutoFiling" of documents scanned/index in wins.
Assignment Manager	<p>This service works in 2 modes:</p> <ol style="list-style-type: none"> 1. Acts as a synchronic listener to newly created tasks in vFlow. 2. Acts as an a-synchronic message handler for assignment messages created by the message router for FileNet BPM newly created tasks. <p>In both cases, this service performs the task assignment to a specific entity in the organization based on the task assignment configuration of the DriveU Administrator.</p>

Client Components

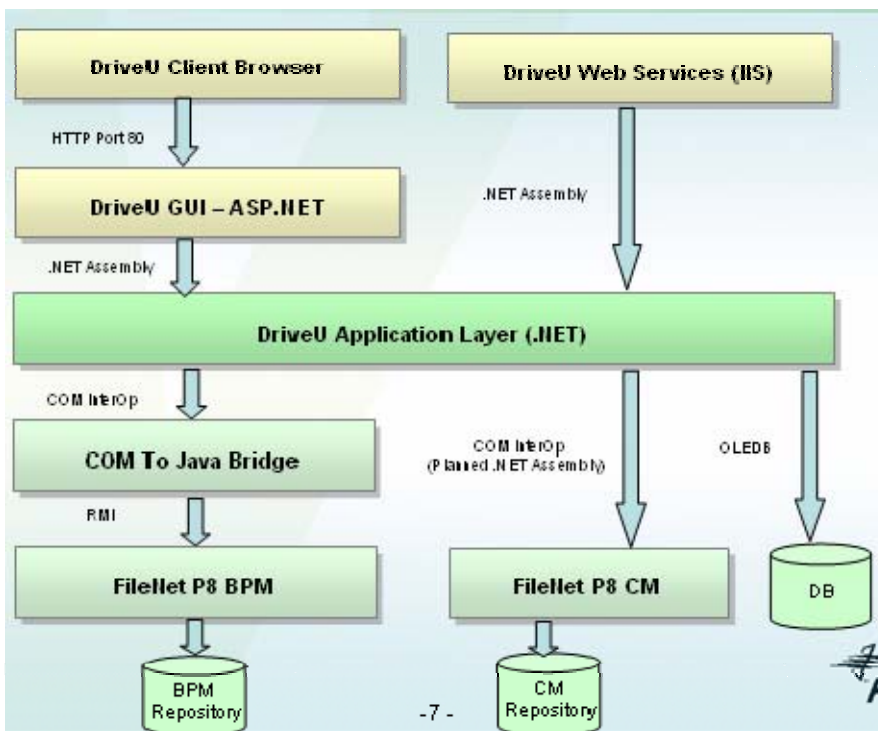
Brower	Internet Explorer to be used for the DriveU web site and site administration
W2-console	<p>User for 2 purposes:</p> <ol style="list-style-type: none"> 1. Configuration of the "Filing rules framework" 2. Sample application for testing the DriveU ECM Web Services (including open source) <p>In next versions the configuration of the "Filing Rules Framework" will be a part of the DriveU Site Administrator application.</p>
vFlow client	Used for the creation and configuration of the vFlow process templates in case vFlow is used as the workflow provider.



Additional utilities

<p>Process Transformer</p>	<p>Performs automatic process transformations of newly created or modified workflows (both FileNet P8 & vFlow) and updates the DriveU Site administration repository with the new process definitions.</p> <ol style="list-style-type: none"> 1. For FileNet BPM a windows console application is invoked through a VBScript "CheckIn" event subscription for class "Workflow Definition". The console application invokes a web service method to perform the transformation. 2. For vFlow, the client IDE must perform "Transfer" for every process change, which invokes the same web service method.
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DriveU Layers Architecture





4 Summary

Organizations must effectively manage, organize and retrieve enterprise content and business processes in order to achieve standardization, meet regulation requirements, optimize customer support, improve staff productivity and survive in today's competitive environment.

IFN's DriveU solution helps the organization to meet these requirements by efficiently and rapidly integrating FileNet's ECM & BPM infrastructure into the company's organizational structure.

DriveU enhances and maximizes the organization's ECM infrastructure with unique and innovative capabilities that enable the organization to gain efficiency and maximize performance.

With DriveU, IFN provides tailored ECM solutions adapted to different sector's needs through pre-defined business templates that reduce risks and costs.

DriveU helps the organization to:

- Ensure standardization and enforce regulation requirements
- Improve and maximize performance by up to 60%:
 2. Reducing response and process time
 3. Maximizing performance by smart load balancing
 4. Expediting right decision making by utilizing all content and processes on a single screen
- Providing all relevant content to the relevant role in the organization – which enables faster and more effective service by up to 40%
- Integrate pre-built, steady and customized solutions that reduce risks and costs.

This includes constant updated versions of the solution implemented as apposed to tailored solutions where every change is costly.