



## CASE MANAGEMENT: ADDRESSING UNIQUE BPM REQUIREMENTS

Over the past several years, Business Process Management Suites (BPMS) have matured into powerful platforms for process automation and performance optimization, many configurable by business-friendly process modeling tools. The benefits of BPMS over a wide range of processes – improvements in cycle time, throughput, resource utilization, standardization and compliance, business integration, and end-to-end performance visibility – are well established. However, an important class of business processes has been unable to enjoy them because of the limitations of conventional BPM Suites: *case management*. This report describes the differences between case management and conventional BPM and shows you what to look for in a BPM solution to truly support case management.

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## What Is Case Management?

One problem with case management is that no single definition for it exists. It has been variously described as a segment or style of document management, knowledge management, or customer relationship management. Certainly, document content, collaborative decision-making, and customer interactions are important elements of case management, but they are important in conventional BPM as well.

The essential distinguishing characteristic of case management is the “unstructured” progression of a case from initiation to its final state. In conventional BPM, by definition, a process instance progresses through a sequence of steps you can describe explicitly as paths in a diagram, leading from a single start point to one or more end points. The path logic for any particular instance might be determined by human judgment, external events, and business rules, but the steps, branching logic, and exception paths are all definable in advance.

In case management, by contrast, the flow logic cannot be expressed in such a diagram defined in advance. In case management, human judgment, external events, and business rules don’t just determine paths through a predefined diagram. Instead those factors determine at runtime *which* activities need to be performed and whether additional steps are required, either picked from a predefined menu or conceived on the fly. While this flexibility is an essential ingredient of many types of real-world processes, conventional BPM Suites demand a process model – however complex – that can be completely defined in advance.

Moreover, a case is rarely a single process in the conventional BPM sense. It is a *collection* of processes and isolated tasks, the number and identity of which cannot be fixed by a predefined template or rules. While case templates provide a convenient starting point for cases of a particular type, the actual steps and information required to complete each case are determined by a combination of human judgment, rules, and events occurring at runtime. Conventional BPM can sometimes manage individually the various processes involved in a case, but it has difficulty managing progress of the case as a whole. In case management, the case folder provides overall coordination of the case as a whole, partially defined in advance by the case template, but with the flexibility to change at runtime as each case proceeds.

Despite its semi-structured nature, case processes suffer from the same problems as conventional structured processes. They take too long to complete. Resources are not used efficiently. Information is misplaced or not retained. No standardization across the organization. Difficulty of enforcing compliance with policies, regulations, and best practices. Lack of visibility into key performance indicators, either at the individual case level in real time or historical trends in the aggregate. BPM Suites bring relief for all of these issues with conventional processes. Case management processes need the same capabilities... but this requires a different type of BPM platform.

## Profiles of Case Management Processes

Case management processes are a common occurrence in many industry segments, including government, insurance, banking and credit, legal, and healthcare.

### *Dispute Resolution*

A good example of dispute resolution concerns billing and credit card disputes. Processing payments is a conventional structured process, but when a customer disputes a charge or demands a refund, case management is usually required.

Even if the credit card issuer provides a standard form for initiating the case, the activities required to resolve each case depend on a myriad of factors. What is the reason for the dispute? Were the goods delivered or services provided? Were they defective? Was the defect the fault of the manufacturer, the shipper, the customer, or some other party? Does the dispute concern the amount of the charge? And so forth.

Resolution of the dispute could depend on any or all of these factors, each of which typically involves production and review of documents. The credit card company may require information from the customer; the manufacturer, retailer, or service provider; the shipper; possibly legal counsel, attorneys, or even law enforcement. The rules involved could depend on the customer's location. As the facts unfold, new tasks and documents may be added to the case.

In the end, there is no way to define in advance the credit card company's dispute resolution "process" as an explicit flow from case initiation to resolution. But many of the same factors that motivate conventional BPM – timely resolution, efficient utilization of resources, compliance, and end-to-end performance visibility – are still important.

Other examples of dispute resolution case management include healthcare claims and grievance procedures, HR termination, and civil litigation and mediation.

### *Benefits Administration*

Case management is well established in many segments of benefits administration, particularly in the public sector. Examples include disability, veterans' benefits, welfare assistance, student financial aid, and grants programs. Within a single case there are issues of eligibility, disbursement of funds or services, changing circumstances of the beneficiary, reporting and compliance.

### *Underwriting*

In various segments of financial services, including commercial lending, life and disability insurance, and securities, the underwriting process is really case management. The activities and documents required depend on the circumstances of each case. While the components of "standard" cases may be predictable, there are many exceptions, requiring additional input from lawyers, accountants, regulators, and investigators.

### *Project Management*

An application area that could benefit from case management BPM, but has received little attention to date, falls under the heading of project management. Examples include launch of a new product or service, a major IT system upgrade, or mergers and acquisitions. There may be relatively few instances of a particular type of case, but each may represent high value and high risk. As with the other examples, the significant attribute is the fact that unanticipated tasks and processes may be added once the project is

underway. Project management software typically provides just planning and tracking; case management adds the BPM dimensions of automated workflow, enforcement of business rules, and application integration.

## Differences from Conventional BPM

### *Technical Requirements for Case Management*

These examples share a number of common factors. Some of them are absent entirely in conventional BPM, while others simply play a different role in case management.

### Case Information Managed as Documents

A large fraction of case-related information is received and managed in the form of *business documents* rather than structured data. Where conventional BPM applies automated logic to data, case logic more often applies human judgment to information contained in documents. Thus a case management platform must include a complete document management system, a comprehensive facility for creating, capturing, indexing, storing, finding, viewing, sharing, editing, versioning, and retaining a wide variety of document types. Simple document attachments and a viewer, as provided by conventional BPM, are not enough. Case-oriented BPM should be able to apply rules to document events – check-in of a new version, for example – for automation and case status tracking. Just as you cannot predefine all the tasks needed to complete the case, you cannot specify in advance all of the documents required. While common ones can be required by the case template; others may be added ad-hoc at runtime.

### Case Activities Added at Runtime

Some tasks and processes needed to complete the case may be defined in advance through the case template, but *ad hoc tasks* – whether selected from a predefined menu or defined from scratch – are a critical distinguishing element of case management. Often, those tasks are related to creating, obtaining, reviewing, and approving documents. Some of those tasks could represent conventional processes involving multiple participants. Managing a case as a single unit composed of independent tasks and processes – some added at runtime – is simply beyond the scope of conventional BPMS.

### Case Advancement through Events

In BPM, an *event* means “something that happened.” Conventional BPM often *initiates* processes based on some event, such as receipt of a document, but from there the instance progresses like a train moving down a track. Subsequent events might switch the train to another track at specified points in the flow, but for the most part the process advances by itself. Completion of one task is what triggers the next one down the line.

Case management does not normally work by routing the case folder to the next task sequentially down the line. Instead it advances through events, both external and internal:

- *External events* include receipt of a phone call, letter, fax, or email related to the case. The contents of that message are added to the case folder, and new tasks or processes may be created.
- *Internal events* include assignments and business rules. Case workers assign tasks and initiate processes as they deem necessary as they work on the case. Business rules within the case may automatically create and assign tasks – or perform fully automated actions – based on either external events, completion of other case tasks, or expiration of task deadlines.

Thus, instead of a train moving down a track from task to task, the conceptual model of a case is a collection of independent parallel tasks interacting via events. Those tasks define the case context and are

visible, along with case documents, from the shared case folder. The state of the case as a whole is determined by the combined state of all its tasks and documents.

## Case Context through Shared Case Folder

Human judgment about advancement or resolution of the case frequently depends on not a single document in isolation, but the document collection as a whole. Thus, all case information – subject to specific security and access control rules – is typically available to users working on the case in the form of a *shared case folder*. The assumption that case workers know where to look for the case information they require represents the *knowledge dimension* of case management. In addition to case data and documents, the case folder provides shared access to case tasks and deadlines.

### *Challenges: Why Case Management Is Hard for Conventional BPMS*

As awareness of the case management gap in BPM has increased, BPMS vendors are beginning to add one or two features to their standard offering and declare it suitable for case management. But even with these isolated enhancements, conventional BPMS has a hard time addressing case management for several reasons:

1. **The process engine.** The key feature of a BPMS is its central orchestration engine, which automates the flow of a process instance according to a predefined process model. Some BPMSs have added the ability to insert ad-hoc tasks from another task in the model. But such tasks are not independent, running in parallel, with their own rules or possibility of spawning other steps from within them. They are simply grafted into the sequential flow for that instance. The fallacy here is that a case is not a single process. It is a collection of tasks and processes interlinked by events, rules, and business judgment. Conventional BPMS cannot manage such a collection as a single complex “thing.”
2. **Content-awareness.** Most BPMSs are designed to operate with data, not business documents. They treat documents as attachments, available for viewing, but they rarely support creating, editing, versioning, organizing, or finding the specific document types required by the case, or storing documents in large volume, or responding to content events, or retaining documents for years after the case is complete. Good content management systems can do those things, but they need to be deeply integrated with the BPM component to meet the needs of case. BPM Suites from content management vendors do this part reasonably well, but they tend to fall down on the next requirement.
3. **The Case Folder.** As the central feature of a case management system, one would think that an out-of-the-box case folder would be part of any purported case management feature in a BPMS. Not so. BPMS vendors are far more likely to propose that the tools used to configure the conventional process portal environment can be used create something like a case folder. Outside of the hassle involved, particularly in integrating the tasks, documents, rules, and events involved in the case, this approach misses the core idea of case management: a case is not just a collection of isolated things, like processes and documents, but *a single thing* that is progressing toward completion. That is what the case folder represents. If you cannot understand the status of the case as a whole through simple inspection of the case folder, you can’t really do case management very well.

## Case360: A Case Management BPM Platform

The first BPMS that really meets the needs of case management is a product you may not have heard of: Case360 from Global 360. Case360 is a special-purpose BPMS dedicated to case management. It provides all of the technical requirements described above and overcomes the three challenges. While its primary focus is case management, Case360 can support conventional processes as well, either standalone or as aspects of a case folder.

The heart of the system (Figure 1) is the case folder. Underneath are a complete set of supporting services, including process modeling and automation, document management, business rules, collaboration, and performance analytics.

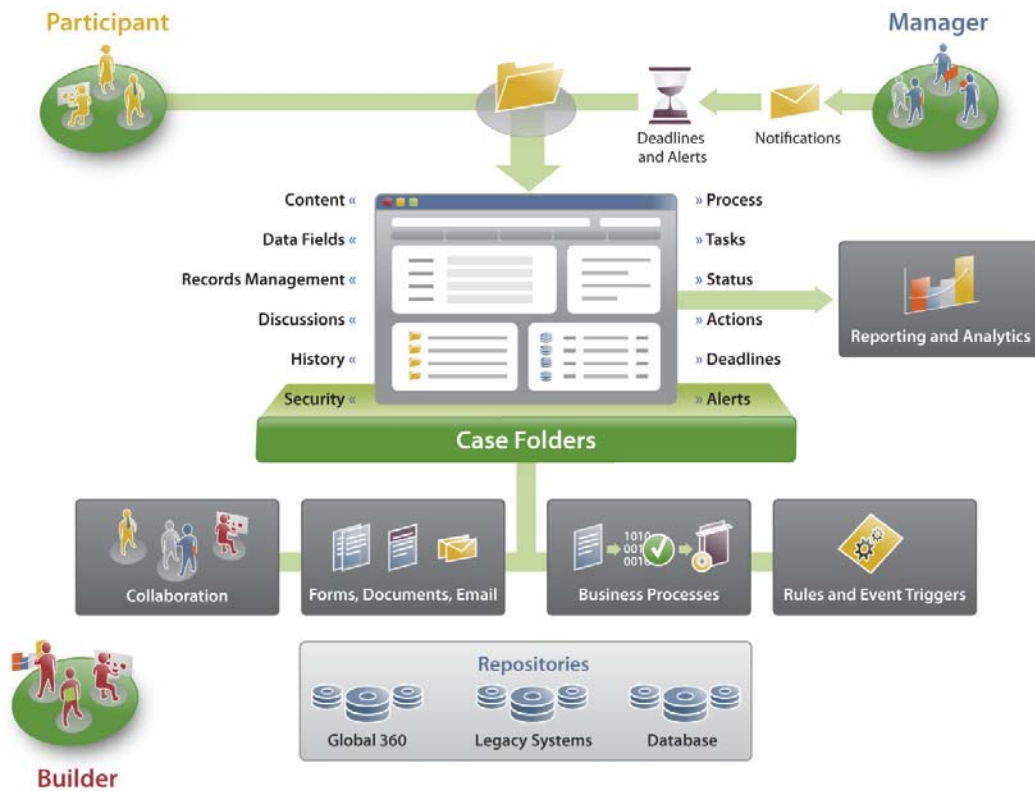


Figure 1: Case360 Case Management Capabilities. Source: Global 360

## The Case Folder

Figure 2 illustrates a typical case folder. All case folders contain the same set of information panels – Data (form), Contents, Tasks, History, and Discussions – but are offered in a wide variety of prebuilt configurable layouts that can be easily modified. While a case owner can be assigned, the case folder itself is a shared resource, typically not locked to one user. This is critical for true case management in order to allow multiple activities to happen in parallel.

**Figure 2. Underwriter's case folder. Source: Global 360**

Case360 separates the case folder's business logic from its presentation, which can vary based on the user, stage of the case, or virtually any other case information. This allows task-specific views of a case, simplifying user interaction. The History panel provides a complete audit trail of task, content, and data state changes for the case, and can be configured to include even read-only actions to comply with regulatory demands. The Discussions panel provides collaboration via threaded discussions and offers an alternative to hand-written "sticky notes" typically found within paper case folders.

Task	Status	Completed	Assigned To	Deadline	Actions
Application Review Activities					
-Reserve Policy Number	Completed	100%	Matt Mulcahey (nba)	Must be completed 1 business hour (s) after the Casefolder "Traditional_Universal Life Application" is in progress.	
Confirm prior insurance information	In Progress	30%	Matt Mulcahey (nba)	Must be completed 1 hour(s) after the task "Confirm prior insurance information" is in progress.	
Review application for completion	In Progress	50%	Jack Montague	Must be completed 2 business hour (s) after the task "Review application for completion" is assigned.	
Check for State Mandated forms		0%			

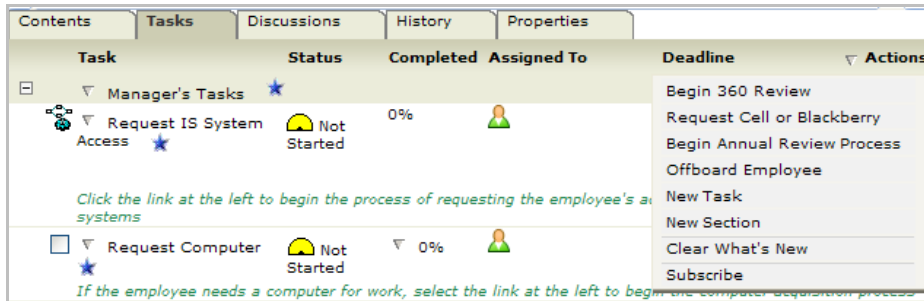
**Figure 3. Tasks panel showing case status at a glance. Source: Global 360**

## Tasks

Given the nature of case management business processes, task management is a critical capability. The Tasks panel (Figure 3) lists all of the tasks for the case, their assignee (by name or role), deadline, completion status, and deadline. A task can be standalone or represent a complete BPM process. (Case360 provides a Visio-based process modeler and associated execution engine, just like a

conventional BPMS.) Users are automatically notified when they are assigned tasks, and access the task user interface either via the case folder as a whole or a task form. Case360 includes a full graphical, scriptable form builder for this purpose.

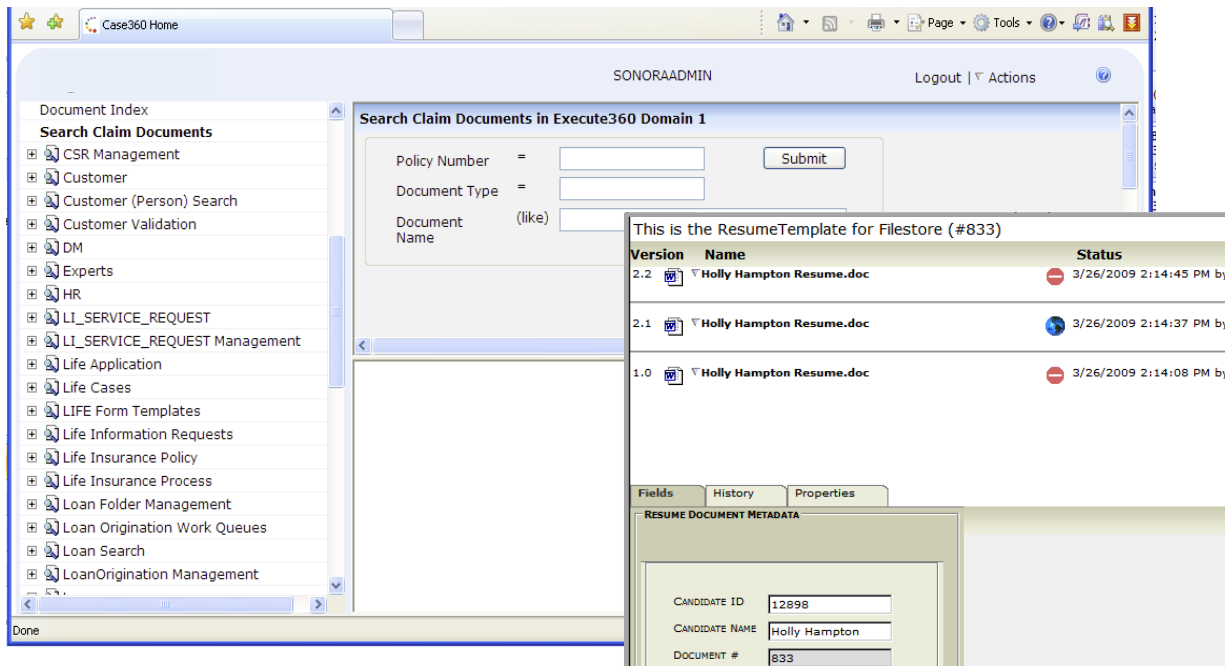
Tasks that are always expected to be part of a case can be predefined in the case template, but others may be added at runtime from the Actions menu, either from a list of predefined tasks or defined on the fly (Figure 4).



**Figure 4. Add ad-hoc tasks from a drop-down. Source: Global 360**

## Documents

A strength of Case360 is support for documents, both as part of the case folder and as standalone entities. Unlike most other case management solutions or BPM Suites, Case360 includes a complete document repository (Figure 5), supporting check-in/check-out, versioning, storage migration, and retention management. Documents are defined through the use of templates, much like with case folders. These templates define specific document types, including formats and metadata.



**Figure 5. Case360 Content is managed in a true ECM repository. Source: Global 360**

Content	Status	Assigned To	Deadline
Application Pages			
Personal Information	Completed	Matt Mulcahey (nba)	7/28/2009 4:33:32 PM
Traditional and Universal Life Policy Details	Completed	Matt Mulcahey (nba)	7/28/2009 4:33:38 PM
Life Financial Information	Completed	Matt Mulcahey (nba)	Must be filled 1 business hour(s) after th "Life Financial Information" is in progress.
Fraud Notice	Completed	Matt Mulcahey (nba)	Must be filled 1 business hour(s) after th "Fraud Notice" is in progress.
Authorization	Completed	Life Manager	Must be filled 1 business hour(s) after th "LI Traditional Universal Life Application" is in p
Agreement	Completed	Lorrie Stein	Must be filled 1 business hour(s) after th "Personal Information" is in progress.
Agent's Statement	Completed	Bella Winston (Agent Service Associate)	Must be filled 1 business hour(s) after th "Personal Information" is in progress.
Conditional Receipt	Deferred		
Applicant Questionnaires			
Lifestyle Questionnaire	In Progress	Jack Montague	7/28/2009 1:00:00 PM
Health Questionnaire	Not Started	Life Analyst	7/28/2009 1:00:00 PM

Figure 6. Case folder Contents panel shows documents and placeholders for missing documents. Source: Global360

The Contents panel (Figure 6) lists documents attached to the case as well as *placeholders* for documents required by the case. As with tasks, a base set of documents and placeholders is typically specified by the case template, but others can be added ad-hoc from the Actions menu. A placeholder represents a document that is expected to be included as part of the case, and may have an assignee, completion status, and deadline.

Of critical importance is the fact that a single document may be included in multiple cases. In addition to Global 360’s own content repositories, Case360 can access documents in third party repositories such as Documentum, FileNet, Sharepoint, and others.

The screenshot shows the Case360 home page with the following components:

- Navigation Tabs:** Home, Toolbox, Queries, My Tasks, My Overdue Work, Actions, Logout.
- Welcome Message:** "Welcome to the Global 360 system." with a user profile picture and details:
  - Message of the day: Friday is a company holiday
  - Logged in user: Matt Mulcahey (nba)
  - ID: new\_business\_analyst
  - Viewpoint: Life - New Business Analyst viewPoint
  - Manager: manager\_bill
- My Work Section:**
  - Find Information:** Find Policy Holders, Find Policies, Find Blank Forms.
  - Find Work:** Application Review Queue, Policy Issuance Queue, Applications Needing Re-work Queue, Applications Waiting for Documents, All Queues.
  - Key Metrics and Reports:**
    - Key Performance Indicators:**

Goal - Time In Application Review	Avg. Time In Application Review	Current Status
2 Bus. Days	1.85 Bus. Days	<span style="color: green;">●</span>
- Query Results Section:**
  - Application Review Table:**

Insured Name	SSN	Risk Amount	State	Policy Status	Case Priority	Casefolder	Agent	Agent #
Janice Most	777-88-9999	\$750,000	CA		5		Brian Gallant	77563
Sandra Charles	123-45-6789	\$750,000	CA		5		Brian Gallant	77563
  - Policy Issuance Table:**

Insured Name	SSN	Risk Amount	State	Policy Status	Case Priority	Casefolder	Agent	Agent #
					1		Brian Gallant	77563
					1		Brian Gallant	77563

Figure 7. Case360 home page allows users to access assigned work and documents. Source: Global360

## Process Management and Events

While case workers may be prompted by a task notification or external event to access a particular case folder, they can also access Case360 as a conventional BPM process portal (Figure 7) to see all of their assigned tasks, search for documents, view performance metrics, etc. Each user's home page can be set up with predefined queries for work or documents, and supports additional queries from the portal.

In addition to manual interaction with the case folder and portal, the case template definition tool provides a scripting environment supporting event-triggered automation of case processing. State changes of case tasks, content, and data trigger scripts that can assign new tasks or placeholders, update case data, or execute a web service. Scripting has access to the entire Case360 API, so it can do about anything you want. Event-triggered automation is a key element of case management. Also, Case360 supports Corticon's business-friendly decision table designer and rule engine, allowing automated decisions to be triggered by case tasks and events.

## Performance and Tracking

While analytics are an afterthought in other case management solutions, Case360 includes performance visibility and optimization tools. Task and content events are aggregated and tracked by an analytics engine that can provide dashboards of KPI charts, tables, and alerts. Supervisors can monitor the productivity of case workers and teams, and adjust QC/audit and priority review thresholds as current performance conditions warrant (Figure 8). Such features are just as important in case management as in conventional BPM for many types of processes.

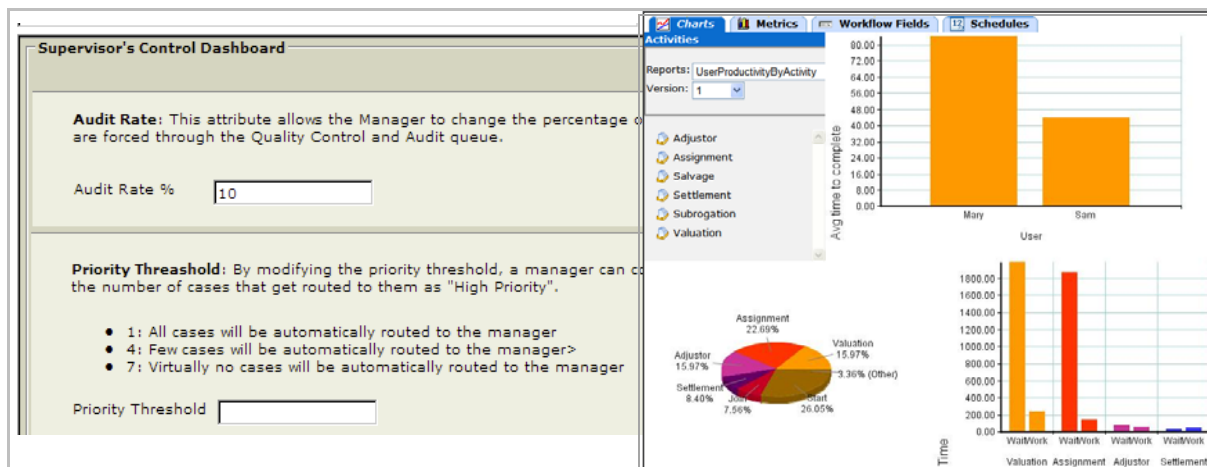


Figure 8. Monitor performance of case management and traditional process work. Source: Global 360

## Case360 Customer Examples

### Dispute Resolution

Merchant services providers enable businesses to accept payments from their customers through credit cards, debit cards or stored value gift cards and checks. Retrievals, chargebacks and customer service requests are a daily occurrence in which the handoffs and information involved is determined by human judgment as the case is progressing. Case360 promotes compliance with regulations and best practices without constraining users to a static path of "first A then B then C". Having a complete case history is critical for understanding the root cause of the problem, speeding them to a solution.

## Paperless Judicial System

In courtrooms around the country, judges, attorneys and clerks are engaged in the complex process we call the judicial system. Whether related to Traffic, Probate, Misdemeanor or Felony offenses, the volume of information required to complete a case is staggering. Motions, filings, judgments, receipts, and correspondence must all be tracked. Hearings need to be scheduled and re-scheduled, all within statutory timeliness limits. Case360's paperless approach allows rapid access to all information pertinent to a specific case, ad-hoc reassignment of tasks, and other capabilities missing in conventional BPMS.

## Medical Claims Appeals

The normal process for handling medical claims is structured enough to be handled by conventional BPMS. However, when a claim is denied, the Appeals and Grievances process is not. A patient's appeal of a denied claim kicks off a thorough review of the claim and all supporting information. This involves sending copies of a patient's records to various interested parties, including third party physicians and lawyers. The order in which activities occur is not fixed in advance, and enforcing timeliness of reviews is a challenge. Case360 coordinates the Appeal and tracks all documents and tasks to ensure that all parties complete their tasks in the allotted time, which can often stretch in some cases to years.

## The Bottom Line: What to Look For in a Case Management Platform

I expect to see a growing list of BPMS vendors declare their offerings case management platforms, based on some facility for dealing with documents and ad-hoc activities. To meet the needs of real-world case management processes, however, you need more than that. Here's what to look for:

**Case folder out-of-the-box.** It should provide a central access point for all of the tasks, processes, documents, data, and other artifacts related to the case, in a presentation that lets you understand the overall case status at a glance. BPMS vendors' portal and mashup builder tools have gotten pretty good, but you don't want something that just looks like a case folder. It has to actually be a case folder. The difference is integration under the hood between the tasks, processes, documents, data elements, and discussion threads that comprise each case. You want that integration to be prebuilt.

**Case templates.** A case template is a model for a particular type of case, specifying a list of tasks and documents typically required. Of course, in any instance you can elect to omit some or add new ones, but the case template provides the starting point. The case management platform should include a rich case template design tool that supports event-triggered automation in addition to interactive tasks.

**Ad-hoc tasks and documents.** A key distinction between case management and conventional BPM is the ad-hoc element. At any point in a case you need to be able to add new tasks and document placeholders, either selected from a menu or defined on the fly.

**Support for conventional processes.** You shouldn't have to give up conventional BPM to handle a case. Real-world cases often contain multiple conventional processes, and these should be supported with conventional BPMS functionality: workflow automation, application integration, business rule support, etc. The point is a case is not a single process. It contains multiple processes, including those added at runtime. The processes need to be managed as processes in addition to managing the case as a whole. Ideally, you want a single platform for both the case management and conventional BPM support.

**Document-awareness.** Documents play a critical role in case management. A single document may be referenced by multiple cases, and its lifetime is independent of the cases that use it. You need a true enterprise content repository for case management, providing foldering, search, versioning, access control, and retention management. There are many ECM repositories out there, and many conventional BPMSs can integrate with them without too much difficulty. But case management really wants tight

integration, so that when a document is added or updated or approved, the case is made aware of that event and can take action on it automatically.

**Event-triggered automation.** Cases progress by means of events, both internal and external. Because there is no “map” for progressing through the case, all the component tasks and documents announce their status changes through events. External events – a phone call, email, or letter – also move the case along. The case management platform should be able to define rules that automatically trigger actions when particular events occur. This not only ensures efficiency but standardization and compliance.

**Performance visibility.** Business activity monitoring (BAM) and analytics are an important feature of conventional BPMS, and the need is no less in case management. Managers and supervisors need dashboards key performance indicators and alerts at both the case instance and aggregate level.

Clearly, the technical challenge is great for case management BPM vendors. The platform needs to provide everything a conventional BPMS provides, and add case management on top. That explains why BPMS vendors typically promote case management “features” rather than a true case management BPM platform. Case360 shows that it can be done. If you’ve been wondering why conventional BPMS doesn’t seem to be flexible enough for your business problems, you perhaps should think about a case management platform.

*Bruce Silver*