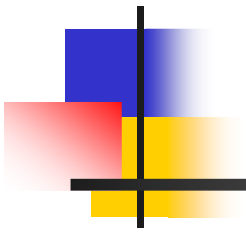


Business Process Management Notation





Who am I

Name: Scott Heffron, MCP SQL Server, MCAD.Net

Company: CTR-SQL: Choose The Right - SQL

Software:

- ASP.NET
- C++
- C#, VB.NET
- ColdFusion

Databases:

- MS SQL Server, MCP 2000
- Sybase
- Oracle
- SQL Anywhere



Agenda

- What is Business Process Management
- What is Business Process Modeling Notation
- Diagram Notations
- User Documentation Examples
- Case Studies
- Where to go from here
- Questions



What is Business Process Management (BPM)

Refers to business systems that help develop and manage business processes end to end, from a business event to the ultimate business result. These systems seek to take elements of traditional business process solutions and bring them together so that they can be managed effectively and optimized end to end.



The Three Dimensions of BPM

- Business: The Value Dimension
- Process: The Transformation Dimension
- Management: The Enabling Dimension



Business: The Value Dimension

The business dimension is the dimension of value, and of the creation of **value** for both customers and stakeholders.

BPM directly facilitates the goals and objectives of the business enterprise: sustained top-line growth and improved bottom-line performance; increased innovation; improved productivity; enhanced customer loyalty and satisfaction; and elevated levels of staff effectiveness.



Process: The Transformation Dimension

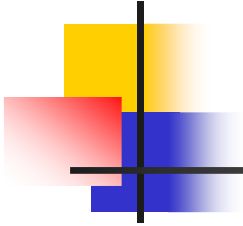
This dimension creates value through structured activities called processes. Operational processes transform resources and materials into products or services for customers and end consumers. This “transformation” is how a business works; it’s the magic elixir of the enterprise. The more effective this transformation, the more successfully you create value.

When business processes are more **effective**, more **transparent**, and more **agile**. Problems are solved before they become issues. Processes produce fewer errors, and those errors surface faster and are fixed sooner.



Management: The Enabling Dimension

Management is the enabling dimension. Management sets people and systems into motion and prods processes into action, in pursuit of the business goals and objectives.



What is Business Process Modeling Notation



What is Process Modeling

- Capturing an ordered sequence of business activities and supporting information.
- There are different levels of process modeling.
 - Process Maps: simple flow charts of activities.
 - Process Descriptions: flow charts extended with additional information, but not enough to fully define actual performance.
 - Process Models: flow charts extended so that the process can be analyzed, simulated and/or executed.



What is BPMN

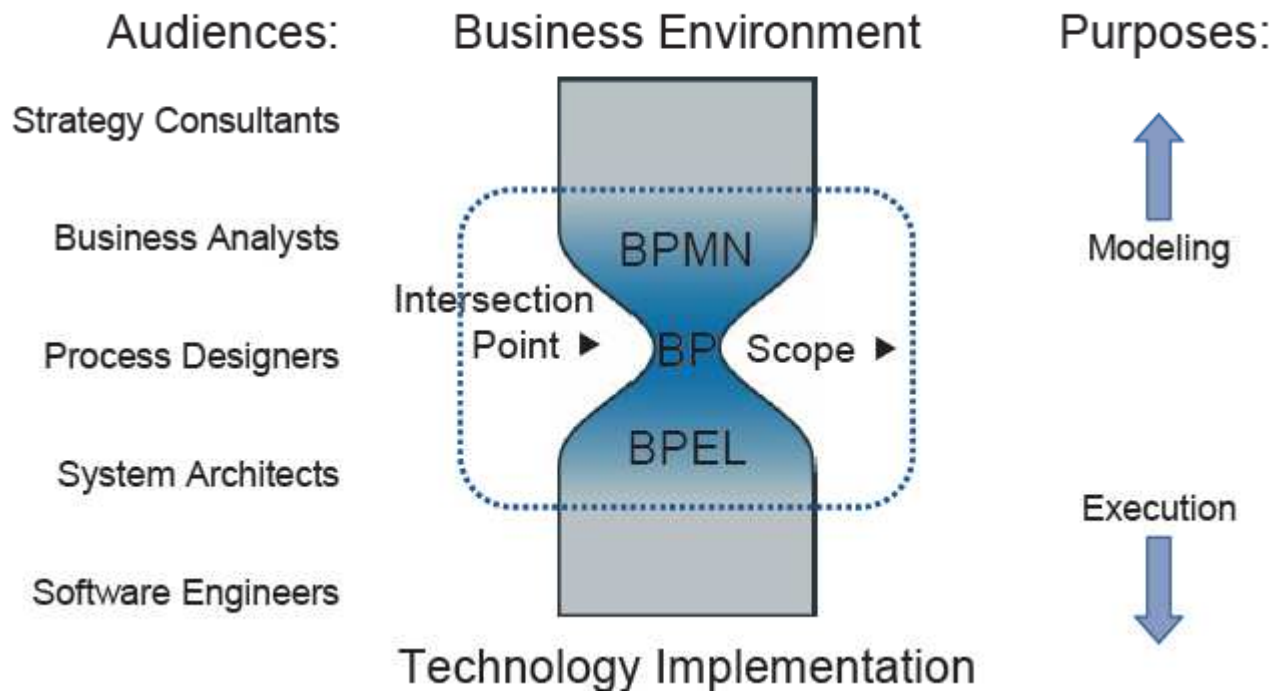
- Flow-chart based notation for defining Business Processes.
- An agreement between multiple modeling tool vendors to use a single notation
- Provide a path to generate a Business Process Executable Language (BPEL)



Origins of BPMN

- BPMN 1.0
 - May 2004, BPMN 1.0 specifications was released to the public.
 - February 2006, 1.0 was adopted as an OMG standard

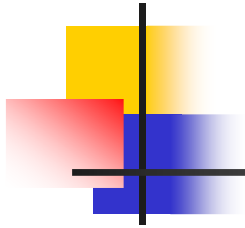
BPM Environment





BPMN Development Drivers

- Acceptable and Usable by the business community
- BPMN would be used for more than general business purposes.
- Intended to be uncommitted to any particular methodology
 - Methodologies will give guidance as to the purpose and level of detail for modeling
 - BPMN is a complex as needed to be.



Basic Diagram Notations



Events























- An Event is something that “happens” during the course of a business process. These Events affect the flow of the process and usually have a trigger or result.
- They can start, interrupt or end the flow.
- Events are circles.

Different Type of Events

Events

Start	Intermediate	End
		

Event Types

Message			
Timer			
Error			
Cancel			
Compensation			
Rule			
Link			
Terminate			
Multiple			

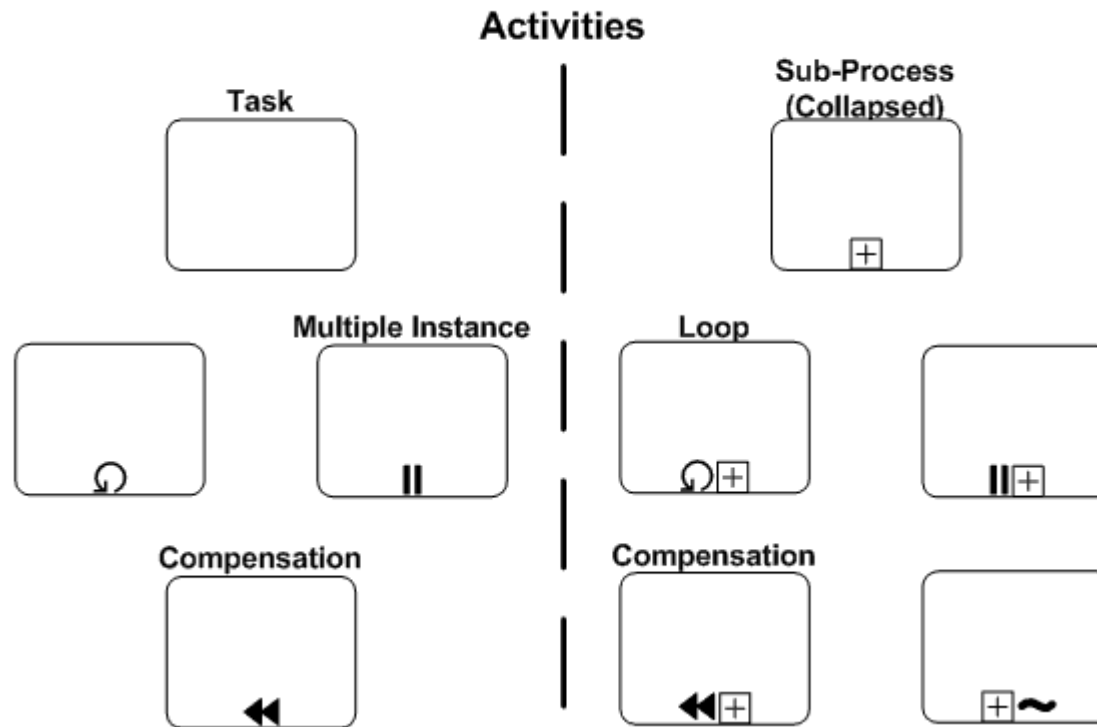


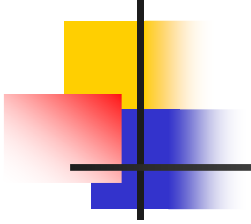
Activities

- Is work that is performed within a business process.
 - They can be atomic or non-atomic (compound)
 - They are a Task or Sub process
 - They are round rectangles
 - They can be performed once or be defined as loops.



Activities





Demo

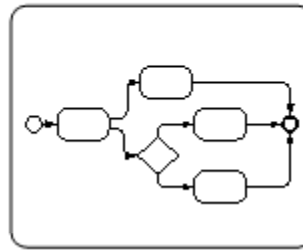


Tasks

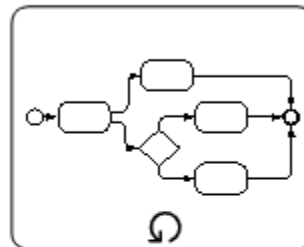
- An atomic activity that is included within a process.
- Used when the work is not broken down to a finer level of detail.
- Markers or icons can be added to tasks to help identify the type.

Sub-Processes Types

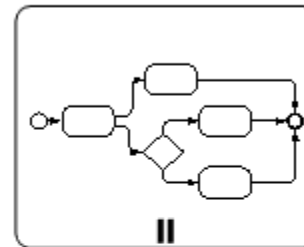
Sub-Process
(Expanded)



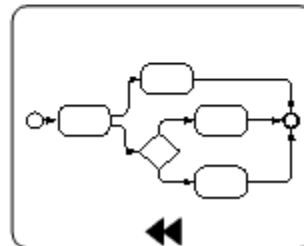
Loop



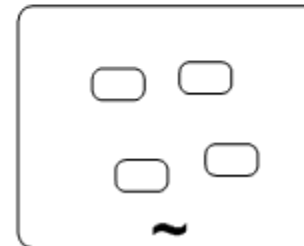
Multiple Instance



Compensation



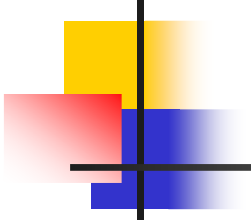
Ad-Hoc





Sub-Processes

- Enable hierarchical process building
- A compound activity that is included within a process. It can be broken down into a finer level of detail.
- A “plus” sign in the lower center of the shape indicates this is a sub-process
- Two types: 1) Embedded and 2) Independent



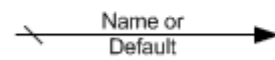
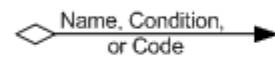
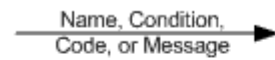
Demo



Connections

Connections

Sequence Flow



Message Flow



Association

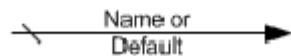
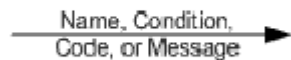




Connectors

Connections

Sequence Flow



Message Flow



Association



- **Sequence Flow** is used to show the order that activities will be performed in a process
- **Message Flow** is used to show the flow of messages between two entities that are prepared to send and receive them.
- **Association** is used to associate data, information and artifacts with flow objects



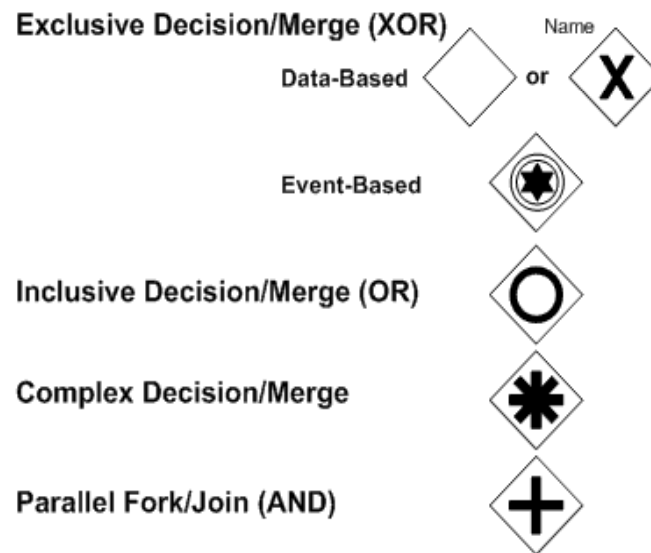
Gateways

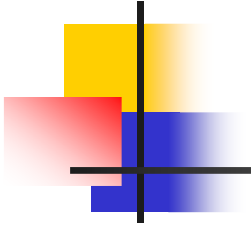
- Modeling elements that are used to control how sequence flows interact.
- All Types are diamonds
 - Different internal markers indicate different behaviors
 - All can perform both a split and merge
- Gateways represent a place where control is needed.



Gateways

Gateways





Demo



Artifacts Definition

- Provide capabilities to show information beyond the basic flow-chart
- Current Artifacts:
 - Data Objects
 - Groups
 - Annotations



Artifacts Images

Artifacts

Data Object



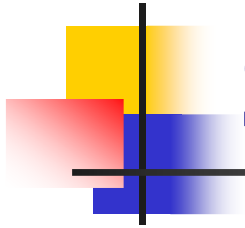
Name
[State]

Text Annotation



Group





Swim lanes

Swimlanes Pool

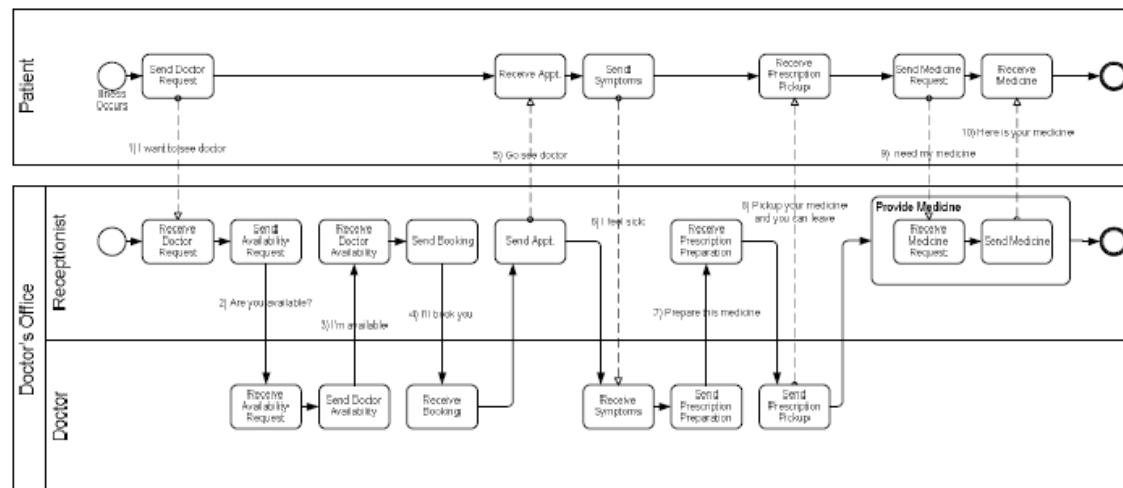
Name	
------	--

Lanes (within a Pool)

Name	
Name	

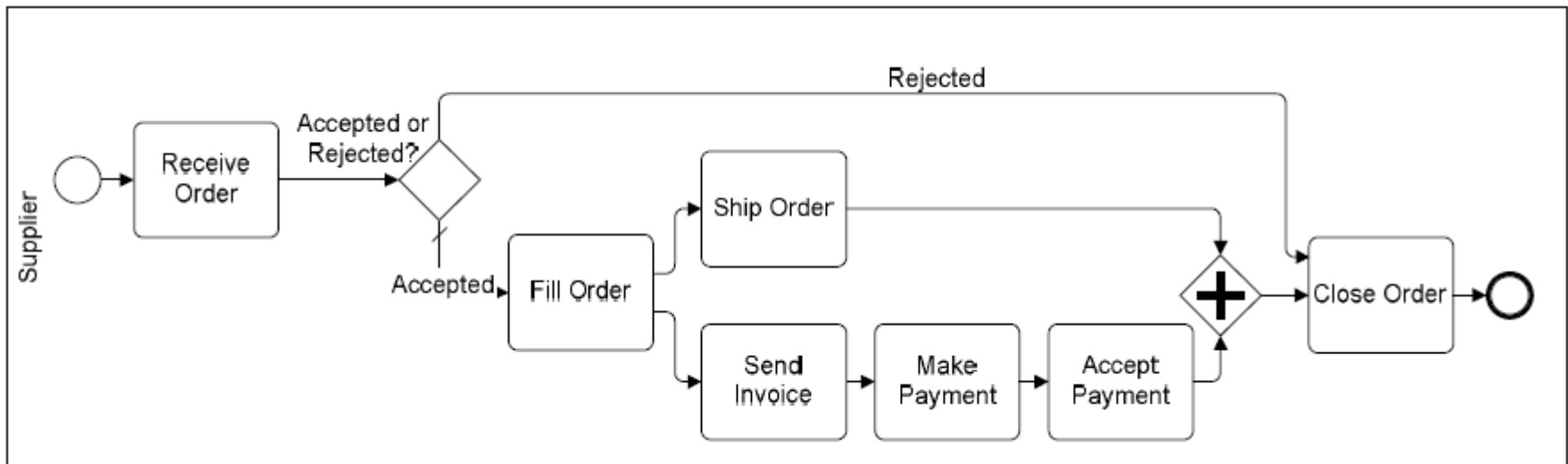
Swim Lanes

- Used to help partition and/or organize activities.
 - Pools represent participants (B2B)
 - Lane represent sub-partitions of objects within a pool



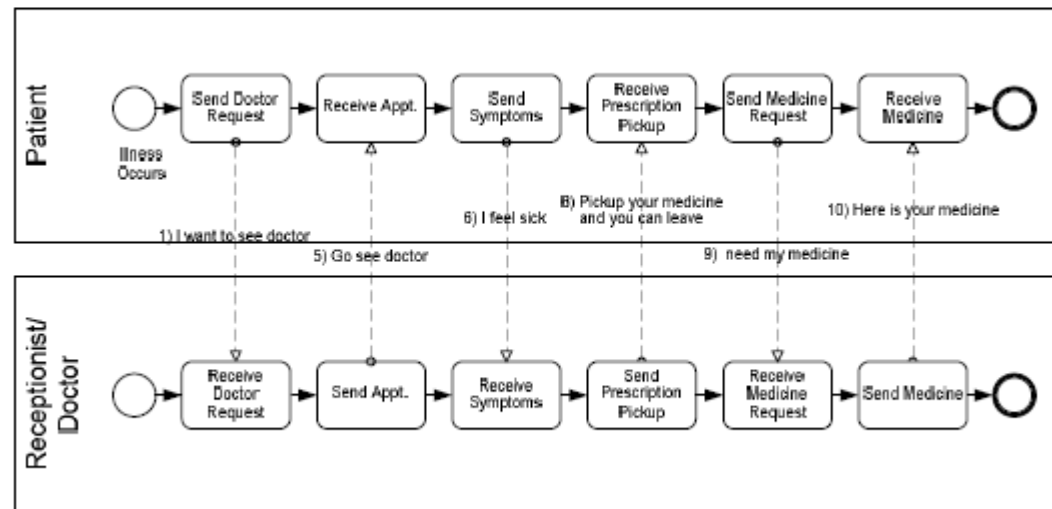
Orchestration

- Defines processes that are internal to a specific organization.
 - Contained within a single pool



Choreography

- Depicts the interactions between two or more business entities.



Core Set of BPMN Elements

Flow Objects

Events



Activities

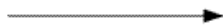


Gateways



Connecting Object

Sequence Flow



Message Flow

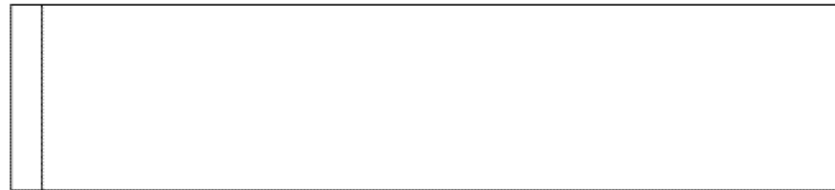


Association

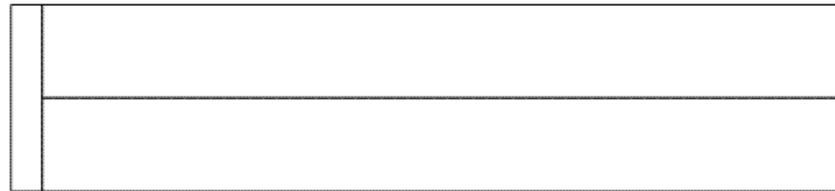


Swimlanes

Pool



Lanes (within a Pool)



Artifacts

Data Object



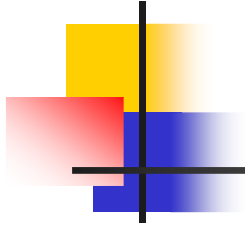
Name
[State]

Text Annotation

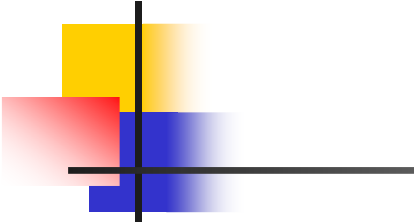
Text Annotation Allows a Modeler to provide additional Information

Group

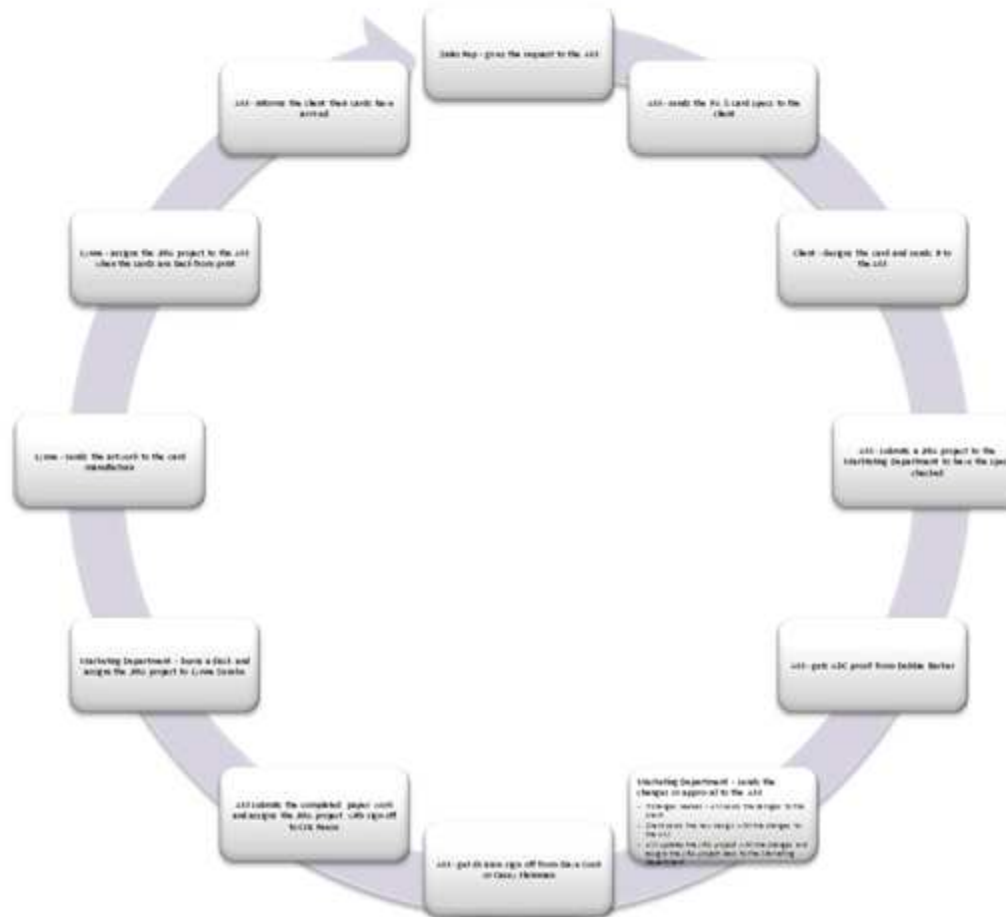


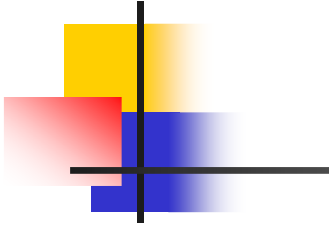


User Documentation Examples



Custom Cards – If the client is designing the card

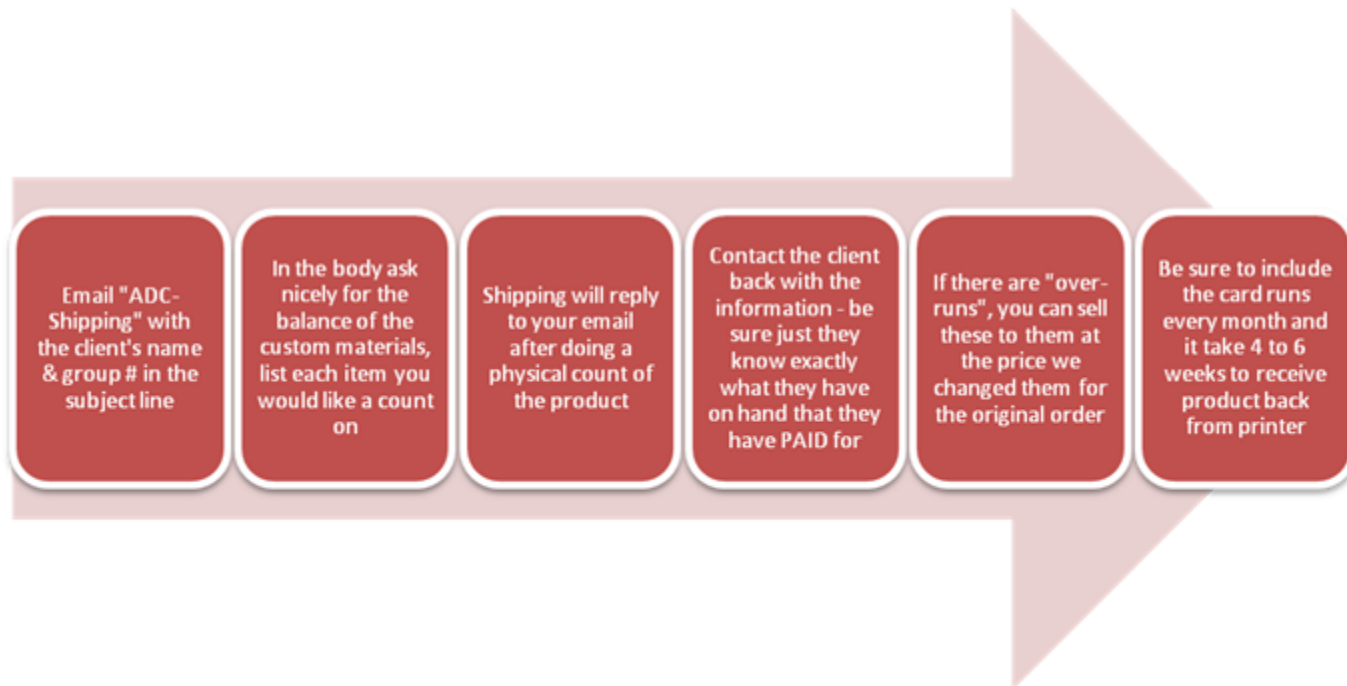


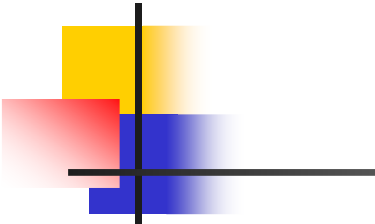


Inventory Flow

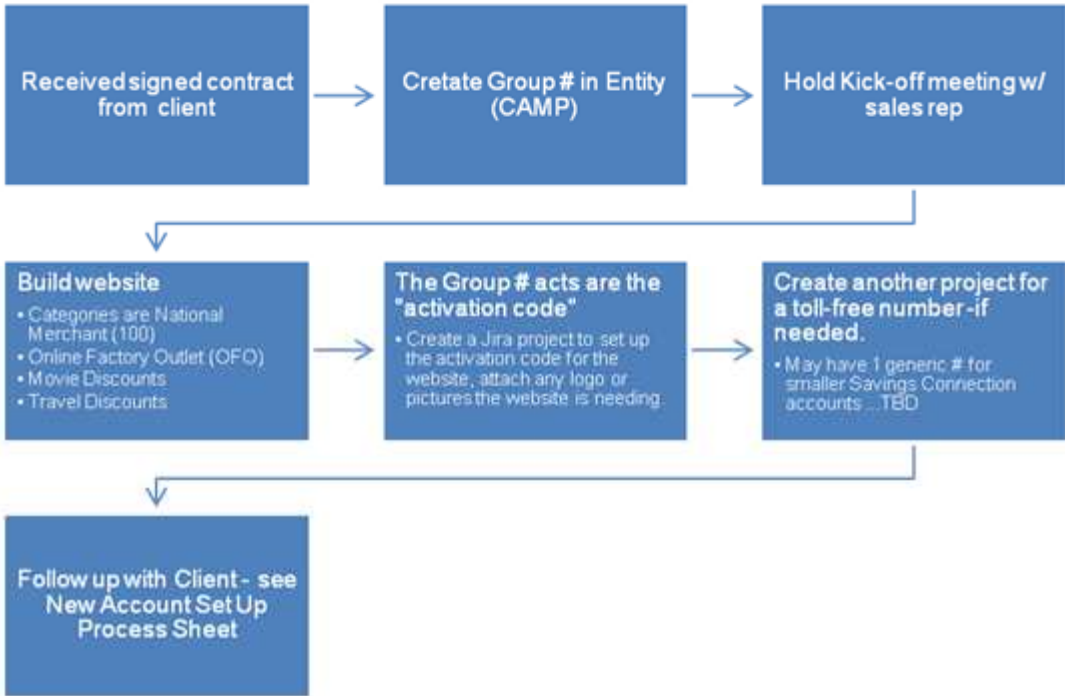
Either the client will email the AM for a balance of their custom materials or during our bi-weekly inventory meeting.

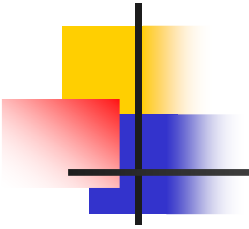
Request from Client





Savings Connection





Web Authorize

- accessdevelopment (one word)
- GOLF2WIN

To pay an invoice with credit card

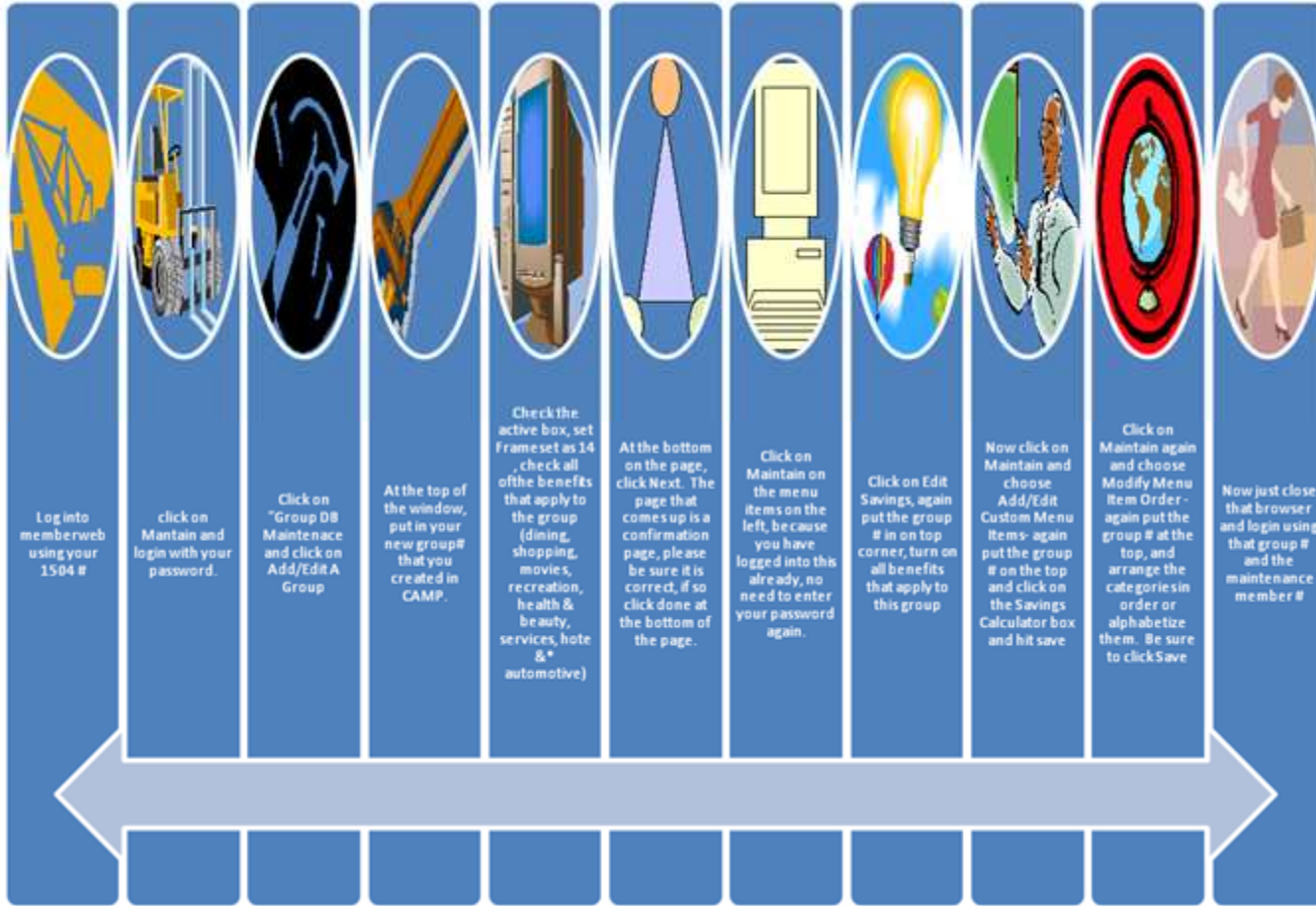
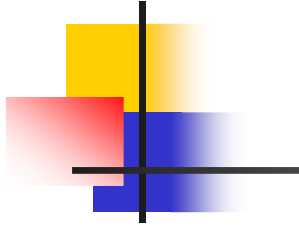
- Click on the 5th button from the left named "NEW"
- New window will appear - fill out form
- Be sure the invoice # is the actual group # of the invoice.
- Click "Authorize" to process credit card for payment of invoice.

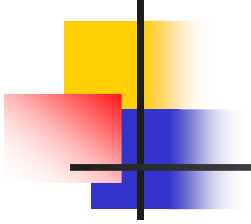
To Process all credit card payments through posting

- click the Print icon (the first button on the left) - choose the Detail option
- Click the "File" at the top of the page
- Open batches - must be sure all transactions are "accepted"
- click on date (used for balancing
- Close out of the program (can't go back and forth)

Return/Credit instead of Sales

- Click the 5th icon from the left "New"
- Change the "Sales & Deposits" to "Return/Credit"
- Continue to fill out remainder of information
- Click "Authorize" to process return





Case Study



Current Project

We have an application that runs the order entry, file uploads, marketing material, reports, data migration.

This application has been around for 6 years and is so big and none of the original developers are with the company. We need to find out how each process works and see if we should can purchase a product.



Tasks

- Document the system so that business users and IT understand what is going on.
- Check to see if these processes are running effectively.
- Verify that the process is needed.
- Check if cross functional processes
- Check if outside processes should be added.



Discovery

- Find the jobs that the front line workers use.
- Find the back jobs
 - DTS jobs
 - SQL Agent jobs
 - External jobs (B2B)



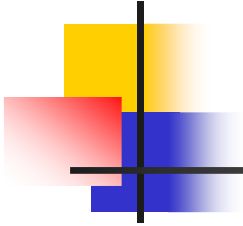
Structure

- Subject Area
 - Application
 - Internal Processes
 - External Processes
 - Infrastructure



Areas

- Application
 - Description
 - Step Information
- Internal, External, Infrastructure
 - Description
 - Overview Image
 - Diagram of each section
 - ETL Image
 - SQL Statements



Example



Process To Document

**Generate
Daily Fairfield CC File
Workflow Process**



Step(s)

- Document Job Information.
- Work on "As-Is" Process.
- Capture ETL Information and detail each step.



Document Job Information

Description

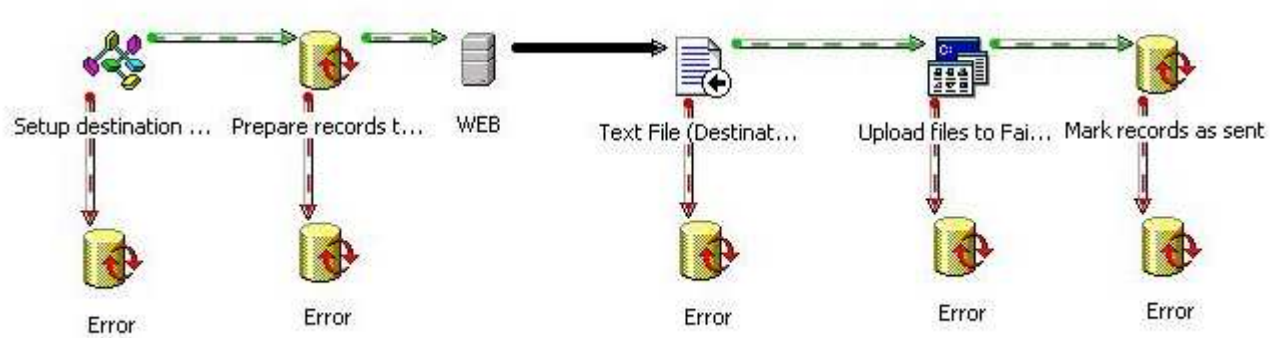
[\[edit\]](#)[Contents \[show\]](#)

This process is used to create a file of Fairfield credit card records that have not been sent yet. Have the system push the file to a designated FTP site.

Job Information:

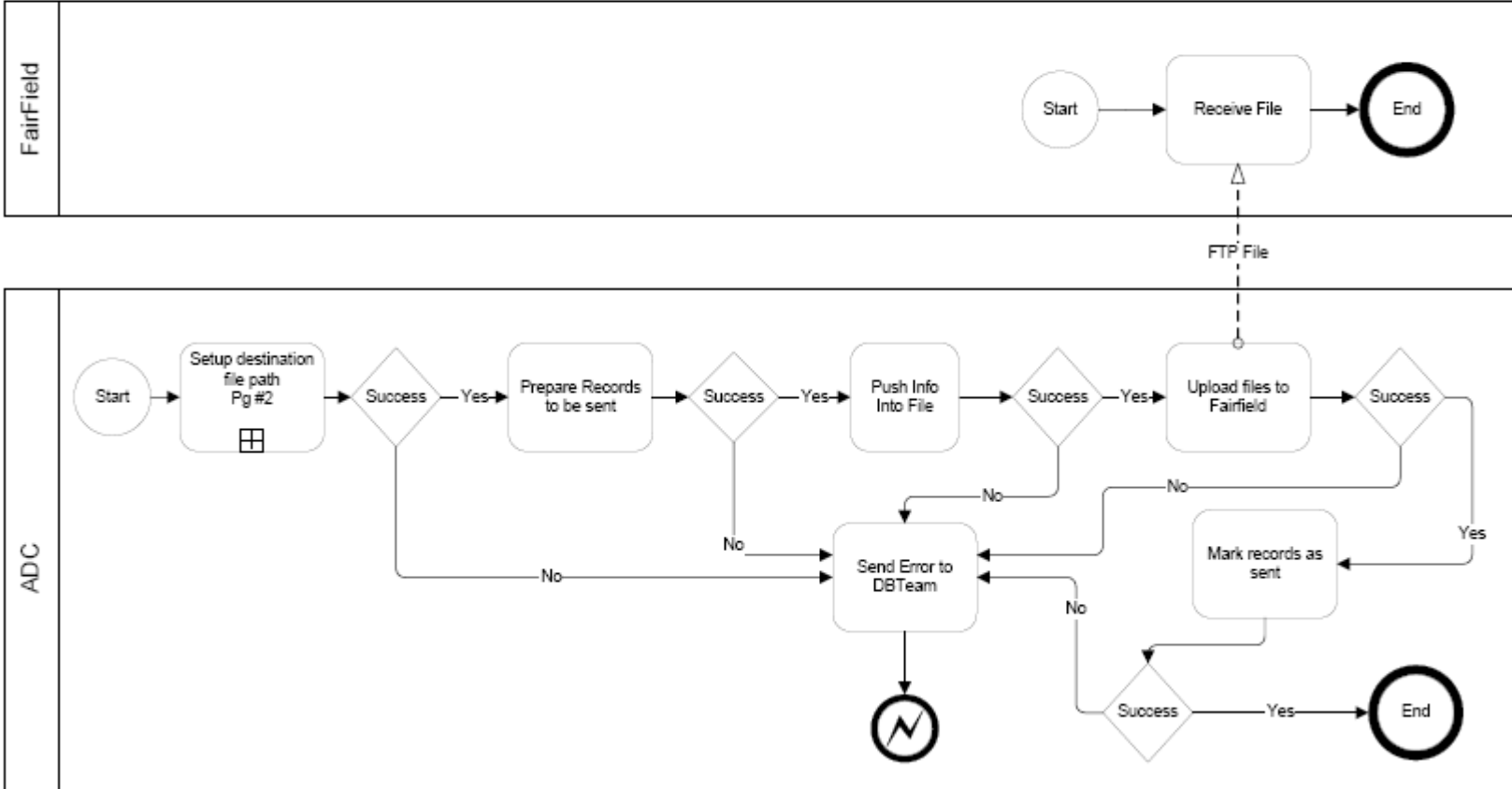
```
Server: Camp2K6  
Job Name: Generate Daily Fairfield CC File  
Time: Every day at 5:00am
```

"AS-IS" Process



Overview of Process

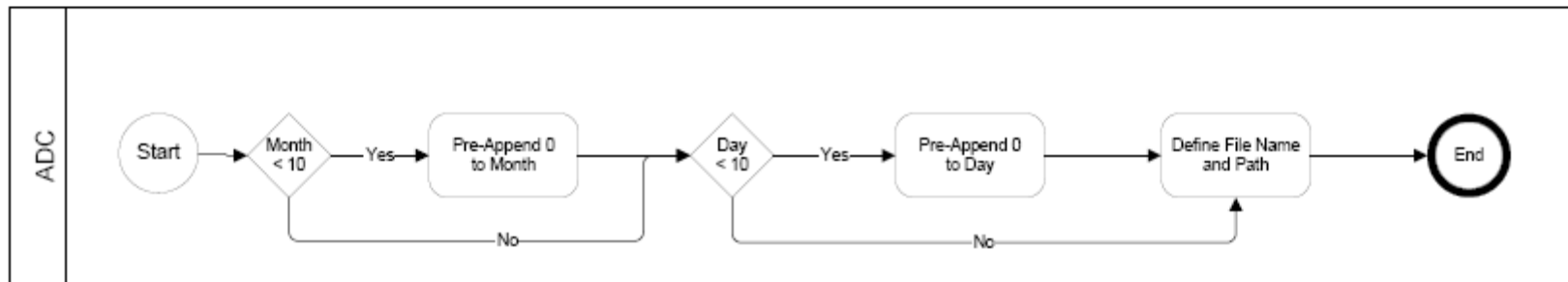
Business Process
For
Generate Daily Fairfield CC File



Drill into Sub-Process

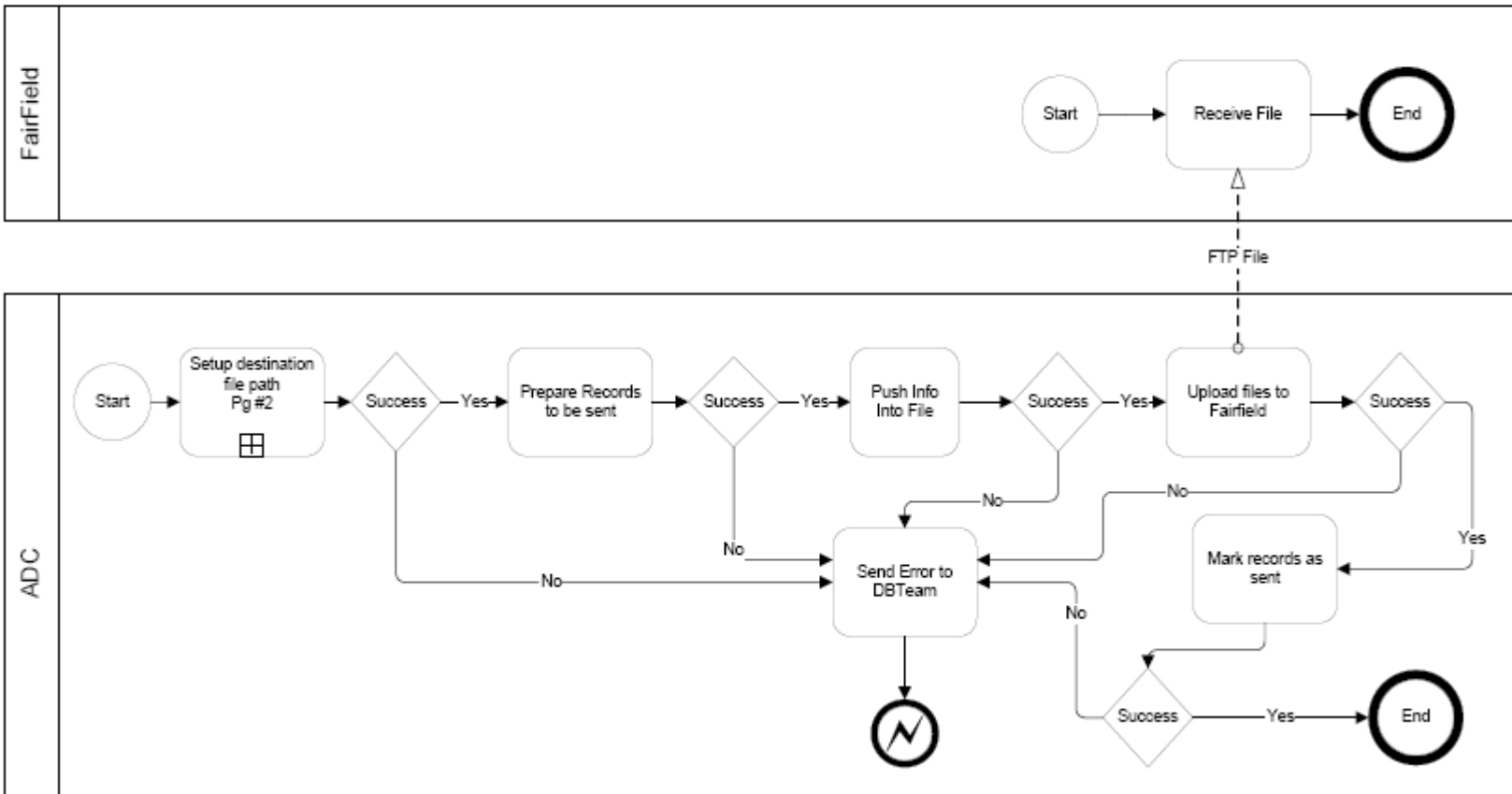
Business Process
For
Generate Daily FairField CC File

Section: Setup Destination File Path



Finish Off this Process

Business Process
For
Generate Daily FairField CC File





Little More Complicated

Generate
Member Upload
Workflow Process



Member Upload Process

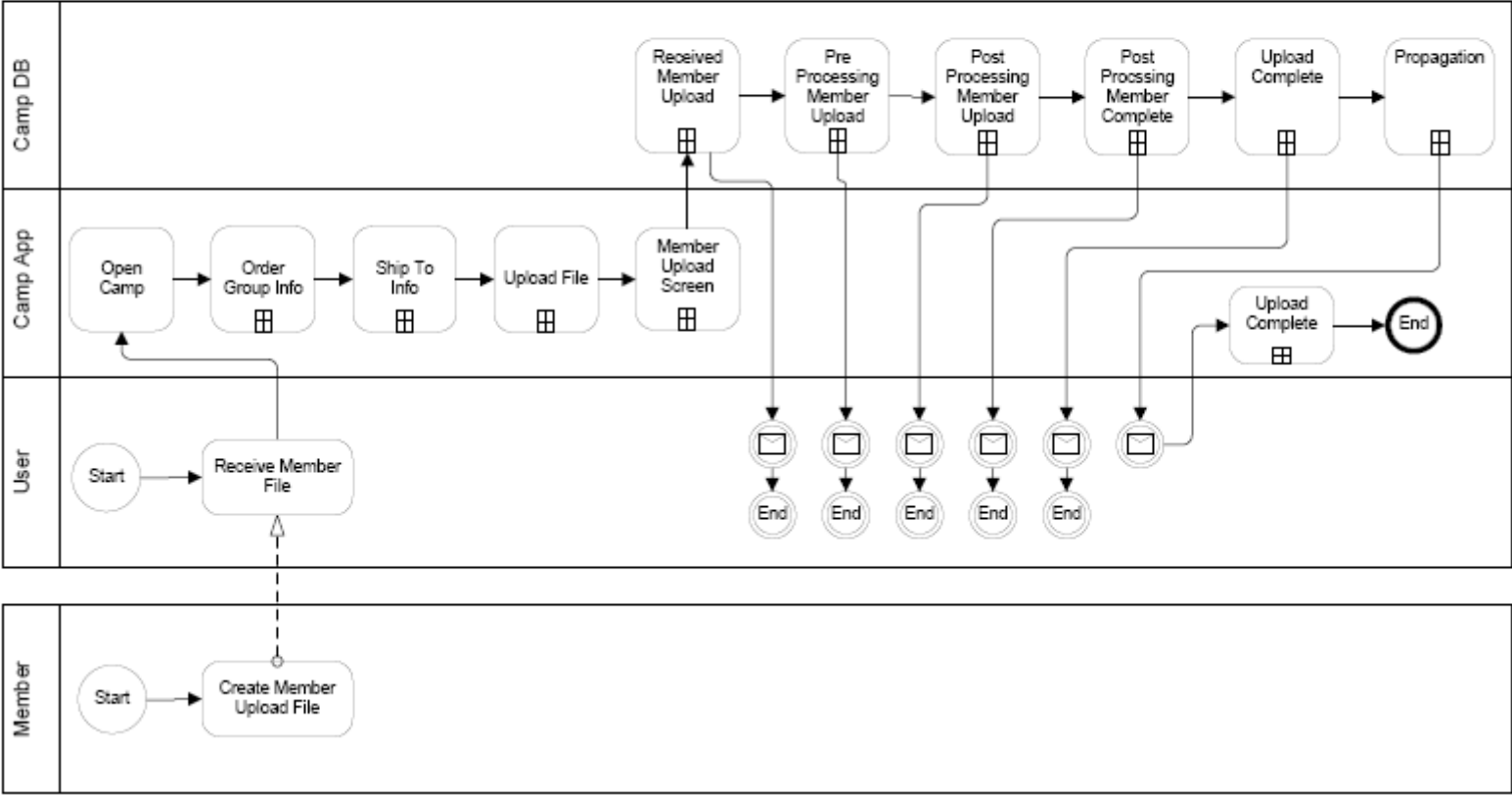
Description

This is the process that is used to upload member listings manually into Camp.



Overview Image

Business Process
For
Member Uploads

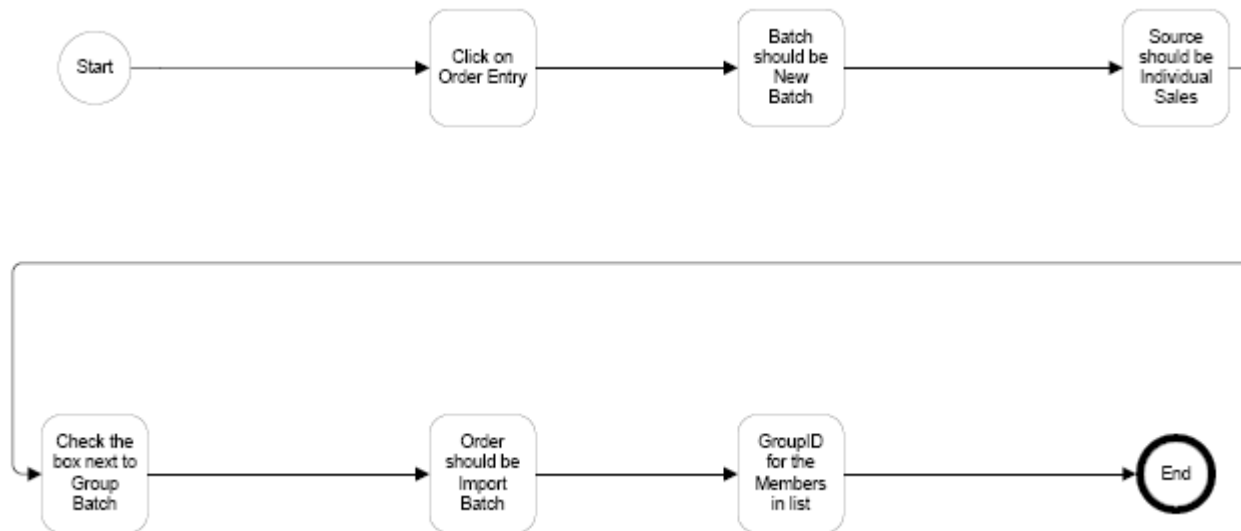




Sub-Process: Order Group Info

Business Process
For
Member Uploads

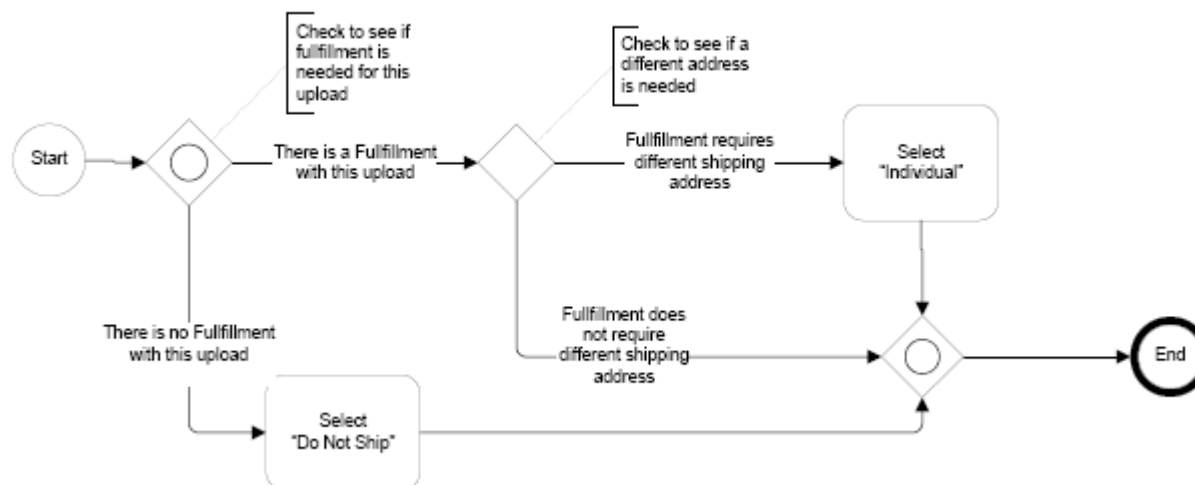
Section: Order Group Info



Sub-Process: Ship Info

Business Process
For
Member Uploads

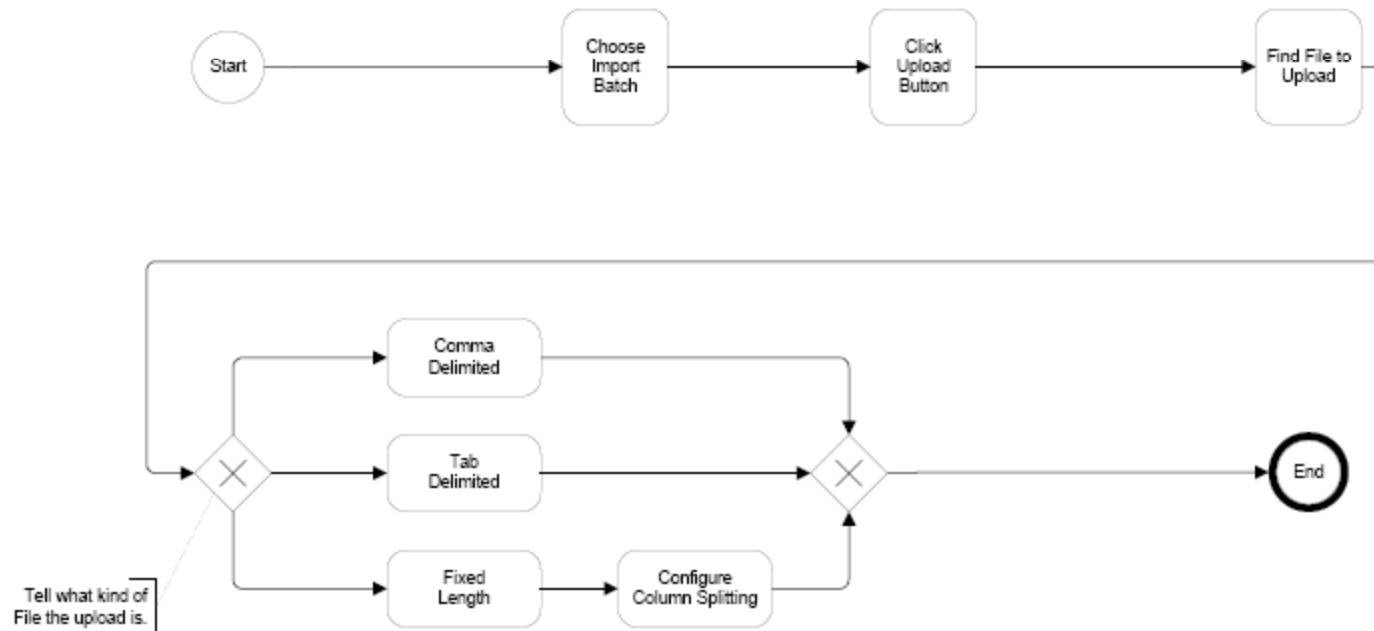
Section: Ship Info



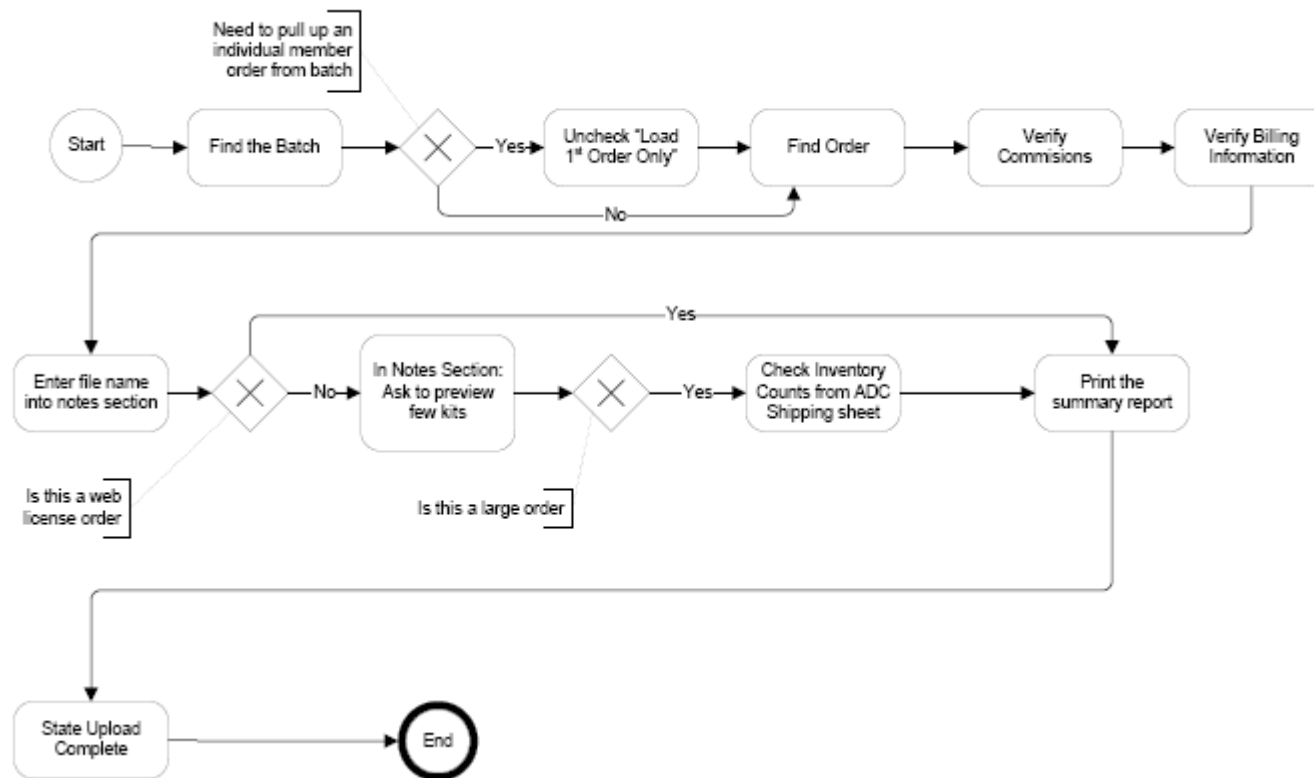
Sub-Process: Upload File

Business Process
For
Member Uploads

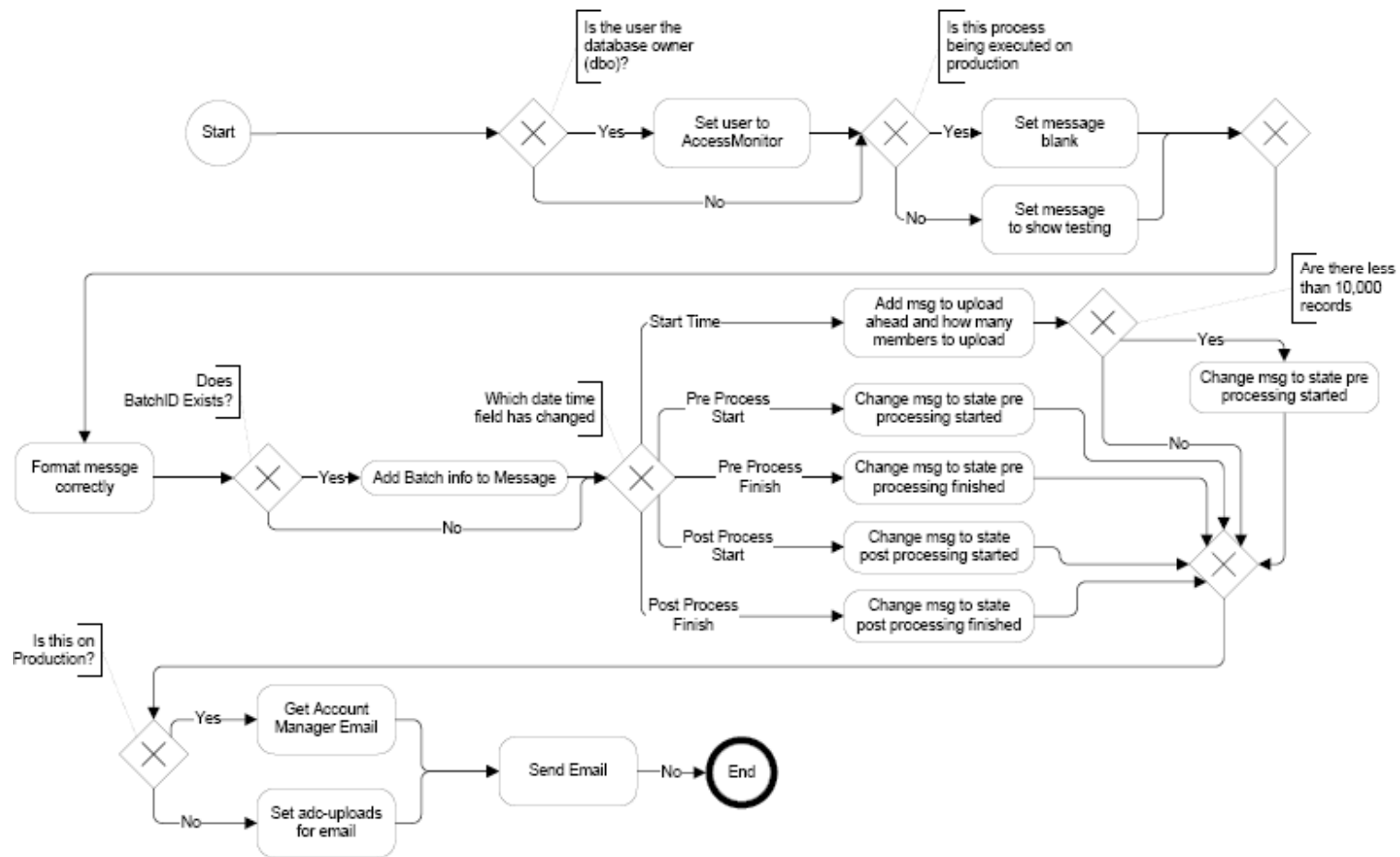
Section: Upload File

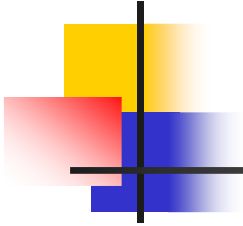


Sub-Process: Upload File



Sub-Process: Generate Email





Where To Go From Here



General Modeling Concepts

- A process is chronological. Accurate models should be time line orientated
- Processes generally begin with a triggered event and then work through significant business rules
- All tasks or activities are assigned to roles that are meaningful to the people in the business. Be sure to capture relevant roles. Which could be outside the company



General Modeling Concepts – Contd.

- A complete model should display how objects or data are transferred and where they are going.
- A process can be modeled in a hierarchical fashion (sub-process).
- The choices made for decisions, which occur within the process, determine which of the potential paths will be taken.



General Modeling Concepts – Contd.

- Establish standards or guidelines for developing models and naming model elements.
 - Establish naming conventions for each type of modeling object.
 - Avoid redundancy in naming. Do not include words like Process, Task or Activity.
 - To help with reports, name should be 32 characters or less.
 - To help with readability, words should be capitalized.



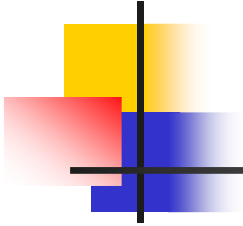
Visio Stencils

A BPMN 1.0 version set of the stencils will be uploaded with the presentation. As a separate Zip File.



Ten Best BPM Practices

- Think Process, Be Process
- Get Smart
- Adopt an Executive
- Great Expectations
- Pick a Methodology
- The Right Technology
- Hear the voice of the customer
- Pick a Project
- Measure First
- Plan to Change



To improve is to change;
to be perfect is to change often.

By Winston Churchill



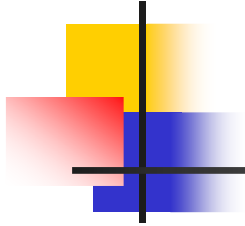
Interesting Web Sites

- Dive Into BPM
 - <http://www.DiveIntoBPM.org>
- BPM Home
 - <http://www.bpmn.org/index.htm>



Interesting Products

- Tibco Business Studio
 - http://www.tibco.com/devnet/business_studio/default.jsp
- Savvion Process Modeler
 - <http://www.savvion.com/bpm-products/process-modeler.php>
- Business Process Modeling with Visio
 - <http://www.itp-commerce.com>



Questions

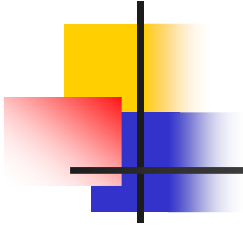
&

Answers



Contact Information

Email: Scott.Heffron@CTR-SQL.com



Thank You