



Best Practices for Easily Adding Workflow to Existing Excel-based Solutions

Sigrid Kok | Winshuttle



WINSHUTTLE
USER
GROUP CONFERENCE

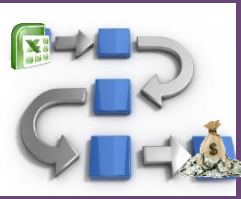
Disclaimer



This document contains forward-looking statements based on current expectations, forecasts and assumptions of the Company that involve risks and uncertainties. Forward looking statements are subject to risks and uncertainties associated with the Company's business that could cause actual results to vary materially from those stated or implied by such forward-looking statements.



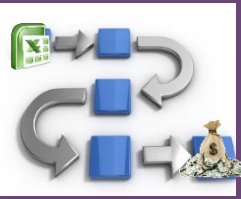
About Me



- At Winshuttle almost 6 years
- Previously SAP, IBM and a few start-ups, as well as an Aerospace & Defense company in IT
- Current Role: Lead SE, Product Tester, Demonstration Creator, and someone who is too curious for her own good! 😊
- Contact: Sigrid.Kok@Winshuttle.com

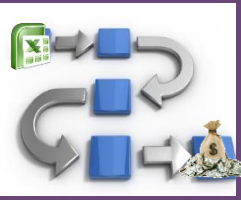


Agenda



- Setting the Stage
- Options for Workflows with Excel
- What is Excel Workflow?
- When to use Excel Workflow?
- Demonstration
 - Excel Experience
 - Workflow Design
- Benefits
- Questions

Setting the Stage



- You have Excel templates and scripts to post information to SAP
- You need approvals of the data before you post it
- You need to collect data from multiple groups before posting
- You want to define those processes without programming
- The OOTB Governance workflows WS provides are insufficient
- You can't or don't want to use SAP workflow
- Examples:

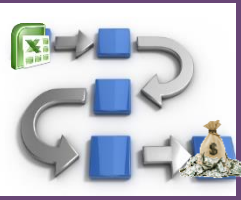
WINSHUTTLE

• Route Journal Entries for approval before Posting

• Route Material Creation to sales and accounting



Options for Workflows with Excel



Current:

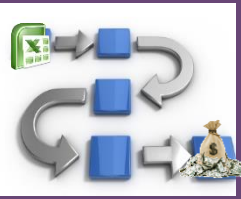
- Foundation OOTB Workflows
- Custom workflow with Designer
- Form “Envelope”

New:

- Smart Table in a Form in version 11.0.3
- Excel Workflow in version 11.0.4 (coming with Foundation 11.1)



Smart Table



Features:

- Form-based solution – the form is the process data “master”
- Ability to upload and download data to/from Excel
- Validation & Rules in the Form
- Concurrent editing on group-specific columns, i.e. sales

The screenshot displays the Winshuttle Smart Table interface. On the left, there is a panel for processing an Excel file named 'MM01-ComposerExcel-24.xlsx'. It includes options for selecting a worksheet ('Sheet1'), defining a range ('A1' to 'A125'), and checking 'My data has headers'. An 'Upload' button is at the bottom of this panel.

The main area shows a table with columns: Row, Industry Sector, Material Type, Description, Base UOM, Material Group, Gross Wt, Net Wt, Wt Unit, Volume, Volume Unit, ISO Desc, Plant, and Sal. The table contains 10 rows of material data.

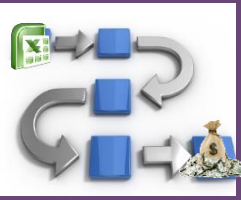
A 'Validation Results (25 Rows, 3 Errors)' dialog box is open, showing the following table:

Row	Page	Column	Current Value	Validation Error
7	1	Net Wt	11	Net Weight cannot be greater than Gross Weight
10	1	Description		Material Description is required
23	3	Net Wt	15	Net Weight cannot be greater than Gross Weight

Red callouts in the main table highlight the errors: 'cannot be greater than Gross Weight' for row 7 and 'Material Description is required' for row 10.

At the bottom of the interface, the text 'WINSHUTTLE™' and 'WINSHUTTLE USER GROUP CONFERENCE' is visible.

What is Excel Workflow?



A common interface for Excel File Processes:

- OOTB Workflows
 1. Send to Reviewer and Reviewer Posts
 2. Send to Reviewer and return to Submitter when Approved to Post
- Custom workflows built in Composer

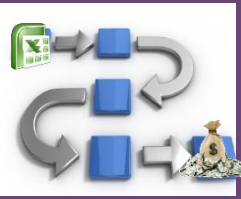
Common actions:

- Review and collect approvals
- Allow participants to contribute and upload a new version

WINSHUTTLE Only in Custom Workflows



When to use Excel Workflow?

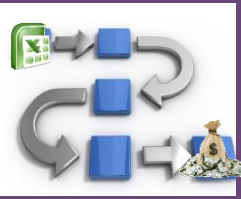


- If you need OOTB or custom process/workflow for an Excel file
- You have a large amount of data to process
- You want process participants to leverage the Excel Add-in to:
 - Review the Excel file – OOTB and custom
 - Update the Excel File - custom
 - Leverage Data in the Excel file to drive the workflow - custom

Limitations:

- No concurrent editing
- No OOTB control over which columns a

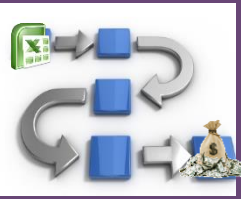
Excel Workflow Demo



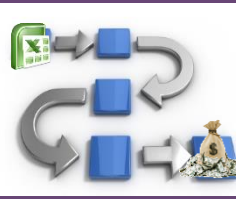
- Excel Experience
- Workflow Design



Demo: Excel Experience Video



Pre-Submission of Data Template – Single Posting



Excel interface showing the 'Winshuttle Run' ribbon and 'FB50-Mill Creek JE AP-1.xlsx' file. The ribbon includes options like 'Write Headers', 'Log Cell: E8', 'Backup Data', 'Launch SAP GUI', 'Validate', 'Simulate', and 'Debug'.

Note: Only Single Cells can be promoted. Use Totals, Countif and other formulas to promote what you

Item	GL Account
1	0000190990
2	0000474100
3	0000473110
4	0000476500
5	0000893015
6	0000477001
7	

FB50-Mill Creek JE AP-1.xlsx Properties

General Summary Statistics Contents Custom

Name: [Field] Add Delete

Checked by Client Date completed Department Destination Disposition

Type: Text Link to content

Value: [Field]

Name	Value	Type
DocumentDate	12/17/2015	Date
PostingDate	12/17/2015	Date
CompanyCode	1000	Text
TotalCredits	23000	Number
TotalDebits	23000	Number
Currency	USD	Text
LogMessage		Text
DataReviewP...		Text

OK Cancel

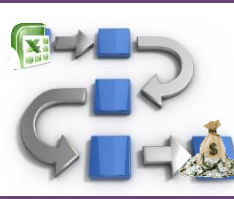


Total Credits:	23,000.00
Total Debits:	23,000.00
Balance:	0

Company Code	Cost Center	Item Text	WBS Element	Profit Center
1000				1000
1000	3100	trade show travel	E-9990	9999
1000	3100	Cell Phones		1000
1000	3100			1010
1000	3100			1000
1000	3100	Tech World		1010



Pre-Submission of Data Template – Multiple Postings



Hdr / Dtl	Comp Code	Document Date	Posting Date	Currency	Reference Document Number	Document Header Text	General Ledger Account	Debit-S/ Credit-H	Amount In Doc Currency	Sales Tax Code	Cost Center	Profit Center	WBS Element	Internal Order	Text
Log Winshuttle TRANSACTION 10.5 Embedded TRANSACTION script (FB50RunShuttleParkV2SK.TxR) 6/21/2013 8:30:58 AM Mode: Winshuttle Function Module WEG-800_sigrldk Start Row: 2 End Row: 0 Number of Errors: 4															
H	1000	1/26/2016	1/26/2016	USD	Inv. PN293	Invoice for PN293									
D							473000	H	1000	OI	3110			E-9990	texto en español
D							405200	S	1000		3110				
D							473000	H	500		3110				中文文本 - chinese
D							405200	S	500		3110				
D							473000	H	250	OI	3110				
D							405200	S	250		3111				
H	3000	1/26/2016	1/26/2016	EUR	Inv. 7349	Invoice for 7349									
D							473000	H	1000		3110				
D							473000	S	1000		3110				
H	1000	1/26/2016	1/26/2016	USD	Inv. 999286	Invoice for 999286									
D							473000	H	250	OI	3110	1010			
D							405200	S	250		3110	1010			
D							473000	H	2500	OI	9999				
D							405200	S	2500		3110	1010			
D							473000	H	10000	OI	3110	1010			
D							405200	S	10000		3110	1010			
D							473000	H	250	OI	3110	1010			
D							405200	S	250		3110	1010			
H	1000	1/26/2016	1/26/2016	EUR	Inv. 9992851	Invoice for 9992851									
D							473000	H	250.00	OI	3110				
D							405200	S	250.00		3110				

FB50-JournalEntries-Multiple-SK.xls Proper... ? X

General Summary Statistics Contents Custom

Name: Add Delete

Checked by
Client
Date completed
Department
Destination
Disposition

Type: Text

Source: ExcelFileName Link to content

Properties:

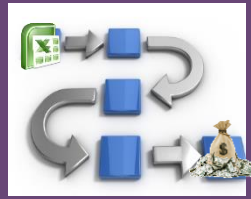
Name	Value	Type
Count1000	4	Number
Count2000	0	Number
Count3000	1	Number
CountOverLimit	2	Number
ExcelFileName		Text


OK Cancel

AC	AD	AE	AF	AG
Count Company 1000	Count Company 2000	Count Company 3000	Count Amount over 10000	Excel File Name
4	0	1	2	FB50-JournalEntries-Multiple-SK.xls

Calculated columns for whole workbook, such as counting company codes, amounts over a limit, etc. can be promoted for use in

Excel Formula Ideas for Promoted Values

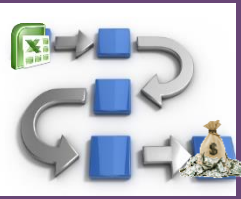


- **CountIf**
 - `=COUNTIF(B:B,"=1000")` count occurrences of company code 1000 in B
 - `=COUNTIF(J:J,">=10000")` count occurrences of amounts ≥ 10000 in J
- **Totals/Sums**
 - `=SUM(J2:J9999)` sum all values in J, range specified
 - `=SUMIF(E12:E111,"=S",F12:F111)` sum F if Credit (S) in column E
- **Excel File Name**
 - `=MID(CELL("filename"),SEARCH("[",CELL("filename")),1,SEARCH("]",CELL("filename))-SEARCH("[",CELL("filename"))-1)`


Will provide your excel file name



Submit Script & Template



File View Map Run Foundation

Submit To Foundation Local File View All Tasks

Submit Wizard

1) Script File 2) Data Template 3) Data File Workflow 4) Supporting Documents 5) Summary

Submit Wizard

1) Script File 2) Data Template 3) Data File Workflow 4) Supporting Documents 5) Summary

Submit Wizard

1) Script File 2) Data Template 3) Data File Workflow 4) Supporting Documents 5) Summary

Submit Wizard

1) Script File 2) Data Template 3) Data File Workflow 4) Supporting Documents 5) Summary

Submit Wizard

1) Script File 2) Data Template 3) Data File Workflow 4) Supporting Documents 5) Summary

Submit Wizard

1) Script File 2) Data Template 3) Data File Workflow 4) Supporting Documents 5) Summary

Script File

File name: *
Description:
Foundation destination:
Sheet: *

Script Review Process

Script reviewer: *

Data Template

File name: *
Description:
Foundation destination:

Data File

Data Review Process

Workflow process: *
Data file library: *
SAP server: *

Supporting documents

File Name

Summary - Submit to Foundation

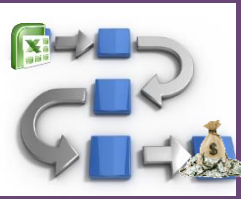
Script File	
File path:	http://Foundation/TransactionScripts/FB50-Mill Creek.trx
Script reviewer:	Ritika Tondwal - WSE\RTONDWAL
Data Template	
File path:	http://Foundation/Templates/ FB50 Mill Creek Template.xlsx
Data File Workflow	
Workflow process:	Custom Workflow: Journal Entry
Data file library:	http://Foundation/DataFilesSKWF/
Supporting Documents	
Supporting document(s):	None

Previous Submit

WINSHUTTLE™

WINSHUTTLE USER GROUP CONFERENCE | LAS VEGAS 2016

Submit Data File



FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW Winshuttle for Journal Entry Winshuttle Run Winshuttle Foundation

Open Data Tasks Outbox Input Files Supporting Documents Submit to Foundation

Submit Wizard

1) Data File 2) Data File Workflow 3) Supporting Documents 4) Summary

Data File

File name: *
Description:
Foundation destination:

Data Workflow

Workflow process:
Auto run:

Data Review Process

Data file reviewer:

Complete

Supporting documents

File Name
ws.jpg
Supporting Document.docx

Summary - Submit to Foundation

Data File

File path: <http://Foundation/DataFiles/MM02/ FB01-Mill Creek AP 1.xlsx>

Data File Workflow

Workflow process: Custom Workflow: | Journal Entry
Data file library: <http://foundation/DataFileSKWF>
Next step in workflow:
Data file reviewer:

Supporting Documents

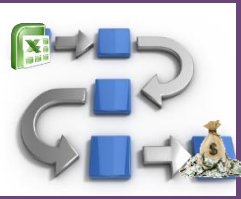
Supporting document(s): None

	A	J	K	L	M
1					
2	MO				
3	JO				
4	Com				
5	Docu				
6	Posti				
7	Refer				
8	Head				
9	Curre				
10	Doc				
11					
12					
13					
14	3	000			
15	4	000			
16	5	000			
17	6	000477001			
18	7				

Profit Center
1000
9999
1000
1010
1000
1010

WINSHUTTLE™

Data File Library – Custom Properties

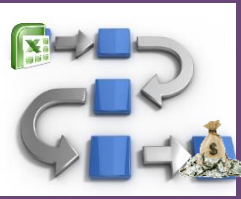


Type	Name	Title	Status	<input type="checkbox"/> Created By	<input type="checkbox"/> Reviewer	Approval Date	Created	Supporting Documents	<input type="checkbox"/> Runner
	FB50-Mill Creek JE AP-1 <small>NEW</small>	FB50-Mill Creek JE AP-1	Awaiting Supervisor Approval	<input type="checkbox"/> Sigrid Kok			12/17/2015 3:00 PM	View	

CompanyCode	1000
Currency	USD
DocumentDate	12/18/2015
PostingDate	12/18/2015
TotalCredits	23,000.00
TotalDebits	23,000.00
LogMessage	
WorkflowInstance	DataFileSK-0000072



Studio Tasks



St Persona = Contributor/Approver Winshuttle Studio

File View Map Run

New
Open
Save
Info
Scheduled Tasks
My Workflow Tasks
Log Viewer
Account
Outbox
Help

Options
Exit

Task Viewer

Refresh List

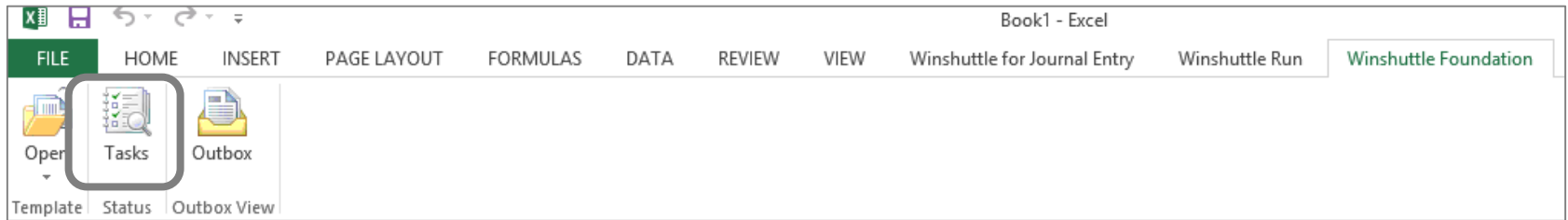
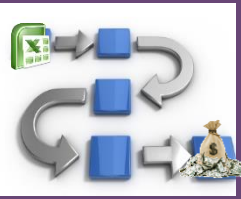
All My Open Tasks 1 - 5 of 8

Type	Task	File/Form	Date	Originator
	Run Transaction	MM02_2015-12-10.xlsx	12/10/2015	Skate April
	Review Script	MM02_Skate1.Txr	01/15/2016	Ritika Tondwal
	Review Data File	MM02_2016-01-01.xlsx	01/25/2016	Marc Rouhana
	Review Script	MARA_MARC_MATNR.Qsq	01/25/2016	Ritika Tondwal
	Approval 1	MyCustomExcelWorkflow	01/30/2016	Jerry Garcia

[View All Tasks on Foundation](#)



Workflow Tasks to Review/Contribute



Task List

Task Viewer

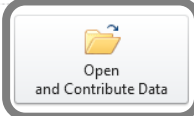
Refresh List

Task	Created On
FICO Supervisor Approval http://foundation/DataFileIntegWF/FB50-Mill Creek JE AP-1.xlsx	Thu, 17 Dec, 2015



Details

Created On: Thu, 17 Dec, 2015
Task: FICO Supervisor Approval
[View Process History](#)

Data File

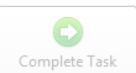


Workflow

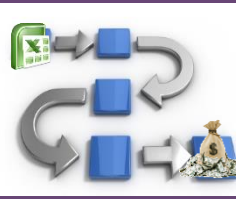
Actions:  

SAP Server: WB6

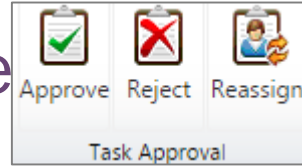
Comments:



Workflow Participant Actions



From the



Approve Data File

Approve Data File

Approval for OOTB Workflow

Approve Task

Approve Task

Approval for Custom Workflow

Reassign Task

Reassign Task

Reject Data File

Reject Data File

File Info

Data file: http://Foundation/DataFiles/MM02_Skate1.xlsx
Associated script: http://Foundation/TransactionScripts/MM02_Skate1.xlsx
Associated workflow: One step review - auto run after approval (WE6 as System Account)
Supporting documents: 1 existing, 2 added

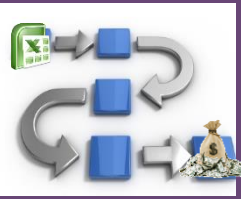
Task

Task name: Data file review
Task description: This is a simple data review task that requires a single approver.

Reject Cancel



Process History from Excel



From Tasks

Details

Created On: Wed, 30 Dec, 2015

Task: FICO Supervisor Approval

[View Process History](#)

from the Ribbon



Winshuttle Studio

Workflow Process History

The workflow recorded these events:

Name	Creation Date	Completion Date	Type	Status	Comments
▼ DataFileSKWF - DataFileSK-0000067	Thu, 17 Dec, 2015		WorkflowProcess	Running	

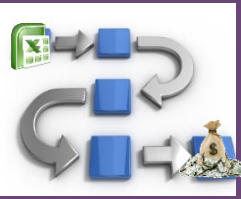
Assignments

Activity Name	Assigned Date	Assignee	Completion Date	Status	Review Date	Comments
Start Workflow	Thu, 17 Dec, 2015	Sigrid Kok	Thu, 17 Dec, 2015	Completed		Auto launched process.
FICO Supervisor Approval	Thu, 17 Dec, 2015	Sigrid Kok		Assigned		

Close



The Form



The Workflow has a form, and it can be used, as need, for the Excel Workflow Process:

- Review Required (open Excel data file before approval) is supported from the form
- Allow Replacement (Updating the data) is not supported from the form

• The Excel file is the “master” for the process of data

Winshuttle recommends using the Excel add-in

Integrated Workflow

Data File Link
FB50-Mill Creek JE AP-1.xlsx

Supporting File(s) Link(s)
ws.jpg
Supporting Document.docx

CompanyCode
1000

Currency
USD

TotalCredits
23000

TotalDebits
23000

PostingDate
12/17/2015

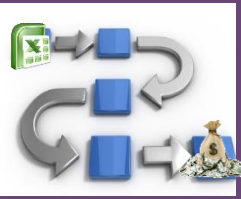
DocumentDate
12/17/2015

Status
Awaiting Supervisor Approval

Error rows
Total rows

LogMessage

The Form

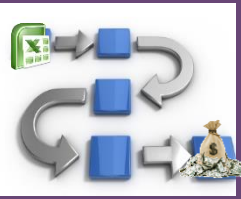


The form can simply be a reminder to open the Excel file with a URL link to it, as well as provide cursory information.

Integrated Workflow - Please use Excel to participate in this process	
Please participate in this workflow from Excel using the Winshuttle Studio add-in. You can either open it using the below link - or - Go to Excel and open the below file.	
Data File Link	
FB50 Mill Creek AP 1.xlsx	
Status	
Awaiting Supervisor Approval	
Workflow Status	

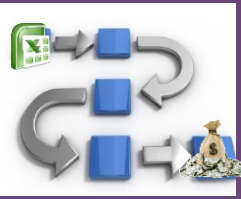
Winshuttle recommends using the Excel add-in

Excel Workflow Demo



- Excel Experience
- Workflow Design (for custom workflows)

Solution Wizard for Excel Workflow



New Solution ✕

Steps:

- 1. Solution Start**
- 2. Swim Lanes
- 3. Data Connections
- 4. Field Packs
- 5. Scripts / Web Services
- 6. Finish

NAME: *

TYPE OF SOLUTION: *

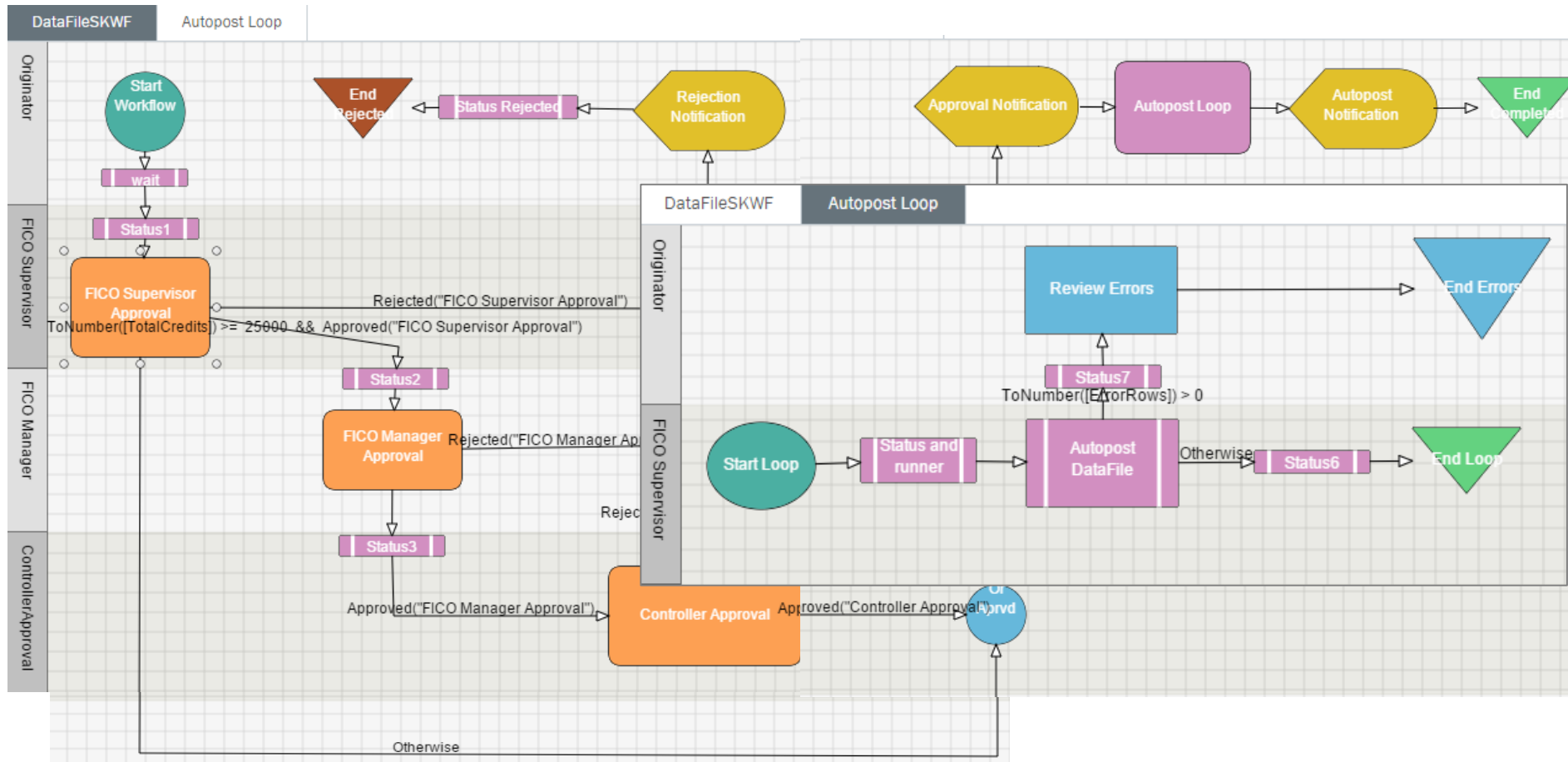
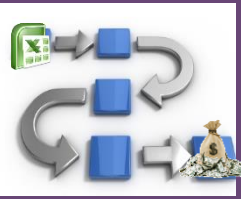
Form Workflow Excel Workflow

FOUNDATION SITE: *

DATA FILE LIBRARY:

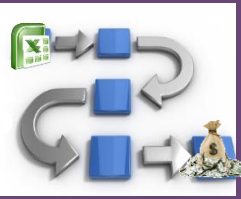
Previous Next **Finish** Cancel

Excel Workflow Example – Single Posting

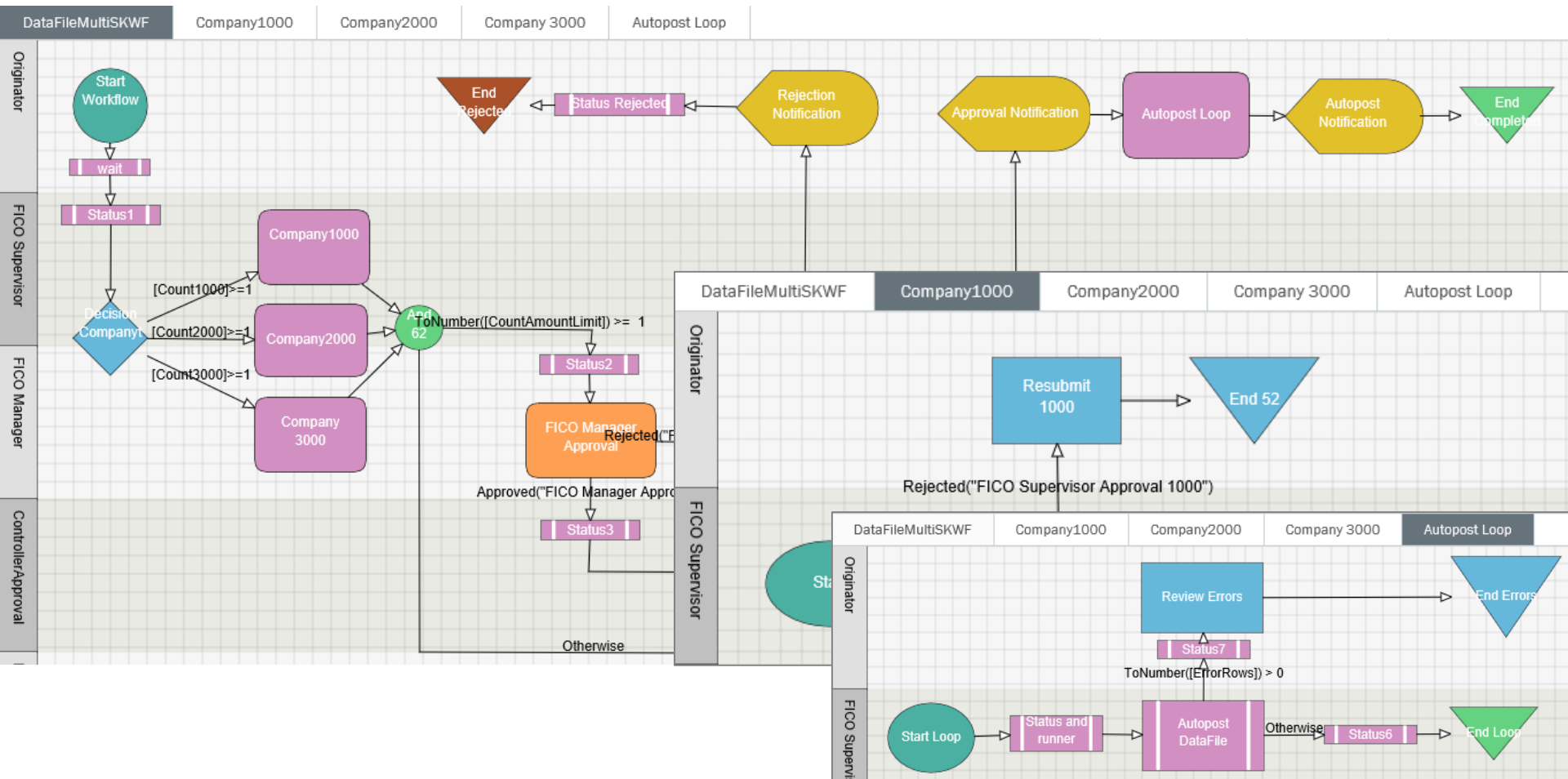


Note: Excel Workflows look similar to form-based workflows. But they can be designed to route an Excel file for contributions and approvals.





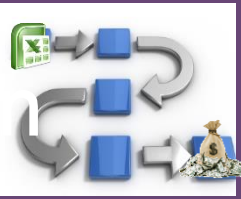
Excel Workflow Example – Multiple Postings



Note: Excel Workflows look similar to form-based workflows. But they can be designed to route an Excel file for contributions and approvals.



Workflow - Data File Column Synchronization



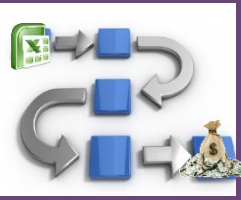
Governance Data File Library Columns can be Synchronized with the workflow process

The screenshot shows two main panels. The left panel, titled 'DataFiles', displays the 'Data File Library' for 'DataFileSK'. Under 'Data File Sync Columns', a rounded rectangle highlights nine columns: CompanyCode, Currency, DocumentDate, Error rows, LogMessage, PostingDate, Status, TotalCredits, and TotalDebits. The right panel, titled 'Form Data', shows a tree view of form fields. A rounded rectangle highlights a folder named 'DataFileColumnsSync' which contains nine entries: CompanyCode [CompanyCode], TotalCredits [TotalCredits], TotalDebits [TotalDebits], Currency [Currency], PostingDate [PostingDate], DocumentDate [DocumentDate], Status [Status], LogMessage [LogMessage], and Error_rows. Other fields like URLControlIDF, Supporting_File_s__Link_s_, and FormName are also visible but not highlighted.

Notes:

- Custom Properties can be defined in the
- Use the synchronized values to route workflow
- Currently, you must manually create the columns in the Data File Library, and they must match the Excel custom properties names exactly to be populated

Workflow - Conditional Data-based Assignments



Participant

Description

Group central Members

Include Self True

Name FICO Supervisor

Override Size

Participant Resolver SharePointListQuery

Participant Resolver Arguments (Collection)

Type PersonFromRole

Assignment Type Arguments Editor

Validate

PARAMETER	VALUE
ALLOWSELECT	false
COLUMN	FICOSupervisorApprover
DISPLAY	false
LIST	FICOSupervisorApprovers
POOLCOLUMN	
POOLLIST	
POOLQUERY	
POOLSITE	
QUERY	[CompanyCode] ==
RUNAT	Start
SITE	http://foundation

OK Cancel

SharePoint List

FICOSupervisorApprover

✓	Title
	1000	...	1000	i:0#.w wse\sigridk
	2000	...	2000	i:0#.w wse\sigridk
	3000	...	3000	i:0#.w wse\sigridk

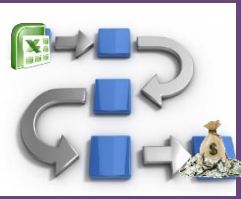
Edit Query

INSERT:

Field Operator... Field Value ... Function... Node...

[CompanyCode] == @[/my:myFields/my:DataFileColumnsSync/my:CompanyCode]

Workflow - Set Column Plugin



Plugin Arguments Editor

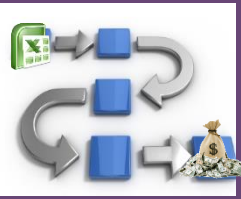
Validate Add

PARAMETER	VALUE
? SITE	<input type="text"/>
? LIST	- Select -
? QUERY	<input type="text"/>
? EXPRESSION	<input type="radio"/> YES <input checked="" type="radio"/> NO
? AUTOCHECKOUT	<input checked="" type="radio"/> YES <input type="radio"/> NO
? USELINKEDDOCUMENT	<input checked="" type="radio"/> YES <input type="radio"/> NO
STATUS	Awaiting Supervisor Approval
WORKFLOWINSTANCE	[/my.myFields/my.FormName]

Type	Name	Title	Status	Created By
	FB50-Mill Creek JE AP-1	FB50-Mill Creek JE AP-1	Awaiting Supervisor Approval	<input type="checkbox"/> Sigrid Kok

OK Cancel

Workflow - URL Control

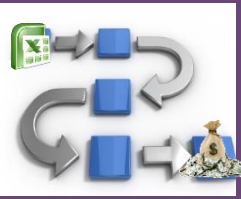


General Settings	
Name	Url_8
Label	URL Control_8
New Window	True
Include Content Inline	True
Inline Height	500px
Inline Width	100%
URL Field	- Select -
Text Field	- Select -
Result File Field	- Select -
Show 'Data File' Field	URLControlDF
Show 'Supporting Documents' Field	Supporting_File_s__Link_s_

Data File Link FB50-Mill Creek JE AP-1.xlsx
Supporting File(s) Link(s) ws.jpg Supporting Document.docx



Workflow - Force Review of Data File

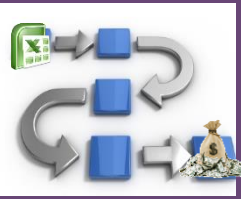


Require Review

On a workflow task or approval node:

- Forces a review of the Data file if True
- Before you can approve/complete the task, you must:
 - From Excel Add-in – open the file for review
 - From Form – click on link for data File
(Winshuttle recommends using the Excel Add-in)

Workflow - Allow updates of the Data File



Allow Replacement

On a workflow task or approval node:

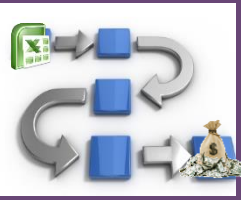
- Automatically checks out the file
- Allows a new version of the Data File to be checked in
- You must complete this task from the Excel add-in, in order to either:

WINSHUTTLE Check-in a new version

- Discard the Check-out and retain the current data file



When to use Excel Workflow?



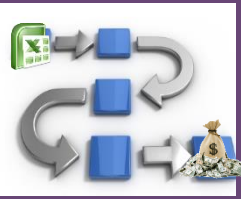
When to use Excel Workflow?

- If you need a custom process/workflow for an Excel file
- You want Excel as the “master” for your process data
- You have a large amount of data to process
- You want process participants to leverage the Excel Add-in to:
 - Review the Excel file data
 - Update the Excel File data
 - Enable Excel data to drive the workflow

Limitations:

- No concurrent editing
- No OOTB control over which columns a participant can update or what they see

Questions?



Other Resources



Documentation

- <http://winshuttle-help.s3.amazonaws.com/composer/winshuttle-composer-ideal-workflow.htm>

Winshuttle User Group

- <http://wug.winshuttle.com>

Winshuttle Support

- <http://support.winshuttle.com>



Disclaimer



This document contains forward-looking statements based on current expectations, forecasts and assumptions of the Company that involve risks and uncertainties. Forward looking statements are subject to risks and uncertainties associated with the Company's business that could cause actual results to vary materially from those stated or implied by such forward-looking statements.

