



Workflow vs. Application Automation Tools: Choosing the Right Tool for the Job

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INTRODUCTION

With the increasing popularity of workflow software, many IT departments are wrestling with the distinction between workflow programs and application automation tools. Both claim to automate business processes.

The purpose of this document is to compare and contrast workflow and application automation. This document will show that workflow and application automation are similar, but that there are important distinctions, and that ultimately they serve different purposes. The document concludes by making the argument that your ultimate goal should be full automation.

TERMINOLOGY

Differences between workflow and application automation are obscured by non-specific, overlapping terminologies. Terms like "business process," "automation," "task," "job," and "rule" have different definitions when pertaining to workflow versus automation. These terms, as they are used in this whitepaper, are defined below.

WORKFLOW

Task: an action or activity; a series of tasks make up a workflow process.

Rule: attributes that define how a task can be completed and how a task can be passed to the next person for action.

Work process: a series of tasks connected by rules; traditionally known as a business process.

AUTOMATION

Job: a single executable piece of work; jobs usually target a particular application or a specific executable program; a series of jobs make up an automated process.

Dependency: criteria that determine the sequence in which jobs will execute.

Business process: a series of jobs connected by dependencies; traditionally known as a job stream.

GENERAL

Step: generically refers to a task or job.

Process: generically refers to a work process or business process.

So, in workflows we can now speak of a "work process with manual tasks held together by rules." In automation we can speak of a "business process consisting of application jobs connected by dependencies."

WHAT IS WORKFLOW?

Workflow is the tasks, procedural steps, organizations or people involved, required input and

output information, and tools needed for each step in a business process.

The NPD Group defines workflow as the "automation of a business process, in whole or part, during which documents, information or tasks are passed from one participant to another for action, according to a set of procedural rules."

The two key points to both these definitions are:

- the inclusion of "people" or "participants" taking "actions"
- the "passing" of actions or tasks (according to procedural rules) between "participants"

Further, workflow automation products allow a company to create a workflow model and components such as online forms and then use this to manage and enforce the consistent handling of work. For example, an insurance company could use a workflow automation application to ensure that a claim was handled consistently from initial call to final settlement. The workflow application would ensure that each person handling the claim used the correct online form and successfully completed their step before allowing the process to proceed to the next person and procedural step. Other examples might include approval of a credit memo or approval of a requisition. Each example includes an "action" or task being carried out manually by one "participant" before being passed on to the next.

WHAT IS AUTOMATION?

According to Merriam-Webster, "automation" is defined generally as:

The technique of making a process or a system operate automatically through the use of devices that take the place of human observation, effort, and decision.

Alternatively, "automation" can be defined as:

The technique of making a manual process automatic by eliminating human effort and intervention.

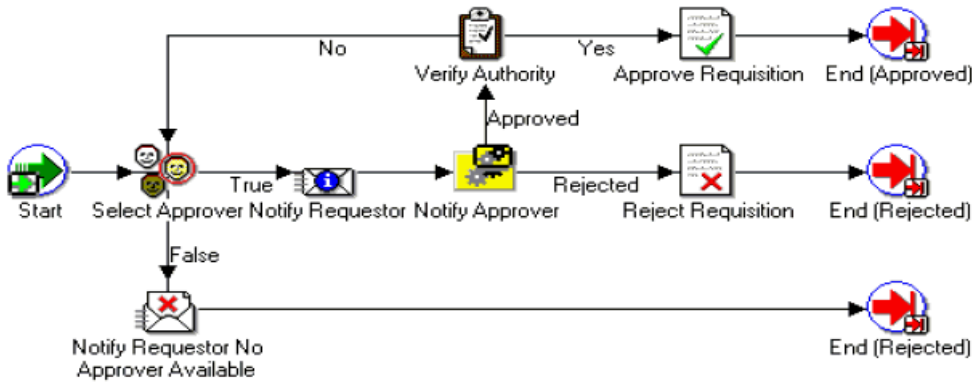
By either definition, complete automation of a process would eliminate any human intervention in the steps of the process as well as the hand offs between steps.

WHAT ARE WORKFLOW TOOLS?

Workflow tools facilitate the design and implementation of workflows. They usually include a graphic tool for drawing a workflow using icons that represent steps in a business process. They also include a workflow engine that drives the workflow, presenting documents or information to participants in the work process in the correct order. Workflow tools can launch programs and applications, but generally rely on actions by the human participants to trigger movement from one step in the process to the next.

One example of a workflow tool is Oracle Workflow. In an Oracle paper titled *Oracle Workflow: Business Process Management for Your Enterprise*, Oracle presents the following diagram as an example of a workflow diagram. Notice the emphasis on the approver and approval steps. This workflow most definitely requires significant human intervention.

Example of an Oracle Workflow



WHAT ARE APPLICATION AUTOMATION TOOLS?

Application automation tools, often known generically as job schedulers, facilitate complete automation of business processes. The scheduling component makes it possible to automatically launch business processes on specific days at specific times. The business process can, and often does, consist of many applications serving many different areas of an enterprise.

True automation tools should make it possible to add dependencies (e.g.: run Job B only after Job A completes), and "if-then" logic that takes the place of an operator checking the state of the system. For example, an automation tool should be able to check for the existence of specific files. With a sophisticated automation tool, you should be able to completely automate a business process, eliminating all human intervention except for troubleshooting.

A typical business process that can be automated is shown in the diagram below. It represents a data warehousing operation. Notice the distinct lack of human intervention.

HOW ARE WORKFLOW AND APPLICATION AUTOMATION DIFFERENT?

Workflow is focused on managing work processes that consist of, at least in part, tasks performed by humans. These tasks can be thought of as "must be" manual tasks, meaning

the task is inherently manual (e.g. signing a document) or the business requires the task to be manual (e.g. approval of a credit memo or requisition). Procedural rules dictate how each manual task is passed to the next person for action. The bottom line is workflow assumes and, in fact, requires manual intervention throughout a work process.

Since these "must be manual" tasks cannot, by definition, be fully automated, workflow tools focus on improving the overall work process by adding rules and notifications between tasks. From a true automation perspective, the overall work process can be streamlined, but the human component is never eliminated, and the process is never fully automated.

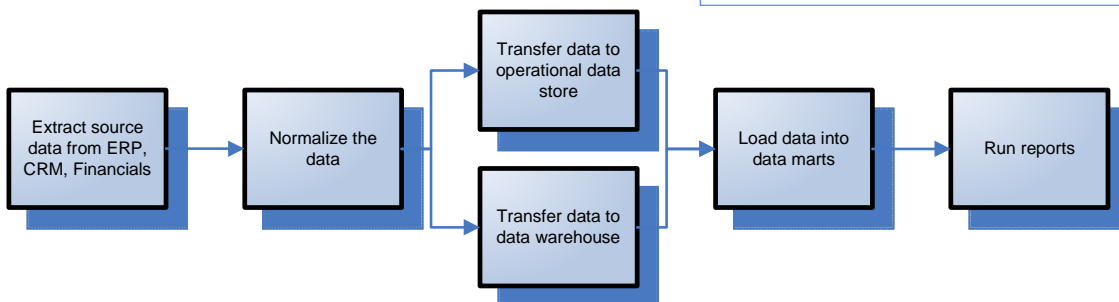
In contrast, application automation automates business processes that consist of various application jobs connected together with dependency logic. The automation tool runs the jobs and the dependency logic is enforced without any human intervention. The bottom line is automation assumes no manual intervention, and actively works to remove manual intervention throughout a business process.

If you were to put process automation on a spectrum running from completely manual (left) to fully automated (right), workflow would fall somewhere to the left of the middle. Application automation would fall far to the right end of the spectrum.

FULL AUTOMATION: THE ULTIMATE GOAL

In the business world, few people would argue that manual processes are better than automated processes. Ever since Henry Ford's assembly line, automation has produced tremendous gains in efficiency and productivity, positively impacting the bottom-line in thousands of companies. In contrast, human intervention in a process opens it up to inconsistencies, delays, and errors. And in today's world of corporate scandals and Sarbanes-Oxley legislation, fraud and faulty data are ever-increasing concerns.

Job schedulers and application automation tools automate business processes such as this data warehousing process.

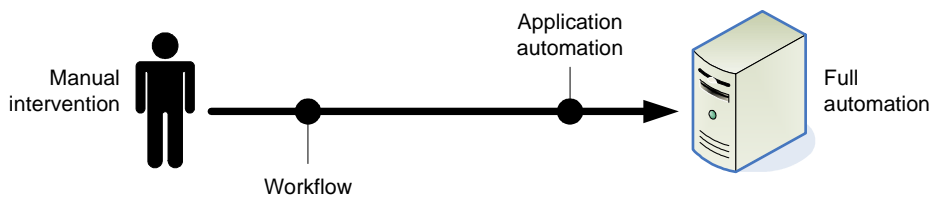


Workflow tools, by definition, preclude full automation. They assume manual intervention in a process.

To choose a workflow tool is to lock your organization into a less than optimum solution.

Automation tools, and more specifically, job schedulers/application automation tools, begin with the assumption of full automation. Choosing an automation tool opens your organization to the most efficient means of completing a process. It gives you the opportunity to streamline processes and eliminate human intervention wherever possible.

In short, workflow tools are backwards looking; application automation tools are forward looking.



WHICH TOOL IS RIGHT FOR YOU?

Your requirements will dictate if a workflow or application automation tool is right for you. It is possible, in fact likely, that you will have a need for both. They are truly complementary.

If you want to streamline processes that still require human intervention to handle "must be manual" tasks, then you will want to use a workflow tool. A workflow tool can reduce the time it takes to complete a process by moving documents from one individual to the next automatically.

If you are automating processes that bridge multiple applications, and those processes lend themselves to full automation, you will want to use an application automation tool. In fact, a powerful automation tool can make it possible to automate processes that you thought were locked in to a workflow model.

APPLICATIONS MANAGER: THE MOST ROBUST APPLICATION AUTOMATION TOOL

If you are looking for a full automation solution, Applications Manager is the most robust job scheduling and application automation tool on the market. As a scheduling tool, Applications Manager provides a sophisticated engine to schedule the execution of entire business processes based on dates, times, day of week, business and fiscal calendars, dependencies, conditions, and events. As an automation tool, Applications Manager supports and enforces a robust set of dependencies, conditions, and predecessors to connect individual jobs together into meaningful business processes that model your business goals. Applications Manager not only automates the individual jobs that make up

a business process, but also automates the "logic" that ties those jobs together. The end result is true automated business processes where the human component has been minimized or eliminated.

Applications Manager is designed to integrate tightly with off-the-shelf applications such as Oracle E-Business Suite, SAP, PeopleSoft, Informatica, Siebel, and Crystal Reports, as well as custom applications. Applications Manager automates, integrates, and accelerates processing within and among applications across all supported operating systems.

Applications Manager clearly does NOT fit the definition of a workflow automation tool. Applications Manager actively targets manual tasks

for automation, including tasks that are traditionally thought of as part of workflow. For example, Applications Manager can capture the criteria used to approve a transaction and store it in its database,

then apply those criteria automatically at the correct step in a process.

If you are still wrestling with choosing between a workflow tool and an application automation tool, you should contact an Applications Manager representative to arrange for a demonstration of the extensive automation capabilities built into Applications Manager.

ABOUT UC4 SOFTWARE

UC4 Software is a leading provider of workload automation and IT process optimization solutions that ensure core business processes and enterprise information systems run faster, more accurately and without interruption. More than 1,500 companies worldwide have successfully enhanced application processing performance and improved IT efficiency using UC4's business acceleration solutions. Customers include American Suzuki Motor Corporation, Cadbury Schweppes, eBay, Eastman Kodak, General Electric, Mattel, McGraw Hill, Panasonic, Robert Bosch, Sun Microsystems, Symantec, T-Systems and Verizon. For more information, please visit [WWW.UC4.COM](http://www.uc4.com).

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