

## Introduction

WorkflowGen, a 100% web-based solution built on Microsoft's industry-leading .NET platform, continues to lead the way by providing an extensive variety of straightforward methods and Web Services available to communicate with external applications. The purpose of this white paper is to elaborate on the available range of options for integrating with WorkflowGen.

Over time, Service Oriented Architecture (SOA) and Web Services have revolutionized the way applications communicate and have become ingrained in the corporate IT landscape. As a best-of-breed workflow and Business Process Management (BPM) platform, WorkflowGen has been designed with open standards in mind for communicating with external applications using SOA, as well as other classic methods which are described in this paper.

## Integration Methods

WorkflowGen proposes three key methods of integrating with external applications, such as SAP®, Oracle® Financials, PeopleSoft®, and a variety of other packages, databases, and data sources. Connectivity to these systems and data sources is generally limited only by the availability of those data sources' connectivity layers such as Web Services, ODBC, OLEDB, or other native connectivity methods.

## 1. WorkflowGen Web Services API

WorkflowGen offers a range of Web Services that provide visibility and control over processes and other system functions, all served up in an XML RSS feed format.

By using these Web Services, developers can communicate with WorkflowGen to:

- ✓ Request a list of ongoing tasks for a given user, typically used to embed workflow information in external portals
- ✓ Request of list of ongoing late tasks
- ✓ Gather data regarding requests for statistical or interface purposes
- ✓ View or change delegations, for example to manage substitutions for employees on holidays
- ✓ Control events in a given workflow, such as to trigger a new request or close an ongoing action
- ✓ Communicate with a workflow request to pass data back and forth

This list of available Web Services will grow with each new release of WorkflowGen as a result of continued customer feedback.

## 2. WorkflowGen Applications

Workflows are built as sequences of “building blocks” in WorkflowGen named Applications. Although many of these are related to human actions using web-based forms, a number of pre-built “system” Applications are included with all WorkflowGen versions to assist with integration tasks.

An example is “XMLtoDatabase”, an Application that provides workflow designers the ability to export data from a workflow web form to any standard database without code. A variety of other such Applications are built-in to WorkflowGen to facilitate exports and conversions.

Additionally, with the Advanced and Enterprise versions of WorkflowGen, you may either develop your own custom Web Services, or simply connect to pre-existing Web Services in external applications. A typical example of this method is to connect to Microsoft SharePoint’s numerous Web Services interfaces to create or update lists and transfer files or data. Another example is connecting to SAP Web Services built using SAP PI or XI to exchange information.

## 3. Web Forms

WorkflowGen supports .NET web forms, typically built using C# or VB.NET (versions .NET 2.0 and greater). WorkflowGen provides .NET classes to dramatically simplify the complexity of work required to interface your web forms to workflows. In the case of simple forms, no code is required and typical form controls such as read-only, required, or hidden fields can be managed from the WorkflowGen interface.

However, WorkflowGen allows you to go further in order to capitalize on the full power of the .NET environment. If needed, you may create complex forms and functions that read and write from external applications in limitless ways without any additional platform “layers”. This allows most pre-existing .NET web-based code to integrate well into WorkflowGen workflows, and also enables these forms to communicate in their preferred method to external systems. Some examples:

- ✓ Use Visual Studio wizards to connect to external databases or other data sources to create dynamic drop-down lists

- ✓ Create your own advanced code to export data to non-standard systems if requirements are too complex for existing Applications
- ✓ Communicate directly from web-forms to external databases or web-services to pre-fill form data

## Examples of Web Form Content

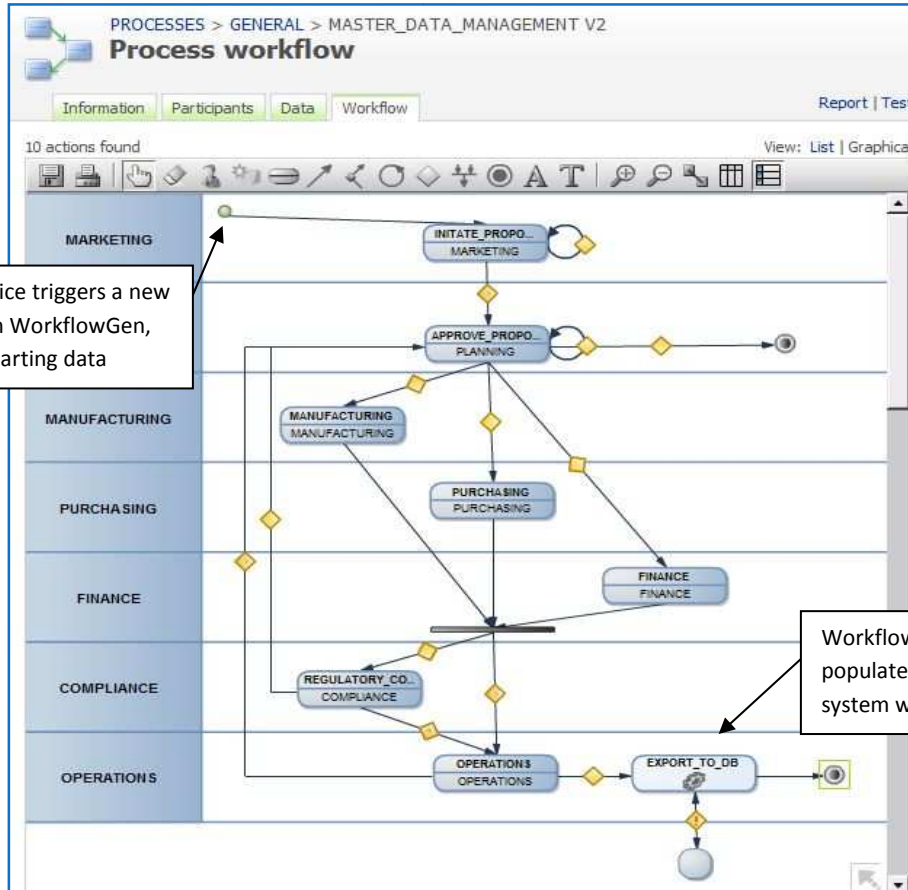
The following examples show how a web form can be populated using Visual Studio to query external databases or systems. Additionally, any form field can be exported to external systems using either .NET code or through the use of Applications as a workflow step.

Moreover, any data appearing on web forms becomes available in WorkflowGen for searches, dashboards, reporting, and for routing workflows.

The image displays two screenshots of web forms. The top screenshot is titled "New Product Proposal" and shows a form with the following fields: Name (Jonathan Maldoff), Date Proposed (12/8/2008), Product Name (Cracker Meal Seafood Fry Mix), Short Description (Cracker Fry Mix), Long Description (Cracker Meal Seafood Fry Mix adds extra crunchiness to fried and baked foods...), Launch Date (12/17/2008), List Price (\$ 4.99), Private Label (N/A), and an attachment (Sample\_Document.doc). A callout box points to the List Price field with the text "Data populated from database or Web Service source". The bottom screenshot is titled "Product Planning" and shows a form with the following fields: Name (Jonathan Maldoff), Date (12/8/2008), Approval (radio buttons for Yes and No), Notes, Requires Regulatory Compliance (checkbox), Profit Center (Line of Business) (Oven Meals), Division (Food Services), Category (Select...), and Product Sub Category (Salt). A callout box points to the Approval field with the text "Answer sent back to external system via Application or custom code". Another callout box points to the Profit Center field with the text "Data populated from database or Web Service source".

## Examples of Using WorkflowGen Web Services and Applications

Data and documents associated with the workflow request can be read from or written to external systems. WorkflowGen actions or requests can even be triggered from external systems.



## The WorkflowGen Portlet

The WorkflowGen Portlet is an RSS feed that can be embedded in any web-based portal as a way to provide a mini-view of a person's workflow actions, with links to more information in WorkflowGen. This RSS feed can be tailored using an XSLT transformation file. Additional RSS feeds are available, providing more details regarding WorkflowGen requests as required.

**Ongoing requests: 25 including 13 past due**  
Browse the list of the requests you have launched.

**Actions to do: 31 including 6 past due**  
Browse the list of the actions you have to do.

**Team actions to do: 4**  
Browse the list of the actions you can handle.

**Requests to follow: 26 including 13 past due**  
Follow-up of the requests of which I'm the administrator.

**Actions to follow: 37 including 7 past due**  
Follow-up of the actions of which I'm the administrator.

## Conclusion

WorkflowGen provides workflow designers as well as advanced developers, the unlimited ability to integrate to external systems whether they are based on Web Services, standard databases, or other formats that can communicate with the .NET platform.

For additional information regarding WorkflowGen and its features, please consult [www.workflowgen.com](http://www.workflowgen.com), or self-register to the WorkflowGen community site at <http://community.workflowgen.com> to download documentation, sample code, and view product videos.

### About Intellera

Intellera delivers cost effective, high-value business process improvements to over 200 loyal clients across North America. The company combines leading-edge tailored business process management (BPM) and enterprise content management (ECM) software with best of breed professional services to achieve sustainable results in business process efficiency. Intellera was founded in 2001 and is based in Montreal, Canada. For more information, visit [www.intellera.com](http://www.intellera.com).