

# What are your experiences with Windows Workflow Foundation?

Asked 16 years, 3 months ago   Modified 1 year, 11 months ago

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**34**

I am evaluating WF for use in line of business applications on the web, and I would love to hear some recent first-hand accounts of this technology.



My main interest here is in improving the maintainability of projects and maybe in increasing developer productivity when working on complex processes that change frequently.



I really like the idea of WF, however it seems to be relatively unknown and many older comments I've come across mention that it's overwhelmingly complex once you get into it.

If it's overdesigned to the point that it's unusable (or a bad tradeoff) for a small to medium-sized project, that's something that I need to know.

Of course, it has been out since late 2006, so perhaps it has matured. If that's the case, that's another piece of information that would be very helpful!

Thanks in advance!

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edited Mar 12, 2012 at 9:37

[Panos](#)

19.1k ● 6 ● 47 ● 55

asked Sep 22, 2008 at 14:26

[Brian MacKay](#)

32k ● 17 ● 92 ● 126

12 Answers

Sorted by:

Highest score (default)



Windows Workflow Foundation is a very capable product but still very much in its 1st version :-)

22

The main reasons for use include:



1. Visually modeling business requirements.
2. Separating your business logic from the business rules and externalizing rules as XML files.
3. Separating your business flow from your application by externalizing your workflows as XML files.
4. Creating long running processes with the automatic ability to react if nothing has happened for some extended period of time. For example an invoice not being paid.
5. Automatic persistence of long running workflows to keep resource usage down and allow a process

and/or machine to restart.

6. Automatic tracking of workflows helping with business requirements.

WF comes as a library/framework so most of the time you need to write the host that instantiates the WF runtime. That said, using WCF hosted in IIS is a viable solution and saves a lot of work. However the WCF/WF coupling is less than perfect and needs some serious work. See here

<http://msmvps.com/blogs/theproblemsolver/archive/2008/08/06/using-a-transactionscopeactivity-with-a-wcf-receiveactivity.aspx> for more details. Expect quite a few changes/enhancements in the next version.

WF (and WCF) are pretty central to a lot of the new stuff coming out of Microsoft. You can expect some interesting announcements during the PDC.

BTW keeping multiple versions of a workflow running takes a bit of work but that is mostly standard .NET. I just did a series of blog posts on the subject starting here:

<http://msmvps.com/blogs/theproblemsolver/archive/2008/09/10/versioning-long-running-workflows.aspx>

About visually modeling business requirements. In theory, this works quite well with a separation of intent and implementation. However, in practice, you will drop quite a few extra activities on a workflow purely for technical reasons, and that sort of defeats the purpose as You

have to tell a business analyst to ignore half the shapes and lines.

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edited Jan 18, 2023 at 2:59

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Darren

336 ● 4 ● 9

answered Sep 22, 2008 at 16:01



Maurice

27.6k ● 5 ● 51 ● 62

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1 Don't suppose you'd consider updating this answer, since we're now in v4? :) – [Brian MacKay](#) Feb 22, 2011 at 16:28

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@Brian: Good suggestion. I will do a blog post when I have the time. – [Maurice](#) Feb 22, 2011 at 18:27

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@Maurice 3 years later, any updates? Windows workflow seems like a ghost town... it seems good in theory but nobody uses it - there's a glaring omission which I'm missing. – [David](#) Mar 12, 2014 at 10:18

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@David Sadly you are not the only one missing it. It had a lot of promise but the lack of marketing and adoption have pretty much left it as you say, a ghost town that is all but abandoned. – [Maurice](#) Mar 13, 2014 at 7:24

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Related question: [When to use Windows Workflow Foundation?](#) My answer there:

13

You may need WF only if any of the following is true:

1. You have a long-running process.



2. You have a process that changes frequently.
3. You want a visual model of the process.

For more details, see Paul Andrew's post: [What to use Windows Workflow Foundation for?](#)

Please do not confuse or relate WF with visual programming of any kind. It is wrong and can lead to very bad architecture/design decisions.

So, if you have such requirements, then WF is a good candidate. Of course it is relatively complex, but mention that the problems that is trying to solve is also complex (and sometimes very complex). IMHO, it is very complex for example to dehydrate/rehydrate objects that have event handlers attached (with events that can be triggered when the object is not in memory).

I can not judge what you mean by "small to medium-sized project", but in general I would say that if your project has at least two requirements from the above list, then you can consider WF as a solution.

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edited May 23, 2017 at 12:17



Community Bot

1 ● 1

answered Sep 22, 2008 at 15:38



Panos

19.1k ● 6 ● 47 ● 55



10



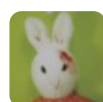
We've used WF in a large-ish SharePoint application and I can say it's OK. It has lots of power and flexibility. and, as Kevin mentions, once you grok the underlying concepts of workflows, you can do pretty much anything you want with it.

On the other hand, it has some really serious issues, like lack of versioning, which can really hurt your application in the future. We've been forced to deploy up to 3 parallel versions of the same workflow named xxx-v1, xxx-v2 and xxx-v3 to keep older instances running and have new instances use the updated versions. A real pain in the ass. Oh, and there are also some really non-intuitive concepts in there (correlation tokens, wtf??)

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answered Sep 22, 2008 at 14:51

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[axel\\_c](#)

6,796 ● 2 ● 31 ● 42

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Thanks for the answer! The parallel versions - does that have to do with this "rehydration process"? How does that work?

– [Brian MacKay](#) Sep 22, 2008 at 14:55

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There is powerful versioning for workflows in SharePoint right now. Of course, that's two versions down the line now, but thought I'd update. – [David](#) Mar 12, 2014 at 10:20

- 
- 1 This has been fixed in WF 4.5 (can now run multiple versions side by side) adds a new map feature that allows a systems admin to migrate existing WF instances to a new version (with some restrictions on what can be migrated of course). – [Tony O'Hagan](#) Dec 7, 2015 at 5:06
-



9



We had a project at work that I was involved in using Workflows. The idea (from management), was that us programmers would write the Workflow Activities along with the "engine" and framework. Then non-programmers would take care of all the rest by compiling their own Workflows into dlls which the engine would automatically load.

Management was sold on this idea of non-programmers using Workflow to help develop software, and it was pretty much a complete waste of time. The problem we were trying to solve with this project was relatively complex and we knew from the very beginning that the software would have to be modified almost constantly (its calculations were dependent on other companies and governments).

The end result was that we were unable to make the Workflow modules generic enough for anyone else to use. So the programmers were the ones who were forced to work with the Workflows, and all the Workflows did was get in our way.

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answered Oct 3, 2008 at 18:30

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[daharon](#)

2,010 ● 2 ● 18 ● 20

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2 /agree totally. We implemented WF so that users could change business rules, but the rules became so complex as a result of the separation that even the programmers started to struggle. – [James Westgate](#) Apr 7, 2010 at 13:43

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7



I've been using Workflow 4.0 for the last few months and although mostly impressed, I've found it extremely hard to learn.

For the most recent version (that comes with .NET 4.0 RC), there is next-to-no documentation on the web, in any books or no training courses available. I've only found articles relating to the now defunct 3.0 version. Even the MSDN documenation is light on the ground.

The workflow designer is not as intuitive as it should be by any means so learning is very hard. I've had to rely on answers from a single person on StackOverflow (thanks by the way Maurice!) - and I would be stuffed without his help.

So in summary, I think it has potential but you would be quite mad to learn it yet - wait for more training, documentation and books otherwise you will be going into it blind!

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answered Apr 7, 2010 at 13:32

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Lygpt

171 ● 2 ● 11

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Thanks for the update -- this is the first I've heard about workflow 4.0 – [Brian MacKay](#) Apr 8, 2010 at 13:44

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5



Last year we completed a working application with WF, now used as the backbone of an unbelievably huge system which is used by a very big bank for its mortgage process. The process has many steps starting from customer application to approval of credit.

Although it was a success, there were so many problems and crisis all along the way. And it won't be worth the trouble for any smaller size projects.

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edited Jan 18, 2013 at 22:35



Tim Lovell-Smith

16.1k ● 16 ● 79 ● 94

answered Jan 23, 2009 at 13:40



Orkun Balkanci

898 ● 1 ● 8 ● 19

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Not sure I followed Orkun - so you used Agile for this one, and it didn't work out? And you also don't recommend agile for small projects? – [Brian MacKay](#) Jan 28, 2009 at 17:22

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Nope Brian I was talking about WWF. sorry for the misunderstanding. – [Orkun Balkanci](#) Jan 29, 2009 at 10:23

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4



I consider MS WF as a low-level workflow library rather than a fully fledged enterprise workflow product such as K2. It will enable you to build a workflow enabled application, but is not in itself a workflow application. My experience of it in this capacity has been positive, although we have had to build a lot of our own



infrastructure around it (a pub/sub framework, a workflow lifetime manager etc). A lot of the documentation out there is fairly simplistic and does not cover building up an enterprise workflow application based on MS WF.

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answered Sep 22, 2008 at 15:15

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Gareth D

885 ● 1 ● 9 ● 22



3

Hard to learn. Quite flexible. Not to be confused with a visual tool for end users, only for programmers. Not sure if I like the dependancy property approach.



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answered Apr 7, 2010 at 13:45

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James Westgate

11.4k ● 8 ● 65 ● 69



2

It really depends on what you want to do with it. I've only used it a little, but compared to more mature products like MetaStorm (I know technically it's a BPM, but there is still a workflow component), Process Choriographer and IBM MQ workflow, there's no comparison. It's just not mature enough. On the other hand it's free where the others are not and can probably get the job done. I don't know if I would place a multi-million dollar operation on it, but with smaller ones, I'd give it another shot. The real hurdle you are going to face is the change in thought process it



requires. If you don't have developers that have worked with state systems before that can be a real hurdle.

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edited Sep 22, 2008 at 14:38

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answered Sep 22, 2008 at 14:32



[kemiller2002](#)

115k ● 28 ● 199 ● 253



1



Brian, I can't reply to your comment, but anyway, by versioning i mean making changes to the underlying code of the workflow without breaking already running instances, and gracefully applying updates to existing workflows. I'm not sure about 'stock' WF, but at least in SharePoint environment there's no concept of workflow versions so new versions have to be deployed as completely different workflows which becomes a maintenance nightmare. This has nothing to do with 'rehydration', rehydration is the process by which you bring a 'dormant' workflow back to activity after some event or change in state. That is handled transparently by the workflow runtime.

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answered Sep 22, 2008 at 15:19

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[axel\\_c](#)

6,796 ● 2 ● 31 ● 42



1



WF ist integrated into SharePoint (WSS 3.0), and i have created quite a few workflows for various SharePoint-Websites, so i can tell about my experience of WF in SharePoint. Compared with other workflow-frameworks WF scores well. It's stable (i haven't experienced any mysterious errors), workflows are fairly easy to design (thank to the workflow-designer in Visual Studio) and you can use not only sequential but also state-machine workflows.

It's not perfect, of course, and a developer will definitely need some time to understand the concept (of i.e. the Activity Model); but it's definitely useable - even for "small tasks".

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answered Sep 22, 2008 at 15:26



[user4531](#)

2,565 ● 8 ● 30 ● 38



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Never tried WFF, but I remember reading [this article about WFF by Leon Bambrick](#) where he basically says the whole genre of software development tools is nonsense. Might help you decide one way or the other.

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answered Sep 22, 2008 at 16:44



[George Mauer](#)

122k ● 139 ● 395 ● 626

2 Somewhat misleading and not relevant to WF given that the author states in a comment: "Biztalk is not the kind of product

I had in mind when I wrote this, and in fact Windows WF is not either. It's some of the third party offerings (and particularly the way they are 'sold') that annoys me." – [Panos](#)  
Sep 23, 2008 at 9:31

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