

Creating an Approval Workflow & Interface

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Agenda



What is the problem with form approvals?



What are the requirements?



What are the options available?



My new solution!

What's the Problem?

- Approval processes and forms are everywhere
- Out-of-Box workflows and actions don't cut it
- User interface is confusing
- It's a lot of work / hours / cost to create more custom solutions



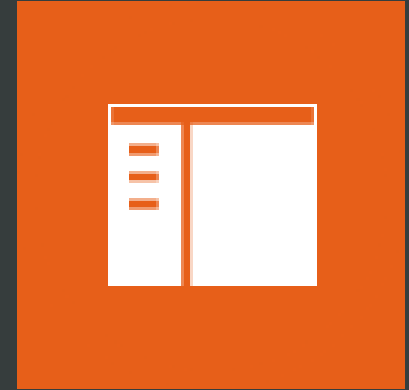
The Requirements

- A standardized approach to all request forms in the organization
- Tasks are assigned to people for approvals.
- Infinite number of types of requests
- Requests are easy to manage
- Approvers can't edit the original request
- Approvers can see a list of items awaiting their action
- Don't use InfoPath form library forms



One Site?

- What if we created one site for all request forms?
- All request forms would be lists in the site
- All tasks would be in the same site



Single Site Method- Pros

- One task list for all tasks
- Requests in separate lists, all in the same site
- Lookup relationships
- Easy to create views
- Report off of one big list of tasks

Single Site Method - Cons

- The lists and tasks in one site could get very large
- Workflows can't be part of a list template
- Permissions could get complicated.
- Each time a new request is needed, it's a lot of work:
 - Create the list
 - Create the lookup to the task
 - Create or add the workflow



Hmmm...

People ask for this all the time...

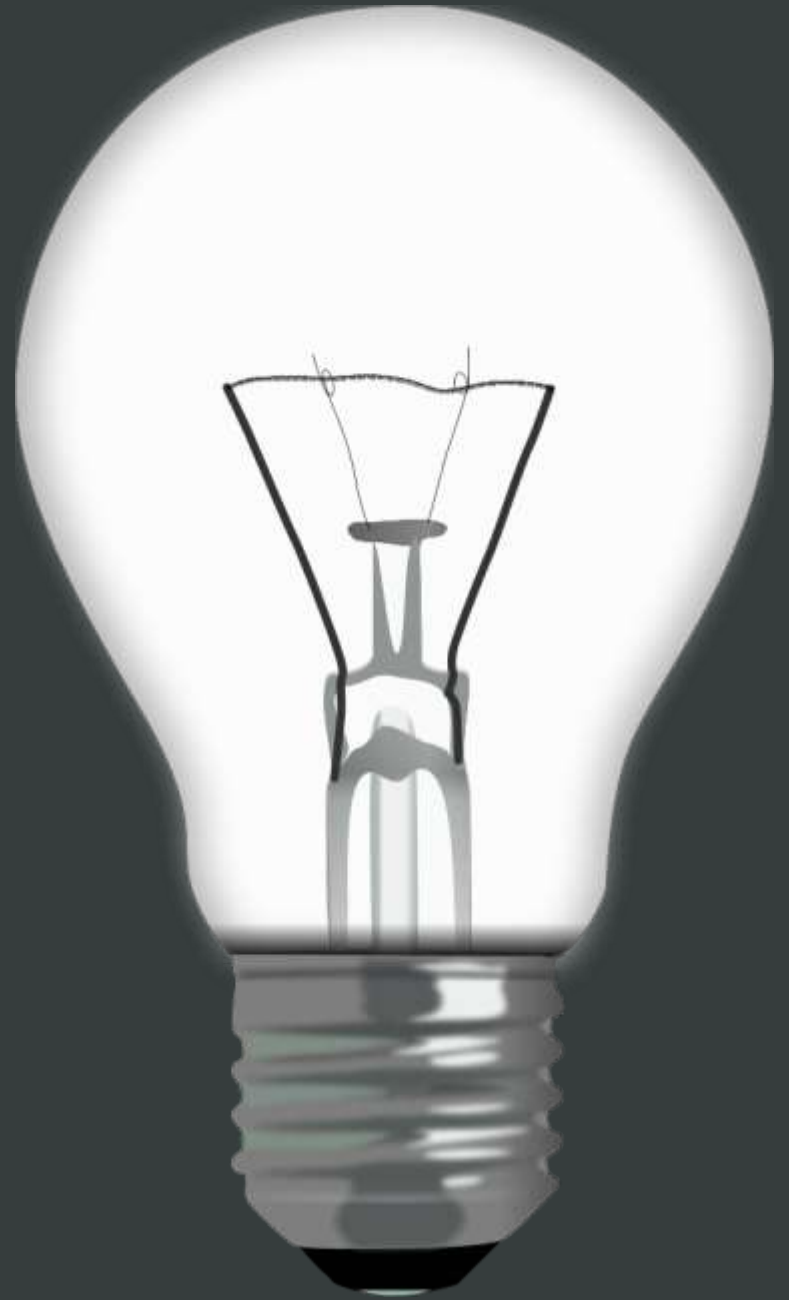
There's GOT to be a better way...

My Solution

Portable, extendable,
customizable solution

Solves most requirements

Drum roll..



My Solution

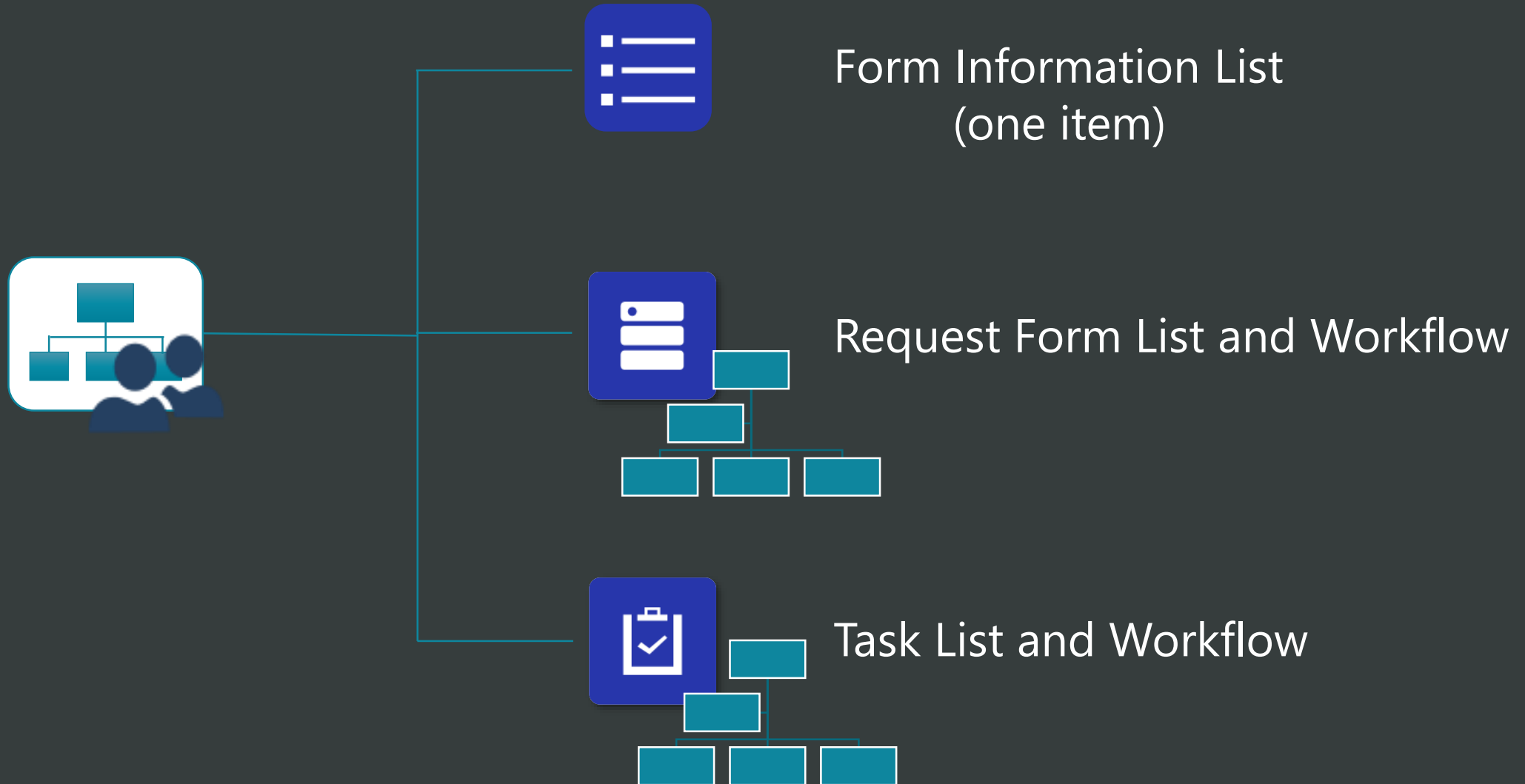
- Each type of request form... is a subsite!
- Create one site, save it as a template, which contains:
 - Request form (list)
 - Form Info List
 - Task list
 - Workflows
 - Web parts and dashboards
- Site columns are used, with content search web parts for rollups!



DEMO

REQUEST FORM SITES

Request Form Site



Form Information List

- Like metadata for the subsite
- Only one item in this list
 - Form Name
 - Form Description
 - Form Outcome Type (Approval or Process)
 - Email body
 - Task 1 Assignment (and task 2 and 3)
 - Completion notification



Form List

- This is the request form itself, with common columns
 - Form Type Lookup – Approval or Process (outcomes)
 - Form Status – Approved, Rejected, Completed
 - Current Approver
 - Comments
 - First Approval (and 2nd and 3rd) – these are dates
- For each unique request form, create additionally needed columns.
 - Lookup to Tasks (Count)



Task List

- Just a regular task list, plus...
 - Completed By
 - Completion Date
 - Form Lookup
 - Outcome



Each New Request Type



- Create a new sub-site using the template
- Fill out the “Form Info” item.
- Create a new promoted link at the root level site
- Set up permissions on the two lists:
 - Form list – form users (everyone) add new forms
 - Task list – Form approvers “contribute”



Workflows

There are two workflows:

1. Initial Task Creation – runs when a new form is filled out
2. Changed Task – runs when a task is modified (completed)

Workflow: Initial Task Creation



- Runs on the form list.
- Runs only when a new item is created.
- What does it do?
 - Creates the first task for the first approval
 - Sends a notification email to the assignee

Workflow: Changed Task



- What does it do?
 - If there is not another approver, it's done
 - If there is a next approver, it creates the task and email
 - There's a lot more... [demo]
- Runs on the task list.
- Runs only when an existing item is changed.

Setup Steps

Create content types and a subsite.

1

Configure the subsite: lists, workflows, web parts

2

Save subsite as a template, create rollups

3

- Create content types in a hub or just the root of the site collection.
- Create a sub-site to use as a template that all request forms will be created from.

Setup Steps

Create content types and a subsite.

1

Configure the subsite: lists, workflows, web parts

2

Save subsite as a template, create rollups

3

- Create the 3 lists in the sub-site.
- Create lookup:
 - Task list – Form lookup to form list
- Create the two workflows
- Customize the list form web part page.

Setup Steps

Create content types and a subsite.

1

Configure the subsite: lists, workflows, web parts

2

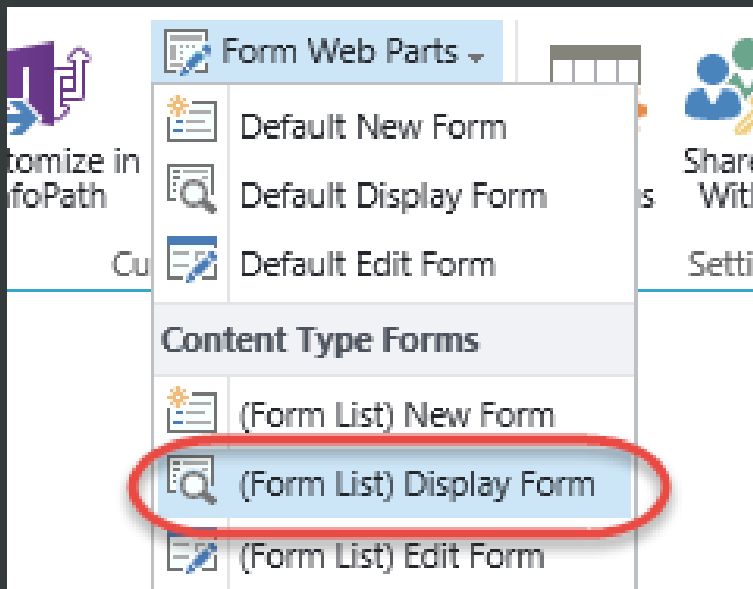
Save subsite as a template, create rollups

3

- Save site as a template
- From the root site, create other request forms using this template
- *Bonus: enable publishing feature ONLY on the root site, and have the ability to control sub-site creation to ONLY that template.*
- At the root site, use content search web part to display rollup list data.

Form Web Parts

- The SharePoint list form
- The Query String URL Filter Web Part
- Pending tasks
- Completed tasks



The image shows a screenshot of the 'Leave Request Form' in the iWMENTOR system. The form includes the following fields and values:

- Absence Type: Vacation
- Division: IT
- Requested Start Date: 6/4/2016
- Requested End Date: 6/6/2016
- Request Comments: Gotta go

Pending Tasks

Edit	Task Name	Assigned To	Task Status	Created
	Approve - Leave Request: 2	Joelle F	Not Started	4/21/2016 2:45 PM

Completed Tasks

Task Name	Outcome	Completed By	Created	Assigned To
Approve - Leave Request: 2 I approve.	Approved	Laura Rogers	4/21/2016 2:44 PM	Corey Emmons
Approve - Leave Request: 2 Great, have fun!	Approved	Laura Rogers	4/21/2016 2:43 PM	Laura Rogers



User Interface

- Homepage
- Rollups
- Super simple

There isn't a reason for end users to actually go to the sub-sites.

Homepage

Forms Site

HR Forms Links

Leave Request

Fill out a request to go on leave.



Travel Request



Equipment Request

Users have one simple page to start filling out any form.

Fill Out a Form


Test Forms Site

Forms Site

HR Forms Links

Leave Request

Form List - New Item



Leave Request Form

Please fill in this form in order to have time off approved.

Absence Type: Division:

Requested Start Date: Requested End Date:

Request Comments:

Submit

Rollup Web Parts

- Dashboards are created, using the Content Search Web Part:
 - My Requests
 - Active Requests
 - Completed Requests
- These are pages at the root site.
- Permissions can be used so that only approvers can see the latter two.

Pros and Cons

PROS

- Easy to spin up new request types
- Simple, standard interface for end users
- One place to go for all forms
- Workflows are already in place
- Web parts are already in place
- Content Types can be created in a hub, in case this solution needs to be used in multiple site collections.
- Less worry about reaching list throttling limits.

CONS

- Strict set of requirements/standards to apply to all forms
- Creating new rollup views can entail creating or editing display templates.
- For reporting, there isn't one big list of all requests or all tasks.
- If a workflow change needs to be made, it needs to be done on all sites.

Security

- Form List – Advanced settings – item level security is set.
- Task list – End users only have read access.
- SharePoint groups can be used for approvers.
 - There can be one group of approvers
 - Or each request form can have its own group of approvers
- Form Users – Create a custom permission level that doesn't allow personal views.



Optional Functionalities

- What else can I do with it?
 - Add a "Claim Task" button to the task form
 - Common lookup lists can be created at the root level, used as site columns.
 - Create approval SharePoint groups per department or division.
 - Create very cool rollups / dashboards with your own display templates
 - Forms – use whatever form solution you want, if not InfoPath

Screenshot: Initial Task Workflow

- "Task1person" variable = "Task 1 Assignment" field from the Form Info List – as a display name
- "AssignedToVar" variable = "Task 1 Assignment" field from the Form Info List – as a login name

Impersonation Step

The contents of this step will run as the workflow author:

Set Form Status to Submitted

then Create item in Tasks (Output to Variable: create)

then Set Current Approver to Variable: Task1person

then Email Variable: AssignedToVar

Screenshot: Changed Task Workflow

set variables

- Set Variable: OutcomeType to Form Info:Form Outcome Type
- then Set Variable: FormTitle to Form List:Title
- then Set Variable: FormURL to [%Workflow Context:Current Site URL%]..
- then Set Variable: CountTasks to Form List:Count Tasks
- then Set Variable: Task2person to Form Info:Task 2 Assignment
- then Set Variable: Task3person to Form Info:Task 3 Assignment

Impersonation Step

The contents of this step will run as the workflow author:

If Current Item:Task Status equals Completed

- Set Completed By to Current Item:Modified By
- then Set Completion Date to Workflow Context:Date and Time Started
- then Set Variable: CompletionNotify to Form Info:Completion Notification

If Variable: OutcomeType equals Approval

- Set Variable: TaskPrefix to Approve

Else

- Set Variable: TaskPrefix to Process

If Variable: CompletionNotify is empty

- Set Variable: CCfield to Form List:Requestor

Else

- Set Variable: CCfield to Variable: CompletionNotify

If Current Item:Outcome equals Rejected

- Update item in Form List
- then Email Form List:Requestor
- then Stop the workflow and log rejected and finished

If Variable: CountTasks equals 1

- Set Variable: NextPerson to Variable: Task2person
- then Update item in Form List

Else if Variable: CountTasks equals 2

- Set Variable: NextPerson to Variable: Task3person
- then Update item in Form List

Else

- Update item in Form List

If Variable: NextPerson is not empty

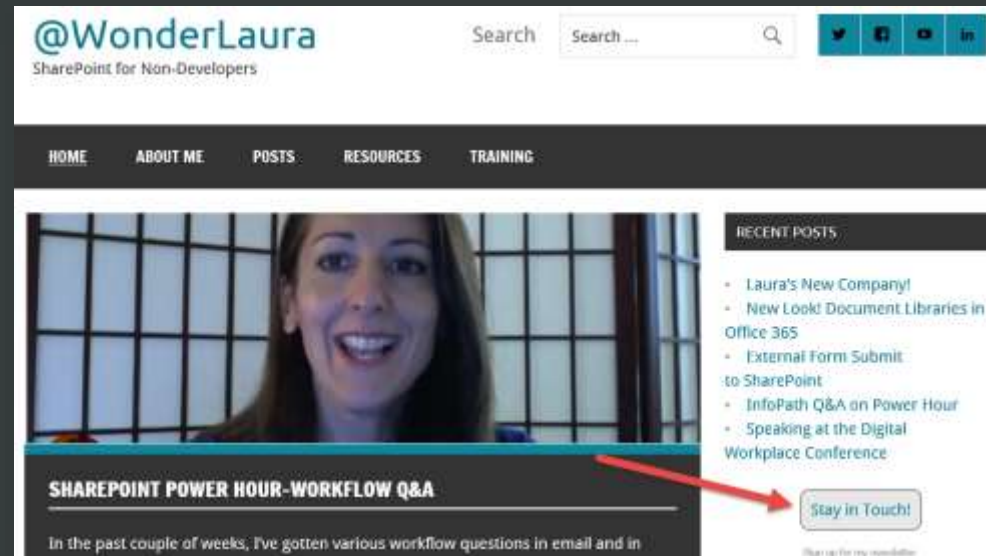
- Create item in Current List (Output to Variable: create)
- then Update item in Form List

Else

- Update item in Form List
- then Email Form List:Requestor

Further Resources

- Check out my blog for more posts about workflows, and click the STAY IN TOUCH button to be notified.
www.wonderlaura.com
- Check out my free SharePoint Power Hour every Wednesday at 11 central on my YouTube channel:
<https://www.youtube.com/user/WonderLaura>



Thanks for coming!

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Come to my next session...

Wed 12/7, 2:00 – 3:15 Automating your Work with Microsoft Flow