



A Petri IT Knowledgebase Whitepaper Resource

How to Build Productive Business Solutions in SharePoint and Office 365

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How to Build Productive Business Solutions in SharePoint and Office 365

In this paper, we are going to discuss the different tools available to you in Microsoft Office 365® to build your own business solutions and a great third-party app that allows you to address the problem using just one tool.

Business Process Management (BPM) can be a very confusing term that seems to mean something different to everyone. So, to avoid this confusion, we are not going to discuss it in this whitepaper. Instead, we are going to talk about the different tools available to you throughout the Office 365 portfolio to build your own app and allow you to take a more all-up approach to the problem.

This paper is for business decision makers and Microsoft SharePoint® users. I promise there won't be any crazy code or complex software installs covered. We will simply walk through the tools that make it easier for you to get your job done. Some of them are easier to use than others, and one of these solutions prides itself on going from concept to running in days, not weeks or months.

Tools and Concepts

The suite of tools in Office 365 is very deep and wide, the rate of change is high. When it comes to building business solutions, I prefer to focus not on the hip and new tools as much as the tried and true. We are going to talk about some of the tools available to build real-life solutions.

SharePoint Online

This is the platform which all solutions will be built on. Although SharePoint may be old hat, it is still the top hat. In all of these solutions, you will use SharePoint for the presentation and storage platform.

Hybrid SharePoint

Hybrid is when you are running SharePoint both online and on-premises. From my experience, the vast majority of businesses find themselves in this scenario as they transition to the cloud. The challenge is that most of the tools we are going to discuss don't easily support hybrid. Plan accordingly.

The Two Types of Workflows

Workflows are broken down into two camps in my book—human workflows and machine workflows.

Machine Workflows

Machine workflows are often referred to as simply automation. For example, when someone signs up for a newsletter on your website, their details are automatically routed to your CRM and email deployment system. When the email system sees the new person, it sends them a welcome email and then starts the drip campaign. Very useful and completely no touch for you.

Human Workflows

These are the workflows that are driven by humans from start to end. Yes, the machine moves the process along, but the bulk of the work and value is generated by the humans in the process. An example would be a capital expenditure request. A human creates the request, a manager reviews the request and approves it, finance then reviews it to make sure it fits in the budget, and finally an executive signs off on it. That is a traditional human workflow. Now wouldn't it be cool if we could add a collaborative step in which a committee voted on the merits of the request? And if, after all of the approvals, the system automatically generated the purchase order? Seems like a pretty powerful idea that we should explore later in the paper.

SharePoint Designer for Workflows

It turns out that per Microsoft, SharePoint Designer (SPD) 2013 is still the default way to build workflows in SharePoint. The good news is that after four years it is a pretty stable platform. The bad news is that not a lot has changed in four years and in Internet years, which are like dog years, that is a long time.

Other Microsoft Tools

- Flow
- InfoPath 2013
- PowerApps
- Microsoft Forms

FlowForma BPM

FlowForma BPM is a workflow, forms, and document generator all wrapped in one package that works above SharePoint, meaning the tool uses its own engine for workflows and forms while presenting and storing data inside of SharePoint. This enables functions such as hybrid workflows, collaborative decision making, and enhanced reporting, all with no-code. This means faster deployment times for you and more agility in creating business solutions by you the business user, not those folks down in IT.

Building Human Workflows

The first step to better business productivity most businesses take is investing in some workflows, and with SharePoint, that usually means starting with SPD. Let's look at how to get started and some of the pros and cons of the process.

To begin, you will need a copy of SPD 2013, which you can download [here](#). There are both 32bit and 64bit versions to choose from. Additionally, after you install it, you will need to install Service Pack 1 and then fully patch it. While Office 365 and other cloud tools have spoiled you with always updated software, that is not the case here; you need to keep SPD healthy on your own. With SPD installed and patched, you can now open it and connect to your SharePoint site. From there you use the Ribbon to create a List Workflow, Site Workflow, or Reusable Workflow. Every project I have ever been on we have created List Workflows. Why? They are the easiest to put into context. Want someone to enter data in a list, then have a few tasks kick off, and ultimately have someone approve it? That is a List Workflow.

The editor for building the workflows is straightforward on the surface—the real challenge comes when you try to work with other lists. All the tools that you need are there; the problem is that it takes some trial and error to write formulas and references that connect lists. While you can say these are no-code solutions, they aren't exactly business user-friendly. Referencing other lists requires understanding INTs vs. GUIDs and a bunch of other chaos. It is easy to get lost. Below is an example of the rabbit hole you go down to just reference one list from another.

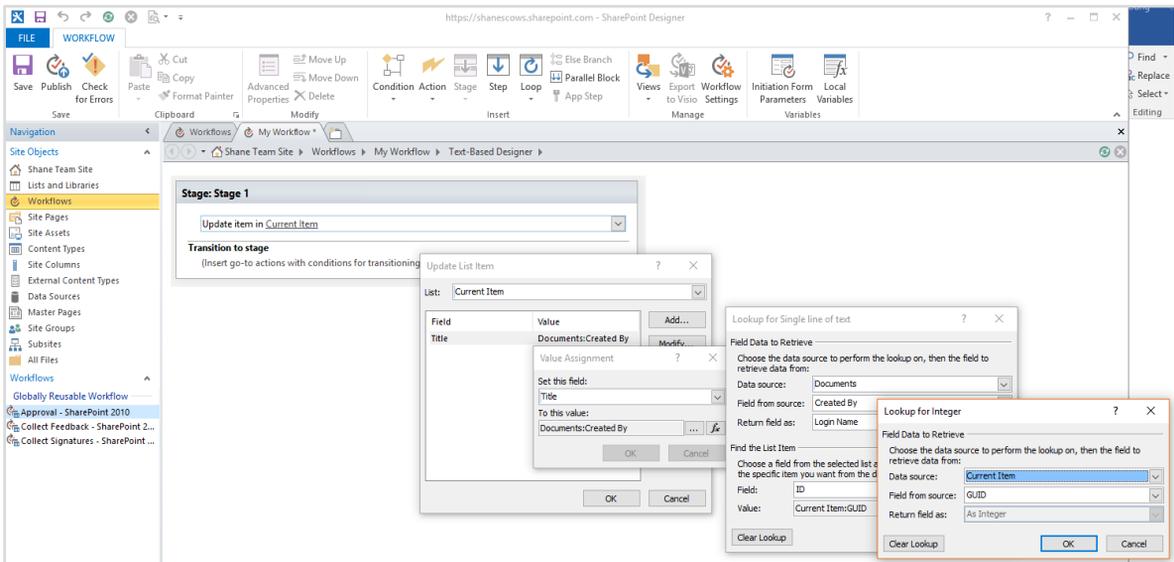


Figure 1—SharePoint Designer Process for Connecting Lists

Speaking of not getting lost, this is where I like FlowForma BPM. Not only are its no-code solutions much more business user-friendly than SPD, but its interface for working with the workflow is a simple, tabbed interface as shown overleaf. That isn't custom forms and code, that is FlowForma BPM 101 right there. Compare that to keeping track of where you are in a SPD workflow... SPD workflows are either simple or you are getting lost, there is nothing like this.

Incident management Incident number INC1023 Opened by Trial Department IT

INCIDENT DETAILS	INITIAL DIAGNOSIS	LEVEL 1 SUPPORT	LEVEL 2 SUPPORT	INCIDENT ESCALATION	INCIDENT CLOSURE
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Incident details

Incident number:

Opened by:

Department:

The KEDB (Known Error Database) SharePoint list contains details of all incidents and their resolution outcomes.
In the Level 1 support step, the step owner can view filtered incidents in the KEDB list.
For the purpose of the PoC please choose **Category = Hardware** and **Subcategory = Maintenance**, as these are the only incident types currently in the KEDB SharePoint list.

Category:

Subcategory:

Impact:

Urgency:

Short description:

Attachments:

Figure 2—FlowForma BPM End User Interface

Hybrid

The other challenge with native SharePoint workflows is everything you do in the workflow context is confined to the current site collection. So, you can reference other lists or workflows from other locations. This is problematic in today's world because so many companies are running hybrid SharePoint. More and more I am being challenged as to how to manage content and create usable information architectures in these hybrid scenarios. That is because hybrid is not a temporary state but the new normal for companies who use SharePoint. Let me give you an example.

In a typical hybrid SharePoint deployment, I see the low-hanging fruit such as My Sites and mostly read sites, like the intranet, being the first content migrated to SharePoint Online. This makes complete sense because they are very low risk. The challenge is that now you are creating and collaborating on new company policies and content in your work space on-premises, but when you are done, you need to publish that content to the read sites that are online for the entire company to consume. With no out-of-box functionality available, that means someone is moving the document manually. Not terribly efficient and very error prone. However, to prevent this problem, you can use FlowForma BPM, where with a few simple clicks of the mouse, you can build a workflow that when the file status is set to complete, it automatically pushes the file from on-premises to the cloud. No code, no complicated gateway products, just a powerful, built-in feature.

This is an incredible value add that makes FlowForma BPM so compelling. And it does more than just push a file to the cloud for you. Because connecting across the cloud is just a standard feature, you can even connect workflows.

Let's make the above scenario more complicated. Have an on-premises workflow that creates content that needs to be published to the intranet AND then needs to be run through another workflow? No problem. Not only does FlowForma BPM let you move content in your hybrid scenario but it can also even connect workflows running on-premises and online. With FlowForma BPM in the mix, you can stop thinking about on-premises SharePoint vs. SharePoint Online and instead truly think of it as just one big hybrid farm. And did I mention that no connectors, gateways, or code are needed to make all this work? Awesome.

Reporting

Reporting gets its own section because I didn't want you to gloss over it. Why? Because one of my recent projects was to find all of a customer's running workflows on SharePoint Online that were not in a completed state and create a link to each of them in a list so that someone could check every single one. That "simple" request took me 172 lines of PowerShell that required a mixture of native PowerShell, CSOM, and the PNP cmdlets. Talk about terrible. So, the first thing I asked the team at FlowForma to tell me about was reporting. The team's answer? Power BI. Brilliant. Thanks to the fact that FlowForma BPM is written above SharePoint, it can expose all the data via an OData feed and then consume that in a first-class product, such as Power BI, instead of a PowerShell script. Check out the screenshot below for an example dashboard that can be built to do workflow reporting with a few clicks of your mouse instead of 172 lines of code.

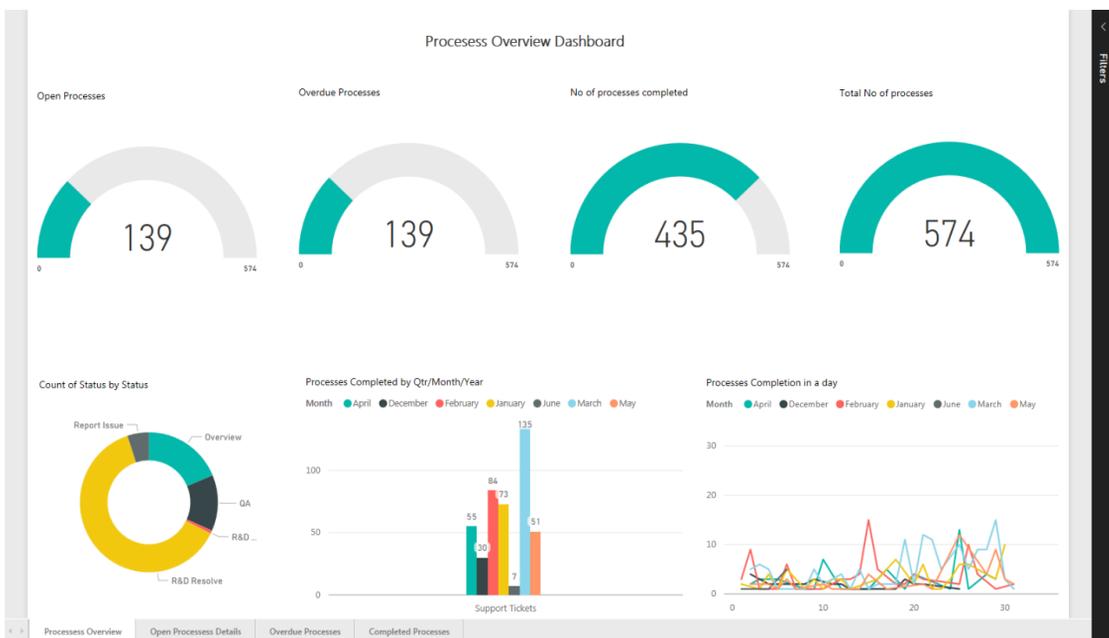


Figure 3—Example FlowForma BPM Reporting Dashboard via Power BI

No More Serial Approvals

FlowForma understand that a very common use of human workflows is to facilitate decision making. The challenge, until now, is that in a normal SharePoint workflow that is done in a series of approval tasks, which work fine if everyone approves. But what happens when the third approver wants a change? It gets really ugly, really quick.

Wouldn't it be easier if instead of a bunch of independent, repetitive steps the decision-making process was put to a vote? This is what FlowForma has built. With its built-in feature, you design a voting process. And it does not have to be a simple up or down vote like old-school workflows. Instead, you can allow for weighting, commenting, private or public votes, electronic signatures that are fully traceable and auditable, and other features that let you build a robust business solution that intelligent decisions can be made from instead of a guessing game of approved or rejected. And as you have probably guessed by now, all of this can be done without any code or complex math integers, just use an easy-to-use business rules interface.

Tender Response Management Example

A Tender Response, or Bid Response, is the process of reviewing and responding to a formal proposal with a formal response. It is a time-consuming, multi-team member process that requires a lot of manual shepherding. Or you can simply use a FlowForma BPM workflow. With FlowForma BPM's Collaborative Decision Making feature, organizations can automate this process, empowering individuals on procurement

teams to review and score each tender response—applying a weighted percentage score that relates to your internal tender scoring criteria. When all the scoring is complete, the decision making for a preferred supplier is seamless, with all scores saved for future reference and audit and e-signature functionality available for additional security.

Creating Documents

How often do you build workflows in which the outcome is someone going and creating a document? A purchase order, a contract, an expense report, a note for the dog eating your homework? Pretty often. Well, as far as SPD goes, there is no concept of a document generator short of assigning a task to the intern to make the document. FlowForma BPM? The FlowForma team is too kind to treat the intern like that, so FlowForma BPM includes a built-in document generator tool that seamlessly integrates with your workflow. And don't worry, the FlowForma team likes you as well, so it is once again a no-code solution. Instead of you learning a new interface, you just build the document in Microsoft Word. You assemble the pieces of the puzzle in a comfortable tool, and you can even add built-in logic.

For example, in a contract, if there is mention of travel, then details about travel expenses are automatically added to the document, but if the project is all remote, then the travel expenses section is left out. Intelligent documents mean more time for the intern to make a coffee run. The other major benefit is the reduction in errors. Even non-interns have been known to mess up paperwork once or twice. Let FlowForma BPM generate the document and never think about business logic errors again.

Building Machine Workflows in SharePoint Online

Are you looking to automate system-to-system work such as SharePoint talking to OneDrive and then Twitter? Then neither SPD nor FlowForma BPM is your answer. In that case, you want to check out Microsoft Flow.

Flow is Microsoft's answer to automation, notifications, and synchronization between cloud services. It lets you build solutions that are machine powered. Do you want to create a SharePoint list item and get an email every time a customer gets added to Salesforce? Then this is the tool for you.

Flow wasn't built for SharePoint, but it can interact with SharePoint Online and SharePoint on-premises if you are willing to put in the work. Truth be told, Flow is still very new and seems more like a framework and an idea right now than a business tool. I think Microsoft will get there, but it's not something you should be messing with for building your intranet workflows today, in my opinion. If you are familiar with IFTTT or Zapier, that is the type of tool that Flow aspires to be, not a SharePoint workflow engine. It just doesn't include the tracking, monitoring, reporting, and troubleshooting steps that you are used to when building workflows for SharePoint.

Forms in SharePoint Online

This is a tough topic because there are a lot of answers but also a lot of qualifiers with those answers. One of the options was literally added during the writing of this paper just to make things more confusing.

InfoPath 2013

InfoPath is the Microsoft forms solution that will not go away. Back in 2014, it was

declared dead—I even went to its [funeral](#)—but we are still talking about it in 2017. Lots of people still use it, but it makes all of them nervous for when Microsoft will finally take it away for good. It is a pretty straightforward interface for building and customizing forms, but if you want to add logic or code behind it, it gets really scary, really fast. If you are looking to build new solutions in SharePoint, stay away; if you already committed to InfoPath, I will keep my fingers crossed for you. Better yet, I will mention that FlowForma BPM has a program to [help you migrate](#) from those scary forms to a product that has a solid future.

PowerApps

PowerApps is Microsoft's new platform for building apps without code. The idea is that if you want to build a smartphone app for inputting data into your backend system, you can use its interface to build that solution and then publish it to the cloud. It is a very exciting promise, but today I still tread very lightly when it comes to PowerApps. I haven't personally done much with PowerApps, but I have seen the demos enough to get excited and consider how they are built. That is where I get scared. The explanation quickly goes from a simple web interface for building to writing code, using APIs, outputting JSON, and making REST calls. This is the opposite of the no-code solutions that you build with FlowForma BPM.

FlowForma BPM

FlowForma BPM comes at the problem in a much more direct way, avoiding the confusion of trying to be everything to everybody. Creating forms with no-code is seamless and uses its Flow Designer feature, allowing you to build forms and the

corresponding workflows in a matter of minutes all from one interface. Pretty cool.

Because FlowForma BPM is built on top of SharePoint as we discussed earlier, you have a lot of flexibility in interacting with data both in SharePoint and other external systems. The product also offers complete extensibility so that if you need to do something that isn't in the standard product, you can build your own reusable add-ons. That will either require those folks in IT to help with JavaScript and APIs or the FlowForma BPM team can be engaged to do it for you. Just depends on how much you like working with your IT group.

That is enough talk about code. We love FlowForma BPM for drag and drop functionality, easy publishing for authenticated or anonymous form usage, and its mobile app that allows you to take forms offline. All this leads to a better experience for the people who truly matter—the business users.

Microsoft Forms

Microsoft Forms has just launched into preview for commercial users. It is a tool for making surveys, quizzes, and polls and publishing them. This is a feature that has been well received in the education space, where it is already generally available, but just adds to confusion in our business space. This is not a SharePoint feature but rather is part of your Office 365 subscription, so I wanted to call attention to it so that you can hopefully avoid any confusion regarding whether it is a replacement for InfoPath or any of the other forms solutions, which it is not.

Features of FlowForma BPM

To this point, I have tried to contextually help you understand where FlowForma BPM fills

gaps and enables you to build solutions that were previously impossible. However, sometimes it is easier instead of hinting to hit you over the head with it, so here are the key features that make taking a free 30-day trial of FlowForma BPM a good idea:

- **No-Code** – I can't say this enough. You shouldn't have to be a technology savant to build business solutions.
- **Enablement** – FlowForma BPM is meant for business users to build business solutions quickly (10 times faster, to be exact), which allows you to take ownership, avoiding the dreaded IT problem of adoption.
- **Hybrid** – Creating a functional information architecture in hybrid scenarios (which is everyone today) is very difficult. The fact that FlowForma BPM operates seamlessly between on-premises and online is a huge win.
- **Built Above SharePoint** – FlowForma BPM uses SharePoint for storage and the user interface interaction, but the fact that the tooling and the workflows work above SharePoint makes it a lot more flexible.
- **Connectivity** – Yes, there is hybrid but don't forget about the rest. Do your reporting with Power BI. Need machine workflows in the fold? FlowForma BPM can interact with Flow. Does PowerApps have your interest? FlowForma BPM can help there, also. So many options without those IT folks getting in the way.
- **Document Generation** – If you have the need for your business processes to produce documents, then FlowForma BPM is your only option. And don't forget, you work in FlowForma BPM's interface, not a developer tool, to make the forms.

- **Make Better Decisions** – Voting and the whole Collaborative Decision Making tool set helps do more than just thumbs up or thumbs down. E-signatures, tracking, public or private comments, and more are available. It's a great enabler of practical business solutions.

Up Your Game Today

Hopefully, this paper has given you some insight into how to create solutions with SharePoint today and helped you cut through the jargon of BPM and instead let you focus on what it is you want to do and what tool does it best. Things you should be considering, in my opinion, are how are you going to handle hybrid, is the solution you are going to build based on tech that is going to be around, and can your users actually use it without a Ph.D.? If you agree that this is what you should be considering, then I encourage you to try a free trial of FlowForma BPM today.

About the Author

Shane Young is a Microsoft SharePoint MVP and one of the best-known SharePoint administrators. He is a frequent speaker at Microsoft Ignite and SharePoint Conferences. He has taught hundreds of students the art of SharePoint Administration, has written multiple books about SharePoint, and conducts advanced SharePoint design training. Through his company Bold Zebras, he conducts wide-ranging SharePoint consulting work for clients. He has 8000+ Twitter followers and participates in a popular SharePoint video podcast with fellow SharePoint MVP Todd Klindt.

About FlowForma

FlowForma, the leading provider of Business Process Management (BPM) tools for Microsoft Office 365® has been revolutionizing the traditional BPM space with an innovative approach to developing BPM products that empower users to get work done, smarter and faster, on the familiar SharePoint platform, without any coding.

An award-winning Microsoft Office 365® Add-In, its FlowForma BPM tool enables business users and Heads of Departments to quickly implement processes such as HR onboarding, new product development and clinical trials as well as many others, increasing organizational efficiency and productivity.

Recognized by Microsoft and trusted by over 110,000 users, this Microsoft Gold Partner is headquartered in Dublin with offices in London and Boston.

For further information or a 30-day free trial, visit www.flowforma.com.

Useful Resources to Help you on your Journey to No-Code BPM:

- FlowForma Blog
www.flowforma.com/blog
- FlowForma Learn Library
www.flowforma.com/learn
- FlowForma BPM 30-day Trial
www.flowforma.com/trial
- FlowForma BPM one-to-one Demo
www.flowforma.com/demo