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# Process Automation Playbook *for* Google Apps

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CHAPTER 1

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# **GMAIL + GOOGLE SHEETS: THE ORIGINAL CHAOS**

Gmail & Google Sheets

# The Original Chaos



Nearly every workflow is initially managed through email. Take a leave request, for example. You send your manager an email, she replies with an approval. You forward the email to HR for record-keeping. Done.

Email is where almost all of our communication and collaboration happens, from quick lunch plans to huge project proposals. It can be a great way to manage human-centric workflows because all of your contacts are instantly available.

At its most basic level, a workflow is a set of data + a path for the data to follow. In this situation,

the data comes either from the email itself, or from an attached spreadsheet. Spreadsheets allow for unlimited data collection and a common place to store the data.

Offices also tend to first graduate to spreadsheets when handling multiple items in the same workflow. If HR handles a lot of leave requests, they may first grab your data from your email and manually copy it to their Google Sheet where they list out individual requests for later processing.

# WHEN GMAIL + GOOGLE SHEETS WORKS GREAT

Gmail + Sheets is the most basic way to manage workflows. It's quick and doesn't take any time to set up. Gmail also allows you to instantly change or alter a workflow. Forward the data to new people and add others to the path as simply as typing their name.

It's a great choice in these situations:

- All the tasks are done by humans and wouldn't be better handled by a system
- Documentation and audit trails for individual items in the workflow are important, but not essential (Searching for email trails can work, but has its limits)
- The path for the data isn't set, or often changes in unpredictable ways
- The process only occurs occasionally – not more than a few times a week
- It is a one-time, ad-hoc process that may not be repeated again

## WHEN CHAOS COMES IN

Although it is very agile, using email and spreadsheets to manage a workflow often creates a lot of **chaos** and confusion. Here are just a few ways that most business users start to see cracks in email's ability to manage workflows.

### **No tracking items.**

Once an email leaves your system, there isn't a built-in way to track if it has been completed by the next person. You have to manually follow up on each individual item.

### **No reporting or analysis.**

Within email, you can't quickly call up a report to see how well an entire process is flowing. If you want to know how efficiently your service requests are handled, you are stuck looking through your history for old emails.

### **Structuring complex items.**

Let's say you have a purchase order for \$10,000, but the invoices are paid in three stages. With email, it is extremely hard to track how much has been paid already and how much is left to pay.



**NO  
TRACKING**



**NO  
REPORTS**



**NO COMPLEX  
WORKFLOWS**



**NO PERMISSION  
CONTROL**



**NO DATA  
VALIDATION**



**ALL MANUAL  
WORK**



**NO AUDIT  
TRAIL**

## **No setting permissions & visibility.**

You may not want every person on the path of the workflow to be able to see or edit all of the data in your spreadsheet or email. Or you may want some data to be read-only while other data is editable. This is nearly impossible to do with email and spreadsheets.

## **No data validations.**

Because emails and spreadsheets are very free-flowing, it is hard to ensure that all the required data is present and in the right format. After receiving your forwarded leave request email, HR might write back and say they need additional information.

## **Encourages manual data entry.**

You may send a reimbursement request as a spreadsheet to your finance team. The person who processes it has to open the spreadsheet and manually enter each item into the finance software. This is not only time consuming, but it opens up possibilities for error. Email + spreadsheets is not the best place when it would be better for systems to talk to each other without the need for human intervention.

## **Difficult documentation & audit trails.**

When you need to refer back to an item from a few months ago, it's possible to recover the email trail, but it can be extremely difficult, especially if you are not sure of the date or if it is a commonly sent email. All of your processes are mixed in with your online shopping and birthday party planning.

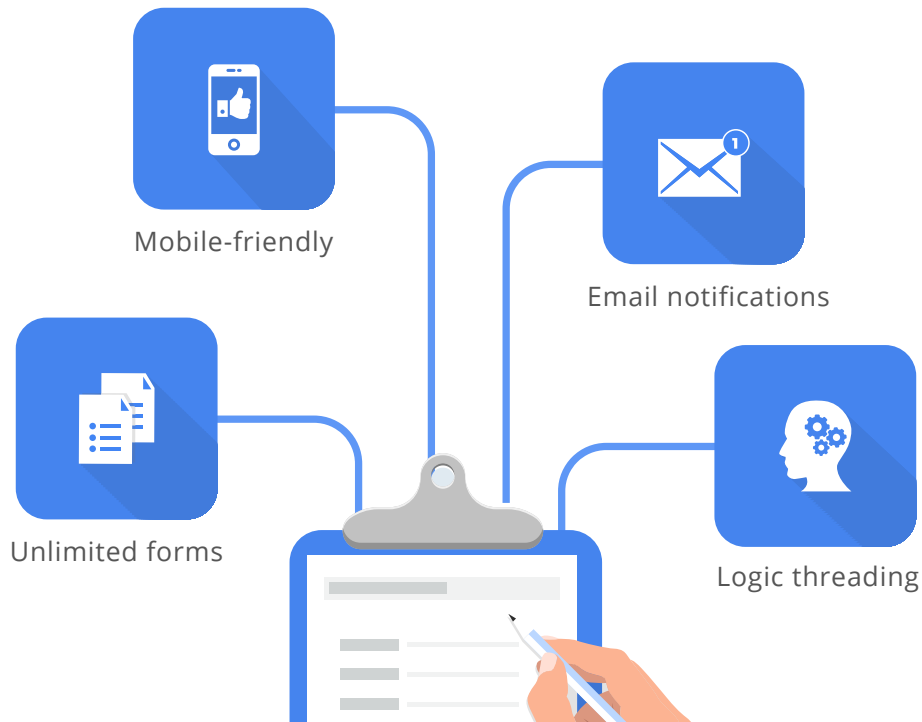


**CHAPTER 2**

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# **GMAIL + GOOGLE FORMS**

# Advantages of Forms



A combination of email and spreadsheets works great for quick, undefined workflows when documentation is only mildly important. But one of the biggest downsides is that you can't validate the data and you must manually enter information into spreadsheets.

This leads to your second option to manage your workflows - Google Forms.

Google Forms is a good option to turn to when you have trouble collating data from different sources in a standard format. For example, if you are trying to collect peer review data among colleagues in a team, using email makes the process very cumbersome. If you made a common Google Sheet for everyone, others could see the entries and their responses might be biased.

Google Forms gives you much more control over collecting data like this. You can choose between nine different types of data fields including date, time, and dropdowns. You can also set up custom validations such as ensuring that a number is a whole number or in a certain range.

With Google Forms, all of your data automatically goes to a Google Sheet, which means you don't have to manually transfer information. After a user fills out your form, all the data is immediately parsed into different fields which makes it much easier to process. Now, your HR team has access to everything they need to process their peer review data.

Google Forms is nice because it captures and stores your data outside of your email. That means you don't need to go digging through your email history to find a request from a month ago.

Now that the data is on the spreadsheet, you can share the Google Sheet within the HR team. If someone new is added, no one needs to forward a bunch of emails to get her caught up; all of the information is in one place. You can also add permissions to your sheet so that some people can edit all of the information, while others can only view it.

# WHEN FORMS IS THE BEST OPTION

Using Google Forms is great when:

- You need your data broken up into very specific, validated units
- You want to reduce the manual transfer of data from email into spreadsheets
- You want to see all of the data for each item of your process in one place
- You have a simple workflow with many submitters and only one receiver

## WHERE FORMS FALL SHORT

Despite the advantages over email, using Forms to manage your workflows still leaves a lot of holes.

### Notifications.

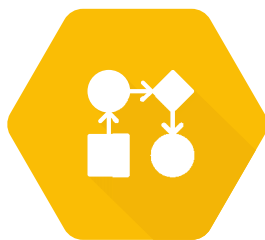
You can enable email notifications when new entries are submitted in Forms, but this only goes to the creator of the form and not anyone else.

### No workflow.

Forms is a good solution for the data part of your process, but not the workflow. After a possible email notification, the next person involved may not be aware of what to do. The first step is automated, but there isn't a way to build in any step after that.



**LIMITED  
NOTIFICATIONS**



**NO  
WORKFLOW**



**LIMITED  
PERMISSIONS**



**DATA  
OVERLOAD**



**NO  
TRACKING**



## Limited permissions on the Sheet.

You can classify users as either editors or view-only, but that is for the entire set of data for every item that comes in. You can't restrict certain fields to be editable for some people but view-only for others. Nor can you allow certain items to be viewable while others are hidden. When you give someone editing access to the Sheet, you are giving them access to all of your data for every item.

## Everything is in one place.

It can be very hard to navigate your spreadsheet when you have dumped all the data for the process in one place. It is fine if there are only a few items per week that come through, but if you have a lot of requests, it is too overwhelming to store everything there. Moving old or processed data requires careful, manual effort and it can be difficult to know what stage all of your items are in.

## Tracking Nightmare.

When your form is filled out, there is a timestamp on the spreadsheet. After that, you are on your own. There isn't a built in way to track what happens to each item as it goes through other steps.



### IF ONLY I COULD GET THE SYSTEMS TO TALK...

Google Forms adds a lot of functionality to capturing data for your process, but it really doesn't help your workflow very much. Next, we'll look at a simple way to get your systems to talk together and add an additional automated step.



**CHAPTER 3**

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**GOOGLE  
APPS SCRIPT:  
LET THE MACHINES  
DO THE TALKING**



Google Forms can add significant functionality to how you collect and store data for your workflow. However, it really doesn't address any workflow problems and leaves you needing something else. And so, we turn to Google Apps Script.

Google Apps Script lets you add small lines of code to any Google App like Sheets or Docs to pull or push data between that app and many other applications. Apps Script is good for system-to-system data flow integrations, whether inbound or outbound. For example, when someone

submits an online form on your website, you can trigger an email response to them. Or a calendar request can be generated after data is received from an online event management system.

For outbound integrations, you can link information in your Google Sheets to trigger events in other cloud-service software that has open APIs. Information that you gather from employees through Google Forms can be automatically added to your HR system.

# HOW APPS SCRIPT CAN HELP MANAGE YOUR WORKFLOWS

When you have a simple data flow that involves systems talking to each other, apps scripts are the easiest way to complete it. Rather than using an entirely separate software system, a few lines of code will do all the work for you.

For example, you can set up an app script to send an email to an approver when certain fields in a spreadsheet are updated. If you only have a workflow of a few steps, Apps Script can be a simple, low-cost way to manage that workflow.



## WHY MOST PEOPLE STAY AWAY FROM APPS SCRIPT

Google Apps Script tends to be a secret among business leaders, mostly because it seems so technical. It looks like code, and it is code, and that is enough to scare many people away.

However, if coding is a new language, doing apps scripts is like learning the alphabet. It can take time to do it on your own and will require a decent amount of learning and tutorials if you are starting from no technical knowledge whatsoever. You will need to learn about different Google APIs and how to execute steps correctly.

## THE SHORTFALLS OF APPS SCRIPT

As great an option as Apps Script is, it still leaves the door open for future frustrations. Apps Script will do the job for simple data flow integrations, but it doesn't even move the needle when it comes to creating a complete workflow.

As a medium, Apps Scripts are very tedious to debug and you will likely spend more time fixing the script than you did creating it. Audit logging is not straightforward, and triggers aren't always consistent. When you start to learn and apply Apps Script, you get a peek into the world of a developer and why they spend so much time staring at a screen.

There are other limitations of Apps Script as well.

## Data integrity.

If you have the same set of data across different sheets, each sheet needs to be updated. This creates a problem because there is no central, master data.

## Only linear workflows.

You can string several Apps Script together to create an ad-hoc workflow, but each step must be done in sequence. It becomes extremely complicated to create a conditional or multi-branch workflow.

## Maximum execution time.

If the application you are trying to connect to takes extra time for data manipulation, your maximum execution time will be limited.

## Recording approvals.

To maintain approval hierarchy and manage workflow states, you will need to use JSON, which is a big step for someone to learn who doesn't already know coding.

### THE SHORTFALLS OF APPS SCRIPT

- Data integrity.
- Only linear workflows.
- Maximum execution time.
- Recording approvals.

## APPS SCRIPT ARE JUST THE START

Many simple processes can become fully automated with a small bit of code to help your applications talk to each other. Apps Script can show you how much is possible without having to make a significant financial investment, and it can also get your creative wheels turning when you see what is possible.

However, Apps Script may not be the right solution for you. If you hate getting involved in code or if you highly value data integrity, you need to look to something else. If your workflows use conditional branching or business logic, or if your business rules change often, you will likely find Apps Script more frustrating than helpful. Also, Apps Script is not a good option for someone who likes to get the big-picture view of how things are running from a single dashboard.

In these cases, Apps Script can be a springboard to help you know exactly what you are looking for in an off-the-shelf workflow management tool like KiSSFLOW.

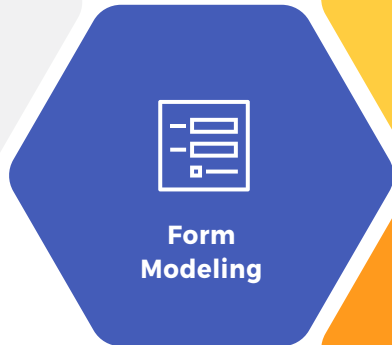
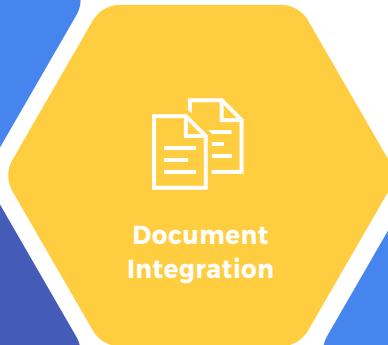
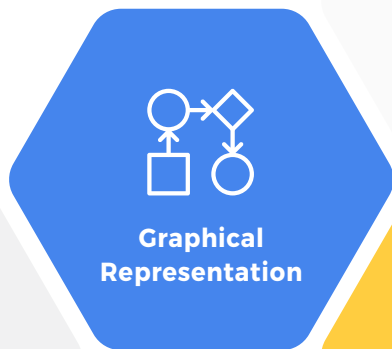


**CHAPTER 4**

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**THE IDEAL  
WORKFLOW  
MANAGEMENT  
SOLUTION,  
99% OF THE TIME**

# Top 10 Workflow Management Features



## WORKFLOW ON AUTOPILOT

Off-the-shelf workflow software handles the two sides of workflow management – capturing data, and creating a path for the data to follow. The software will let you create a form to gather validated data and will help you map out the sequence of tasks that needs to happen.

Using workflow management software allows you to have a fully automated process that can run on its own. There's no checking email, spreadsheets, form submissions, or fixing broken scripts.

Here are some of the advantages that nearly every product delivers:

## **Flexibility across functions.**

The same workflow software can be used by HR, finance, ops, and marketing. Because workflows are common to every part of a business, you can use them anywhere.

## **Tracking individual items.**

If you want to check the progress of a travel reimbursement through email, you had better hope you put the date in your subject line, otherwise it will be a pain. Workflow software will show you the status of any item you submitted and you know where in the path it stands.

## **Notifications, SLAs, and deadlines.**

The software will make sure that each task owner knows when it is time for another task to occur. You can also set deadlines or SLAs for each task to make sure the task is completed and reminders are sent automatically.

## **Flexibility.**

Good workflow software will allow you to change and update workflows as you need with a few clicks. Updates should reflect immediately in the workflow.

## **Permissions and visibility.**

You should also be able to set permissions and manage access privileges to certain data. This is a big improvement over spreadsheets where it is nearly impossible to hide or make read-only specific data points inside a workflow.

## **Reporting.**

Workflow management software is also going to give you reports on your workflows that would have been impossible to track with other methods. See how long items take to complete, which tasks take the longest, how many items occur in a time period, and which items get rejected the most.



## **It's ok to be picky.**

Not all workflow management software is created equal. As you search for the right option, here are a few things to keep in mind.

## **Human-centric vs. System-centric.**

Some options are built so that any business leader can sit down and create a workflow exactly as they picture it in their head. Other options start from a programmer's mentality and map out every possible scenario.

## **Cloud vs. On-premise.**

Beyond how you access your data, a cloud solution puts the responsibility of maintenance and performance in the hands of the vendor. On-premise means you are on the line for both.

## **Cost.**

The price of workflow software can range dramatically. A full-fledged BPM solution will easily reach six digits. Some cloud-based solutions offer free models for limited users. Most cloud-based providers charge per user per month. Be sure to consider any setup and installation fees that are included as well.

## **Integrations.**

Workflow software is often used to supplement and support your main functional software, so integrations are key. If you are already a Google Apps customer, you want to find something that is deeply connected with Gmail, Calendar, Sheets and any other Google App you use (like KiSSFLOW).

For most of us, workflow management software fits the bill, the only difficult part lies in finding the one that matches your needs the best.

## **THE 1%**

While workflow management software is generally the place where most companies stop, there are a few cases where it just isn't enough. The features of an off-the-shelf product become invariably generic for a very specialized market.

A woman in a white lab coat is looking at a laptop screen in a laboratory setting. The background is a yellow-tinted image of a laboratory with various pieces of equipment and a brick wall.

**CHAPTER 5**

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**CUSTOM-MADE  
WORKFLOW  
SOFTWARE FOR  
A RARE BREED OF  
BUSINESSES**

It's very hard to find workflow management software that is only for lawn care, hospitals, ad agencies, etc. So if your industry or niche vertical has extremely specialized requirements, off-the-shelf software may not be the best option for you.

You are the 1%. The rare species of companies with such a specialized need that no one has created something for you yet. You've tried workarounds, hacks, and patches to try to adapt an existing system to your own, but it just isn't working.

Thankfully, there is a solution, but it comes at a hefty price. You must either find an open-source solution robust enough to build your own solution on top of, or create your own from scratch.

## THE NEED FOR CUSTOMIZED WORKFLOW SOFTWARE

There are two major reasons why some companies can't settle for off-the-shelf workflow management solutions:

- 1) A company needs to build the workflow software around a highly specialized or legacy software that is critical to their business, but doesn't have any open APIs or integration points.
- 2) The company requires very specific features or fields displayed for a workflow (like high-resolution satellite images based on coordinates) that no standalone workflow software will have.

For example, a pharmaceutical company using a drug discovery suite has interfaces linking to the company's internal systems. Using an off-the-shelf workflow tool is not a solution in this scenario since the product has no way of going deeper into the company's chemical database to compute the structure and reactivity of materials with each other. On the other hand, a custom-built workflow tool can be programmed to retrieve the data and feed it to the next step of workflow.

## A PERFECT FIT

Using tailor-made workflow software helps businesses retain and squeeze out the most of their legacy software systems without making any compromise in their core competencies. It helps enterprises push boundaries in terms of team collaboration and break process silos caused by organizational status quo.

For example, imagine a huge publication house that handles large-scale projects with dozens of processes built into each project, e.g., multiple editorial reviews, proofreading, layouts, content additions, and annotations. Such a company would need custom software that exists inside of their core business and manages the editorial process from within.

Customized workflow solutions can digitize an enterprise's static processes and allow collaboration to happen in real-time. Furthermore, a customized workflow software is built to interact with other applications in the enterprise, such as your CRM, document management tools, ERP, etc.

## FALLOUTS CAN BE TREACHEROUS

Anytime you create custom software, it's going to be expensive. It is generally only done by large companies who have their own workflow software designed to align well with their core operations. Organizations that require a one-of-a-kind workflow solution typically have intricate task processes, which make software implementations time-consuming and challenging. These types of custom projects usually start at the six figure mark and go up from there.

We once had a request from a large mobile manufacturing company to create a workflow for launching retail chains across Africa. The project required the company to work backwards; hire qualified staff, buy equipment, set up stores' interiors, find and finalize locations, and many other processes that ran parallel. It was outside KiSSFLOW's scope to be able to address all these issues, because what the company actually needed was a combination of a project management tool and a workflow solution.

Tailored workflow tools are designed to fit rigid business flows, and any change in such processes could mean that the workflow software has to be reconfigured from the start. If your workflow tool isn't easily customizable, it can end up being a liability for the enterprise.

## IT'S TIME TO CHOOSE

Now that you have read through all the workflow possibilities for virtually all types of businesses, what do you think fits your organization best? Are you doing fine with Gmail and Spreadsheets, or do you need to stop manually transferring data with Forms? Do you want to try your hand at Google Apps Scripts, or do you have some workflow software in mind?

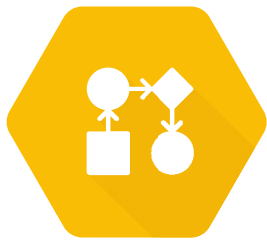
If you are ready to give workflow automation a try, why not start with a free trial to KiSSFLOW? There, you can get a first-hand look at every feature available to you and create your first workflow in minutes. Then you can decide if you are in the 1% who need something more customized.

May all your workflows run smoothly!



KISSFLOW is a **workflow automation & Business Process Management software** that has helped over 10,000 companies automate & manage their processes better.

It is rated as **#1 workflow tool for Google Apps** with user base of over 1,000,000 users



**Access workflows from Google Apps suite**



**Attachments on the fly**



**Single-Sign on with Google Account**



**Easy user Administration**



**Anytime, Anywhere Access**



**Single click approvals from Gmail**

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