

**Workflow Automation: Your Digital Assistant**

**At** our previous gathering, I had hinted at utilizing the newly donated computers to assist the panchayats. Thus, today's meeting at Hebbet Nanjamma's gram panchayat stirred up a touch more enthusiasm among the members. Nanjamma, undoubtedly, had been pondering all day about my take on employing these computers.

As we began, I softly revisited the conversation we'd had at our last meeting. "Have you considered how you might distribute roles and responsibilities among your team of elected representatives, gram panchayat office bearers, and other stakeholders? Remember, achieving Six Sigma is possible only when every stakeholder performs their tasks flawlessly across all processes of the Gram Panchayat."

"How do we go about sharing roles and responsibilities, Shankranna? Could you elaborate a bit?" Hebbet Nanjamma asked. Given her role as the president of the panchayat, I would have expected her to grasp this concept with ease.

"Sure, let's discuss this. Assume that you've properly delegated tasks among your elected representatives and other stakeholders. For instance, you are in charge of education and health, tax collector Prajwal handles tax collection, and panchayat member Rukkamma oversees the finances. Let's say they are competent and need minimal dependence on each other," I began to elucidate.

"You have measures in place to ensure precision in every task or activity, resulting in optimal work performance. Additionally, each elected representative is assigned a role they're skilled at, enhancing human resource efficiency."

"Moving forward, consider ways you could lessen Prajwal's or Rukkamma's workload slightly. By mitigating their stress, they can dedicate more focus to other undertakings such as implementing a new education system or introducing digital banking to your villages. These initiatives require substantial intellect and contribution from all members. We're striving to automate recurring tasks, which would free up more time for Prajwal and Rukkamma to improve your panchayat further."

"To augment efficiency not only for you and your team of elected representatives but also for your citizens and gram panchayat functionaries, I'd like to introduce workflow automation. This technology will enhance everyone's experiences interacting with the Gram Panchayat. Workflow automation can make your Gram Panchayat more productive, precise, and increase accountability," I said.

"Shankranna, what exactly is Workflow Automation? Why is it needed in our Gram Panchayat?" Rukkamma asked.

"Good question. Before delving into workflow automation, let's understand why it's needed and how this technology can add value to our existing system," I replied.

Prajwal, the bill collector, could share with you his daily routine. It's pretty much the same story day after day.

'I arrive at the office, grab the receipt book, and then go door to door collecting bills from the citizens,' he says. This demonstrates how he executes the same task day in and day out.

"Additionally, your gram panchayat office routinely processes tasks such as distributing or collecting application forms for business licenses, birth certificates, tax receipts, and land ownership certificates.

All these tasks are repetitive, and for them to be completed, your staff must be present from start to finish, correct?" I asked.

"Yes, Shankranna," both Nanjamma and Rukkamma chorused, with the rest of the meeting attendees joining in.

"What if I told you that these repetitive tasks, like collecting application forms, checking for all necessary documents, or transferring paperwork from one desk to another for verification, could all be managed using computers?" I watched as their faces registered this idea.

"In the current system, the majority of activities are done manually. Our citizens often have to shuffle from one department to another, desk to desk, just to get a document. Or, as an elected representative, you have to be physically present to sign certificates or routinely follow up with Prajwal to ensure villagers are paying their taxes on time. Aren't all these repetitive and tedious processes?" I questioned.

"But aren't all these tasks that must be done on a daily basis?" Simple Sudarshan raised a query.

"Indeed, these tasks are daily necessities, but if your gram panchayat implemented workflow automation software, you could manage all these tasks online. This system is designed to ensure all tasks and processes are completed systematically. Let me illustrate workflow automation using simple examples. Through these, you'll grasp how this technology can benefit your gram panchayat," I proposed.

"When my team and I implemented a Sampoorana Panchayat Solution in some gram panchayats of the Davanagere district in Karnataka, the elected representatives eagerly anticipated an effective and efficient gram panchayat system. They were thrilled when the work processes were automated. With the introduction of the digital system, citizens

began using the web portal, where they could access information regarding their accounts, property registration, tax payments, job advertisements, and the status of their applications. This eliminated the need for citizens to queue outside the office for certificates or await signatures once submitted to the Grama Panchayat," I began to explain.

## **11.1 Understanding Workflow**

"In simple terms, a workflow is a series of activities that are undertaken from start to completion. Therefore, a workflow comprises numerous activities that need to be executed to finish any given task."

"Let's explore a couple of straightforward examples to better understand workflow," I suggested.

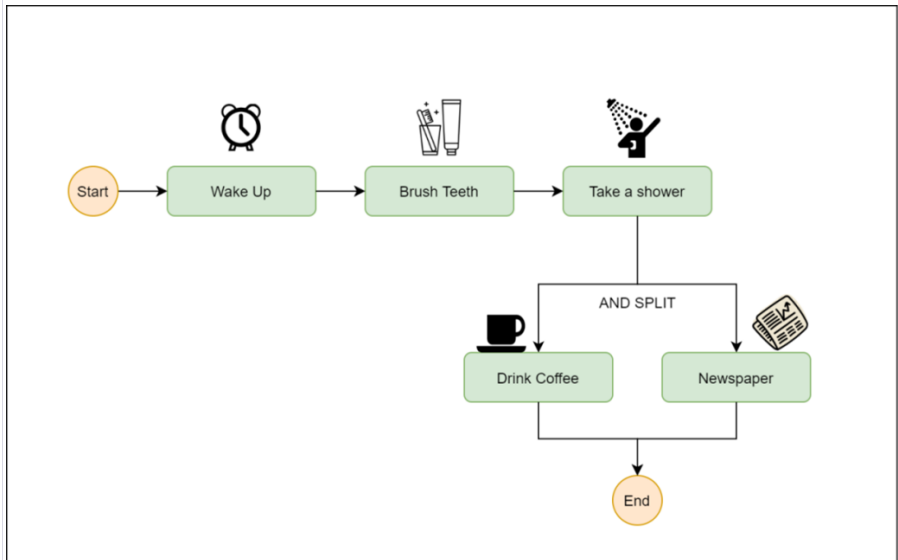
### **11. 1.1. Morning Routine**

"Every day, I wake up at 6 a.m., brush my teeth, take a shower, and then read a newspaper while sipping on a cup of coffee. This is my morning routine, a workflow I follow daily before stepping out. In this context, there are five activities I engage in each morning. Essentially, a workflow should outline all the steps involved in a process. Let's dissect my morning routine to understand how the workflow progresses."

"The steps involved can be enumerated as follows:

1. Waking up.
2. Brushing teeth.
3. Taking a shower.
4. Drinking coffee.
5. Reading a newspaper.

"Now, let's visualize these activities as a workflow."



**Figure 11.1. Simple Workflow of Morning Activities**

"As you can see in Figure 11.1, there are five boxes representing the activities. You may also notice a shift in the workflow after the third activity. Let me explain what each step signifies."

"I start my day by waking up, followed by brushing my teeth, and then taking a shower. These three distinct activities occur in a sequential order. They run independently of each other. A workflow diagram smoothly transitions from one activity to the next, making it a sequential model."

"After taking a shower, I read a newspaper and drink a cup of coffee concurrently. These two activities happen simultaneously, illustrating a parallel model where two or more activities occur side by side."

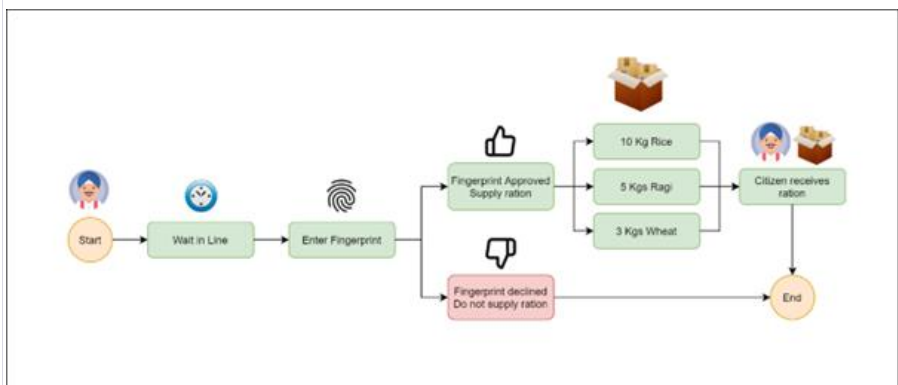
From this workflow of my daily morning routine, you can understand what a sequential or parallel workflow is."

"Isn't that fascinating? Now you have a basic understanding of what sequential and parallel models mean. I'll elaborate more on workflows, and you'll discover more of these patterns. But for now, let's move on to the next example," I continued to explain.

### 11.1.2. Procuring Items from the Nearest Fair Price Shop/Ration Shop

"Imagine you have guests coming over and you plan to prepare a delectable masala dosa for breakfast. Since you have the expertise to cook the dosa perfectly, you decide to soak the rice. Unfortunately, you realize your rice canister is empty. What's your next move?"

"Knowing the Fair Price Shop (also known as the Ration Shop) offers high-quality dosa rice at reasonable prices, you decide to head there to purchase some. Once you reach the FPS, there is a process you need to follow to acquire the rice. Let's examine all the steps involved in this ration collection process, as depicted in Figure 11.2."



**Figure 11.2 Workflow for Procuring Items from the Ration Shop**

1. You depart from your home and arrive at the ration shop.

2. Upon reaching the ration shop, you join the queue along with other citizens and wait for your turn.
3. When it's your turn, you place your finger on the fingerprint machine for identity verification. Depending on whether the fingerprint is accepted or not, the workflow diverges.
4. If your fingerprint is accepted, you are allowed to purchase the ration from the Fair Price Shop. However, if your fingerprint isn't recognized, you can either argue your case or leave empty-handed.
5. In the next step, the shopkeeper weighs and packages the items for you. Here, we observe another parallel division in the workflow, indicating that all the items must be weighed and packed. Only when all the items are prepared and packed, does the shopkeeper hand them over to you.
6. In the final step, you successfully receive your ration, bringing the workflow to a conclusion.

"It's a straightforward workflow, encompassing every step from beginning to end. But the focus of this chapter is on workflow automation. So, what does automation entail? What benefits can be derived from automating the workflow? Let's delve into what workflow automation is with two more examples." I continued with my explanation.

## **11.2. Understanding Workflow Automation**

"Automation entails streamlining any workflow with minimal human intervention. This means you will be able to collect taxes without necessitating daily village visits by bill collector Prajwal, or you can sign documents and forward them along the supply chain without being perpetually stationed in the Gram Panchayat office. The automation of steps is what you aim to achieve for your Gram Panchayat to simplify processes."

"So, does that mean we can work from our current locations without having to go out into the field?" asked Paropakari Padmini.

"To comprehend the automation of workflows, let's consider an example of online shopping," I began my explanation.

"The retail landscape has undergone substantial changes in the last few years. Previously, to buy a kilogram of lentils or a bar of soap, you needed to physically go to the store, select your items, and return home. But now, there's no need to visit the shop to purchase these items. You have the option of shopping online using a computer or mobile phone. Today, even in our villages, many individuals have begun to shop online. But have you ever wondered how these e-commerce platforms like Amazon or Flipkart have simplified the purchasing process?"

"How is that possible, Shankranna?" asked Sahukar Seenappa.

"A complex process unfolds behind the scenes for these products to reach your doorstep within the projected timeframe. If only humans were involved in the process of accepting your order, packing the items, and delivering the products to your home, it would take significantly more time. That's where workflow automation comes in. Large e-commerce corporations like Amazon and Flipkart have completely automated their workflows, reducing the reliance on human resources. The majority of the work is handled by computers through workflow automation," I explained.

"Can you imagine the manpower Amazon India would require to manage the thousands of orders it receives every hour or even every minute? The process is so repetitive that it's more efficient to delegate it to a computer rather than a human. Workflow automation is particularly advantageous during these repetitive steps. Once we have a thorough understanding of what goes into delivering a product to

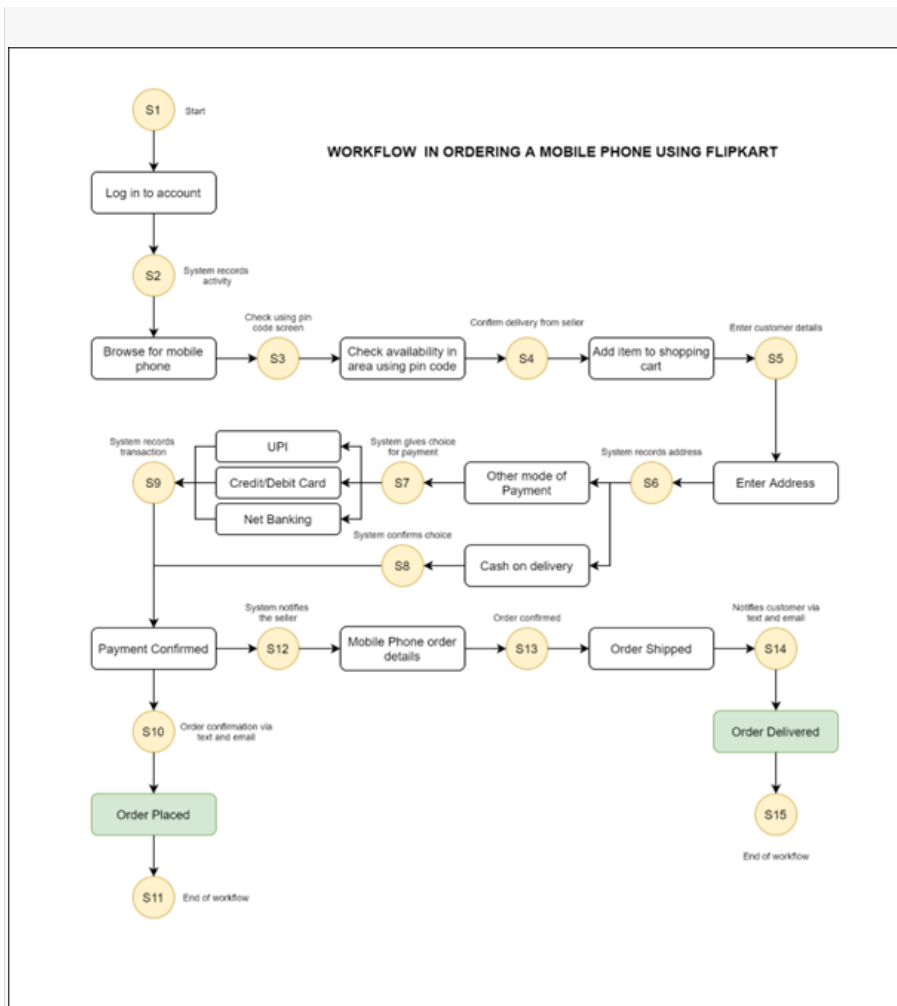


a customer, this workflow can be automated, alleviating any worries you or I may have." I added.

### **11.2.1. Purchasing a Mobile Phone Online on Flipkart**

"Recently, our neighbor Girijamma's son bought a mobile phone for his mother online. How is that possible, Shankranna?" Hebbet Nanjamma queried me.

"Listen carefully. Now, let's suppose you wish to use Navigated Learning Technology to learn more about Gram Panchayats, but you don't own a smartphone. You would need to travel to the store in the neighboring town to buy one. However, you don't have the time to do so. Like Girijamma's son, you also want to make your purchase online. So, how would you order a mobile phone for delivery online via Flipkart? What's the journey from the moment you place the order until it arrives at your doorstep? Let's break down this workflow." I responded.



**Figure 11.3: Workflow of Ordering a Mobile Phone on Flipkart**

1. Begin by opening the Flipkart web portal and logging into your account using your mobile number and password. As depicted in the diagram, the system logs this activity.
2. Once logged in, start browsing through the list of mobile phones available on Flipkart. After identifying your desired mobile phone, check its delivery availability in your area by inputting your pin code.

3. Upon confirming the availability, add the selected mobile phone to your shopping cart. Proceed to the 'Checkout' screen, where you're required to enter personal details, such as name, address, and phone number.
4. Fill in the requested details in the standard template provided by the system. This information is then recorded by the system.
5. The system subsequently presents various payment method options, including Cash on Delivery, Net Banking, Credit/Debit Card, UPI, etc.
6. If you select 'Cash on Delivery', your payment method gets confirmed immediately.
7. If you opt for other payment methods, such as UPI, Net Banking, or Credit/Debit Card, you will be directed to a different screen to complete the payment. At this stage, you can also view a parallel model.
8. Following successful completion of the payment, the system confirms your order via an email and text message, containing the transaction details. This marks the end of your workflow.
9. Meanwhile, the vendor's workflow continues. Once the payment is completed, the seller receives a notification about the order.
10. The seller then packs your mobile phone, selects a delivery service partner, and dispatches the mobile phone from their warehouse to your location.
11. You receive a shipment notification through email and text message.
12. Within a few days, the product gets delivered. A message confirming the delivery of the product signals the end of the workflow.

By examining these steps, it's evident that every stage of this workflow is automated. The computer provides full assistance until the order is successfully placed. It also notifies the seller about the order, and after

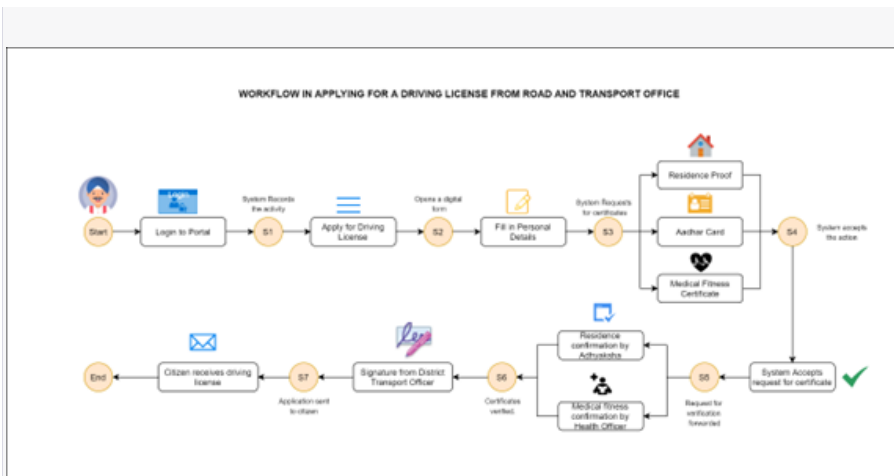
confirmation, automatically sends you a message. Without this workflow automation, Flipkart would require an employee at every step to guide you through the entire process, which would be time-consuming and repetitive. Workflow automation, therefore, enables e-commerce companies like Flipkart to circumvent these costly issues and save considerable resources.

### **11.2.2. Obtaining a Driving License from the Road and Transport Office (RTO)**

"What other services can be accessed online, Shankranna?" Sahukar Seenappa inquired.

"Seenappa, as the Adhyaksha of your Gram Panchayat, you regularly travel to neighboring villages and towns for official work. Your village panchayat, noting the high daily rental expenses, decides to purchase a car. Now, you need to learn how to drive and obtain a driving license from the Roads and Transport Department, don't you?" I posed the question.

"In the past, your only option was to take a bus to the nearest Road and Transport Office (RTO) to apply for a driving license. However, thanks to workflow automation, you can now apply for and receive your Driving License (DL) directly online," I continued.



**Figure 11.4 Workflow in Applying for a Driving License from the RTO Office and Obtaining it**

Figure 11.4 illustrates the workflow involved in applying for and securing a driving license from the Road and Transport Office using their web portal. Let's walk through the steps involved in this workflow.

1. Your first step is to access (login to) the RTO portal.
2. Next, navigate to Services and select "Apply for Driving License".
3. Fill in your personal details using the standardized form provided.
4. Following this, you need to upload your Aadhaar card, proof of residence, and a copy of your medical certificate. You can only proceed to the next step after you've uploaded all these documents.
5. If you have uploaded all three required documents, the system will then validate them and generate your application submission.
6. The subsequent step involves the verification of your residence by the village president, and the verification of your medical certificate by a medical officer. Both the village

president and the medical officer will be notified of these pending tasks.

7. The workflow can only advance to the next step when both forms have been verified. At this point, the District Transport Officer must sign the document.
8. Once the document is signed and ready, the completed document will be returned to your account.
9. The workflow concludes successfully when you receive your driving license.

By automating this process, the RTO has made applying for and obtaining a driving license significantly more efficient. You can complete most steps from the comfort of your own home, avoiding the need to travel to the RTO office and wait in long lines. Workflow automation also helps ensure accuracy by standardizing the process and minimizing the potential for human error.

### **11.3. Model Gram Panchayat Web Portal: How Can You Use Workflow Automation in Your Gram Panchayats?**

"How can this be implemented in a village panchayat, sir?" Simple Sudarshan inquired.

"Consider the repetitive processes in your gram panchayat. For instance, Rukkamma must be present in the office to issue financial forms. This task doesn't significantly contribute to your gram panchayat's growth. However, if this task could be automated, a computer could issue forms online to all your citizens. Your citizens could then obtain the forms from the comfort of their homes. It's a mutually beneficial situation," I explained.

"Moreover, your gram panchayat interacts with numerous stakeholders daily. Automating all tasks between all partners saves a

considerable amount of time, not only for you but also for the stakeholders."

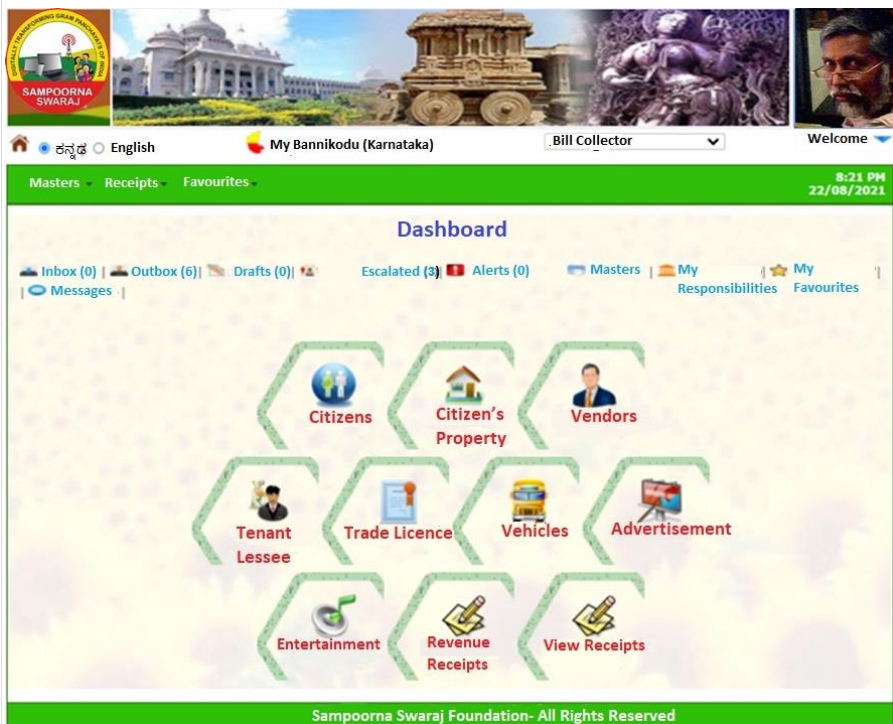
"What benefits could the public gain from the automation of panchayat work?" Software Somu, the Adhyaksha of one of the Gram Panchayats, inquired. Although Software Somu had some knowledge about this, he anticipated a detailed explanation from me to ensure everyone else's understanding.

"When you incorporate workflow automation into your Gram Panchayat, a computer or mobile application is used to access the Gram Panchayat Portal. Each citizen or elected representative is given a unique username and password, which is used to log into the web portal. Once logged in, users are presented with a dashboard, as shown in Figure 11.5," I elaborated.

"This dashboard displays the range of services provided by the Gram Panchayat, such as Citizen Property Registration, Vendor License, Business License, Advertisements, Tenancy Leases, and Income License. All these services can be accessed by your citizens from the comfort of their homes."

"The interface and web portal functions are organized according to the user's role in the Gram Panchayat. For example, Figure 11.5 shows a dashboard for a bill collector of a gram panchayat. If he clicks on 'My Responsibilities', he can see all his duties, like issuing vouchers, collecting khata charges, special water tax deposits, entertainment tax, and vehicle tax. Using this, he can perform his duties online," I explained.

"This means that panchayat staff, elected representatives, and common people alike can benefit from this automation," Hebbet Nanjamma concluded with pride.



**Control Panel (Dashboard) Figure 11.5: A comprehensive panchayat dashboard showcasing the interface for a bill collector.**

“The control panel also organizes messages into categories like Inbox, Outbox, Drafts, Escalated, and Alerts.

1. **INBOX:** The Inbox displays all the transactions generated by the system for the user. A citizen can monitor the progress of his or her application or receive notifications when a document or message is returned. For Adhyakshas like you, the inbox provides notifications when you initiate a task to be signed or approved.
2. **OUTBOX:** The Outbox lists all the transactions or activities conducted by the user via their account. It aids in tracking all transactions carried out from your account and keeps a record of all messages sent.



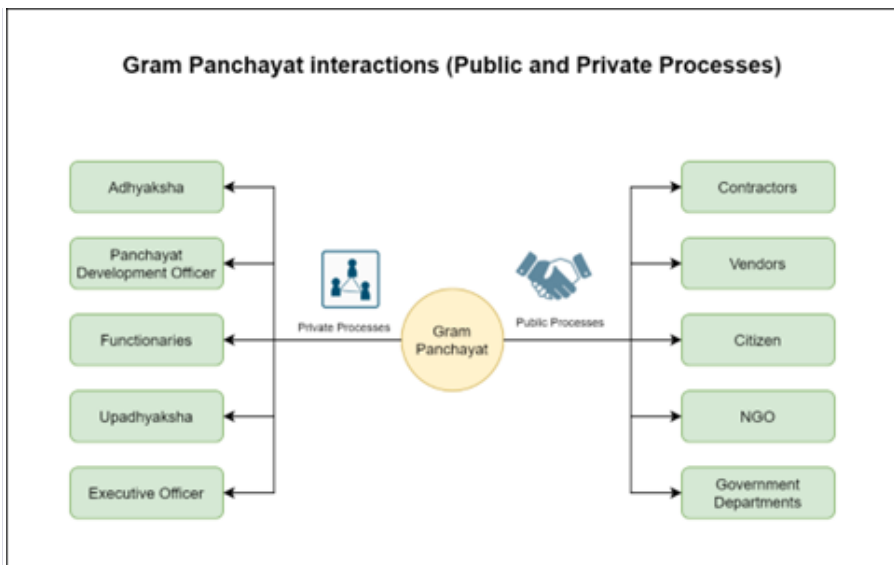
3. DRAFTS: This stores all transactions that are still in progress or need modification.
4. ESCALATED: If any task isn't completed within the given deadline, it is escalated to higher authorities. This implies that the task is delayed. This generates an alert or notice for the higher officials of the Gram Panchayat, informing them about the delay in this task.
5. ALERTS: The Alerts section displays the actions that have either been executed or are yet to be performed.

I delved deeper into the specifics of workflow automation.

#### **11.4. Seamless Integration of Internal and External Processes**

"Alright, Sir, you've explained about the tasks inside the office. But don't we have to interact with the public and various organizations outside the Gram Panchayat? How does that work?" Sahukar Seenappa inquired.

"Indeed, Seenappa. Gram Panchayats like yours represent a form of public administration focusing on civic services. If you aim to automate your procedures, the key is to flawlessly integrate internal and external processes to establish a smooth operational system. By implementing an e-governance model in your Gram Panchayat through workflow automation, you are making public processes more accessible to your citizens. Using workflow automation software, your citizens can apply or request various services directly through your Gram Panchayat portal," I explained.



**Figure 11.6 Internal (Private) and External (Public) Processes in a Gram Panchayat**

“By internal processes, we refer to all processes within your Gram Panchayat, like those involving the Adhyaksha, PDO, EO, or other functionaries. External processes denote interactions with citizens, vendors, contractors, NGOs, and government departments, etc., that your Gram Panchayat collaborates with to accomplish certain tasks. Figure 11.6 provides an example of what internal and external processes entail.”

“For instance, when a citizen applies for a birth certificate, you have to collaborate with the Health Department or PHC to confirm the child's birth. In other instances, you may have to work with various government departments like Income Tax, Water, Power, Agriculture, Forest, etc., which form part of the external processes. If any of these processes are not up to Six Sigma standards, it can disrupt the smooth functioning and efficiency of the service delivery. Therefore, for your Gram Panchayat to be effective, there needs to be a seamless

combination or integration of all these internal and external processes," I concluded.

## **11.5. Immediate benefits of implementing workflow automation**

"What are the immediate benefits of automating the work flow Shankranna?" asked Paropakari Padmini.

**Many benefits are there, some of them are here:**

1. Your citizens can avoid the complexity of collecting application forms and submitting them back to the office. All these processes are executed online with workflow automation.
2. Automation of work flow reduces the chances of human error such as spelling errors or handwriting interpretation that may occur while creating documents.
3. Automation of tasks saves a lot of time. Time and human resources are saved.
4. With better coordination between elected representatives like you and the concerned departments involved in the work flow, the productivity of the system will increase significantly.
5. Workflow automation improves the transparency and accountability of your system. If all steps are recorded with powerful tools like Blockchain, trust in your system will increase.
6. Most importantly, incorporating workflow automation will improve citizen services in your organization. All stakeholders' satisfaction improves significantly.
7. Workflow automation facilitates data collection and inventory. A central repository can be used to store all information that can be used for future reference.

## **11.6. A Success story of Workflow Automation in Dorchester County (USA)**

"Are there any examples of successful workflow automation?" Sahukar Seenappa questioned.

"Yes, there is. Similar to our Gram Panchayats, Dorchester County in the US (USA) has implemented workflow automation for forms using the SimpliGov platform. It is a cloud-based automation designed to complete government tasks in record time. The county was heavily dependent on paper for all operations. Citizens realized that this process was very tedious. So instead of manual processes they shifted the work to digital and automated processes. Instead of using a scanner, they used their mobile phones to take a photograph of the document. Instead of using a printer to print the form, they were able to fill the form digitally."

"Thereby they were able to eliminate a significant amount of manual work and increase the speed of processing forms to five times faster than manual processing. Digitization and automation of form submissions saved thousands of hours in a few months. Workers were able to use this time for more things that added more value to the system. This is how workflow automation redefined productivity and efficiency in Dorchester County, America" I described the Success story of Dorchester County.

"Wonderful. So, if we want to automate the work flow in our Gram Panchayat what should we do Shankranna?" Hebbet Nanjamma asked.

"To introduce workflow automation in your Gram Panchayat, you need to study each task in detail. You need to foresee or visualize all the steps involved in a particular task. Experts help you automate the steps using software. When introducing new technology, we need people like you who are good project advisors. It is also important to examine the participation and inputs of all stakeholders. While designing and creating the desired workflow, it will certainly take

several iterations to get the workflow to the level where it meets the user's needs. Most importantly, this will significantly improve your citizen's interaction with your Gram Panchayat." I spoke.

### **11.7. You have a database; how do you protect it?**

"Shankranna, I have a doubt. Now the records of our Gram Panchayat transaction records are safe in almirahs. If we implement workflow automation, how we can keep safe such documents?" Simple Sudarshan asked.

"Sudarshan, your suspicion is natural. Once you implement workflow automation in your Gram Panchayat, a lot of transactions will happen with your Gram Panchayat. This transaction uses digital forms to store and inventory information. So, now you also have a rich database containing your citizen information. Transactions take place between your village panchayat and multiple stakeholders such as citizens, businesses, government departments and employees. This information is confidential. Because it contains sensitive information like your citizen's land purchase certificates, business licenses, receipts and citizen's personal information. This huge amount of information is a huge responsibility for your Gram Panchayat. Information cannot be lost or destroyed, and most importantly citizens' information cannot be tampered with."

"Like you said, when information is recorded on paper, you can make multiple copies of the document. But when the information is on the computer, how do you ensure its security? There are chances that the computer will stop working or some people can hack the system to extract information and play tricks."

"So how do you ensure that your citizens' information receives the highest level of protection?"

"We have the answer to all these doubts of yours. In the next chapter of the book, we will learn how all transactions in the workflow can be secured using blockchain technology. Blockchain technology has a high level of cryptographic technology so that the information on

your computers is immutable. Blockchain technology promotes accountability and transparency in your village panchayat” I explained.

“Your journey as Digital Gandhi is adding so much value to your Gram Panchayat. We are on the verge of bringing almost complete digital transformation to your Gram Panchayat under your leadership. So, let's look forward to what blockchain technology means,” I concluded my long speech.

The audience had listened in silence!

