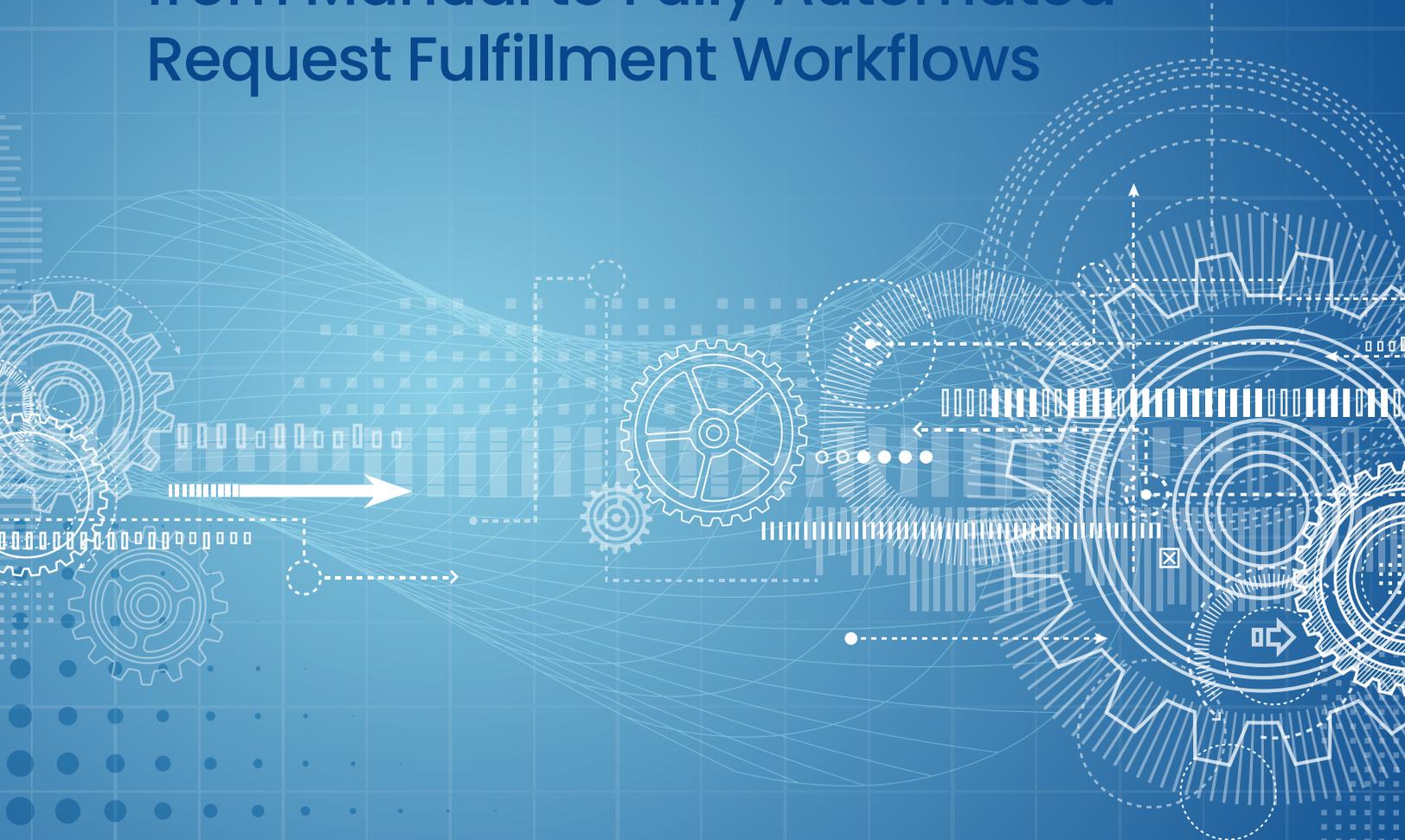# Business Process Nirvana

How to Navigate the Journey from Manual to Fully Automated Request Fulfillment Workflows

KINETICDATA

Table of Contents

About Kinetic Data

Kinetic Data provides workflow automation software to the public sector and large enterprises. We make it easy for agencies and organizations to integrate with their existing systems and automate complex processes. Our solutions are built for mission-critical applications, and our team has more than 20 years of experience in delivering successful projects.
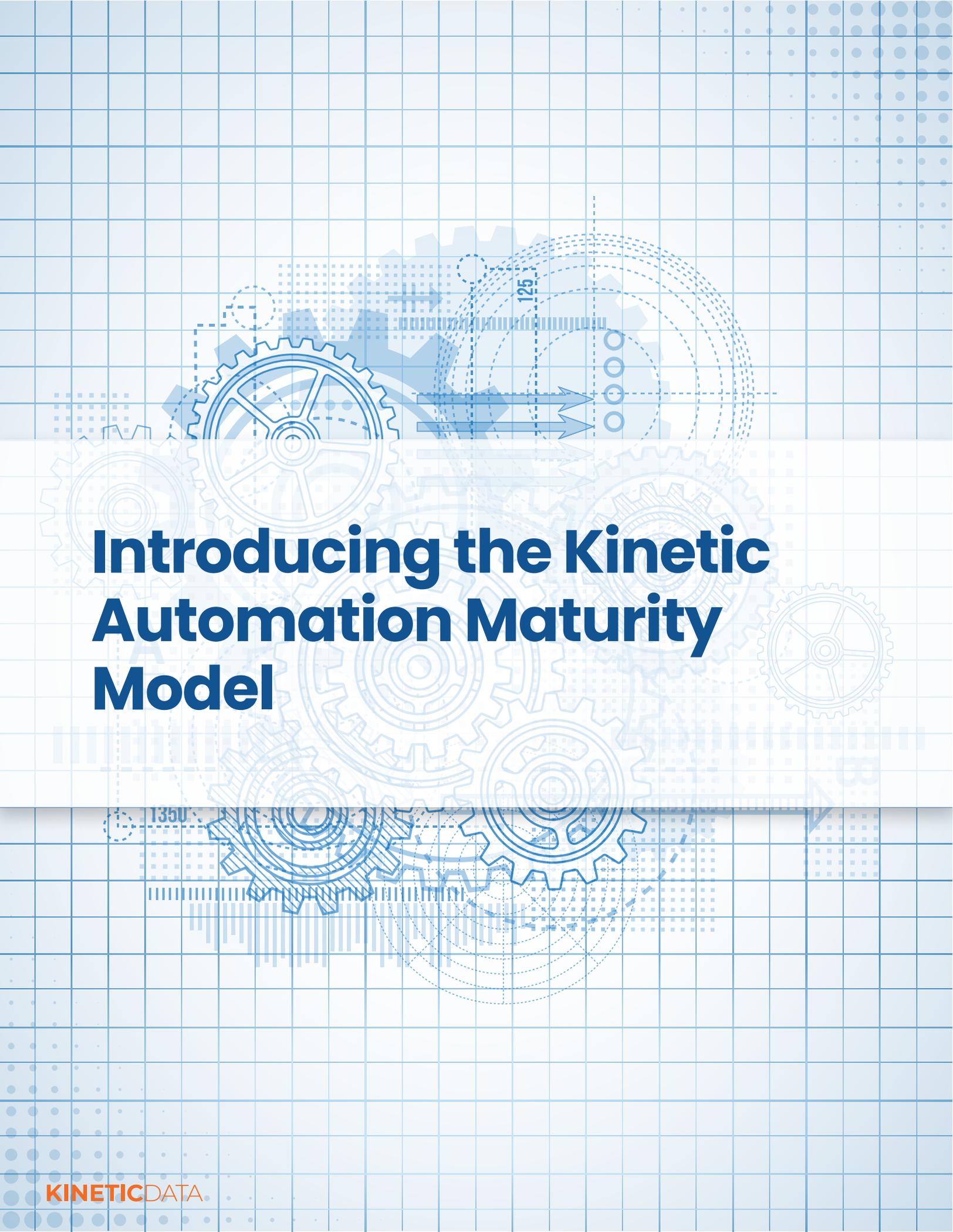
Introducing the Kinetic Automation Maturity Model

Introducing the Kinetic Automation Maturity Model

A methodology for workflow automation with a goal to identify which business processes are ripe for digital transformation improvements.

Ralph Waldo Emerson famously said, "Life is a journey, not a destination." He could just as well have been referring to business process automation. At Kinetic Data, we've seen hundreds of leading companies and organizations struggle with the concepts of workflow automation applied to their particular environment. What follows is the Kinetic Automation Maturity Model(sm), which defines the six stages business processes must be migrated through on the journey from manual to fully automated workflows.

Business Process Automation Overview

1. All business processes start with a request (e.g., a customer places an order; an employee submits an IT support ticket; an executive asks for a report; etc.) and ends with fulfillment. Redesigning workflows to replace manual, human steps with digital, machine-executed tasks can provide massive time and cost savings to enterprises.

2. Business processes targeted for improvement generate such results because of iteration. The spectrum of iteration ranges from fully manual to complete automation of workflows. All iterative workflows have the fundamental goal of improving productivity, lowering completion time, and ultimately optimizing the quality of fulfillment while freeing resources for meaningful work outcomes.

3. Even partial business process flow automation improves productivity and outcomes. Not every process needs full automation. It may be that 20% automation yields the maximum efficiency. But when determined as a process candidate, full workflow automation results in much more dramatic savings.

4. The Kinetic Automation Maturity Model (KAMM(sm)) details the steps in this process. Every business process within your organization is at one of these phases. Knowing or learning which processes are ripe for increasing automation will result in focused efforts on the highest impact activities to move your organization forward.

By increasing your business process automation maturity level, you can get more work done faster, with greater accuracy, compliance, and agility.

The KAMM Framework

Here's what the KAMM looks like. It's a six-step journey that transforms business processes from completely manual to fully automated. In that migration, average process costs are reduced by two orders of magnitude, while request fulfillment time drops from a week or more to virtually instantaneous.

Not every business process is a candidate for full automation. Due to considerations around complexity, technology, or frequency, some processes will be best left at intermediate stages in this model.

The goal in using the KAMM then is not to fully automate every request fulfillment workflow, but rather to migrate every business process to the stage where it is as automated as practical. Doing so will minimize fulfillment time and cost across your organization while increasing user satisfaction, improving process visibility, and maximizing fulfillment accuracy.

KINETICDATA | The Kinetic Automation Maturity Model (KAMM℠)

The notion that business processes are either manual or automated is overly simplistic in today's environment. This model shows a real, time-tested progression of workflow processes from fully manual to outright automation nirvana.

STAGE OF AUTOMATION	INTERNAL COST / PROCESS	TYPICAL DURATION	
S1: R -> U	$30.00	Week(s)	HUMAN BRAINPOWER
S2: R -> F	$15.00	Days to Week(s)	
S3: R -> A -> F	$10.00	Days to Week(s)	
S4: R -> A -> F -> X	$5.00	Hours to Days	MACHINE EXECUTION
S5: R -> A -> X	$1.00	Minutes to Hours	
S6: R -> X	$0.30	Moments	

SLOWER / LESS VISIBILITY · FASTER / BETTER ANALYTICS

As business processes are taken from initial stages of automation to more mature stages, total cost and time to fulfillment completion decline while visibility and insights increase. A win-win for the organization.

KEY
R = Request   A = Approval
U = Unstructured   X = Execution (by machine)
F = Fulfillment

S1: R › U

This is an unstructured, unmanaged process. It provides no visibility to the requester and is manually fulfilled. For example: a user, customer, or partner submits a request ("R") through a form or by sending an email. On the other end, a human decides what to do with that unstructured ("U") request and then must determine how to handle and how to complete.

Based on research from Forrester, Gartner and other sources, the average cost of a manual process is pegged at about $30.

S2: R › F

When an organization implements a proper system such as Kinetic Data software and starts with the most basic step toward automation, the process becomes structured and managed.
Although fulfillment ("F") is still manual, at this stage the request would get assigned to a specific team. It would naturally have an SLA that is enforced. If it wasn't fulfilled within three days, they would get a reminder. If it's still not fulfilled three days after that, the request would get escalated. The requester can check on and view the current status of the request at any time.

This prevents any requests from falling through the cracks or ending up in limbo. Adding structure, management, and visibility cuts the cost approximately in half.

S3: R › A › F

At this stage, some steps in the process are automatically completed ahead of time. For example, a support ticket is created and the request is automatically routed to the correct area for approval ("A") based on type, so fulfillment can be more effective and completed in fewer steps.

In the previous stage (S2), the individual doing the fulfillment needed to know the complete process and mentally keep track of all the steps. In this stage, the next step is taken to build and automate some steps in the process (through a workflow orchestration system such as the Kinetic Platform), taking manual steps out of fulfillment. That further reduces the cost to fulfill the request.

S4: R › A › F › X

In the previous stage, the request was approved, then fulfilled by a person "swivel-chairing" into a different system to complete a task. At this stage (S4), that individual can do everything in the Kinetic Platform, which will then automatically complete the action in the other system. Eliminating the swivel chair reduces the fulfillment cost to $5.

The "X" in this case is execution. It may be an API call or updating a database record, but in any case, the action is completed in the Kinetic Platform.

Note the horizontal dashed line in the KAMM diagram. Above that line, fulfillment requires a human brain process; a human is figuring out what to do. Below that line, the system has stored the definition and map of the process, so it is moving through the process steps automatically rather than relying on a human brain.

S5: R › A › X

At this stage, there's no need for a human to do anything except possibly approve the request under certain circumstances. The process starts when a request is submitted. The system checks to see if approval is required, and if it is, a request is sent to the predefined individual for approval. Otherwise, the system just proceeds through the steps in the fulfillment process.

The system now has enough information about what is needed in the request itself. The process is well enough established for the system to reliably execute it.

S6: R › X

The final stage is request to execute. The process is now fully automated. It's common enough that no approval is needed. Using the Kinetic Platform, the organization has optimized out steps that just don't need to happen at all.

KAMM Steps and Cost Savings

At the first stage, industry analysts such as Forrester and Gartner have pegged the average cost of an unstructured process at $29–$30. This essentially means the requester is typing into a free text field or sending an email describing what they want.

Simply structuring and managing the process—providing the user with predefined fields to fill out, drop-down values, etc., instead of free text and assuring that process steps get completed in a timely manner—cuts the fulfillment cost in half.

Removing Humans from the Equation

Taking the human out of the fulfillment process (e.g., eliminating the swivel chair) reduces the cost by another third. And then below the dashed line where humans are taken out of the loop completely, the process is optimized by eliminating unnecessary steps; the workflow is fully automated, it provides complete status visibility, and costs drop dramatically.

As the KAMM model shows, process automation isn't simply a matter of flipping a switch. It's an iterative workflow process. In parallel, organizations move individual processes through this process from unstructured and unmanaged to fully automated, while also repeating this exercise with more and more processes.

Automation's Five Areas of Impact
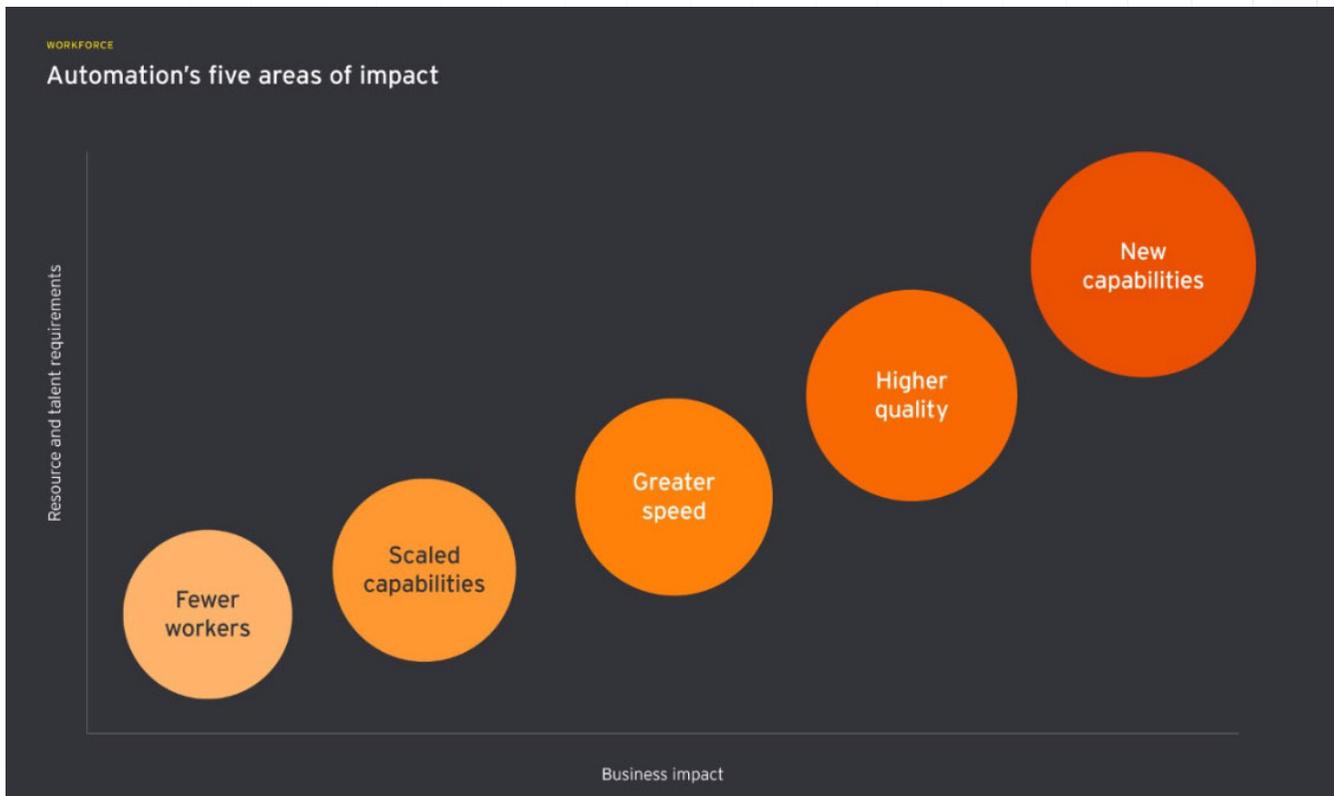
Source: Ernst & Young

This graphic from Ernst & Young illustrates how organizations benefit beyond cost and time savings as they move to progressively more advanced stages of process automation.

The Remarkable Benefits of Process Automation

Optimizing and automating processes eliminates costs and saves time.

The Real Cost of Manual Processes

Virtually no one will argue that process automation doesn't provide a number of valuable benefits. Reasonable people may, however, question the specific costs used in the KAMM framework.

Do manual processes really cost that much? And can automation really produce savings of that magnitude? To answer those questions, we first need to understand the tangible cost of a manual process to appreciate process automation holistically.

We started with a figure of $30 for a manual process, a number commonly used by industry analysts like Gartner and Forrester as well as online sources. But what exactly goes into that cost? And how are costs reduced or eliminated as processes become structured, managed, optimized and ultimately automated? Let's take a closer look.

The Sources of Process Cost

Inefficient, manual processes are costly. According to Entreprenuer.com, an IDC study found that inefficiency costs companies anywhere from 20% to 30% of their revenue every year. That seems really high. But even if that figure is off by 2X, 3X or as much as 5X, the costs of process inefficiency are substantial.

There's no question that manual processes impose costs. But what exactly makes process inefficiency so expensive? Here are 11 common elements of process costs:

1. **Direct time:** This is usually one of the easier costs to measure and quantify. It's the cost of the time and labor directly required to complete a manual process or fulfill a request.

2. **Number of employees involved:** Closely related to direct time, this is a broader measure of the labor cost of all employees who have to "touch" a process between its beginning and end.

3. **Indirect time:** Though more difficult to measure, this is potentially much more expensive than the direct cost of a manual process. This is the delay, the wait time, and the lost productivity associated with the full duration of the process, from request through fulfillment. For example, if an employee's laptop crashes and they request a new one, what is the cost of their lost productivity while waiting? If it's a lawyer who can't put in billable hours on a case or a technology consultant who can't be working with clients, this cost can be quite significant.

4. **Errors:** Manual processes are error-prone. The costs of errors can show up in all sorts of ways, from the cost of rework (e.g., doing parts of the process over because they were done wrong the first time), returns (e.g., if the wrong product was delivered), and mistakes (e.g., lost sales— or worse, lost customers).

5. **Inaccurate data:** Manual processes are slower and less precise than automated tasks. This can cause data to be out of date or just plain wrong. At the least, this can lead to wasted time

while decision makers double-check or seek to verify the numbers. At worst, it can lead to bad decision making.

6. **Finger pointing:** As Milton Friedman famously said, "When everybody owns something, nobody owns it." He was talking economics, but the same principle applies to processes. If every step, every task in a fulfillment process isn't clearly assigned to—and the responsibility of—a specific individual, it's easy for people to point fingers when something goes wrong.

7. **Lack of visibility:** Manual processes are opaque. There's no visibility into macro data like the average time to complete a process or how often a specific type of request is made. Even specific actions such as when a task was completed, who did it, or who (if anyone) approved it is often not clear either. That not only means a lack of data for decision making but also an increased risk of fraud by an outside vendor or even an employee.

8. **Compliance risk:** Related to but separate from that lack of visibility, manual processes are also more difficult to track and audit. In regulated industries and other situations, this can lead to financial penalties and fines being levied.

9. **Siloed information:** When completing a manual process or fulfilling a request involves multiple departments, each is often using its own applications. The lack of integration, and the visibility it provides, means one group can end up waiting on another, unaware of the status of certain tasks. It also increases the risk of mistakes.

10. **Poor employee experience:** When an employee has to wait a long time for a request to be fulfilled, or it's fulfilled incorrectly, or worst of all, it "falls through the cracks" and doesn't get fulfilled at all, it creates a bad experience. In addition to lost productivity, it can negatively impact engagement and retention, not to mention corporate image. There are copious process-related horror stories on Glassdoor and Reddit.

11. **Poor customer experience:** As damaging as delays and mistakes can be to employee morale for internal requests, they are worse when they impact your customers. Whether the impact is indirect (the customer has to wait due to inefficient internal processes) or direct (wrong product, invoice errors, or customer service frustrations), slow and error-prone manual processes can lead to lost sales, dissatisfied customers, and reduced competitiveness.

Process Automation Benefits

Optimizing and automating processes eliminates the costs above and saves time. Not only are employees more productive because they are doing more value-added work rather than simple fulfillment tasks, but the increased speed and accuracy makes "customers," whether internal or external, happier. Here are 12 more specific benefits of process automation.

1. **Increased productivity:** With automated processes, employees spend less time working on manual fulfillment tasks or waiting (with attendant down time) for requests to be fulfilled.

2. **Reduced errors:** Automation improves accuracy, so rework is eliminated and less time is spent dealing with other negative outcomes from bad data.

3. **Clear accountability:** When processes are optimized and automated, there's less human involvement required. But where humans are involved, it's clear who is responsible for what.

4. **Improved department collaboration:** Having clear responsibility for each task reduces finger-pointing. And integrating systems used in different functions makes it easier for the people in those groups to work together as well.

5. **More efficient resource allocation:** When employees are freed from manual fulfillment tasks, they can devote more time to higher value-added activities.

6. **Better customer experience:** Internal and external customers alike benefit from consistently faster and more accurate fulfillment, leading to higher employee and customer satisfaction and retention.

7. **Greater visibility:** Automated processes simplify and improve data collection. Leadership has better access to high-level performance metrics and the ability to spot bottlenecks, while everyone involved can check the status of a fulfillment process at any time.

8. **More accurate, data-driven insights:** With access to more data and greater confidence in its accuracy, leaders are able to make better-informed decisions, faster.

9. **Elimination of "swivel chair integration":** Integrating systems and automating processes eliminates the need for employees to copy and paste information between systems or into spreadsheets, which saves time, reduces errors, and can potentially reduce software licensing costs.

10. **Increased agility:** Business processes aren't "set and forget." Any number of changes can mean even well-optimized processes need to be revised: new products, changes to an organization's IT infrastructure, mergers and acquisitions, regulatory changes, and more. Automated processes are easier to iterate and modify, enabling organizations to be more responsive, flexible, and agile.

11. **Improved compliance:** Automated processes produce data at every step and are fully auditable, better enabling organizations to meet legal and regulatory requirements, as well as to prove their compliance.

12. **Ability to scale:** Process automation eliminates the time and capacity limitations of manual processes, enabling enterprises to much more easily scale up fulfillment as volume increases.

Assessing what's possible

Along with traditional cost optimization metrics such as net savings, ROI and payback period, an automation business case should assess the impact the opportunity will have on multiple value drivers, including:

Customer
▸ Customer satisfaction
▸ Self-service enablement

Employee
▸ Employee productivity
▸ Employee satisfaction

Management
▸ Reduced risk
▸ Increased compliance
▸ Business agility
▸ Business insights

Corporation
▸ Cost optimization
▸ Revenue and growth optimization
▸ Brand reputation

Automation opportunities can be prioritized based on the relative importance of these value drivers to strategic objectives.

Source: Ernst & Young

From their research, Ernst & Young also notes that beyond direct financial measures, automation has a positive impact on a number of other value drivers across the organization.

So...Why Hasn't Every Task Been Automated?

Given the significant and undeniable costs of manual processes, as well as the compelling benefits of process automation, why do so many organizations still use so many manual processes? There are a number of reasons. Here are the four most common obstacles to process automation:

1. **Integration limitations:** It's challenging to integrate modern applications with the wide range of technologies often found in larger enterprises. This can include everything from legacy systems to external data sites, portals, scanners and other data input devices, sensors, and mobile apps. The complications of integration can inhibit the implementation of process automation.

2. **Exception management:** Business processes often have numerous exception conditions which further complicate efforts to automate. Mapping these exceptions can turn a simple flow chart into something that looks more like a plate of spaghetti.

3. **IT constraints:** The typical enterprise now has hundreds of applications in its technology infrastructure. IT teams are stretched with everything from implementation and upgrades to support, security, and strategy touching every corner of the business. They simply can't execute on every single project request.

4. **Inertia and complacency:** A final reason may be the most common of all. When everyone is already beyond busy, it's easy to take an "if it's not broken, why fix it?" approach to process management. This is especially true for cross-departmental processes, where the effort of collaboration across functions may not seem worthwhile; or to put it more colloquially, like "the juice isn't worth the squeeze."

The Solution

Desmond Tutu famously said, "there is only one way to eat an elephant: a bite at a time." Given the challenges noted above, the same is true for process automation.

Rather than try to completely automate fully (or mostly) manual processes in a single large and painful step, make the transition incrementally, as detailed in the KAMM framework.

The first step is simply adding structure and management to a process. Apply definitions and boundaries. Replace free-text fields on forms with pre-defined drop-down lists. Add automated task reminders. Even these small changes can cut manual process costs in half.

Then continue to iterate the automation. Add automatic routing of requests based on type. Connect systems to eliminate "swivel chair integration." Optimize the process to get rid of unnecessary steps. Keep in mind that process automation is implemented on two parallel tracks:

- changing human actions or behaviors

- making technology changes

It's much easier on both fronts to make a series of small changes rather than one giant leap. Consider implementing supporting technology like the Kinetic Platform that simplifies integration while empowering business users to build their own automated workflows, reducing the burden on IT.

Taking small steps that lead to quick wins can build momentum for change. This approach lets you transition processes from manual to automated in a series of steps, reducing disruption and increasing the odds of success.

And as shown by the costs and benefits of process automation, the end result of these incremental steps can have a huge organizational impact in terms of lower costs, higher productivity, and increased overall customer satisfaction.

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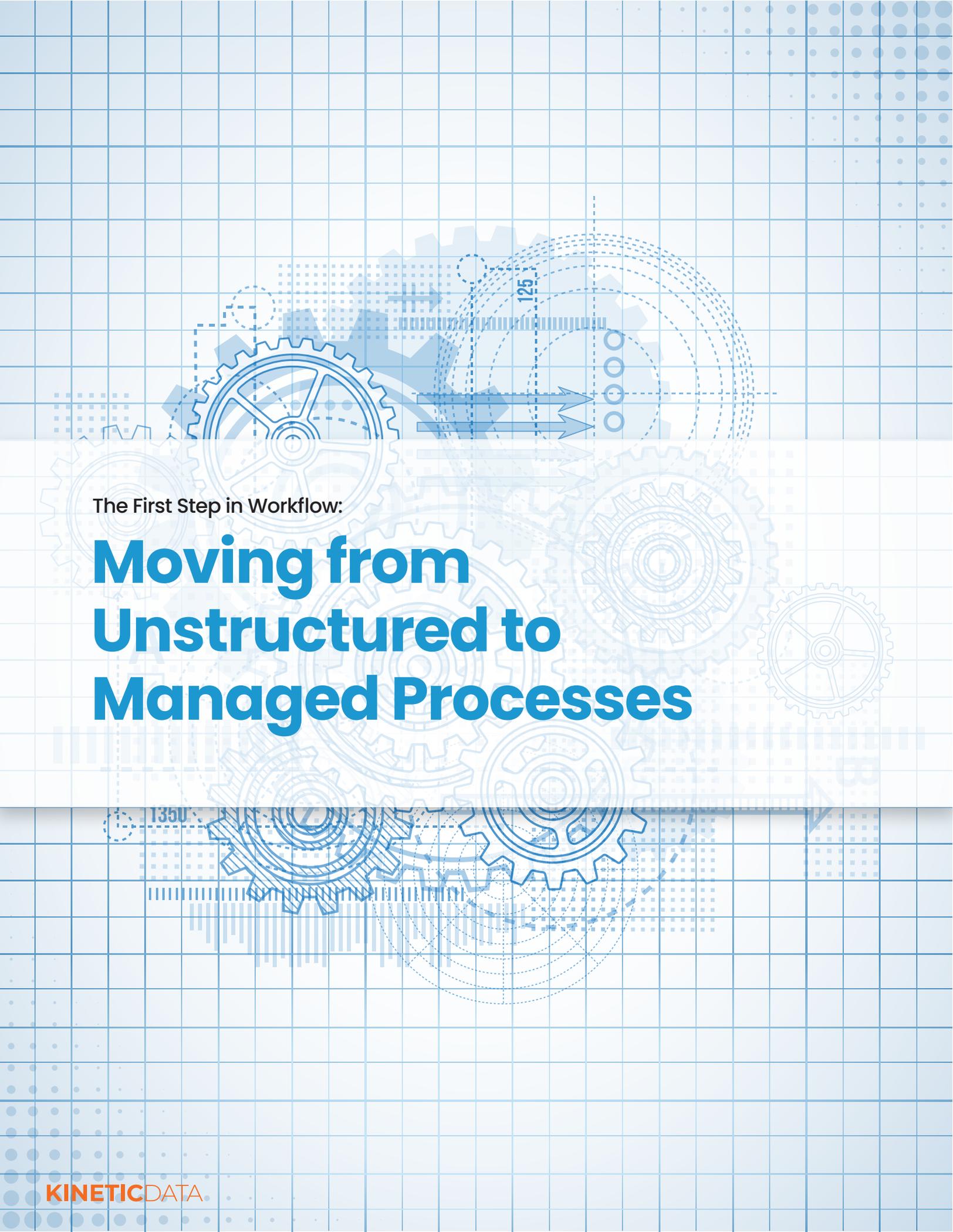
The First Step in Workflow:

Moving from Unstructured to Managed Processes

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Moving from Unstructured to Managed Processes

On the journey of redesigning business processes to go from manual to fully automated, the first step is transitioning unstructured, unmanaged manual processes to procedures that have some structure and management behind them. This accelerates fulfillment while eliminating wasteful, frustrating back-and-forth communications.

This section defines KAMM stage one and stage two processes; the benefits of redesigning stage one processes; and the requirements for making this transition.

What is Stage 1 of KAMM?

Stage 1 is where most new processes begin. In startup companies, virtually every business process is at Stage 1 initially. In established companies, Stage 1 processes often emerge when there are changes in the enterprise: a new product or service launch, a merger or acquisition, a new strategic partnership, a change in the organizational structure, or other such moves.

Stage 1 provides a basic framework for fulfilling some type of request: a new hire, a new piece of equipment, new software, some type of internal services, or something else.

STAGE 1:
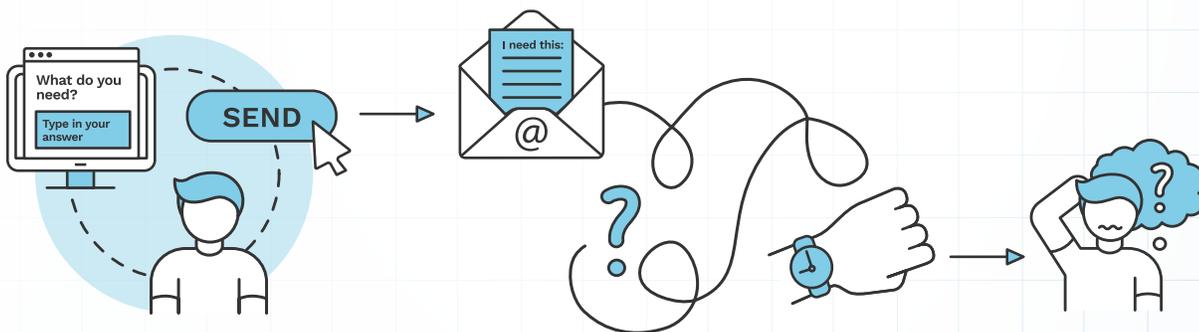
Typically, an organization will create a simple web-based form or perhaps even just a generic email box. An employee (or a customer, or a supplier...) types a description of their issue into an email message or the web form, clicks a "Submit" button, and then waits for someone to (and hopes someone will) deal with it.

What the organization has, in effect, is a wide open funnel through which they can take requests. For example, an employee who just received new computer hardware may report that an item was damaged when they received it, or there were items missing, or they received the wrong items (e.g., a monitor and a keyboard, when they wanted two monitors). Any variety of issues may be reported.

Frustrations of Stage 1 Processes

Though Stage 1 processes can "get the job done," they typically result in a number of frustrations for both requesters and fulfillers, as well as wasting time and money for the organization.

One common frustration is excessive communication. To use one of the examples above, an employee may request two large-screen monitors to connect to their laptop but instead receive a monitor and a keyboard. They type the details of their issue into an online form; the submitted information gets sent to an email inbox; and then the person assigned the issue may have to respond by asking for the order number.

The employee then responds to that email with what they believe to be the order number...but it's actually the shipping number. So there is another round of messages sent back and forth. The entire sequence of communications may take a couple of days. Often, people get annoyed, and decide "Forget it; too much energy."

But those back-and-forth messages about clarification of what data is required in order to resolve the issue happen over and over again. That becomes a frustration for the fullfillers, because this is what they do all day long. It's not an ideal experience for either the requester or the fulfiller—but it is typical.

A second problem with Stage 1 processes is that experienced fulfillers typically have these processes memorized. They know they need to match the complaint to the order number, validate the issue, send the requester an RMA number along with instructions, etc.. At a minimum, these fulfillment steps should be written down so that any employee on the fulfillment team can resolve this type of issue. But for Stage 1 processes, there's frequently not even formal documentation.

A third frustration of Stage 1 processes is their lack of visibility. The requester has no idea who is working on the issue; if anyone is actually working on the issue; or when their issue may be resolved. Management has no visibility into how frequently this type of issue occurs, or how long it typically takes to resolve such problems.

A final difficulty with Stage 1 processes is dropped issues, or confusion during handoffs. If there is more than one person involved in the fulfillment of a request, that can be a recipe for trouble. Whose responsibility is it to tell the requester that the issue has been resolved—the person who received the original request, or the individual it gets handed off to? This situation is even more challenging when there are multiple functions involved in fulfillment (e.g., IT and finance) rather than just departmental coworkers.

Stage 1 processes mean pain for the requester, the fulfiller, and the broader organization.

Why Organizations Have Stage 1 Processes

There are many reasons why a business enterprise, government agency, or educational institution may have some Stage 1 processes in place. In some cases, it even makes sense to keep these at Stage 1. In many more situations, however, there are significant benefits to moving such processes to Stage 2. Here are several reasons why Stage 1 processes may exist.

- **New processes:** As noted above, virtually all processes start out at Stage 1. It's helpful to develop some experience and standards around Stage 1 processes before attempting to move them forward.

- **Legacy operations:** An organization that makes efforts to optimize and automate common business processes may still have some Stage 1 processes in place for supporting older, legacy products. The volume isn't high enough or the potential return substantial enough to justify modifying those workflows.

- **Non-core focus:** Procedures that are necessary but infrequent and not part of core operations are often manual, Stage 1 processes. For example, the IRS has automated systems in place for processing tax returns and sending out refunds because those are core parts of its mission. But the organization likely used many Stage 1 processes for managing the distribution of COVID-19 relief payments (particularly for taxpayers who don't file their returns online), because those were an unusual occurrence.

- **Technology laggards:** Some organizations simply aren't aggressive about adopting automation technology, particularly if there's no competitive market pressure to do so. They may take an "if it isn't broken, don't try to fix it" approach to certain operational procedures.

- **Low volume:** For items and services with low, intermittent demand, automation may be seen as not worth the effort. For example, an auto parts distributor may have highly automated processes in place for common parts, but still use Stage 1 one processes for rare special orders, such as a tail light assembly for a 1957 Studebaker Golden Hawk.

> **The potential to automate tasks differs by more than 2X across sectors and up to 7X between functions as varied as finance (where 80% of tasks hold potential for automation) and learning and development (with only 12% of work potentially subject to automation)... We found that every sector can transform roughly a third of its work.**
>
> ~ Ernst & Young

- **Exceptions and customizations:** An organization may have automated processes in place for shipping standard products but still use Stage 1 processes when the requester wants something modified or out of the ordinary.

- **Non-time-sensitive issues:** Processes may be left at Stage 1 if they are related to "no rush" types of requests where the requester has low expectations and is perfectly satisfied with not getting an answer back quickly.

What is Stage 2 of KAMM?

At Stage 2, some degree of management and structure is applied to processes. Instead of simply presenting the requester with an open text field on a web form, the fulfilling organization may ask the requester to select from a list of five, 10 or some number of predefined services.

For each service, the form will then ask the user to provide specific information needed for that request.
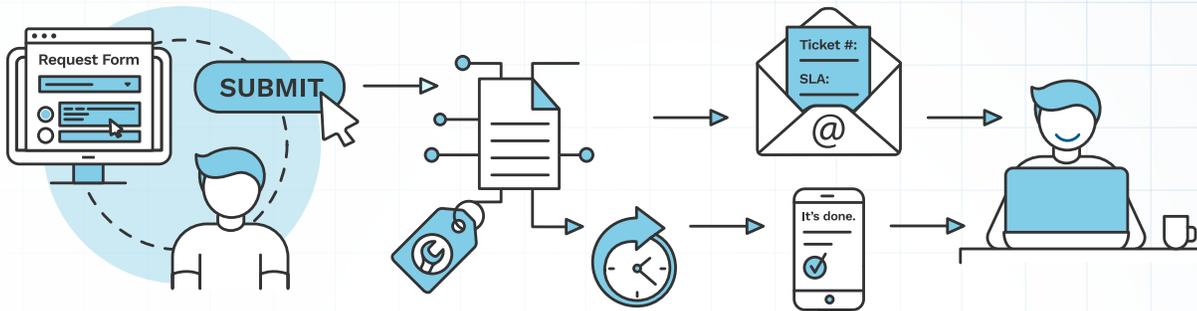
STAGE 2:

Returning to the example of an employee receiving a monitor and a keyboard when they had requested two monitors, the web form may offer "Incorrect order" as one issue option. If the employee checks that box, the form will then ask for information such as the order number, what was expected, and what was actually received.

So, when the form responses are sent to the fulfiller, that person now at least has the right order number, what the person expected, and what actually happened — eliminating several back-and-forth emails.

At Stage 2, common types of requests are predefined rather than wide open. The system asks for the right information up front, with validation (e.g., order numbers must begin with an "N" and be seven characters long; any other type of input will be flagged as an error).

Having complete and correct information right away helps the fulfillment person to be more efficient, and have a better work experience. It also enables the organization to develop SLAs around these common services: an incorrect order will be resolved within three days, billing or chargeback errors within four hours, etc..

> **One insurance firm used software to automate subrogation claims processing and reduced time per claim from 10.0 minutes to 3.5 minutes, increasing the volume of claims processed per week by a third.**
>
> ~ McKinsey

Benefits of Moving from Stage 1 to Stage 2

For common processes, there are several benefits for moving from Stage 1 to Stage 2. Depending upon the frequency and value of the process, these benefits can be quite significant. Among these benefits are:

- **Improved visibility:** In a Stage 1 process, the requester sends an email or submits a form, and then...waits. They have no idea if their issue is being worked, who is working it, or what the status is. At Stage 2, requesters have visibility into the process, and managers gain visibility into the frequency of each type of request, typical resolution time, requester satisfaction scores, and other performance metrics.

- **Greater reliability:** With Stage 1 processes, there is always some risk of a request being "dropped." It may not have reached the right person. It may have been set aside to work later, then forgotten about. It may have required multiple individuals to fulfill it, and gotten dropped during a handoff. The requester has no idea this has happened until a week, or two, or three goes by...and there's still no resolution. By contrast, at Stage 2, the problem is assigned a ticket number, an SLA, and the requester can check on progress at any time.

- **More accurate ticket assignment:** Because issues are predefined rather than wide open (and open to interpretation), tickets get routed to the right team, with the right information, the first time. This makes problem resolution faster and more accurate.

- **Improved user experience:** Less typing, fewer back-and-forth emails, faster and more accurate problem resolution, and increased visibility add up to a better experience for requesters.

- **Improved fulfiller experience:** Getting accurate, complete information right away, combined with receiving work that matches their skill set, improves life for those on the fulfillment end. There's less frustration and confusion, less stopping and starting, and more consistent, predictable work. Network experts don't get assigned mainframe questions, or vice versa. They have happier customers, so they receive higher performance scores.

- **Increased efficiency:** Issues get resolved faster and more accurately, reducing wasted time on back-and-forth communications or worse, avoidable downtime. Management has visibility into process metrics, enabling them to prioritize improving the right processes and eliminating bottlenecks.

- **Modernized, rationalized processes:** Managing and structuring processes enables them to be improved, eliminating wasted steps. Rationalizing processes means they are performed uniformly and consistently; there are no longer multiple methods being used by different people to resolve the same type of problem. Confusion is reduced or removed.

- **Time savings:** Back-and-forth communications are eliminated. Fulfillers can resolve problems or fulfill requests more quickly. Requesters spend less time waiting for issues to be resolved. Processes are accelerated, enabling everyone involved to be more productive.

- **Cost savings:** In the KAMM framework, the average fulfillment cost at Stage 2 is half that at Stage 1. But depending on the nature of the process, the ROI can be much greater: 4X, 6X, even 10X, with hundreds of hours saved per month. Reducing costs frees up budget dollars to be spent elsewhere.

- **Higher confidence:** When issues are resolved accurately, quickly, and consistently, users have greater confidence in the system. They are more likely to use the request system as designed rather than trying to work around it and causing disruption.

Taking the First Step in Process Automation

A Stage 1 process is unstructured and unmanaged. Requests may be submitted through a simple web form, an email address, or a paper form. This is where virtually all new processes start, and where some will remain if they are unusual, low-volume, or have intermittent and unpredictable demand.

Moving processes from Stage 1 to Stage 2 can provide significant time and cost savings, as well as improving the reliability of and visibility into process workflows. Even this first level of automation improves the experience for both those making requests and those fulfilling them, as well as benefiting the organization.

Processes are solid candidates for transitioning from Stage 1 to Stage 2 if they have reasonably high volumes or if there are legal or compliance considerations involved.

Making the transition from Stage 1 processes to Stage 2 requires some knowledge of their characteristics as well as defined fulfillment steps. The final piece is technology that provides client-side logic to assure the information submitted is valid.

Moving from Stage 1 to Stage 2 is just the first step in the KAMM framework for process automation. But this first step alone can provide valuable benefits and significant ROI.

This all sounds great, but how exactly does one transition a process from Stage 1 to Stage 2?
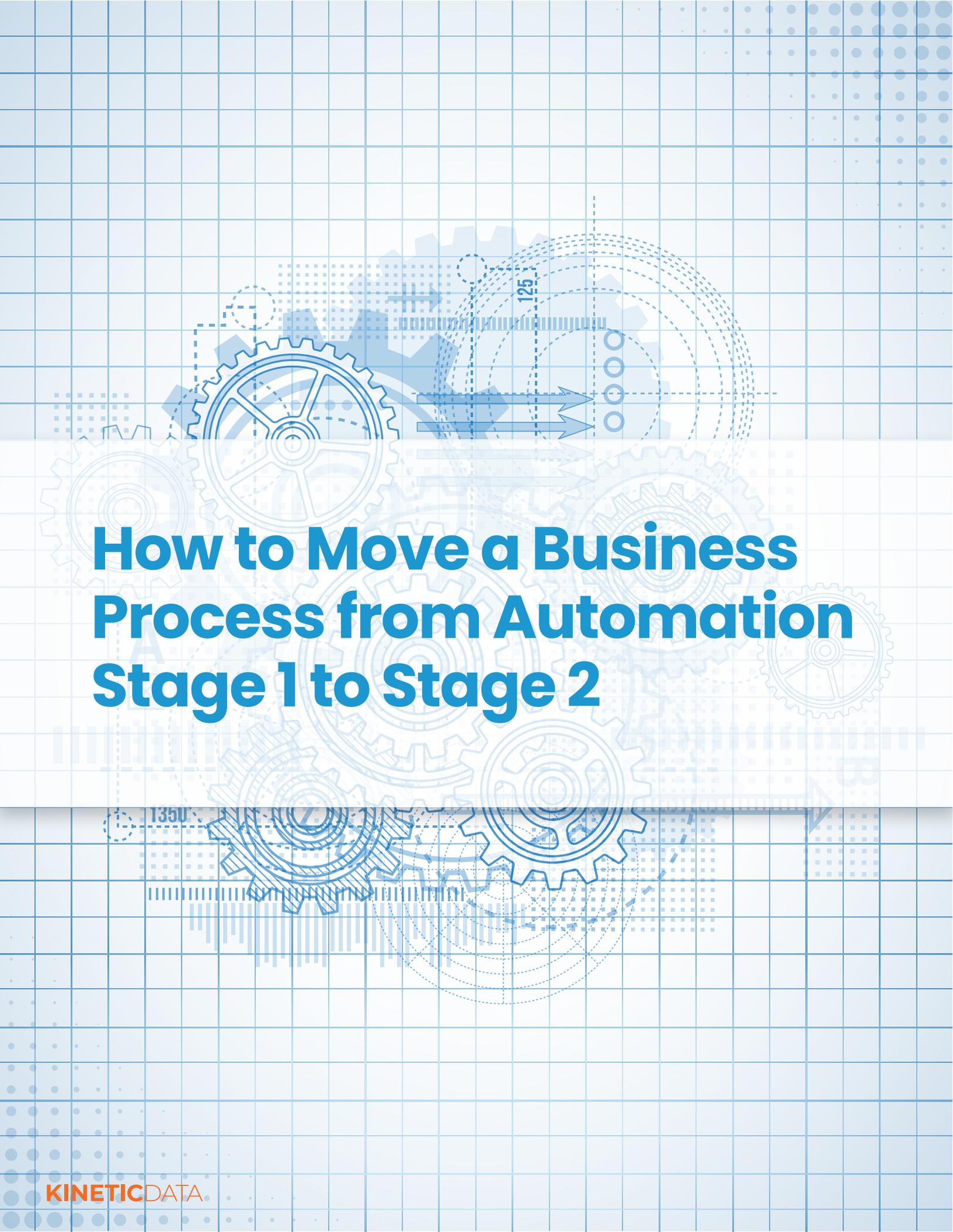
How to Move a Business Process from Automation Stage 1 to Stage 2

How to Move a Business Process from Automation Stage 1 to Stage 2

Transforming a manual business process to one that is structured and managed can cut the cost in half and reduce typical completion time from weeks to days, among several other benefits outlined above.

The requirements for a stage one process are simple. Strictly speaking, the only technology that's really required is an email inbox for request intake. And then the organization needs to communicate to its employees (or customers, suppliers, constituents, channel partners...whomever will be submitting requests), "Have questions? Email us here." That's one approach.

It's very common that organizations will create a web page or portal with a form that enables a requester to type in unstructured text, and then automatically sends the input to a defined email inbox.

STAGE 1:

Companies may have fairly impressive systems for handling that workflow. They may have an interface built in Remedy, ServiceNow, or another ITSM platform. But if all the system is doing is collecting unstructured text and forwarding it, that process is still stuck at stage one.

To move from stage one to stage two processes, an organization needs three elements:

- **Process intelligence,** which helps determine which processes are the best candidates for automation.

- **Process definition,** so that the organization isn't trying to automate poorly defined or inefficiently designed process workflows.

- **Client-side logic,** which assures that fulfillers will receive valid data enabling them to fulfill requests or resolve issues.

Process intelligence:

A common approach is for an organization to analyze its last 100, 1,000, or some number of unstructured requests to identify the most common problems: invoiced the wrong amount, shipped the wrong product, delivered the wrong quantity—whatever those problems may be.

The next step is to determine what information is needed in order to resolve each of those issues: order number, shipping number, expected items or quantity, actual items or quantity delivered, etc.. With this

information, the company can move from a form asking for unstructured text to one with a drop-down list of issues the user can select from, and fields for the information required for each request type.

Process definition:

Processes must be defined and documented before any type of automation can be applied. Which department and/or individuals should be assigned to each type of request? What information is needed? What is the process for resolving the problem or fulfilling the request? What information needs to be communicated back to the user, and when? Who (if anyone) needs to approve the request? What are thresholds for approval (e.g., any request over $100 needs to be approved by finance)?

Client-side logic:

The final requirement is to have the right technology in place—a system that enables the organization to build customizable or configurable front-end forms. Client-side logic checks for the validity of the input to each form field. For example, phone numbers need to have 10 digits. Order numbers always start with an X. If the input doesn't adhere to the rules, the system will display an error message and ask the user to re-enter the data for that field.

Field-level validation is a key requirement, so that when the form data is submitted to the fulfilling individual or department, it contains valid, quality information.

STAGE 2:
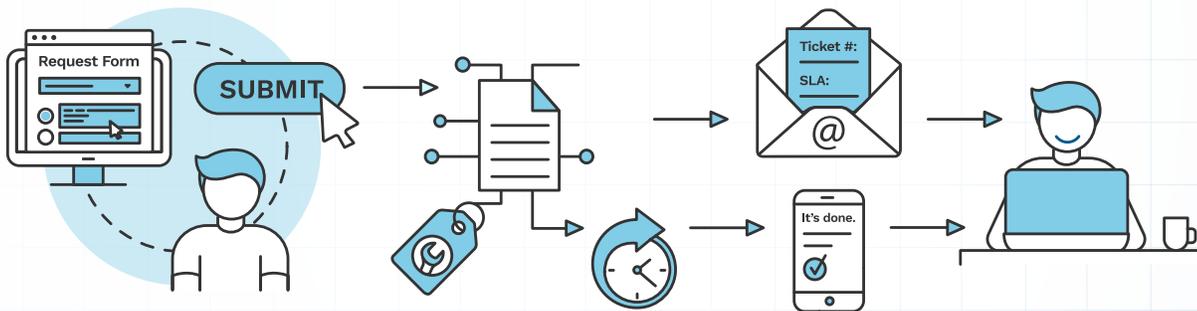
Once those three elements are in place, the best candidate processes can be transitioned to stage two. This is usually based on volume. However, even low-volume processes are candidates for stage two if they involve legal or compliance matters.

A Stage 1 to Stage 2 Example: DoD Form 2875

As noted above, Stage 1 processes often involve simple web-based forms and/or an email inbox. But many still involve paper forms. The requester fills out a paper form, submits it to a designated individual or drop box, and then...has no visibility as to what happens next or the status of the request. Those are typical characteristics of Stage 1 processes.

One paper form that will be familiar to anyone who works or does business with the U.S. Department of Defense (DoD) is Form 2875. This form is used by contractors, military personnel, civilian employees, or other qualified individuals to request access to specific DoD systems. The form can be downloaded online, and once completed, is typically faxed, mailed, or physically delivered to a specified location.

Since a separate Form 2875 must be submitted by each individual working on a project, a contractor may have to submit dozens or even hundreds of forms for a single program. There's no confirmation of receipt once a form is submitted, and getting a response can take anywhere from a couple of days to several weeks.

The individual responsible for approving the access may not want to approve the project. The form may get misrouted. There may be a data entry mistake on the form; for example, the account code or specified domain doesn't exist.

Any number of issues may cause approval to be delayed or rejected, requiring the requester to complete and submit a new form—starting the entire process over again. These paper forms don't have any validation or provide any visibility.

At Stage 2, a requester would fill out the Form 2872 online. Field-level validation enabled by client-side logic would prevent any errors or erroneous information from being submitted. The requester would get a confirmation of receipt, and then have visibility into the status of their access request. There may still be some sort of delay in approval, but at least the requester would know exactly where and with whom their request is "stuck."

> **In a recent US survey conducted by Ernst & Young LLP, more than half of the respondents confirmed that paper is used for 41% to 60% of business processes to capture ink signatures, complete workflow or store general information...Many organizations are finding ways to (automate) paper-based processes and are realizing significant returns through speed of processing, tighter controls, improved audit records, increased visibility, and enhanced data analytics and insights.**
>
> **~ McKinsey**

RECAP: Stage 1 to Stage 2

Going from Stage 1 to Stage 2 requires three elements:

- Process intelligence to help select the best processes to automate first.

- Process definition which describes how requests are handled and fulfilled.

- Client-side logic to validate data as is entered into an online form.

One common example of a stage one to stage two transition is to convert a static document-based process (paper or PDF) to one using active form logic for validation, routing, approval, and status tracking.

Next, we'll look at the subsequent stages of automation maturity and help you evaluate whether your organization is moving towards desired goals and flows.
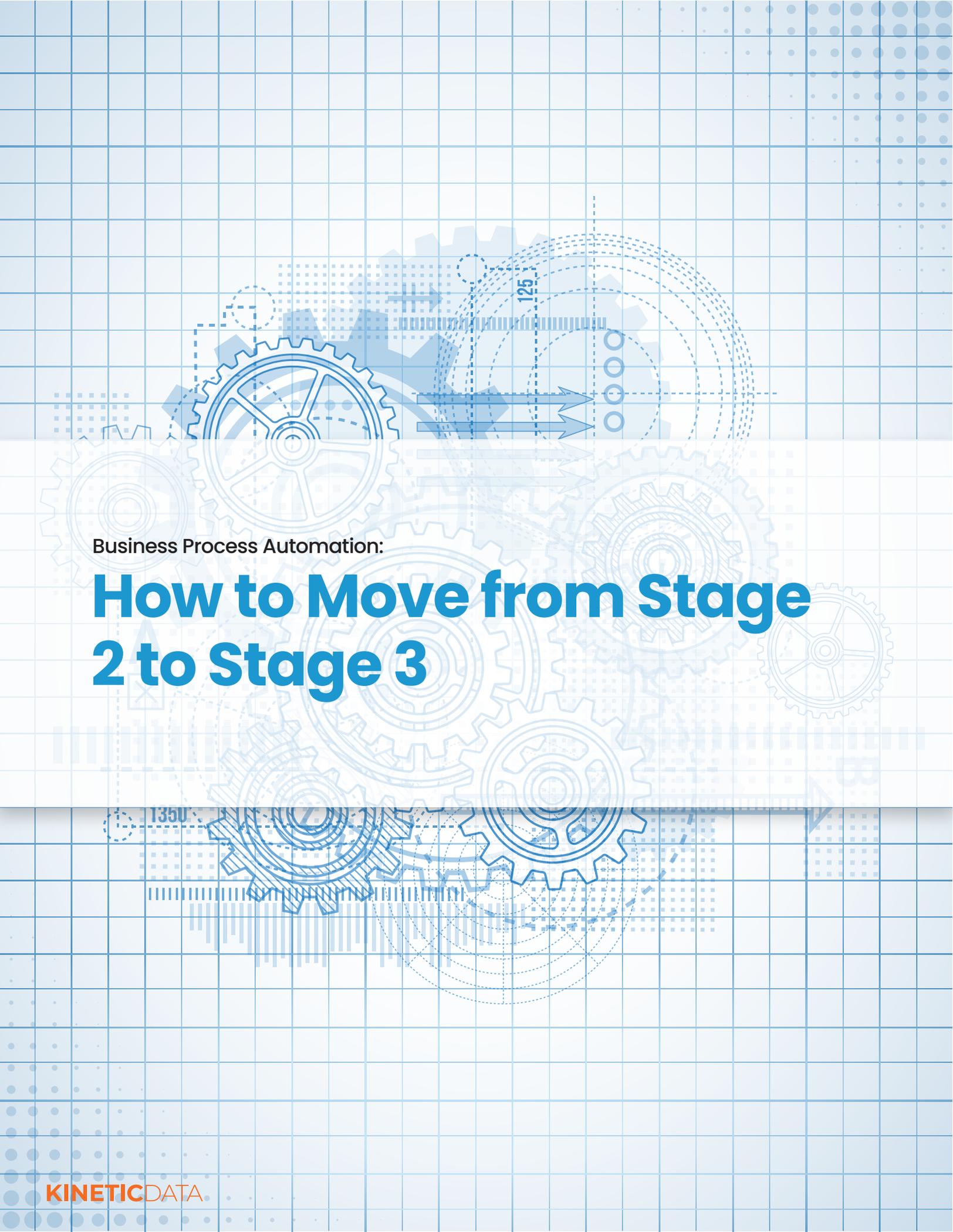
Business Process Automation:

How to Move from Stage 2 to Stage 3

Business Process Automation:

How to Move from Stage 2 to Stage 3

Workflow automation is the process of transforming manual processes to fully automated workflows and requires transitioning them through six stages, as illustrated in the KAMM framework.

The first step is to move processes from open-ended, manual task flows (Stage 1) to structured and managed processes. At Stage 2, fulfillment processes are still manual, but SLAs are applied. At Stage 3, specific steps start to be mapped out, taking fulfillment processes out of the "brain of the fulfiller" and enabling some steps to be automated.

Here's what Stage 3 processes look like; when and why you'd want to move processes from stage two to three; and how to accomplish that transition.

Frustrations of Stage 2 Processes

Though there is now a system in place, at Stage 2, all of the steps required for processing of fulfillment are still stored in the brain of the fulfiller. They know what the process is. The human is acting like an engine.

That works, but it requires a high level of training for an organization. If you want to modify your processes, you have to communicate to all the fulfillers.

That makes changing processes hard, and training new people to do fulfillment hard. It also creates significant risk; if a fulfiller leaves the organization, a great deal of valuable knowledge may walk out the door.

In addition, while Stage 2 processes provide more visibility than Stage 1, that visibility is still limited. It's difficult to see where steps may be missed, where errors may occur, and where bottlenecks are slowing process completion.

Why Organizations Have Stage 2 Processes

Organizations commonly have a lot of Stage 2 processes that should be moved to Stage 3. It's the Pareto Principle: (roughly) 20% of all the different types of requests are repetitive tasks that account for 80% of all requests submitted. These are the prime candidates for further workflow automation.

On the other hand, it makes sense to keep low-volume types of requests that don't have compliance impacts at Stage 2. It may not be worth the effort to optimize and automate workflows that just don't happen very often. It's a fair amount of work to migrate the knowledge from someone's brain into a process definition, so if a task only gets done a couple of times each month, it probably doesn't make sense to move it.

What is Stage 3 of the KAMM?

While the major advance in taking processes from Stage 1 to Stage 2 is moving from unstructured workflows to a framework, the big change in Stage 3 is to migrate process definitions from human brains to software systems.

It starts with whiteboarding sessions to map out the fulfillment process as stored in the brain of the human(s) doing the fulfillment. These process steps are then optimized and entered into a system. It's systematizing the human brain. It's no longer the case that some human knows what to do, but rather that the system knows what to do.

At Stage 3, you start breaking down the end-to-end fulfillment process into a series of discrete steps. This enables you to optimize fulfillment for the task at hand. Fulfillment is still done by humans, but the system assists them by 1) guiding them through the process step-by-step, and 2) providing the human fulfiller, at each step, with only the information needed to complete that specific task.

STAGE 3:
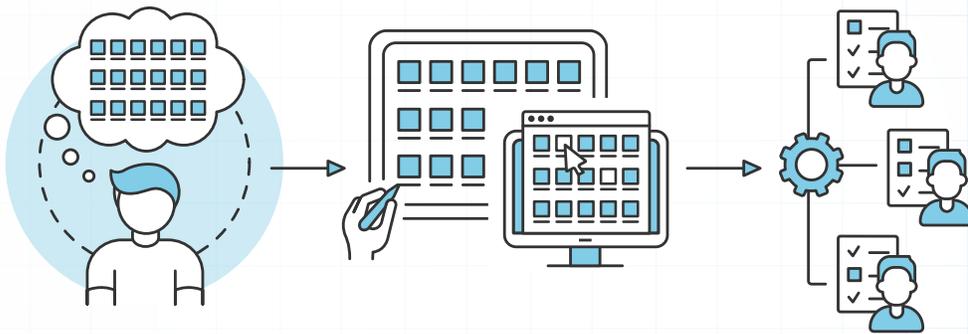
From that point on, although fulfillment tasks are still performed manually, the process is managed by a system. The system instructs the human fulfiller what to do at each process step and provides the information needed to complete each specific step.

For example, to begin the process of fulfilling an order for a new iPhone, the fulfiller may need to know who approved the request and when it was approved. At the second step, the fulfiller may need to know what color and model of iPhone to take from inventory, but doesn't need the approval details. At the third step, the fulfiller needs to know what software to pre-install on the phone, but doesn't need the detail for the first two steps.

Benefits of Moving from Stage 2 to Stage 3

As noted above, in Stage 2, a human is both managing and performing all fulfillment tasks. At Stage 3, though humans are still performing the tasks, a system is now managing the overall process. That provides a number of compelling benefits. Moving processes from Stage 2 to Stage 3:

- **Reduces costs:** Per the KAMM framework, this transition typically cuts fulfillment costs by about a third, mainly due to reducing manual steps and improving consistency.

- **Enables process optimization:** At Stage 3, fulfillment processes are broken down into discrete

steps, which uncovers opportunities to eliminate, combine, or redesign tasks in order to reduce the overall time and effort required.

- **Improves visibility:** Identifying and "systematizing" fulfillment tasks provides greater visibility to spot bottlenecks, reduce or eliminate errors, and measure performance on a more granular level.

- **Simplifies training:** In Stage 3, the fulfillment steps get well defined. That guidance can be used to optimize tasks, reduce time, simplify training, and increase flexibility. It's easier to change process definitions, and new fulfillment employees can be onboarded more quickly.

- **Reduces errors:** There's a much higher likelihood of getting the process done right the first time once it's at Stage 3 of the KAMM framework. At Stage 2, fulfillment is still relying entirely on a human brain. No matter how knowledgeable, talented, and conscientious employees may be, they can still forget things or make mistakes. But at Stage 3, the system is managing the task flow, which reduces the need to resubmit requests or correct fulfillment errors.

- **Improves employee satisfaction:** When employees get their requests fulfilled more quickly and with greater accuracy, their job satisfaction increases. They are able to be more productive and have less disruption to their workflow. And by simplifying fulfillment tasks and reducing rework, it increases job satisfaction for those doing the fulfillment work as well.

- **Improves scalability:** Moving processes to Stage 3 improves utilization of resources within an organization, which cuts costs while increasing capacity. It enables the enterprise to handle the same number of requests with fewer people, or a larger number of requests with the same staff level.

How to Move Processes from Stage 2 to Stage 3

Again, this migration is about taking the fulfillment process out of the brains of humans and moving it into a system that can manage, guide, and enforce the steps. It makes sense to undertake this move for high-volume requests as well as for lower-volume requests that have legal or regulatory compliance implications.

The transition from Stage 2 to Stage 3 involves a lot of whiteboard time. After identifying which processes to migrate, you'll need to carefully examine the Stage 2 tickets for each request type. What did the fulfillers do? What notes did they make? Get the process owners involved. Break down each complete fulfillment workflow into discrete steps. Build out the steps and look for opportunities to improve the process.

In addition to a whiteboard, you'll need software that lets you do something with that information: an orchestration back end that can guide fulfillers through the process and provide them with the information needed at each stage.

As human fulfillers progress through each step, it's important that the system only passes through the information needed to complete that specific step. This is key to reducing errors. If fulfillers are overloaded with extraneous information that isn't required for the task at hand, then they need to search and sift to find what they need—and that can cause errors. Orchestration is vital.

A Stage 2 to Stage 3 Example: Ordering an iPhone

At Stage 2, when an employee requests a new or replacement iPhone, the request gets routed to someone in IT to take an iPhone out of inventory, preload it with the required software, and deliver it to the employee. But the first step that the fulfiller takes is to make sure the request has been approved.

Process owners may see that they are getting 20, or 100, or some significant number of iPhone requests each month, and decide to improve this process. The first step in transitioning that process from Stage 2 to Stage 3 is to go to a whiteboard and map out all of the steps required for fulfillment.

Noticing that fulfillers can't begin their work until they check to see if the request has been approved, the first bit of process improvement can be applied: route the request to the appropriate manager for approval before it goes to IT for fulfillment. It's a small improvement, but will save time for IT on every iPhone request going forward.

In Stage 2, the requester would have been presented with some very basic options, such as model, after selecting iPhone as their request type. In Stage 3, they would see a full list of options in drop-down menus, so that this information can be passed to the fulfiller at the appropriate step: model, carrier, color, type of case, and perhaps choices of specific apps.

Parts of the process may start to be automated at Stage 3. For example, at Stage 2, the fulfiller may know that when they get down to five or fewer iPhones in stock, it's time to manually place an order for 10 (or some number) more, to replenish their stock on hand.

Seeing this part of the process in the whiteboard exercise, the team may automate this, having the system automatically order more phones once the inventory drops to a preset level. Again, it's a small improvement that saves a lot of manual effort over time.

> The fast lane (of process automation) is enterprise software that can be scaled and is reusable... The major benefit we found (from automation software) is a return on investment that varies between 30 and as much as 200 percent in the first year. But it's wrong to look just at the short-term financial gains...That approach does not do justice to the power of the software because there are multiple business benefits" including superior compliance, better customer service, and reduced stress on employees.
>
> ~ McKinsey

RECAP: Stage 2 to Stage 3

Moving processes from Stage 2 to Stage 3 starts with looking at recent tickets to identify the best candidates. Any processes that are either high-volume or have compliance implications can be improved by transitioning them to Stage 3.

The migration starts with a whiteboard exercise. A big part of the move to Stage 3 is to take knowledge out of the heads of fulfillers and map all of the fulfillment steps in orchestration software. This enables the system to manage the process, and provide fulfillers with the precise information they need at each step.

Some sort of orchestration software is required to make the move to Stage 3. But the system won't do anything for you until you sit down with your process owners in front of a whiteboard and break down the process.

This transformation provides a number of benefits, from cutting fulfillment costs by one-third on average, to reducing errors, increasing visibility and improving employee satisfaction.
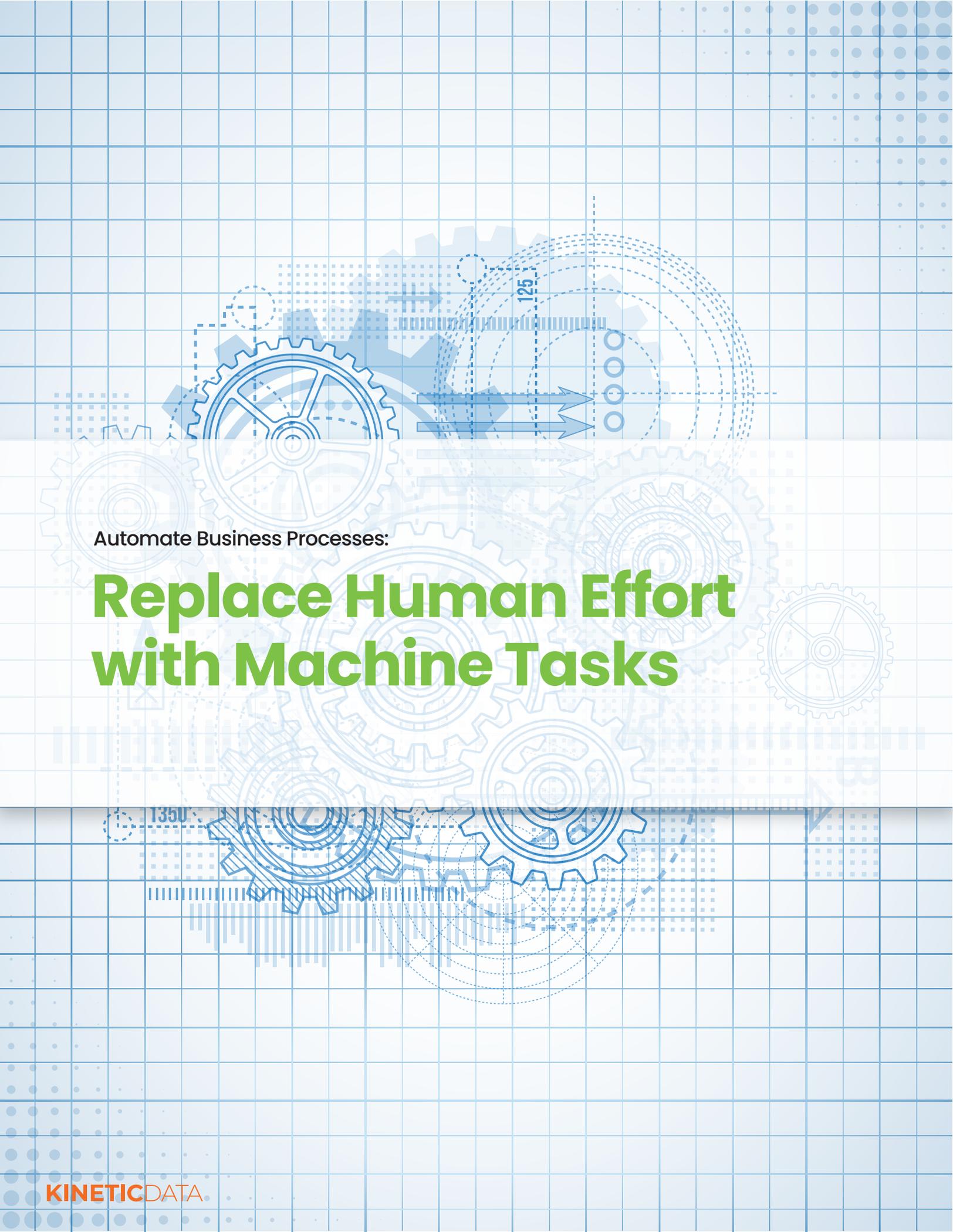
Automate Business Processes:

Replace Human Effort with Machine Tasks

Automate Business Processes:
Replace Human Effort with Machine Tasks

On the six-step path defined by the KAMM framework, one of the biggest leaps is taking a process from Stage 3 to Stage 4, as noted earlier:

"Above that line (separating Stages 1-3 from Stages 4-6), fulfillment requires a human brain process; a human is figuring out what to do. Below that line, the system has stored the definition and map of the process, so it is moving through the process steps automatically rather than relying on a human brain."

On the business process automation journey, request fulfillment processes are evaluated in Stage 2. Those which are either high-volume or have compliance implications (or both) are generally moved to Stage 3. Most Stage 3 processes will in turn be moved to Stage 4, with the exception of the items noted below.

Here's a look at why some processes may be kept at Stage 3, the definition of Stage 4, the benefits and risks of making the transition, and an example for illustration purposes.

Business Process Automation Frustration at Stage 3: Swivel Chair

Although a system is managing the overall fulfillment process at Stage 3, a human is still typically performing each of the task steps. A step may often look something like: checking off the completion of a task in a ticket management system, updating a record in the financial software, and then returning to the first system to close out the ticket.

In Stage 4, closing out the ticket automatically updates the record in the finance system, so the swivel chair is eliminated. Employees save time and stay "in the flow" because they aren't switching back and forth between software platforms.

Why Organizations May Keep Some Processes at Stage 3

Generally, most business processes that are moved to Stage 3 will be transitioned into Stage 4. Once the process has been mapped out and digitized, it's natural to automate many of those manual steps and eliminate the swivel chair.

> "
>
> **Automation also necessitates improved cycle times and improved throughput, driven by (software that works 3-4 times) the number of hours of a human, (much) faster, and can be operational 24x7. Additionally, automation allows a reduction in the volume of human (and machine) hand-offs, further streamlining processes.**
>
> ~ Deloitte

START

1

2

3

4

5

6

END

But there are two types of exceptions where an organization may choose to keep some processes at Stage 3. The first is when the process includes steps that are very difficult to automate. It just may not be worth the effort in the long run, especially if the volume isn't very high and the process isn't terribly costly.

The second situation occurs when a process involves updating records or recording transactions in a legacy system or platform, such as a mainframe. The integration may be just too difficult and painful to be worthwhile.
But again, most Stage 3 processes will naturally be transitioned to Stage 4.

What is Stage 4?

At Stage 3, a human may be working a ticket in their workflow platform, then log into a separate system such as Salesforce.com to apply a discount code, then return to their workflow platform to close out the ticket.

But at Stage 4, the systems are integrated and the discount-code-application step is coded into the workflow process. So, once that human closes out the ticket, the workflow platform automatically updates that record in Salesforce. Instead of assigning tasks to humans, those tasks can be performed via an API.

STAGE 4:
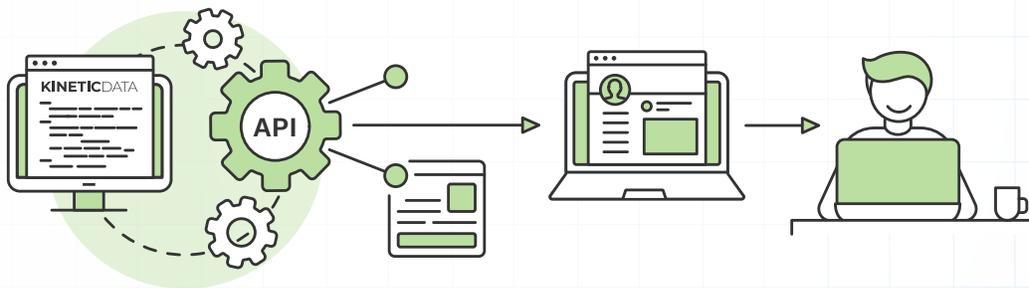
The flow of Stage 4 processes is from request to approval to (human) fulfillment to (machine) execution:

1. A person makes a request.

2. Then a workflow orchestration engine (such as the Kinetic Platform) automatically sends a message to the appropriate individual for approval.

3. Once the request is approved, a human fulfiller gathers the required information, enters that into the workflow system, and saves the record.

4. The system then does the execution.

Another example is adding a new hire to the executive group in Active Directory. This will enable the person to get a set of security privileges. Once approved, the request would be routed to a human fulfiller who would then select the relevant Active Directory attributes and save the record.

As soon as the fulfiller hits "Save," the workflow engine would call Active Directory, make the modification to add the newly hired individual to the executive security group, and provide notification. That's what Stage 4 is about: in the workflow of fulfilling a request, a human has to add some information at some point before it can move forward. **That's the middle step.**

Stage 4 gets rid of the "swivel chair" at Stage 3 where the fulfiller must copy-paste or re-enter data between different systems. This eliminates the risk of duplicate data entry errors and keeping the fulfiller in the flow of using a single system, with fulfillment optimized for the task at hand.

Automating Business Processes: Stage 4

Stage 4 is all about the API economy and about API consumption. The more systems your organization has behind the scenes that expose an API, the more software applications you have that can participate in the completion of workflow tasks. Leveraging APIs is what Stage 4 (as well as Stages 5 and 6) is all about.

As a simple example, an organization could have a machine that does approvals. Approvals are assigned to an application instead of a human. The software uses AI or rules-based logic to make or deny approvals, with human involvement required only for exceptional cases.

Benefits of Moving from Stage 3 to Stage 4

There are numerous benefits of transitioning Stage 3 processes to Stage 4. Two of the biggest benefits, as with automation generally, are in saving time and costs. Per the KAMM framework, moving processes to Stage 4 reduces overall completion time from weeks to days, or even from days to hours.

It also cuts the typical cost of a process in half. Having machines perform request fulfillment tasks instead of humans is more efficient. A computer doesn't have to "wait until it has time" to perform a task, and it can complete most add/change/delete tasks essentially instantaneously.

Beyond saving time and money on the actual process of fulfillment, the benefits of moving processes to Stage 4—or automating business processes—include:

> **"**
>
> **In an insurer we studied, there was a particular process where it used to take two days to handle 500 premium advice notes. It now takes 30 minutes.**
>
> ~ Deloitte

- **Eliminating the swivel chair:** A third benefit is that, as noted above, the swivel chair is eliminated at Stage 4. This improves not only employee productivity but also job satisfaction, since they are able to stay in the flow. It also reduces the risk of errors, improving process consistency and accuracy.

⬇ END

KINETICDATA | Business Process Nirvana: How to Navigate the Journey from Manual to Fully Automated Request Fulfillment Workflows

- **Improving analytics and visibility:** With process tasks being completed by machines instead of humans, visibility is dramatically improved. It's easier to see exactly where fulfillment of a specific request is in the process, how long specific tasks as well as overall processes are taking to complete, and where bottlenecks are cropping up. All of these expose opportunities for process improvement.

- **Increasing scalability:** There are natural limits to how fast humans can work. If thousands of orders need to be placed manually, they'll either take a long time or simply not get done without hiring more people. But a computer can place thousands of orders, quickly and easily.

- **Avoiding vendor lock-in:** If you have five or 10 or X ways that your workflow platform is interacting with a system (e.g., SAP, BambooHR or BMC Remedy), it simplifies your testing and analysis of a potential replacement system (e.g., Oracle, Workday or ServiceNow). If these X tasks can work in the new system, then all of your existing processes that call those X tasks can work, too.

  If you want to switch the API to transition from BambooHR to Workday or from Remedy to ServiceNow, you can do it. No one needs to know the difference up front; the changes are only on the back end. You could even create both a Remedy ticket and a ServiceNow ticket for a given period of time and work the issue in both to see if you're happy with the new system.

  If it does the trick, you can eventually disable the Remedy API and work all tickets in ServiceNow. You're able to experiment with different back-end systems without changing the front-end interface or workflow. No one at the front end knows the difference. So, you get seamless architectural flexibility.

- **Reducing training and documentation costs:** If your entire team is working directly in an enterprise software platform such as SAP, and SAP comes out with a new version—you may have to retrain everyone on how to perform 10, or 20 or X processes, because they'll work differently now.

  You also have to update all of your supporting documentation to reflect this change, and make sure to replace every copy of the old documentation to avoid confusing your people.

  But if you have your entire team, everyone at your facility or 10,000+ employees across your company filling out forms and hitting "SAVE" in your front-end workflow system, then the fact SAP now does something differently is irrelevant to them. No one needs to change their behavior. That is a huge benefit.

- **Enabling and supporting change:** In the same way Stage 4 processes allow architectural flexibility, they also permit changing the way tasks or workflow sequences are done on the back end without changing the way your people work on the front end.

  So you can improve your inventory management, pricing, shipping practices—whatever— without forcing anyone at the front end of these processes to do things differently. It's all gain, no pain.

An Added Benefit: Software License Fees

Beyond time and cost savings, a key benefit of migrating processes from Stage 3 to Stage 4 is savings on software license fees. For example, suppose you have hundreds of requests coming in each month and 10 people who normally deal with those.

If you can move 90% of those to Stage 4 where the processing is being done through an API, then only 10% will require your staff to deal with these directly in the target system.

You now need only one or two licenses instead of 10, significantly reducing your software license costs.

The (Minimal) Risks at Stage 4

There's little risk in moving Stage 3 processes to Stage 4. It's true that when machines are doing the work instead of humans, your people will come to rely on the technology over time and lose the skills to complete these processes manually.

But the risk of vital fulfillment process knowledge "walking out the door" is actually greater at Stage 3, when humans are still performing most of the tasks. At Stage 4, these tasks are documented and coded in the system, reducing that risk.

Additionally, there's little risk of losing oversight or control for compliance and auditing. At Stage 4, machines are doing the work, leaving a digital audit trail as tasks are completed. If anything does go wrong, it should be easier to spot and correct at Stage 4 than at earlier stages.

> **90% of employees feel burdened with repetitive and boring tasks that can be easily automated.**
>
> ~ Imaginovation

There is some risk of a workflow process "breaking" at Stage 4 because a back-end system gets upgraded. The new version may use different terminology (e.g., "priority" rather than "severity") or add a new required field. But again, because of the process documentation and visibility, it should be relatively easy to find where the process is broken, fix it in the front-end workflow platform, and then resume business as usual.

A Stage 3 to Stage 4 Example: Corporate Laptop Configuration

A common request type across organizations is for new laptop configuration. A new employee joins the company and needs a laptop pre-configured with the required software to perform the tasks that are part of that role.

In Stage 3, a fulfillment employee would have to take a laptop out of inventory, look up the software requirements for the new employee's role, and then manually install and configure the needed applications.

At Stage 4, the new laptop would get plugged in, connected to the network, and then based on the role selected, the system would automatically configure and install all of the required software.

How the Kinetic Platform Supports the Move from Stage 3 to Stage 4

In Stage 4, systems of record play a vital role. The Kinetic Platform serves as the "glue" across these systems, orchestrating tasks among them. It provides the ability to automate fulfillment processes regardless of the back-end systems in use.

The Kinetic Platform enables your organization to take a low-risk, lower-cost "embrace and extend" approach to process automation rather than requiring a disruptive, time-consuming "rip and replace" project.

It also supports different approaches to process automation. One approach is for your fulfillment team to do all of their work in the Kinetic Platform. It then communicates with various back-end systems of record to complete tasks and update records.

Another scenario is when you've already got great workflows built within other systems. In that case, the end user makes a request in the Kinetic Platform, which then sends a ticket to SAP, or ServiceNow, or another back-end fulfillment system of record.

Once that ticket is completed and closed out in the back-end system, it sends a message to the Kinetic Platform which then performs the next step or notifies the end user that the process is complete.

The Kinetic Platform enables you to put a simple, intuitive interface onto functions performed in other systems. No one has ever said, "That SAP interface sure is nice." One example might be providing retail store employees with a user-friendly mobile interface into the company's back-end SAP system.

Exposing only the fields and elements that are absolutely necessary to complete a task not only simplifies training and accelerates process completion, it also reduces opportunities for error.

> "
>
> **New technologies that promise double-digit or even triple-digit same-year returns should rightfully be viewed with skepticism. But our experience shows that the promise of intelligent process automation is real if executives understand the drivers of opportunity and incorporate them effectively...One large financial institution used a transformation at scale to automate 60 to 70 percent of tasks in record-to-report processes (while) another institution achieved an 80 percent reduction in processing costs in excess queue procedures.**
>
> ~ McKinsey

Reflecting the "avoid vendor lock-in" and "reduce training costs" benefits of Stage 4 processes as outlined above, the Kinetic Platform makes it easy to modify processes to accommodate a field name change or new required field when updating systems of record. And it's designed to let you swap out API connections quickly and seamlessly.

RECAP: Stage 3 to Stage 4

In the six-step journey to transform a manual fulfillment workflow process to a fully automated process, the leap from Stage 3 to Stage 4 is a big one. It marks the point at which fulfillment tasks start to be performed by machines instead of humans.

Although most Stage 3 processes will eventually be transitioned to Stage 4, those which involve either difficult-to-automate manual tasks or difficult-to-integrate legacy systems may be left at Stage 3.

Transitioning processes from Stage 3 to Stage 4 provides a number of benefits, reducing fulfillment time and costs as well as eliminating the swivel chair so employees can stay in a less stressful and more productive flow state. It also cuts licensing and training costs, helps avoid vendor lock-in, improves process visibility, and increases scalability.

The Kinetic Platform supports the move to Stage 4 by serving as the orchestration "glue" between various back-end systems of record. It enables fulfillment workers to complete tasks across multiple back-end systems from one simple, intuitive interface, accelerating workflows while reducing training costs and the risks of system upgrade disruptions. And it provides organizations with a cost-effective "embrace and extend" approach to process automation rather than forcing an expensive and disruptive "rip and replace" effort.
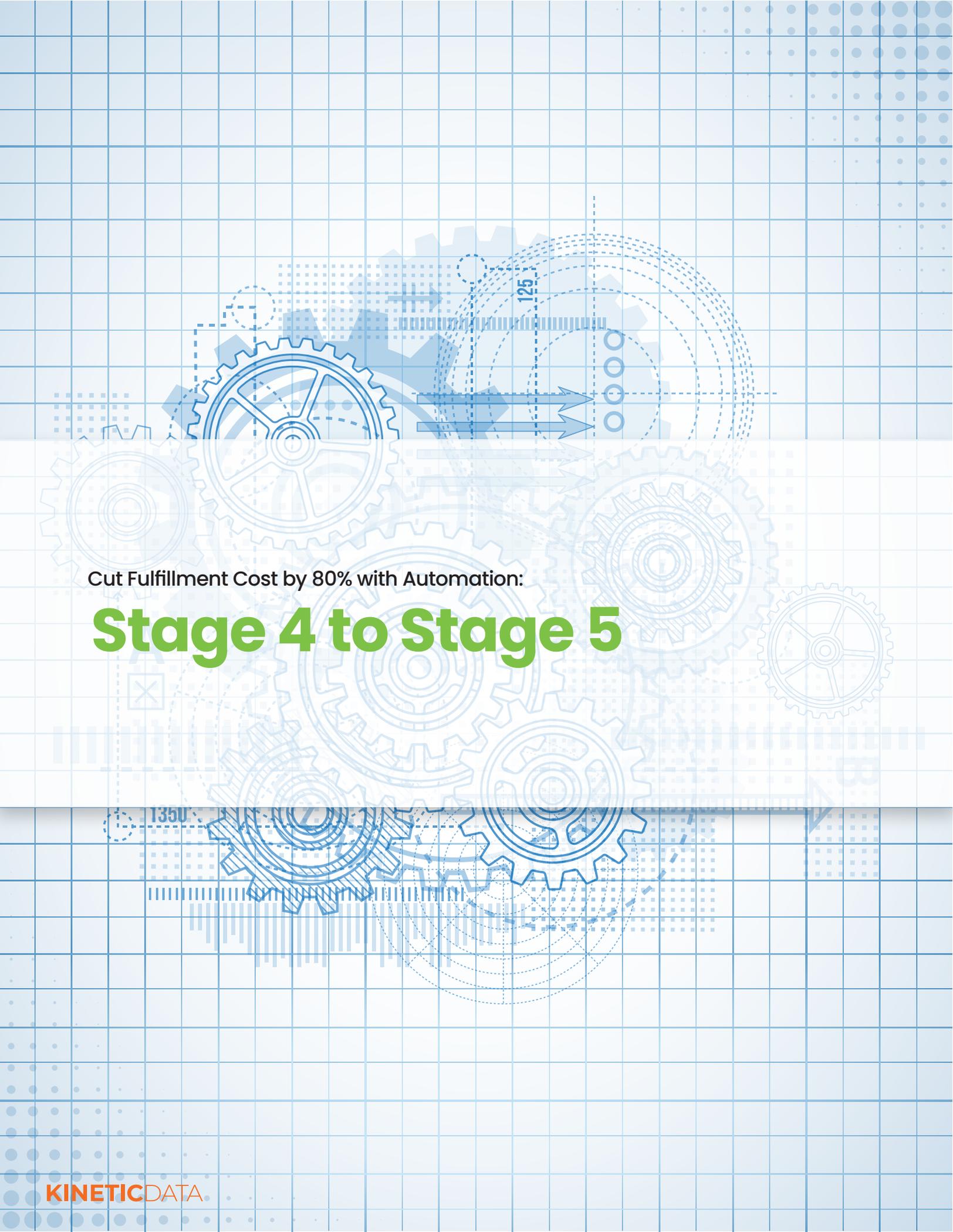
Cut Fulfillment Cost by 80% with Automation:

Stage 4 to Stage 5

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Visibility takes away fear and gives people confidence that the system is working for them, which increases the likelihood of a positive experience.

Tech research and consulting firm Gartner defines business process automation as "...the automation of complex business processes and functions beyond conventional data manipulation and record-keeping activities, usually through the use of advanced technologies. It focuses on "run the business" as opposed to "count the business" types of automation efforts and often deals with event-driven, mission-critical, core processes.

Moving from Stage 4 to Stage 5

As business processes are transformed from manual to fully automated through the six-step journey mapped out in the Kinetic Automation Maturity Model (KAMM), time and costs are reduced at each stage.

But the biggest single cut in costs comes in the transition from Stage 4 to Stage 5, as the typical internal fulfillment process cost drops from $5 to $1. The typical fulfillment time is also slashed, from "hours to days" to "minutes to hours."

That's huge. But is it realistic? Well, not every Stage 4 business process can be feasibly migrated to Stage 5. But for those processes that can be moved, yes: the replacement of human effort with machine execution can produce dramatic reductions in the time and cost of fulfillment.

> "
> When one large credit card processor automated its credit and debit card transaction dispute process, the backlog of new disputes was reduced from 35 days to 5 days. (That's an 85% reduction.)
>
> ~ Ernst & Young

Here's a look at why enterprises may keep some Stage 4 processes, an introduction to Stage 5, an outline of the benefits, and a brief example.

Why Organizations May Keep Processes at Stage 4

Though many of the processes that make it to Stage 4 will be further refined and automated into Stage 5 workflows, there are several reasons why an organization may choose to keep certain processes at Stage 4.

- **Complexity:** When a process has a large number of variables or variations—each of which constitute a low-volume version of a common high-level process—it may be too complex to codify. It's not worth the effort to automate every variation of the process because the volume or frequency doesn't justify it.

- **Multiple systems:** It can be that within the human fulfillment step of a Stage 4 process, the fulfiller needs to interact with multiple back-end systems, with only part of the process "automatable" through APIs. This is particularly the case when one or more of those systems is a legacy platform that doesn't allow for easy integration.

- **Multiple fulfillers:** Similarly, if a process requires the efforts of multiple human fulfillers in a daisy chain, it may be too complex to automate.

- **High-touch functions & examples:** A process may include human-centered interactions that don't lend themselves to easy data gathering, such as requiring an interview. This is common, for example, across HR processes such as:

    ◇ Hiring

    ◇ Employee promotions

    ◇ Performance reviews

    ◇ Disciplinary actions

(It's important to note that other HR processes, such as vacation scheduling, are more easily moved to Stages 5 or 6.)

Another example is software enhancements. While an organization may have an automated process for collecting and prioritizing enhancement requests, the step where a developer writes the code, saves it, and commits it, is not automatable.

Yet another example is closing the books quarterly in finance. Although the process usually involves repeating the same steps every three months, there's frequently some wrinkle in the workflow that requires human involvement in gathering or verifying information.

The biggest reduction in time and cost comes in the transition of processes from Stage 4 to Stage 5. Unfortunately, it's not practical to move every Stage 4 process forward toward greater automation.

What is Stage 5?

The flow at Stage 5 is from request to approval to execution. There's no need for a human to do anything except approve the request. As previously explained, "The system now has enough information about what is needed in the request itself. The process is well enough established for the system to reliably execute it."

- Someone makes a request.

- Somebody else approves it.

- Someone in the system just does it; there's no fulfiller.

STAGE 5:

In
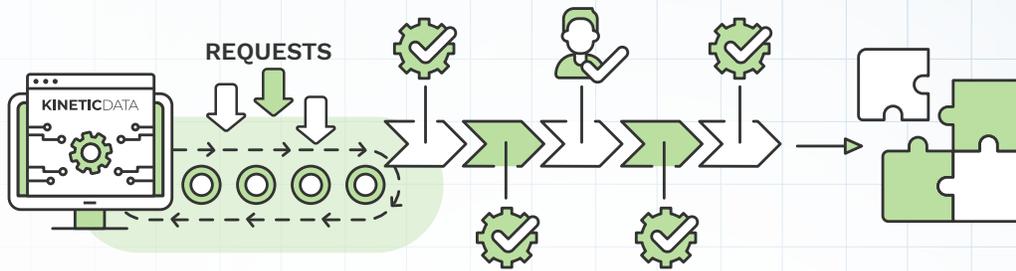
Stage 5, all human fulfillment steps from Stage 4 have been optimized and automated. Workflows move automatically and seamlessly from approval to machine execution. There are no human fulfillment tasks involved. Replacing human effort with machine execution dramatically reduces fulfillment time and cost while increasing scalability and process visibility.

Stage 5 is enabled by learning over time: this kind of request always gets this fulfillment, that kind of request always that kind of fulfillment. Identifying those patterns enables you to remove the human fulfillment step and— with human approval—effortlessly move to execution.

> **Quote generation time for insurance agents in California was cut from 14 days to 4 minutes using automation. The insurance firm recorded a 70% increase in sales.**
>
> **~ Windward Studios**

How to Move Processes from Stage 4 to Stage 5

Let's say an employee wants to request an increase in their voicemail storage. At Stage 4, they make the request, it gets reviewed and approved, then routed to a fulfillment person. That individual then notes a change needs to be made on Cisco server #12, enters some information specific to the request, saves it, and that information then goes into the execution process.

Another example includes a person that requests to be added to a reporting group for a database system. The request goes to a fulfiller who selects the appropriate three of five data warehouses, hits "Save," and then behind the scenes those three data warehouses get updated. It's a human brain deciding that of the five data warehouses, these are the three that need updating.

Watching these processes over time, it should become apparent that voicemail changes always involve server #12. Requests from finance always involve the same three data warehouses.

That's how an organization can move processes from Stage 4 to Stage 5. By learning over time, it's clear that certain types of requests always get the same fulfillment decisions. And that's how you can take the human out of that fulfillment process and go straight to execution.

Primary Benefit of Moving from Stage 4 to Stage 5

The most significant benefit of transitioning processes from Stage 4 to Stage 5 is the time and cost savings.

Moving a process from Stage 1 to Stage 2 cuts the average fulfillment cost in half. Moving from Stage 3 to Stage 4 reduces it by half again. But the transformation from Stage 4 to Stage 5 slashes internal fulfillment costs by 80%.

How? In Stage 4, humans are still involved in the fulfillment process. It typically consists of collecting information and entering it, either directly into a back-end system of record or into the workflow platform which, in turn, updates records in other integrated systems. Humans are an expensive (and time-consuming) part of the process.

In Stage 5, however, the only human action required is the approval. Once the request is approved, the system takes over. And once the system takes over, the money savings begins. All of the manual fulfillment steps in Stage 4 have been automated. In Stage 5, you're simply allowing something to happen; the computer then does all of the work. That's why moving processes from Stage 4 to Stage 5 produces such dramatic savings.

Additional Benefits of Moving from Stage 4 to Stage 5

What about the time savings? Well, in Stage 4, someone submits a request, someone else approves it and now it's sitting in the fulfiller's queue. That person may have 30 other things to do and not get to that request until two days later. And then they take care of it.

In the meantime, the requester is waiting, because that task hasn't reached the top of the fulfiller's queue yet. In Stage 5, there's no waiting on that queue. As soon as the request gets approved, the system fulfills it. It's automatic.

In fact, the 80% cost reduction figure actually understates the total savings. The middle column in the KAMM diagram shows the cost to actually perform the fulfillment. But the total duration from request through fulfillment is being significantly reduced.

That means the requester spends less time waiting for their new iPhone or laptop or whatever product or service was requested. Requesters now have less down time, making them more productive, and their time—though not explicitly called out in the KAMM framework—is valuable.

But slashing fulfillment time and cost isn't the only gain. Additional benefits of moving process to Stage 5 include:

- Unlocking business opportunities: Managing various backend systems of record through a front-end orchestration engine reveals how all of the pieces come together.

  So, for example, providing a requester with an additional 10GB of email storage space isn't simply a matter of fulfilling that request; for an MSP or systems integrator, streamlining that process opens up a new revenue opportunity. Within an enterprise, it enables accurate departmental chargebacks.

- Enforcing business rules: Again, as noted above, many systems such as cloud platforms presume that anyone with administrator privileges has the authority to do pretty much anything within their systems. It's a request straight to execution, which enables tasks to get done very quickly—but also involves danger.

  At Stage 5, the workflow engine enables you to add business rules and an approval step, placing a check on activity that slows down fulfillment but also mitigates risk.

- Improving the customer experience: If you want higher net promoter scores or internal service ratings, better word-of-mouth promotion, and more customers, then it's not only fulfillment speed that matters, but also visibility.

  Let requesters know the status of their fulfillment at all times. Make things go fast and keep requesters in the loop. "You'll receive your item on (date). Here's the tracking code." And then once they actually receive it: "Your product has been delivered. How did we do?"

Visibility takes away fear and gives people confidence that the system is working for them. It increases the likelihood of a positive experience that customers (internal or external) will want to repeat—and promote.

Benefits of Stage 5 for Managed Service Providers (MSPs) and System Integrators (SIs)

Stage 5 processes make it easy for service providers to expose any number of standard services and upgrades at attractive prices. This is because they are automated on the back end: an additional data backup, another voice line, more email storage, etc. Bill the client $10 for something that costs $1 or less. They can easily, and profitably, add new service features.

MSPs and SIs can provide those services with all the required safeguards, automated and rolled into a business process. They can build a business on that.

Having Stage 5 processes enables service providers to think about how they can make their customers' lives better. Reducing the cost of service is certainly important, but increasing customer satisfaction by offering new services, with end-to-end visibility, is where the real money is.

RECAP: Stage 4 to Stage 5

At Stage 4, business processes start to be managed by a purpose-built software platform rather than relying on human brain power. In addition to reducing fulfillment time, cost, and errors, moving processes to Stage 4 eliminates the frustrating swivel chair tasks of Stage 3 and can substantially reduce software licensing costs.

Most Stage 4 processes can be further refined by transitioning them to Stage 5, where all human steps are automated except for approval. Exceptions include processes that are complex or require non-automatable human-centric interactions such as conducting interviews.

Typical fulfillment costs are reduced by 80% in moving processes from Stage 4 to Stage 5, primarily through optimizing and automating human fulfillment tasks. Stage 5 benefits also include improving productivity by dramatically reducing overall fulfillment duration (wait time), enforcing business rules, and enhancing the customer experience.

Finally, Stage 5 offers significant additional business benefits for service providers such as MSPs and systems integrators. It enables them to reduce costs and expand service offerings while increasing client satisfaction and visibility.
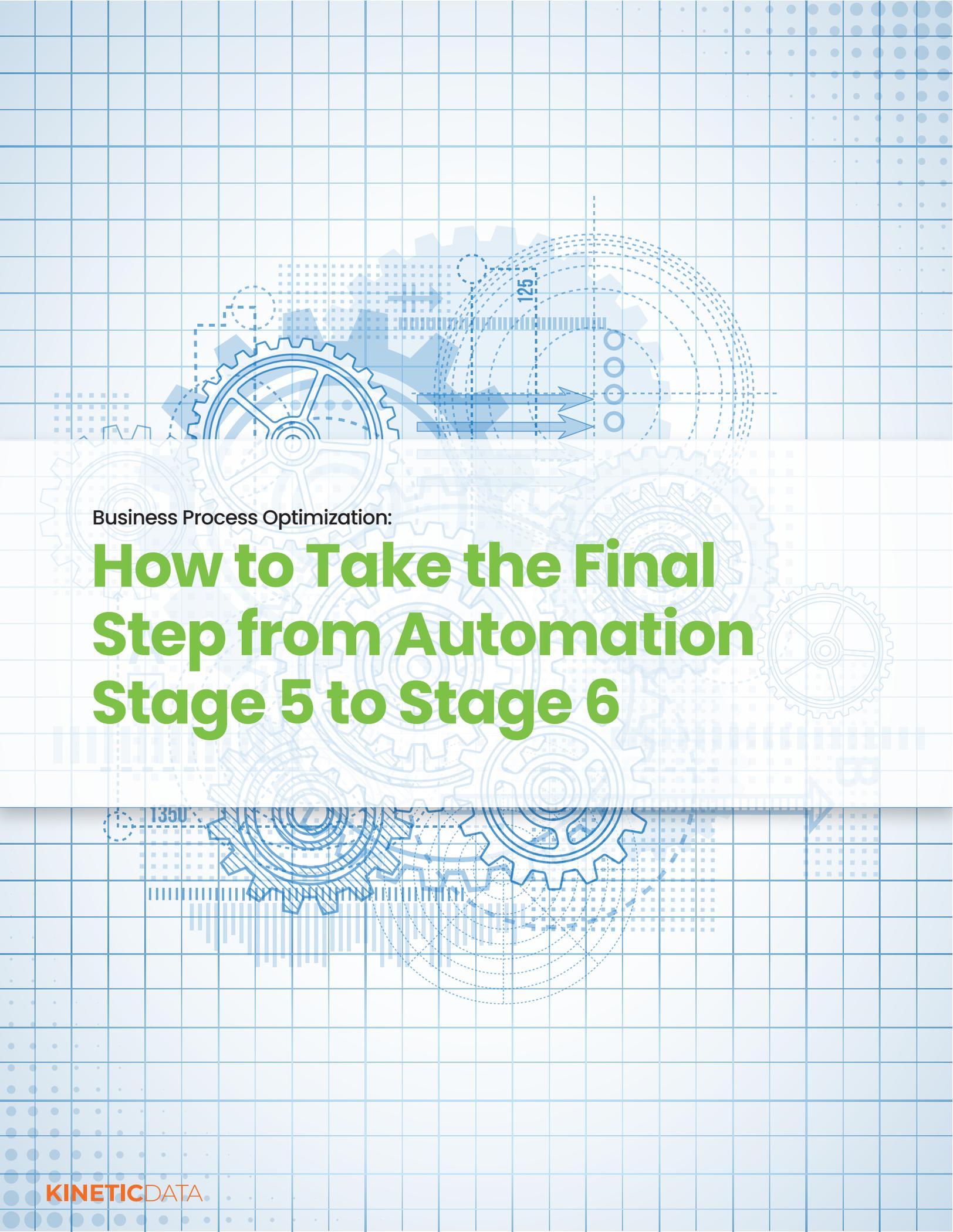
Business Process Optimization:

How to Take the Final Step from Automation Stage 5 to Stage 6

KINETICDATA

Business Process Optimization:

How to Take the Final Step from Automation Stage 5 to Stage 6

Stage 6 of the KAMM framework culminates the journey from unstructured and unmanaged manual processes to full automation.

Moving a business process from Stage 5 to Stage 6 is the final step and removes humans from the process completely. This step can be referred to best as business process optimization. Fulfillment goes directly from a request (which may or may not be submitted by a human) to execution.

As is the case at each of the other stages, not every process that's been migrated to Stage 5 is reasonable or practical to move to Stage 6. But for those processes that can be transitioned to this final stage of automation, the fulfillment time and cost approach zero. You read that right: zero.

This benefit isn't only about internal cost savings, as significant as those are. Organizations that are able to transform processes to Stage 6 gain a competitive advantage in the market, create a formidable barrier to entry and optimize the customer experience. You can create differentiation based on speed, accuracy, and lower internal costs.

Here's a quick look at why some processes may be kept at Stage 5, the definition of Stage 6, how risks can be mitigated without delaying fulfillment, and a brief example.

> **Process automation is the building block for digital transformation. 97% of IT decision-makers say that process automation is vital for successful digital transformation.**
>
> ~ McKinsey

Why Organizations May Keep Processes at Stage 5

The main reason to keep certain processes at Stage 5 is because you always want a human to approve those requests. This may be done for legal, regulatory compliance, fraud prevention, security, and/or company policy reasons.

Organizations will keep processes at Stage 5—requests requiring human approval—for high-value requests, and more broadly for those where the cost of making a mistake is greater than the additional process cost of requiring request review and approval.

What is Stage 6?

According to the Project Management Institute, "...a company's process optimization project must identify ways to make their business processes manageable, with formalized, actionable information about how, and how well, the process is executing. Not unlike any other project, a business process

optimization project must define the scope of the process to eliminate confusion and set the project boundaries." Stage 6 is all about business process optimization.

At Stage 6, requests go directly to execution. This is because the system knows that based on certain rules, a request is "approved" without asking a human. This is business process automation at its finest.

For example, a sys admin makes a change in AWS. If that single individual is able to act as the requester, approver, and fulfiller, that's a Stage 6 process. They just make the request, and it gets done.

STAGE 6:
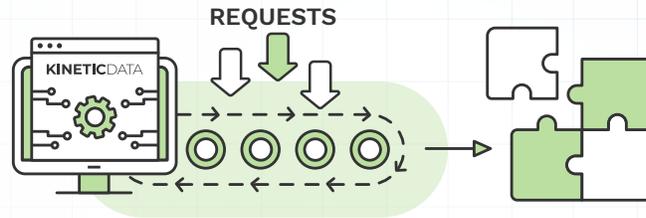
Although there's no separate approver, the individual making the request may have to acknowledge risks, agree to certain terms, or provide some type of quasi-approval themselves as a legal or policy step in order to execute.

Another example is Amazon. From the company's earliest days selling books and CDs to today where it sells seemingly everything, it's had a relentless focus on shortening the time from order to delivery.

Today, Amazon's highly automated fulfillment processes and next-day (in some cases, even same-day) delivery give it a hugely powerful competitive advantage. Once it has drone delivery perfected, its entire order-to-delivery process can potentially be at Stage 6.

Benefits of Moving from Stage 5 to Stage 6

Optimizing business processes is the movement from Stage 5 to Stage 6.

Transforming a Stage 5 process to Stage 6 cuts the elapsed time for fulfillment from hours to minutes and minutes to moments, making request and execution almost instantaneous. It also slashes the average internal cost of fulfillment by 70%, from $1 to just 30 cents.

If certain types of requests are "always approved," then it's a waste of time to require an approval. People are busy; the approver may not even see the request for approval for several hours after it's submitted. Stage 6 eliminates that wasted wait time.

In addition, Stage 6 is ideal for processes where time is the critical variable, making business process optimization invaluable. For example, a manufacturing production line goes down because a vital part fails in a key machine.

At that point, the cost or risk associated with approval is a non-factor; what matters is getting a

replacement part to the facility as quickly as possible, and providing the requester with complete visibility into the fulfillment status and estimated delivery time.

Additional Benefits of Stage 6 Processes

Another benefit is the ability to use robots. A robot is an automated workflow scheduler that functions as a non-human requester to initiate a process. The trigger to activate a robot may be time-based (e.g., enforce password changes every 90 days, perform a full data warehouse weekly backup every Sunday morning) or event-based (a server goes offline, a new worker is hired, an employee leaves the company).

How to Mitigate Risks at Stage 6

With no approval required at Stage 6, there's a risk of fraud occurring under certain circumstances.

One strategy for mitigating this risk is to implement requests straight to execution, with the addition of an auditing function. As a result, the execution happens immediately, but it can be rescinded or retracted later.

There's an auditing function that doesn't slow down the process but does provide after-the-fact verification. That way, things get done very quickly. However, there's a way to step in and right the ship if something isn't quite on the level.

Another risk mitigation method is to add qualifiers, such as: if the value is less than $100 and the individual hasn't made a similar request within the past 30 days, then skip the approval step so as not to interrupt the process flow.

Even if a very small share of such requests are not legitimate, the organization may still be better off keeping these requests at Stage 6. This is because the overall time and cost savings outweigh the infrequent small losses.

This happens most commonly in the world of ecommerce. Under certain conditions, if a customer reports that an item received is incorrect or defective, the retailer may issue a refund or send a replacement. But they tell the consumer to just keep the original item, no need to return it. With proper checks in place to detect abuse, this policy can be more cost effective than paying for return shipping and managing the discrepant material disposition.

A Stage 6 Example

If you've ever seen the Cisco Call Center Administration Console, you can understand why it takes eight months of training to master. But one common request is that an employee needs an extra ten minutes of space added to their voicemail box, because they are on vacation and their mailbox is full.

- At Stage 4, the employee makes a request, then a human fulfiller logs into Cisco Call Center and navigates their way to the requester's account where they can add the 10 minutes of mailbox time.

- At Stage 5, the employee makes a request for those 10 minutes through the workflow engine portal, someone approves it, and then the workflow platform makes the change inside Cisco Call Center.

- At Stage 6, if the request meets certain predefined criteria, the system fulfills it immediately. There's no human involvement whatsoever. These types of requests can be submitted and fulfilled 24x7x365.

The End of the Journey

Moving business processes from Stage 5 to Stage 6 is the final step in the KAMM framework. By eliminating the Stage 5 requirement for a human approval step, Stage 6 culminates the journey from unstructured and unmanaged manual processes to full automation. From request directly through to execution.

With the exception of processes that require human approval—generally for cost, risk, or compliance reasons—most Stage 5 processes can be moved to Stage 6. This transition holds many business benefits:

- reduces typical fulfillment costs by 70%;

- cuts fulfillment time to near zero; and

- even enables the use of robots (automated workflow schedulers) which completely eliminate the need for human involvement in certain processes.

Although eliminating the human approval step can create potential risks, these can be mitigated by applying conditional filters or implementing audit processes at various points.

A highly visible example of an enterprise on the journey to full process automation is Amazon. Most of the online retail giant's order fulfillment processes are likely at Stage 4, largely automated but still requiring some human steps (e.g., packing boxes, loading trucks, and delivering packages). Absent the need for human approval, automating delivery using warehouse robots, drones, and autonomous vehicles can take order execution to Stage 6.

> **"**
>
> **Few companies have achieved automation's full potential: although most respondents say it's possible to automate at least one-quarter of their organizations' tasks over the next five years, less than 20 percent say their organizations have already scaled automation technologies across multiple parts of the business.**
>
> **~ McKinsey**

Appendix

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