



WORKFLOW ROI

Guide for Calculating
Workflow Automation
Return on Investment

ABSTRACT

Get ideas for generating quantifiable metrics to share when making the case for implementing a workflow automation solution.



Guide for Calculating Workflow Automation Return on Investment (ROI)

Overview

We've been helping customers improve their business workflow and request management for over a decade and one thing we've learned is that every workflow situation is utterly unique. Because of this, when questions turn to the subject of Return on Investment, we approach each situation differently.

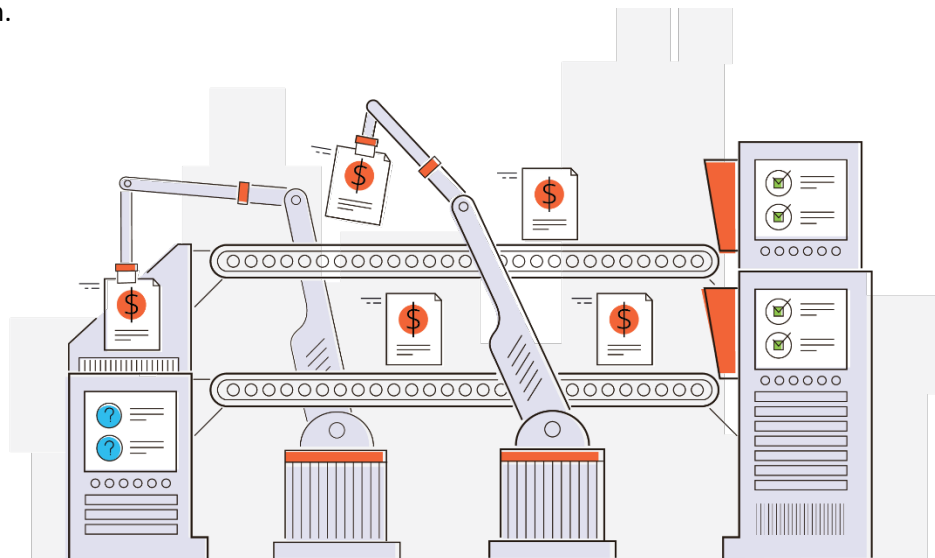
This guide is intended to **help you think through your own unique workflow situation(s)** and come up with some quantifiable metrics that you can share with colleagues, leadership, vendors, etc. when making the case for implementing a workflow automation solution in your department or organization.

We will provide guidance, examples and worksheets that you can use to calculate your return on investment. However, we will not try to provide you with exact numbers since, as we've said, your use case, costs and benefits are unique to your organization.

With that said, this guide is broken up into sections based on common workflow automation benefits:

- Faster Transaction Processing
- Employee Satisfaction
- Error Reduction
- Approvals
- Compliance
- IT Development

The examples provided may not exactly match your specific situation but **walking through them will help you think about quantifying the aspects of your current workflows** and the potential gains from automation.



Categorizing Benefits

Costs and Hard Benefits

ROI for workflow automation projects that promise efficiency improvements seem difficult to justify with hard facts. The project costs are usually easy to quantify based on:

- Implementation costs
- Software licensing/maintenance or subscription fees
- Service/Consulting fees
- Consumption of internal resources (including Training)

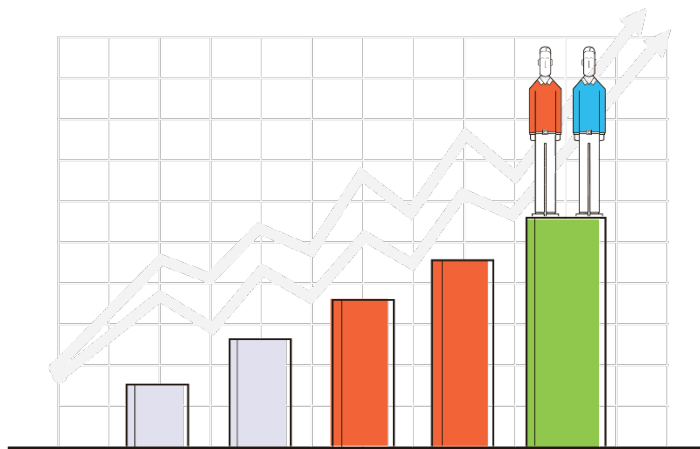
The benefit side of the equation usually includes a mix of hard and soft benefits. With some prudent information gathering on the front end, even the soft benefits can be quantified.

Hard benefits of process automation include avoided costs like the following:

- **Process headcount reduction** – Reduction in fully-burdened salary of employees involved in a process plus any reduction in employee-based costs such as company cellphones, named user software licenses, and cost per square foot of office space, if there is a significant drop in headcount.
- **Legacy system retirement** – cost of hardware and software maintenance plus the costs of any IT administrators.
- **Consumables** – Depending on the size of the organization, consumables like paper and toner can be significant.

Beyond the Hard Benefits

On the soft benefit side, greater depth and creativity is required to convince the approvers of the business case and ROI. Let's look at some common soft benefits before analyzing some specific examples.



Faster Transaction Processing Time

This factor may be difficult to quantify if it is not high enough to justify headcount reduction. The narrative around this avoided cost should tie in to the business plan. It may allow the company to generate additional revenue without adding headcount. If that approach is credible, there is a quick way to estimate the avoided cost.

First, gather metrics on the time spent performing the current workflow, on a per transaction (claim, sales order, approval, new customer setup, etc.) basis. This should include the time spent by each employee involved in the workflow. To achieve greater certainty around this estimate, it would be helpful to diagram out the current manual workflow and target automated workflow. When you see which manual steps are eliminated, you will have improved ability to estimate the percent reduction in time.

Use the transaction volume anticipated in next year's projections and plug it into the following worksheet:

CURRENT ANNUAL COST PER TRANSACTION		
Employee1 time X fully burdened cost of employee1 time*	\$ 40.00	dollars per transaction
Employee2 time x fully burdened cost of employee2 time*	\$ 20.00	dollars per transaction
Employee3 time X fully burdened cost of employee3 time*	\$ 25.00	dollars per transaction
* List and total cost for each employee involved in workflow	\$ 85.00	
Estimated Future Transaction Volume	50,000	based on next year's business plan
	\$4,250,000.00	total transaction processing cost using current workflow
FUTURE ANNUAL COST PER TRANSACTION		
Anticipated costs of performing automated transaction		
Estimated % reduction in time	30%	
Estimated target cost per transaction	84.745	
Estimated Future Annual transaction volume	50,000	
	\$4,237,250.00	
Labor Cost savings for speeding up the single workflow:	\$ 12,750.00	
Add annual avoided costs for reduced paper/printer consumption	\$ 5,000.00	
Total annual savings for automating this workflow	\$ 17,750.00	

Employee Satisfaction

Speeding up workflow and eliminating errors and manual error checking are the primary goals of effective workflow automation. Another key benefit for many businesses is the positive effect that automation has on employee satisfaction and retention.

The best way to get facts on how employee satisfaction affects ROI is to think through the expense of recruiting and hiring replacements for employees who resign because of frustration with inefficiency. This is easier if you perform and document exit interviews that capture this information. The narrative around your ROI numbers can set the stage by stating, “Last year, X% of the employees the company cited inefficiency as a reason for their departure.” The cost of replacing them can be quantified as follows:

Employee Replacement Costs	\$	Notes
Job description advertisement cost		
Outside recruiter professional services		
Inside HR recruiting costs		hours spent x fully burdened hourly rate
Hiring manager's time		(hours spent reviewing resumes, interviewing, preparing offer package, onboarding) x fully burdened hourly rate
Staff time spent on training and onboarding new hire		average hourly rate x hours spent on onboarding tasks
Salary differential between departing and incoming employee		This may be a positive or negative number
Lost productivity of new hire		(estimated weeks of coming up to speed x fully burdened weekly rate)
Total Cost of replacing employee	\$TOTAL	This is the total year one cost of replacing a dissatisfied employee

Error Reduction

There is no question that workflow automation improves more than overall process efficiency. In many situations, it reduces costly errors. The benefits side of the ROI calculation should include a retrospective analysis of any recent errors and the costs associated with them. In many situations, errors can generate second order effects that are quite costly.

In many businesses, there is still inadequate control over discounting approvals, and significant process disconnects between providing a quote, booking the sales order, and invoicing the customer. An analysis provides clues to the cost of chaining these processes across departments by email, phone calls, and word of mouth.

Specification Errors

In the following manufacturing situation, if a specification error persists into a production run, the costs of that error include:

Product Production Error Costs		
		\$
First Order Cost Impact	Labor cost of revising, approving, and issuing the correct specification	
	Labor cost of sourcing new components and suppliers	
	Cost of retooling or resetting production equipment (parts and labor)	
	Total cost of scrapped production run (raw materials, labor, utilities)	
<i>If the error is not noticed until after the sale:</i>		
Potential Second Order Cost Impacts	Shipping, receiving costs plus labor costs of processing returns	
	All costs associated with shipping new order to replace defective goods.	
	Possible labor, legal, notification costs if there needs to be a recall	
	Estimated lifetime customer value of lost customers after the recall	
	Total Cost of a Single Error	\$\$\$\$

Pricing Errors

The ROI for automation of the workflow chain that covers specification approval, component/supplier sourcing, and receiving inspections should factor this kind of first and second order estimate of the avoided cost.

Pricing Error Costs	\$
Labor cost of generating and approving revised sales order when customer disputes pricing.	
Cost of lost sale if customer backs out because sales order does not match the quote.	

Lost revenue from customer invoice write-downs based on disputed pricing on invoices.	
Labor cost of adding an extra layer of invoice review to catch errors before invoices are sent to customers	
Lost profitability if sales staff offers discount without approval and it is not noticed until after the sales order is signed.	
Cost of processing a customer complaint and credit memo during an invoice dispute.	
	\$\$\$\$

Approvals

Approval workflows, such as those for capital expenditures, may involve multiple levels of approval, circular requests for additional information and meetings, and lack of standardization from division to division. Many approvals require a decision from top executives with busy schedules. They are often on the road and unavailable for clarification meetings during normal business hours. They cannot easily wade through looping email chains and attached documentation while travelling or in meetings.

Vendors involved in Capex expenditures may offer time limited quotes, so delay has a real dollar impact. It is helpful to refer back to a specific expenditure for which the price increased due to approval delays when building the ROI. Automation provides savings at every step in the process.

Capex Approval Costs

Sum of internal labor savings for each step:

Request initiation	
Review of supporting information and questions from other approvers	\$
Processing requests for clarification by approvers	
Obtaining Status of Capex Request	
Increased external audit costs due to informal documentation of approval	
Rekeying of approved request into ERP Purchasing module	
Rekeying of approved request into budget tracking software	
Reworking errors on manual supporting spreadsheets	
Reworking errors arising from manual rekeying into ERP and budget tracking software	
Management self-service on status and size of all pending and current period requests	
Preparation of standardized summaries for board, investor and lender approvals	
Cost of missing limited time pricing by vendor	
	\$\$\$\$

These examples show that advance data gathering and deeper thought about avoided costs can give project sponsors the edge when building their ROI model so that the soft benefits are documented in a way that is less likely to be discounted by the approving managers.

Compliance

Regulatory Compliance

In heavily-regulated industries, the cost of non-compliance can be onerous. Ultimately, moving to an audit-ready workflow system to improve compliance is about creating better oversight, strengthening controls, and performing well as a business within the boundaries of risk tolerance.

If you are in a regulated industry, even if the likelihood of a regulatory fine due to a mistake or series of mistakes seems remote, consider the following questions when determining workflow automation ROI:

- What is the organization currently paying annually in regulatory fines?
- How much time and labor is spent recovering from a compliance failure?
 - Forensics, legal fees, etc.

Annual cost of fraud or regulatory penalties	\$
Expected reduction of incidents with automation	%
Annual cost of labor associated with recovery	\$
Expected reduction in labor associated with recovery	%

It would be a mistake to implement a manual ‘band-aid’ to address a compliance risk. Many organizations make this judgement error because they think that workflow solutions are pricey , time-consuming to implement, and difficult to support. In many cases, they can achieve desired compliance with a cloud-based workflow solution that costs far less than the legal fees and fines from a single non-compliance incident.

IT Development

Companies moving to a workflow automation system often see a reduction of custom application development hours from IT/DevOps by moving to a low code and citizen development platform.

If process applications were previously taking 6-8 months to develop and now take 2-3 months, there are obviously significant labor hour savings. In addition, these low-code applications require less support labor hours because:

- They can be better managed by business users
- They are more stable and require less (or no) code to de-bug
- They allow for easy re-use of workflow elements (forms, workflows, reports, etc.)
- Changes in business rules or approval parameters can be made by super-users without code modifications

Freeing up IT dev resources from application development and support has several additional impacts:

- More hours available for strategic initiatives and analysis
- Potential reduction in headcount
- Potential reduction in outsourcing and consulting

So a simple worksheet could look something like this:

Expected reduction in cost of development labor hours	\$
Expected cost reduction in support hour labor	\$
Savings from reduction in FTEs	\$
Savings in reduction from outsourcing/consulting	\$
Additional revenue from new initiatives	\$
Total	

Conclusion

The previous examples illustrate the depth required to create a solid ROI analysis for a workflow automation project. In many cases, the ROI case can be made on the automation of a few workflows that have been causing the business the most problems with efficiency and errors. When the rest of the organization sees the advantages of the initial automation efforts, other departments will extend the use of workflow software so that future benefits accrue with negligible additional costs.

To build a solid ROI like the ones shown in these examples, it's important to document the type and frequency of errors that may occur. Process analysts simply need to ask these questions at each step in the manual process:

1. What can go wrong?
2. How often does it go wrong?
3. Who fixes it and what steps are taken to rectify the error?

There are some situations for which error reduction/elimination in a few critical workflows can be the most significant factor in the ROI analysis.