

WHITE PAPER · ACCOUNTS PAYABLE

Approving and coding AP invoices: manual vs. automated

A Gulf South property manager runs accounts payable for seven related companies, homeowner associations and construction entities, where every invoice has to be coded to the right company, routed to the right approver and paid without being paid twice. This paper models the staff time a purpose-built approval tool returns, how it scales with invoice volume, and what it's worth beyond the hours.

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26 → 6 min

staff time per invoice, intake to paid

~77%

less staff time, at any volume

~33 hrs

saved each month for every 100 invoices

7 → 1

companies' AP in one coding and approval queue

01

The work being measured

Two jobs repeat on every invoice. We measure them separately because they land on different people (a bookkeeper codes, a principal approves) and they fail in different ways.

- **Intake and coding, for every invoice.** Log the bill, confirm the vendor is set up and its COI and W-9 are current, decide which of the seven companies it belongs to, and code it to a GL account or item, plus a job and expense for the construction entities. Confirm it isn't a bill already entered or paid.
- **Approval and payment, for every invoice that goes forward.** Route it to the person allowed to approve that company's spend, record the approval, stamp the invoice, enter it into the accounting system, and file it with its backup so it can be found later.

Out of scope for both methods: the bank payment itself and the monthly close. Those costs are real, but the tool prepares and records them rather than replacing them, so counting them would only dilute the comparison.

02

The manual process today

Invoices arrive by email, by mail and off the office copier. Each is saved to a company folder, coded from memory or by digging up how the vendor was coded last time, then emailed or walked to a principal for sign-off and tracked on a shared spreadsheet. Nothing stops the same

invoice from being entered twice, and the coding lives in one bookkeeper's head.

STAFF MINUTES PER STEP

Manual step	Low	Likely	High
INTAKE AND CODING, PER INVOICE			
Receive the invoice, log it, save it to the right company's folder	2	3	5
Confirm the vendor is set up; check the COI and W-9 are current	2	3	4
Code it: company, GL account or item, and for construction the job and expense; split when needed	4	6	10
Check it isn't a duplicate of one already entered or paid	1	2	4
Minutes per invoice (intake and coding)	9	14	23
APPROVAL AND PAYMENT, PER INVOICE			
Route to the approver allowed for that company; track who has it	3	4	7
Record the approval, stamp the invoice, enter it into accounting	4	5	8
File the approved invoice with backup; update the tracking sheet	2	3	5
Minutes per invoice (approval and payment)	9	12	20
Fixed monthly: reconcile the tracker across companies, chase stuck approvals	45	60	90

How well this matches reality: at about 120 invoices a month across the seven companies, the model gives roughly 37, 53 and 88 staff hours a month (low, likely, high). That lines up with about a day and a half a week of a bookkeeper's time plus scattered principal sign-off, before counting the rework when a bill is miscoded or paid twice, which this model leaves out.

03

The automated process

The tool takes the invoice PDF (one bill, several, or a stack it splits into separate bills), reads the vendor, invoice number, date and amount, flags anything that looks like a duplicate, and pre-fills the coding from how that vendor was coded before. Staff time shrinks to reviewing a queue, handling exceptions and approving. A claim-lock means two people never work the same bill.

STAFF MINUTES PER STEP

Automated step (staff time only)	Low	Likely	High
Review a queued bill, with extracted fields and pre-filled coding already applied	1.5	2.5	4
Handle an exception: a new vendor, a split, a missing COI or W-9, a flagged duplicate (share of invoices)	4 × 15%	5 × 20%	8 × 25%
Approve from the queue: one click, claim-locked	0.5	1	1.5
Mark entered and paid; the audit trail writes itself	1	1.5	2.5
Fixed monthly: work the intake inbox, spot-check, reconcile	10	15	20

Extraction runs the moment a file lands, so by the time staff open the queue the bill is already read, checked for duplicates and coded. The likely case works out to about 6 minutes of staff time per invoice, against 26 by hand.

04

Where each field comes from

No single source has everything, so the tool layers three. The invoice supplies the raw fields, the vendor's own history supplies the coding, and a flag set once in the tool carries forward.

What the bill needs	From the invoice (AI read)	From vendor history	Set in the tool
Vendor, invoice number, date, amount	Yes	—	Confirm on review
Which company it belongs to	Sometimes (bill-to)	Prior companies	Override per bill
GL account or item	—	How it was coded before	Pick or adjust
Construction job and expense	—	Partly	Per bill
Is it a duplicate?	File fingerprint + invoice number	Prior bills	Confirm or skip
COI and W-9 current	—	Vendor record	Upload or flag
Approval, cover sheet, audit log	Generated by the tool		

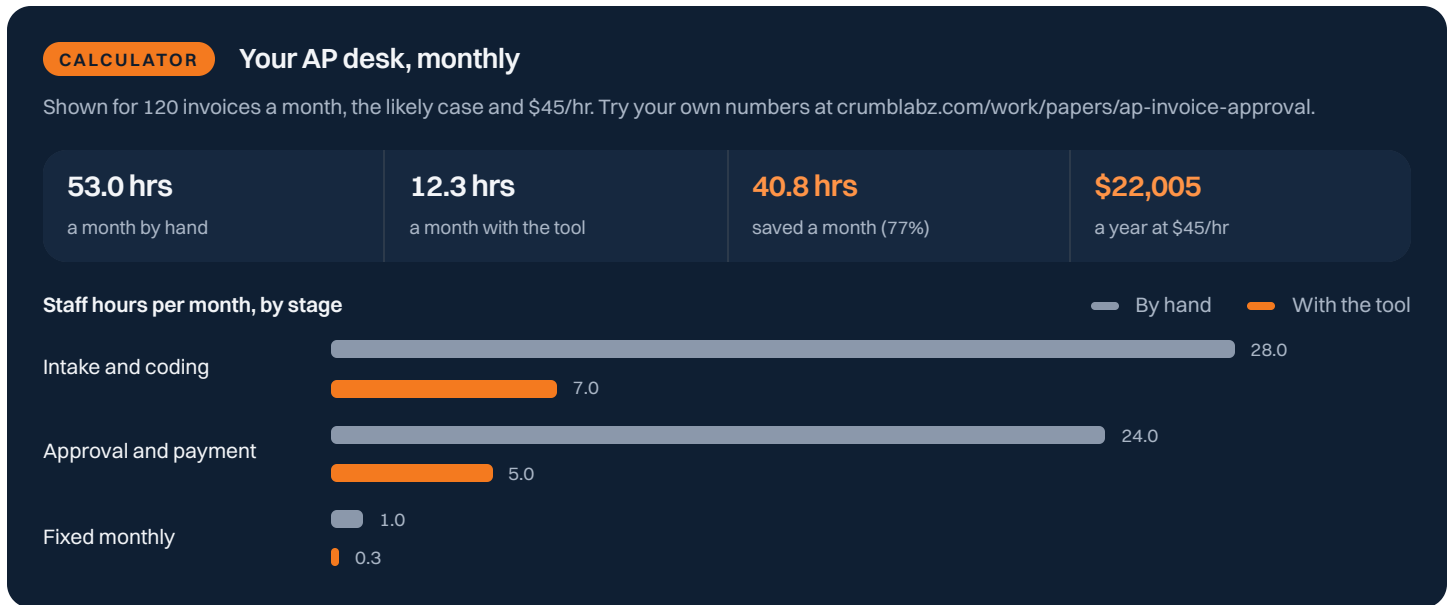
Sources overlap on purpose. The same vendor is coded the same way across all seven companies because the coding follows the vendor, not whoever happens to open the bill. And every invoice is fingerprinted at intake, so a second copy that arrives a month later is caught before a second payment goes out.

05

How the savings scale

Both methods grow with the number of invoices. What differs is the cost per invoice: 26 minutes by hand against about 6 with the tool in the likely case. So the percentage saved holds near 77% at any volume, while the hours saved grow in a straight line with the portfolio. Try your

own numbers.



The month-end crunch

Monthly hours understate the pain, because bills bunch up before each payment run and the close. By hand, approvals move one folder and one email at a time, so a principal becomes the bottleneck exactly when volume peaks. In the tool, every company's bills sit in one queue, routed to whoever is allowed to approve them, so sign-off happens in parallel across all seven companies instead of one after another. Adding an eighth company is a filter, not a new folder-and-email routine.

Rules of thumb (likely case)

- About 20 minutes saved on every invoice.
- About 33 staff hours a month for every 100 invoices, roughly \$1,500 at \$45 an hour.
- Each company added to the portfolio adds a queue filter, not a parallel process, so the marginal cost of the next entity is near zero.

06

Benefits beyond time

- **No double payments.** Every invoice is fingerprinted at intake and checked against prior invoice numbers, so a second copy is caught before a second check goes out. It's the single most expensive AP mistake.
- **Right company, right code.** Coding follows the vendor's own history, so a vendor is coded the same way across every company instead of differently by whoever opens the bill.
- **An audit trail.** Every bill's intake, coding changes, approval and payment are logged with who did it and when, which matters when a vendor or an owner asks what was paid and who signed off.
- **No collisions.** A claim-lock means two people never approve or edit the same bill, even with several staff in the queue at once.
- **Separation of duties.** Roles are enforced: a property manager can file and recommend, but only principals can approve or delete. A shared folder can't give you that control.
- **Less key-person risk.** The coding rules and vendor history live in the tool, not in one bookkeeper's memory. A new hire can run the queue on day one.

- **Compliance in one place.** COI and W-9 status ride on the vendor record, so an expired certificate surfaces while the bill is being approved, not at audit time.

07

Assumptions and limits

- Minute values come from walking through the workflow, not from a stopwatch. The low and high scenarios bracket the uncertainty.
- Volume defaults to 120 invoices a month across seven companies. Yours will differ: the percentage saved barely moves, the hours do.
- Automated time assumes the PDF or scan is legible. Poor photos of crumpled invoices raise exception time.
- Coding reuse assumes the vendor has history. A brand-new vendor carries a one-time setup cost the first time it's seen.
- The rate defaults to \$45 an hour. At a firm this size a principal often does part of the work, so a higher loaded rate may be fairer.
- Sending the bank payment and closing the books are out of scope. The tool prepares and records them; it doesn't move the money.

08

How to test this on your books

Time one real month both ways: the manual process on a sample of ten invoices, and the tool on all of them. Put the measured minutes in place of the likely case, and the calculator above does the rest. We're glad to run that test with you.

About CrumbLabz

CrumbLabz builds custom software, websites and AI tools for operating businesses, then hosts, supports and keeps improving them. Every project starts with a free first call and a free solution map.

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