

Appendix D: AI ROI Calculator

Use this calculator from the moment you baseline a process (Chapter 6) through risk-adjusted value (Chapter 7) to the pilot verdict (Chapter 11), and use it to log costs for every item on your 90-day roadmap (Chapter 27). It keeps two ledgers, hours and cash, and never adds them. Northstar Home & Appliance is fictional, and every Northstar figure below is modeled, not evidence.

Step 1: Baseline

Fill this in before anything changes, measured the way you will measure the pilot. Mark estimates “est.”

Table 1: Baseline record. Baseline hours = cases x minutes per case / 60.

Item	Your entry	Source and date
Process and owner		
Cases a month		
Hands-on minutes per case now		
Exception share (cases kept with a person)		
Baseline hours a month		

Cost per hour. Leave it off both ledgers. Hours times a wage is not cash. If recovered hours really did cut paid overtime or contractor spend, the cash line is the actual drop in that spend, read from the accounts. Chapter 25 prices hours only as an input to a three-year cost comparison, outside both ledgers.

Step 2: Risk-adjusted value

Table 2: Risk-adjusted value, in hours a month.

Step	What to enter	Your process
1. Scored work	Hours a month for cases in scope (Step 1 formula)	
2. Excluded cases	Remove cases a person keeps (exceptions, high-impact items)	
3. Minutes after	Estimated minutes per case including checking	
4. Risk-adjusted value	(minutes now - minutes after) x cases in scope / 60	

Worked example (illustrative, not Northstar; modeled). The heating and cooling service firm’s routine warranty call-backs: about 190 a month at 6 minutes is about 19 hours of scored work, against a 60-hour headline that included exceptions. No excluded cases remained. Checking takes about 2 minutes, so 4 minutes saved x 190 / 60 = about 12.7, reported as about 13 hours a month. That is capacity, not cash.

Step 3: The hours ledger

Table 3: Hours ledger. Use actual build hours, not the estimate.

Line	Formula	Result
A. Hours recovered a month	Measured, reviewing time included	
B. Running hours a month	Spot-checks, upkeep, new work the pilot created	
C. Net capacity a month	A - B	
D. One-off hours	Actual build hours + governance review hours	
E. Months to repay	D / C	
F. Six-month test	C x 6, compared with D	

Worked example (Northstar, fictional; modeled). Meeting follow-through fell from about 15 to about 9 minutes per meeting. The pilot ran 40 meetings in its four weeks, about 43 a month, so 43 x 6 minutes = 4.3 hours, review included. Less 2 running hours, net capacity is about 2.3 hours a month. One-off hours were 22 build plus 6 review = 28. Six-month test: 2.3 x 6 = about 14 hours against 28, so it fails. In Chapter 19, about 50 one-off hours against about 4 net hours a month repaid in about a year.

Step 4: The cash ledger

Enter only money that actually left or stayed in the business, with a record.

Table 4: Cash ledger. Net cash = realized benefits - costs. Never add hours to this table.

Line	Monthly	First year	Evidence (invoice, accounts line, withdrawn hire)
Subscriptions and plan fees			
Usage charges			
Other new spend			
Realized benefit: avoided hiring			
Realized benefit: cost reduction			
Realized benefit: billed throughput			
Net cash			

Hours recovered are never cash. Throughput is cash only when billed. Avoided hiring needs an approved hire withdrawn; cost reduction needs an accounts line that fell. An avoided loss is not a saving. Northstar's meeting pilot: \$0 realized, minus about \$60 a month (illustrative plan price), about -\$720 in the first year.

Step 5: Scorecard and verdict

Table 5: Pilot scorecard. Do not move the line after seeing results.

Measure	Baseline	Result	Line written before the pilot	Met?
Measure in your stop rule				
Quality floor: gate edits; spot-check errors passed				
Unprompted use (share of eligible work, no reminder)				
Fallback rate (share sent to the fallback)				

- ☐ Figure 11.1 outcome: standardize / revise and rerun once / stop. Reason: _____
- ☐ Would we build it again at what it actually cost? _____
- ☐ Is it worth keeping, now that it is built? (Build hours cannot decide this.) _____
- ☐ What share of the gain came from redesign or rules, not AI? _____

Northstar pilot register

These are the figures the chapters report, gathered in one place (fictional; all modeled; plan prices are placeholders). Hours a month are net recovered hours: measured hours less the running and maintenance hours each chapter reports. Projections are shown below the total, not in it. A dash means the chapter does not report it.

Table 6: Northstar pilot register (fictional; modeled). Hours are capacity, not cash.

Pilot (chapter)	Hours a month	One-off hours	Cash	Outcome
Meeting follow-through (11)	about 2.3 net	22 build + 6 review	about -\$720 first year	Standardized, one change
Management briefing (12)	about 17 net (verification included)	about 24 build + 3 governance	about \$25 a month	Standardized
Sales quotes and CRM (13)	about 29 + about 14 = 43 net (no running hours reported)	-	about -\$180 first year	Standardized
Customer service (14)	about 31 recovered, 12 new work, 19 net	-	about -\$1,440 first year	Standardized
Invoices (15)	about 27 net	-	about -\$240 a year; discounts about +\$70 a month	Standardized

