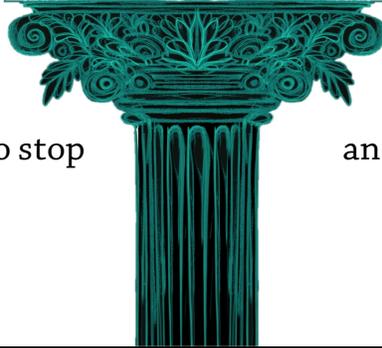


# The Compound Interest of Expertise



How I learned to stop  
worrying

and love retainer  
agreements

This is a presentation about my revelation that the money I save from a good retainer partnership offsets the risk that I will waste money if I can't keep my dev partner busy all the time. That's the high-level topic, at least. At the base level it's about a spreadsheet I made.

Slide 2

## Genesis anecdote (how this talk came to be)



Me: Philip Dennison

- Senior Producer, Outsourcing, Monolith Productions

A vendor came to visit

- “We encourage our clients to use retainer deals.”
- Of course you do.
- <https://www.linkedin.com/pulse/pay-per-asset-agreements-vs-retainer-deals-philip-dennison/>
- What if my team can't keep your team busy?!
- I made a baroque spreadsheet
- He was right. Retainer deals can be very good for both sides

Last winter a biz dev rep for a major external development (outsourcing) company, dropped by my studio on a tour of Seattle devs. We went to lunch.

During our chat he said, “We encourage our clients to use retainer deals.” I nodded with approval, but privately (and reflexively) I thought, “Of course you do.” Why wouldn’t he? It’s in his interest. The retainer agreement moves the burden of filling idle time from the seller to the buyer.

I had already considered the pros and cons of retainer deals at length. Last year I helped lead a discussion comparing retainer agreements and piecework agreements at XDS Ignite (the [External Development Summit](#)’s March mini-conference). I [posted](#) the results of the discussion on LinkedIn.

One of the main assumptions in last year’s discussion – as far as I can tell it is a widely-held concern – is that retainer agreements rapidly become inefficient if the buyer’s team fails to keep the outsource vendor’s team supplied with new assignments. It was *my* primary concern.

But I suspected that the anxiety might be misplaced. To solve the mystery I started tinkering in Excel. I made a spreadsheet which soon became baroque in its interlaced formulas. When I got it functioning I realized my biz dev friend was offering good advice. So I proposed to share the results & spreadsheet at the next XDS gathering so we could continue comparing notes.

Slide 3

## Conclusions

- At sufficient scale, the benefit of expertise outweighs the risk of paying for “idle” talent
- Higher velocity lowers cost
- Retainer discounts rapidly offset the risk of “idle time”

Here’s what I learned: It’s OK to risk having unproductive man days because they pay off with better productivity later. Velocity-at-scale saves more than you lose when paying for a modest duration of idle time. Discount rates accelerate your savings and increase your flexibility

Slide 4

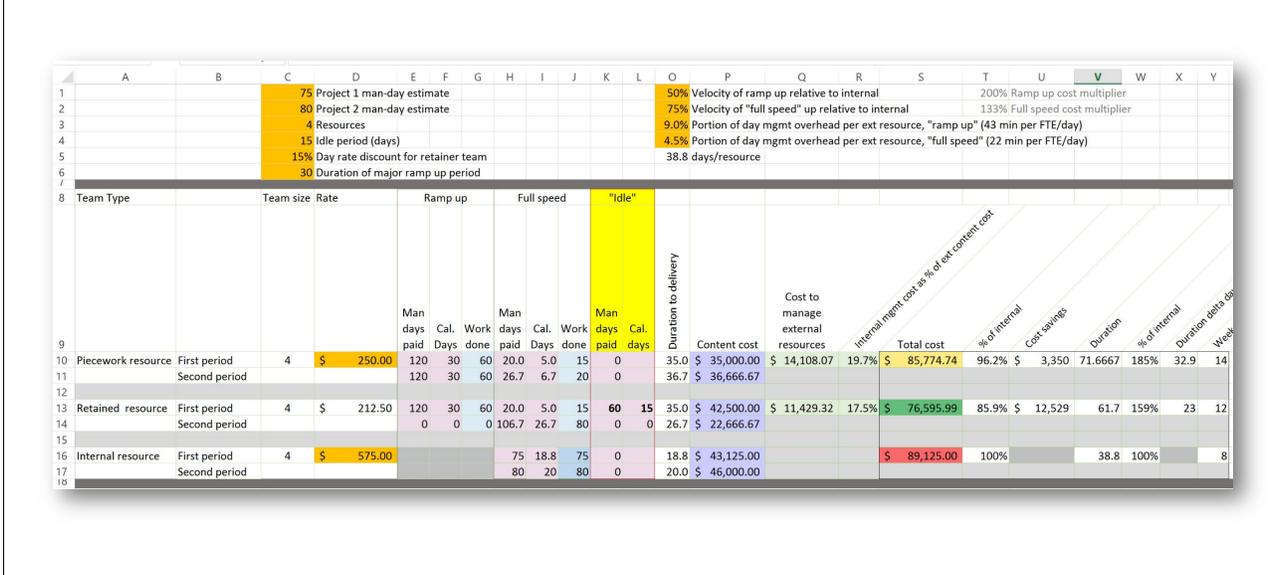
# The baroque spreadsheet



This is what I put together. I gave it a frame to honor its baroque cred. In the live presentation the frame faded away ...

Slide 5

# The baroque spreadsheet



... like so.

Before we continue, please consider a couple of caveats.

I gave an earlier version of this presentation to my XDS colleagues in March, proudly touting the spreadsheet's compelling results. A couple of days later at the Game Developers Conference I toured a colleague through the worksheet on my laptop and we noticed that some of the numbers didn't make sense. Before long I tracked down a major error. When I fixed it I was relieved to see that, while the change narrowed the conditions where retainer arrangements are favorable, the basic conclusions appeared to remain true. Since then I found and fixed another, less critical error.

Could there be other mistakes lurking in its bowels? Maybe? Are there are more elegant ways to derive my conclusions? Almost certainly. But fight me. I'm a producer (not a data analyst), I've never seen this idea demonstrated this way before and for all its potential faults it seems to work. Still, if you're going to use it for your own production plan (or to influence clients) you might want to put the sheet through its paces yourself.

Slide 6

## Methodology

Team Type	Team size	Rate	Ramp up			Full speed			"Idle"		Duration to delivery	Cost to manage external resources	Internal mgmt cost as % of ext content cost	Total cost	% of Internal	Cost savings	Duration	% of Internal	Duration delta			
Piecework resource	First period	4	\$ 250.00	120	30	60	20.0	5.0	15	0	35.0	\$ 35,000.00	\$ 14,108.07	19.7%	\$ 85,774.74	96.2%	\$ 3,350	71.6667	185%	32.9	14	
	Second period			120	30	60	26.7	6.7	20	0	36.7	\$ 36,666.67										
Retained resource	First period	4	\$ 212.50	120	30	60	20.0	5.0	15	60	15	35.0	\$ 42,500.00	\$ 11,429.32	17.5%	\$ 76,595.99	85.9%	\$ 12,529	61.7	159%	23	12
	Second period			0	0	0	106.7	26.7	80	0	0	26.7	\$ 22,666.67									
Internal resource	First period	4	\$ 575.00				75	18.8	75	0	18.8	\$ 43,125.00		\$ 89,125.00	100%		38.8	100%			8	
	Second period						80	20	80	0	20.0	\$ 46,000.00										

[Note that numbers in the text here, formatted like this, "(\*1)," correspond to like-numbered tag(s) in the slide images above the text, which may be on the preceding page.]

There are two main sections to the spreadsheet – variables and results.

The orange cells are inputs (\*1); all the rest of the cells (\*2) are derived by formulas. The inputs allow for 13 variables to test scenarios.

The main output compares data from 3 different team types. (\*3)

There are three pairs of rows in the output, each pair calculating costs for a team type, each row allowing inputs of varying work scope and idle periods

# Variables and assumptions

## Inputs for comparison:

- Internal estimates for two sets of assets (in man days)
- Internal day rate
- External day rate
- % of discount
- Size of team doing the work
- Duration of "idle" period
- Minutes/day/resource of internal oversight

## Educated guesses

- Remote teams operate at minimum efficiency during onboarding and ramp-up
  - Default estimate is 50% of internal velocity
- Experienced external teams accelerate their production rate
  - Default estimate is 75% of the internal velocity
- Sellers may be willing to include a rate discount for retainer deals.

From here on the slides and text may start to get a little boring. This may be a good time to switch over to the Excel file and start entering your own variables (the cells shaded ORANGE) and see how it changes the costs. You can always come back to this document for help or to figure out why or how I set it up. Or if you're a spreadsheet nerd you can keep reading.

# Team type

The screenshot shows an Excel spreadsheet with two main sections. The top section (rows 1-7) contains input variables, with several cells highlighted in orange. The bottom section (rows 8-17) is a detailed table for team types, with a red box highlighting the first column (Team Type) and a yellow box highlighting the 'Idle' column.

Team Type	Team size	Rate	Ramp up			Full speed			"Idle"	Duration to delivery	Content cost	Cost to manage external resources	Internal mgmt cost as % of ext content cost	Total cost	% of internal	Cost savings	Duration	% of internal	Duration delta up	Weight		
			Man days paid	Cal. Days done	Work days done	Man days paid	Cal. Days done	Work days done	Man days paid	Cal. Days done												
4 Piecework resource	first period	4	\$ 250.00	120	30	60	20.0	5.0	15	0	35.0	\$ 35,000.00	\$ 14,108.07	19.7%	\$ 85,774.74	96.2%	\$ 3,350	71.6667	185%	32.9	14	
	second period			120	30	60	26.7	6.7	20	0	36.7	\$ 36,666.67										
3 Retained resource	first period	4	\$ 212.50	120	30	60	20.0	5.0	15	60	15	35.0	\$ 42,500.00	\$ 11,429.32	17.5%	\$ 76,595.99	85.9%	\$ 12,529	61.7	159%	23	12
	second period			0	0	0	106.7	26.7	80	0	0	26.7	\$ 22,666.67									
2 Internal resource	first period	4	\$ 575.00				75	18.8	75	0	18.8	\$ 43,125.00			100%		38.8	100%			8	
	second period						80	20	80	0	20.0	\$ 46,000.00										

The first column (\*1) identifies the rows for each team type.

Internal resources (\*2) are the baseline for comparison both for speed and cost.

The Retained team (\*3) is hired for most of the project, starting when they need to ramp up and continuing until work is complete.

The Piecework team (\*4) is hired until the current set of work is done, then the immediate engagement is terminated until more work is available.

Slide 9

## Project periods

1	A	B	C	D	E	F	G	H	I	J	K	L	O	P	Q	R	S	T	U	V	W	X	Y
2		1	75	Project 1 man-day estimate									50%	Velocity of ramp up relative to internal			200%	Ramp up cost multiplier					
3			80	Project 2 man-day estimate									75%	Velocity of "full speed" up relative to internal			133%	Full speed cost multiplier					
4		2	4	Resources									9.0%	Portion of day mgmt overhead per ext resource, "ramp up" (43 min per FTE/day)			4.5%	Portion of day mgmt overhead per ext resource, "full speed" (22 min per FTE/day)					
5			15	Idle period (days)									38.8	days/resource									
6			15%	Day rate discount for retainer team																			
7			30	Duration of major ramp up period																			
8	Team Type		Team size	Rate																			
9																							
10	Piecework resource	First period	4	\$ 250.00	Man days paid	Cal. Days done	Work done	Man days paid	Cal. Days done	Work done	Man days paid	Cal. Days done	Work done	Man days paid	Cal. Days done	Work done	Man days paid	Cal. Days done	Work done	Man days paid	Cal. Days done	Work done	
11		Second period			120	30	60	20.0	5.0	15	0	0	35.0	\$ 35,000.00	\$ 14,108.07	19.7%	\$ 85,774.74	96.2%	\$ 3,350	71.6667	185%	32.9	14
12					120	30	60	26.7	6.7	20	0	0	36.7	\$ 36,666.67									
13	Retained resource	First period	4	\$ 212.50	0	0	0	20.0	5.0	15	60	15	35.0	\$ 42,500.00	\$ 11,429.32	17.5%	\$ 76,595.99	85.9%	\$ 12,529	61.7	159%	23	12
14		Second period						106.7	26.7	80	0	0	26.7	\$ 22,666.67									
15																							
16	Internal resource	First period	4	\$ 575.00				75	18.8	75	0	0	18.8	\$ 43,125.00			\$ 89,125.00	100%		38.8	100%		8
17		Second period						80	20	80	0	0	20.0	\$ 46,000.00									
18																							

To capture the idea of an interruption to assignments I imagined two discreet sets of work (\*1) separated by some amount of time (\*2). The duration of those periods and the time between active periods are input options.

# Project periods

Team Type	Team size	Rate	Ramp up	Full speed	"Idle"
Piecework resource	4	\$ 250.00	120	30	60
Retained resource	4	\$ 212.50	120	30	60
Internal resource	4	\$ 575.00	75	18.8	75

These blocks represent periods of work interrupted by periods of no work.

# Number of resources

Team Type	Team size	Rate	Ramp up	Full speed	"Idle"
Piecework resource	4	\$ 250.00	120	30	60
Retained resource	4	\$ 212.50	120	30	60
Internal resource	4	\$ 575.00	75	18.8	75

Team size affects velocity, which affects everything, so I made it variable per scenario but for consistency it is the same for each group.

# Rate

Team Type	Team size	Rate	Ramp up			Full speed			"Idle"	Duration to delivery	Content cost	Cost to manage external resources	Internal mgmt cost as % of ext content cost	Total cost	% of internal	Cost savings	Duration	% of internal	Duration delta ep	Week	
Piecework resource	First period	4	\$ 250.00	120	30	60	20.0	5.0	15	0	35.0	\$ 35,000.00	19.7%	\$ 85,774.74	96.2%	\$ 3,350	71.6667	185%	32.9	14	
	Second period			120	30	60	26.7	6.7	20	0	36.7	\$ 36,666.67									
Retained resource	First period	4	\$ 212.50	120	30	60	20.0	5.0	15	60	15	35.0	\$ 42,500.00	17.5%	\$ 76,595.99	85.9%	\$ 12,529	61.7	159%	23	12
	Second period			0	0	0	106.7	26.7	80	0	0	26.7	\$ 22,666.67								
Internal resource	First period	4	\$ 575.00				75	18.8	75	0	0	18.8	\$ 43,125.00		\$ 89,125.00	100%		38.8	100%		8
	Second period						80	20	80	0	0	20.0	\$ 46,000.00								

The day rates for each group (\*1) are just ballpark for domestic and overseas resources.

In the past I have negotiated rate discounts for retained teams, so that's also a variable. The Retainer team rate (\*2) is a function of the discount percentage (\*3).

# Velocity

Team Type	Team size	Rate	Ramp up			Full speed			"Idle"	Duration to delivery	Content cost	Cost to manage external resources	Internal mgmt cost as % of ext content cost	Total cost	% of internal	Cost savings	Duration	% of internal	Duration delta ep	Week	
Piecework resource	First period	4	\$ 250.00	120	30	60	20.0	5.0	15	0	35.0	\$ 35,000.00	19.7%	\$ 85,774.74	96.2%	\$ 3,350	71.6667	185%	32.9	14	
	Second period			120	30	60	26.7	6.7	20	0	36.7	\$ 36,666.67									
Retained resource	First period	4	\$ 212.50	120	30	60	20.0	5.0	15	60	15	35.0	\$ 42,500.00	17.5%	\$ 76,595.99	85.9%	\$ 12,529	61.7	159%	23	12
	Second period			0	0	0	106.7	26.7	80	0	0	26.7	\$ 22,666.67								
Internal resource	First period	4	\$ 575.00				75	18.8	75	0	0	18.8	\$ 43,125.00		\$ 89,125.00	100%		38.8	100%		8
	Second period						80	20	80	0	0	20.0	\$ 46,000.00								

Teams getting faster over time is obviously key to this examination. In these columns I track how much time each team takes to create assets.

The internal team sets the baseline. In this set of variables they do (\*1) 75 days of work in 75 man days in period 1; and (\*2) 80 days of work in 80 man days in period 2.

I calculate the relative speed of the external team with efficiency factors.

A new team will be slower than an experienced team while they learn the pipeline and communication style of their new client. In this scenario the slower Ramp Up period will be 6 weeks (30 days). (\*3)

The Ramp Up velocity value (\*4) is 50%, half the speed of the internal resources.

If they spend 6 weeks ramping up they will accomplish 60 days of work (\*5) (in units of internal estimates) in 120 man days (\*6). (The equation is 30 calendar days x 4 artists = 120 man days, but ½ the efficiency, so finished work equivalent to 60 internal days.)

After ramp up the Full Speed velocity is 75% of the internal team’s speed. (\*7)

Slide 14

### Idle time

Team Type	Team size	Rate	Ramp up	Full speed	"Idle"	Duration to delivery	Content cost	Cost to manage external resources	Internal mgmt cost as % of est content cost	Total cost	% of internal	Cost savings	Duration	% of internal	Duration delta sp	Week
Piecework resource	4	\$ 250.00	Man days paid: 120, Cal. Days done: 30, Work days done: 60	Man days paid: 20.0, Cal. Days done: 5.0, Work days done: 15	Man days paid: 60, Cal. Days done: 15	35.0	\$ 35,000.00	\$ 14,108.07	19.7%	\$ 85,774.74	96.2%	\$ 3,350	71.6667	185%	32.9	14
Retained resource	4	\$ 212.50	Man days paid: 0, Cal. Days done: 0, Work days done: 0	Man days paid: 106.7, Cal. Days done: 26.7, Work days done: 80	Man days paid: 0, Cal. Days done: 0	26.7	\$ 22,666.67	\$ 11,429.32	17.5%	\$ 76,595.99	85.9%	\$ 12,529	61.7	159%	23	12
Internal resource	4	\$ 575.00	Man days paid: 75, Cal. Days done: 18.8, Work days done: 75	Man days paid: 80, Cal. Days done: 20, Work days done: 80	Man days paid: 0, Cal. Days done: 0	18.8	\$ 43,125.00	\$ 89,125.00	100%				38.8	100%		8

Here (\*1) is where the “idle” time enters the calculation. For this scenario, after the first set of work the Retainer team has 3 weeks, or, with 4 resources, 60 man days (\*2), without critical assignments.

## Notes on “idle” time

- The remote team can't *actually* be idle
- An efficient project should be able to avoid completely wasted effort
- It may be preferable to think of this as buffer for work in a pipeline that is still being developed
- There is internal cost of managing the remote team during “idle” periods

	Days paid	Work done	Days paid	Total work	Work remaining	Duration to delivery	Content cost	Cost to manage external resources
0	13.3333	10	0	40	0	37	\$ 18,333.33	\$ 6,900.00
0	13.3333	10	0	40	0	36.7	\$ 18,333.33	
0	13.3333	10	30	40	0	37	\$ 21,958.33	\$ 6,382.50
	36.3333	40	30	40	0	26.7	\$ 17,708.33	
	40	40	0	40	0	20.000	\$ 23,000.00	
	40	40	0	40	0	20.0	\$ 23,000.00	

The vendor’s resources need to be working in the tools & maintaining communication with your team or the expertise will fade. The whole point of this calculation is that they don’t lose facility for your pipeline. The work could be R&D, or nice-to-have assets, or additional polish.

The dev team needs to take into account the overhead for managing the teams during this period.

# Math: Cost

Team Type	Team size	Rate	Ramp up			Full speed			"Idle"	Duration to delivery	Content cost	Cost to manage external resources	Internal migrant cost as % of est content cost	Total cost	% of internal	Cost savings	Duration	% of internal	Duration delta ep
Piecework resource	4	\$ 250.00	120	30	60	20.0	5.0	15	0	35.0	\$ 35,000.00	19.7%	\$ 14,108.07	96.2%	\$ 3,350	71.6667	185%	32.9	14
Retained resource	4	\$ 212.50	120	30	60	20.0	5.0	15	60	35.0	\$ 42,500.00	17.5%	\$ 76,595.99	85.9%	\$ 12,529	61.7	159%	23	12
Internal resource	4	\$ 575.00				75	18.8	75	0	18.8	\$ 43,125.00		\$ 89,125.00	100%		38.8	100%		8

$$\text{Cost} = \text{Resources} \times \text{Day rate} \times \text{Days} + \text{Internal Overhead}$$

This is how I calculated costs. The internal team effort (\*1) is a baseline to compare to the two agreement types. The total cost is figured like this:

$$\text{Cost} (*2) = \text{Resources} (*3) \times \text{Day rate} (*4) \times \text{Days} (*5) + \text{Internal overhead} (*6)$$

# Math: Days

Team Type	Team size	Rate	Ramp up			Full speed			"Idle"	Duration to delivery	Content cost	Cost to manage external resources	Internal migrant cost as % of est content cost	Total cost	% of internal	Cost savings	Duration	% of internal	Duration delta ep
Piecework resource	4	\$ 250.00	120	30	60	20.0	5.0	15	0	35.0	\$ 35,000.00	19.7%	\$ 14,108.07	96.2%	\$ 3,350	71.6667	185%	32.9	14
Retained resource	4	\$ 212.50	120	30	60	20.0	5.0	15	60	35.0	\$ 42,500.00	17.5%	\$ 76,595.99	85.9%	\$ 12,529	61.7	159%	23	12
Internal resource	4	\$ 575.00				75	18.8	75	0	18.8	\$ 43,125.00		\$ 89,125.00	100%		38.8	100%		8

$$\text{Days} = \text{Internal Velocity} \times \text{Efficiency Factors}$$

To recap: Days (\*1) = Internal velocity (\*2) x efficiency factors (\*3)

# Math: Internal Overhead

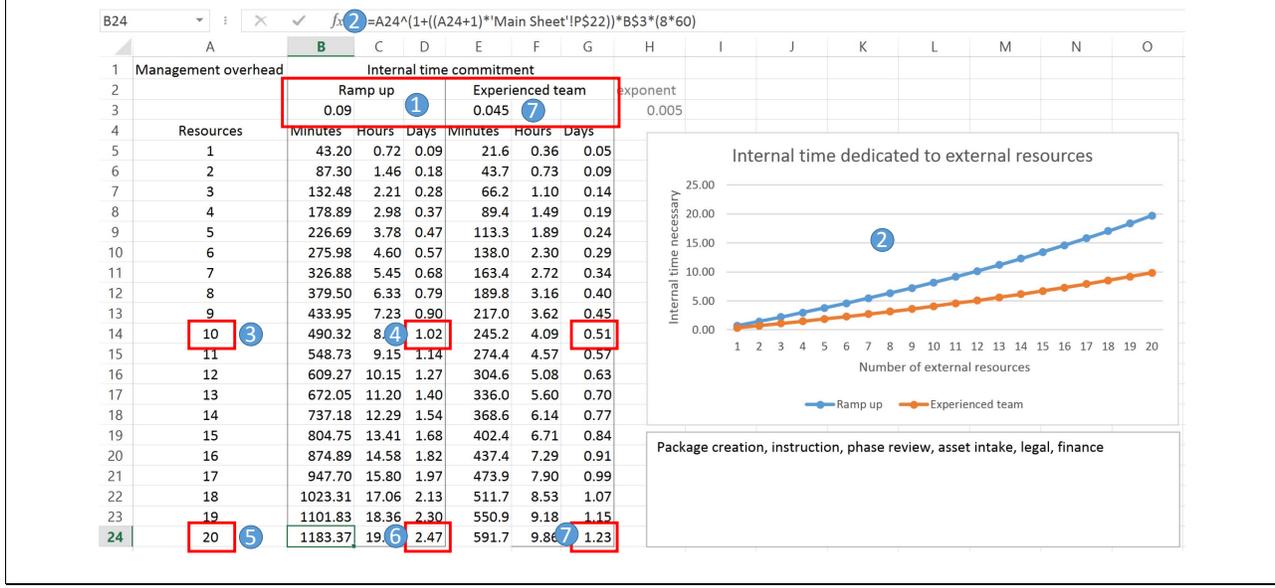
Team Type	Team size	Rate	Ramp up	Full speed	"Idle"	Duration to delivery	Content cost	Cost to manage external resources	Internal migrant cost as % of ext content cost	Total cost	% of internal	Cost savings	Duration	% of internal	Duration delta ep	Week				
Piecework resource	4	\$ 250.00	120	30	60	20.0	5.0	15	0	35.0	\$ 35,000.00	\$ 14,108.07	19.7%	\$ 85,774.74	96.2%	\$ 3,350	71.6667	185%	32.9	14
Retained resource	4	\$ 212.50	120	30	60	20.0	5.0	15	0	35.0	\$ 42,500.00	\$ 11,429.32	17.5%	\$ 76,595.99	85.9%	\$ 12,529	61.7	159%	23	12
Internal resource	4	\$ 575.00	0	0	0	106.7	26.7	80	0	26.7	\$ 22,666.67			\$ 89,125.00	100%		38.8	100%		8

Internal Overhead = % of 1 Day x total Work Days x Internal Day Rate

- ①
- ②
- ③
- ④

Internal overhead (\*1) = minutes per day spent internally per external resource (\*2) x number of external man days (\*3) x internal day rate (\*4)

# A note on internal effort



I added a subtle (and probably unnecessary) complication to the calculation of the internal cost.

I estimated that each external asset in ramp-up phase consumes about 9 percent (\*1) of a man day of collective effort from the internal dev team. One external artist takes the internal team 43 minutes of work each day. On the theory that management gets slightly-exponentially more time consuming as teams grow, I also added a small exponent to the formula (\*2).

In my calculation an external team of 10 (\*3) just ramping up takes an internal effort equal to about 1 man day (\*4). That includes the collective effort of Lead Artists, the Outsourcing Manager, Legal, Finance, Production, etc., for all oversight, intake and administration. Notice that, because of the curve, when you double the number to an external team of 20 (\*5), the oversight load increases more than double to ~2.5 man days of internal support (\*6).

An experienced team takes less internal oversight – in this formula it is half the internal effort (\*7).

# When delivered

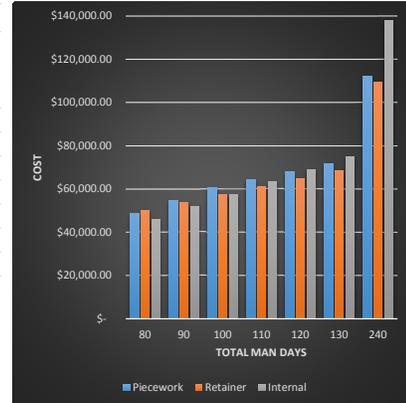
Team Type	Team size	Rate	Ramp up			Full speed			"Idle"		Duration to delivery	Content cost	Cost to manage external resources	Internal mgmt cost as % of est content cost	Total cost	% of internal	Cost savings	Duration	% of internal	Duration delta (days)	
Piecework resource	4	\$ 250.00	120	30	60	20.0	5.0	15	0	35.0	\$ 35,000.00	\$ 14,108.07	19.7%	\$ 85,774.74	96.2%	\$ 3,000.00	71.6667	185%	32.9	14	
Retained resource	4	\$ 212.50	120	30	60	20.0	5.0	15	60	15	\$ 35.0	\$ 42,500.00	\$ 11,429.32	17.5%	\$ 76,595.99	85.9%	\$ 12,529.00	61.7	159%	23	12
Internal resource	4	\$ 575.00	0	0	0	106.7	26.7	80	0	20.0	\$ 46,000.00			\$ 89,125.00	100%		38.8	100%		8	

This column tracks the duration of the work. In this scenario the Retainer team delivers the assets ten calendar work days faster (\*1) than the Piecework team (\*2), which allows earlier integration, more testing and more chances to polish.

# Inflection Points

Variable work scope, no discount, 10 days idle, crew of 4, most work in 2nd period

Piecework	Retainer	Internal	Work set 1	Work set 2	Total Work	Idle man days	Idle cal. days	Crew	Dis-count
\$ 48,571.99	\$ 50,119.49	\$ 46,000.00	40	40	80	40	10	4	0%
\$ 54,643.49	\$ 53,809.99	\$ 51,750.00	40	50	90	40	10	4	0%
\$ 60,714.99	\$ 57,500.49	\$ 57,500.00	40	60	100	40	10	4	0%
\$ 64,405.49	\$ 61,190.99	\$ 63,250.00	40	70	110	40	10	4	0%
\$ 68,095.99	\$ 64,881.49	\$ 69,000.00	40	80	120	40	10	4	0%
\$ 71,786.49	\$ 68,571.99	\$ 74,750.00	40	90	130	40	10	4	0%
\$ 112,381.99	\$ 109,167.49	\$ 138,000.00	40	200	240	40	10	4	0%



Here are some tables comparing variations in a single input to expose where cost advantages change. In the first I adjusted the total work by adding to the second set of work, and you can see that increases to scope improves cost favorability to retainer teams.

[Color key: green is cheaper, yellow is more expensive, red is most expensive.]

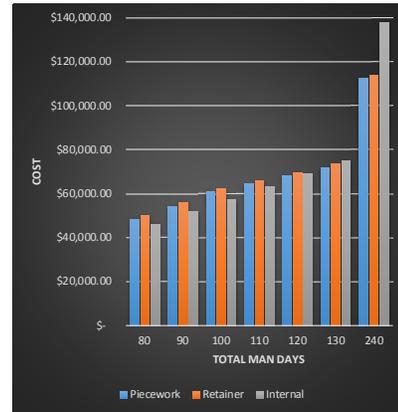
Outsourcing small amounts can be inefficient due to the slow speed of inexperienced teams. At much less than 5.5 man-months of work (110 man days) (\*1) the effort to outsource does not always make economic sense (at my day rate estimates), though it may be required to increase capacity or speed the schedule.

The deal in this scenario has no retainer discount, so the Retainer and the Temp teams get paid the same, but the retainer gets paid for idle time for two weeks, or 40 man-days. But the Retainer team leverages the “idle time” to reach peak velocity earlier and maintains its advantage for all larger scopes. (\*2)

# Inflection Points

Variable work scope, no discount, 10 days idle, crew of 4, **most work in 1st period**

Piecework	Retainer	Internal	Work set 1	Work set 2	Total Work	Idle man days	Idle cal. days	Crew	Dis-count
\$ 48,571.99	\$ 50,119.49	\$ 46,000.00	40	40	80	40	10	4	0%
\$ 54,643.49	\$ 56,190.99	\$ 51,750.00	50	40	90	40	10	4	0%
\$ 60,714.99	\$ 62,262.49	\$ 57,500.00	60	40	100	40	10	4	0%
\$ 64,405.49	\$ 65,952.99	\$ 63,250.00	70	40	110	40	10	4	0%
\$ 68,095.99	\$ 69,643.49	\$ 69,000.00	80	40	120	40	10	4	0%
\$ 71,786.49	\$ 73,333.99	\$ 74,750.00	90	40	130	40	10	4	0%
\$ 112,381.99	\$ 113,929.49	\$ 138,000.00	200	40	240	40	10	4	0%



Here the scope increases in the first work period. If the majority of the work occurs earlier, the Piecework team retains the financial advantage.

# Inflection Points

Variable work scope, **15% discount**, 10 days idle, crew of 4, most work in 1st period

Piecework	Retainer	Internal	Work set 1	Work set 2	Total Work	Idle man days	Idle cal. days	Crew	Dis-count
\$ 48,571.99	\$ 43,619.49	\$ 46,000.00	40	40	80	40	10	4	15%
\$ 68,095.99	\$ 60,643.49	\$ 69,000.00	80	40	120	40	10	4	15%
\$ 82,857.99	\$ 73,405.49	\$ 92,000.00	120	40	160	40	10	4	15%
\$ 112,381.99	\$ 98,929.49	\$ 138,000.00	200	40	240	40	10	4	15%

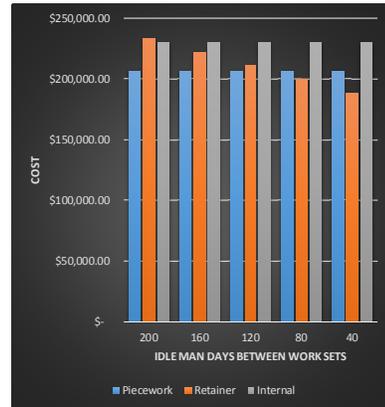


... but the advantage returns to the Retainer team if a 15% discount is factored in. This scenario is the same as the previous set other than the cost discount.

# Inflection Points

Variable idle days, no discount, scope of 400 MD, crew of 8

Piecework	Retainer	Internal	Work set 1	Work set 2	Total Work	Idle man days	Idle cal. days	Crew	Dis-count
\$ 206,671.43	\$ 233,261.85	\$ 230,000.00	200	200	400	200	25	8	0%
\$ 206,671.43	\$ 222,125.33	\$ 230,000.00	200	200	400	160	20	8	0%
\$ 206,671.43	\$ 210,988.80	\$ 230,000.00	200	200	400	120	15	8	0%
\$ 206,671.43	\$ 199,852.27	\$ 230,000.00	200	200	400	80	10	8	0%
\$ 206,671.43	\$ 188,715.75	\$ 230,000.00	200	200	400	40	5	8	0%

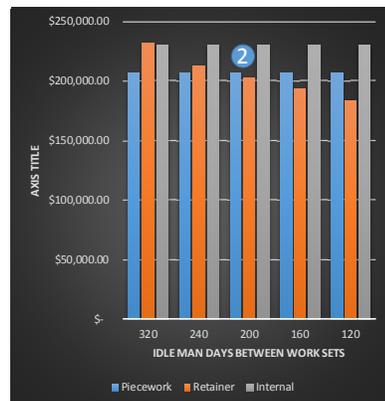


In this scenario with two big sets of work, a retainer team of 8 with 2 weeks idle (\*1), can still be less expensive than the piecework team. And with a discount the flexibility increases (see next example).

# Inflection Points

Variable idle days, 15% discount, scope of 400 MD, crew of 8

Piecework	Retainer	Internal	Work set 1	Work set 2	Total Work	Idle man days	Idle cal. days	Crew	Dis-count
\$ 206,671.43	\$ 231,671.43	\$ 230,000.00	200	200	400	320	40	8	15%
\$ 206,671.43	\$ 212,398.38	\$ 230,000.00	200	200	400	240	30	8	15%
\$ 206,671.43	\$ 202,761.85	\$ 230,000.00	200	200	400	200	25	8	15%
\$ 206,671.43	\$ 193,125.33	\$ 230,000.00	200	200	400	160	20	8	15%
\$ 206,671.43	\$ 183,488.80	\$ 230,000.00	200	200	400	120	15	8	15%



With a large scope and a rate discount a retainer team can spend 5 weeks (\*1) off critical tasks, 200 man days!, and still be less expensive (\*2) than a piecework team.

## Conclusions

- At sufficient scale, the benefit of expertise outweighs the risk of paying for “idle” talent
  - Higher velocity lowers cost
  - Assets integrated earlier have more time for polish
- Retainer discounts rapidly offset the risk of “idle time”

Recap. Retainers can be OK! 😊

Thanks for reading and enjoy poking at the spreadsheet.

Thank you!

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