

Adventures with Charge Back and the Value of a Useful Consistent Lie

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Abstract – Information Technology charge back is actually very simple. Determine the recovery target amount and the items that will be charged back, then divide by the count of each item, and you are done. You have the PRICE of the item. There is resistance that comes from a misconception that the price reflects the COST to produce the item. We separate the ‘cost to produce’ argument from the ‘charge back price’ argument, which are completely different conversations, then use the idea of “a useful consistent lie” to lesion any remaining resistance.

Introduction - Let us start with stating that information technology charge back is easy. Trivial even. It is simple math. It is your recovery target and line items contribution to the recovery target, divided by the number of items expected to be ‘sold’. There you have it. This is the PRICE of the charge back line item.

The political problem happens when the technical experts resist our prices as completely ‘wrong’ for what they knew the line item actually costs. We tried with some success to separate the cost of goods sold conversation (their position) from the charge back price conversation (our position).

The remaining resistance we attempted to address was with the idea of a ‘useful consistent lie’. That is to say, in a charge back process, the price for a line item is a ‘useful consistent lie’ built on the understanding of what it includes. Prices and line items are only methods to achieve a recovery target, nothing more.

Methods and Results

Chargeback is an attempt to recover resources used in the delivery of information technology goods and services. There are really only three parts in this: the recovery target, the number of line items used in the recovery model, and the price of each item to be sold.

$$Recovery\ Target = \sum (\#Items * Items\ Price)$$

There is some room to manipulate prices if you have multiple line items, but the goal is to combine the items sold to equal the recovery target.

Resistance could come from technical experts having consternation with seeing that a ‘server’, for example, is sold for \$27,000 when they know it only costs seven thousand. What they have failed to realize is that the line item of ‘server’ includes much more than their base \$7,000 server. It includes RAM, storage, network, management software, other software, and the people to run it.

The argument is one of ‘cost of goods sold’ vs. ‘charge back price’ placed on the line item.

We needed to separate these back into two separate conversations. Yes, THEY needed to understand the cost of goods sold such that they could find efficiency opportunities. However, the cost to produce has very little to do with the price charged in a charge back model, as the goal is to meet a recovery target and NOT recovering the actual cost of what was sold.

Intellectually this is a difficult conversation. The idea of charging \$27,000 for a \$7,000 server was just unpalatable. Even with showing that the storage, ram, network, software, and other things are ‘built in’ to the price, does not convince everyone. Both parts of the conversation have a different point of view of the cost of line items, and there are no obvious ways to reconcile these ideas

IT Cost of Goods Sold Vs. IT Charge Back Rate Example

IT Cost of Goods Sold (Average)		IT Charge Back Rate
Basic server, CPU, Memory	\$7,000 USD	\$27,000 USD
OS, Monitoring SW, Management SW, vendor support, etc..	\$4,500 USD	
Operations people , support equipment, and support SW	\$3,400 USD	
Power, cooling, floor space, security, network	\$1,200 USD	
Specialty SW like DB, JVM, WAS, etc..	\$4,600 USD	
Storage, RAID, mirror, backup, etc.	\$6,300 USD	

In these cases, a possible approach is that the item price is a 'useful consistent lie', built on the understanding of what it includes.

What is a useful consistent lie, and what is its value?? Well it is everything around you and how you understand it. When your understanding is sufficient for a conversation, you use that understanding, **that is the useful consistent lie**. The value of the useful consistent lie is that the conversation can now be conducted with a reasonable degree of mutual understanding.

For example, what time is it, right now? Whatever your answer, it is not the most correct answer or "truth". It IS a useful consistent lie. The time may be 12:18 in the afternoon by my digital watch, but you may have said it is quarter after noon, lunchtime, mid-day, or any other of a host of answers. **To the extent that our mutual understanding moves the conversation along, it is a useful consistent lie**. If you wish the most correct answer or "truth", you should ask a physicist and set aside a weekend for the nuance of the 'truth'. The value of the useful consistent lie is the conversation can happen with this 'good enough', mutual understanding. The closer you look, the more you realize the 'truth' is an expensive illusion.

When the mutual understanding breaks down, then a new, "more correct", useful consistent lie is needed.

Once these ideas were accepted, our charge back system successfully charged back several million dollars per month using just a few line items. We had 'just enough' line items to allow the consumers to control costs by careful requests for Servers, OS type, RAM, and Storage, and not so many line items that could lead to endless debate of the best configuration choices.

Discussion

So how do these ideas of charge back and useful consistent lie fit together?

Hypothetically, we want to make an information technology charge back system. We know the formula is recovery target divided by the number of items expected to be sold.

The charge back mission is to recover one million dollars spent on information technology, and for data I have the counts of: employees, phones, cell phones, desks, offices, desktop computers, etc. to choose from. After some conversation of which are appropriate proxies for a charge back, the consensus is to charge by Employee then each group pays for their number of employees.

If there are 125 employees, $\$1,000,000/125 = \$8,000$ per employee.

This solution is consistent, transparent, and understandable. There is no expectation that each employee actually costs that amount, but it is understood that it is a 'good enough' answer. **There are consistent perspectives on the useful consistent lie that each person costs \$8,000**, and with this the recovery amount will be collected. Mission accomplished.

Now add people, and politics. Some VP will decide that his group is being 'charged too much' because they do not even use desktop computers. The VP perspective is now inconsistent with the useful consistent lie (how much each person costs), and the chargeback system enters a state of instability.

To address this, we make an adjustment and count desks, phones, desktop computers, and people for a 'better' distribution of cost. To the extent that this solution is consistent, transparent, and understandable it becomes the new useful consistent lie of how much each line item will cost.

	Inventory Count	Target %	Calc Cost	Cost Each / Year	Cost Each / Month	Extended Cost	Recovery Target
		300.0%					1,000,000
desk	143	20.0%	200,000	1,399	117	200,000	
phone	143	15.0%	150,000	1,049	87	150,000	
desktop computer	107	25.0%	250,000	2,336	195	250,000	
people	125	40.0%	400,000	3,200	267	400,000	
						Sum	1,000,000

Notice that people cost less in this model (\$7,984 for the 107 with a computer, desk and phone), but the recovery target of one million is still achieved. The 'wasted' 18 desks and phones are now charged to a group so that groups per person average is more than \$8,000 per person. An incentive to remove inefficiencies in the system. The model is more complicated but probably more "equitable" especially from the complaining VP's perspective. (A person without a desktop computer costs \$5,647)

The spreadsheet formula is simple in that you only choose the recover target "A" and the inventory line item and sold counts "B", then determine how much each line contributes to the recover goal "C". The costs are calculated.

	A	B	C	D	E	F	G	H
1		count	target %	Calc Cost	Cost Each / Year	Cost Each / Month	Extended Cost	Recovery target
2			=SUM(C3:C59)					1000000
3	desk	B 143	0.2	=\$2*C3	=D3/B3	=E3/12	=B3*E3	
4	phone	143	0.15	=\$2*C4	=D4/B4	=E4/12	=B4*E4	A
5	desktop computer	107	0.25	=\$2*C5	=D5/B5	=E5/12	=B5*E5	
6	people	125	0.4	=\$2*C6	=D6/B6	=E6/12	=B6*E6	
7							Sum	=SUM(G3:G6)

To the extent that the inventory line items and sold counts remains constant and the monthly utilization is consistent, then the recovery target will be met. Note this means that variations month to month may cause an under or over collection condition.

The following example of charge back of information technology goods and services is set up the same way. Instead of desks, phones, desktop computers, and people, as the line items we use servers, storage, and memory.

In this example, we have a recovery goal was 500 million and we have some twelve thousand devices. In this case our cost for a server was 27 thousand dollars.

	Inventory Count	Target %	Calc Cost	Cost Each / Year	Cost Each / Month	Extended Cost	Recovery Target
		100.0%					500,000,000
Server	12,000	64.8%	324,000,000	27,000	2,250	324,000,000	
Storage	150,000	25.0%	125,000,000	833	69	125,000,000	
Memory	15,000,000	10.2%	51,000,000	3	0.28	51,000,000	
						Sum	500,000,000

While the numbers are bigger, the method is still the same

Sometimes consensus is not achieved. The individual viewpoints are not easily reconcilable and this normally happened with the super smart technicians because they do not account other costs as license for the software that is running on it. The subtle change in argument is that these technical arguments focus on what is CHARGED, and that it is not equitable based on what things COST to produce. A technician could argue that if it costs E for the equipment and costs S for the software, then the CHARGE must reference these. Like this: Charge= E+S

But what something COSTS to produce, is separate from what a charge back system will CHARGE for an item. The item sold is a proxy for all the things that make up the costs to be recovered. Unless software install becomes a separate line item, it is not accounted for on its own. A charge back model allows for individual cost centers to control costs by selecting line items to meet their local goals at an acceptable price. But never is the line item's charge a direct representation of what it costs to produce that line item.

Now this point is where many a smart person loses their mind. So, let me clarify that there is a co-mingling of two very different conversations. **The charge back conversation is ONLY about recover target and how to meet that target.** If all you have is the count of people then there you go. If you have server count, memory count, storage count or any other 'changeable line items' they are only intended to allow the consumer some control over how they get charged. If software installed is not a line item, it must be 'folded in' to the other line items (assumes that this cost is part of the recovery target).

This is a completely different conversation from the very technical conversation of how much does it cost to produce a good or service. This conversation takes into account the nuance of software licensing, hardware price differences, the cost of power and cooling, and all the other component pieces, and how they contribute to the cost of producing a good or service.

There MAY be a chance that the two conversations are compared, or at least the results. But they are very separate conversations.

It is helpful to note that simple charge back models are mostly about allocating costs (finance). The business units have little choice or control. To control charge back costs, you either fire people or give up floor space (whatever the allocation model has). However, more complex charge back models lose the overt finance objectives, instead focusing on driving behavior. Business units now can choose to add people and use cheaper computers, or use more expensive computers that can displace their phone system, or make other choices that achieve business goals, at a reasonable and controllable cost. Thus, the more complex charge back systems have everything to do with driving (business unit) behavior (consumption) and nearly nothing to do with finance.

Caution: You can make a charge back system too complex. Too many choices cause decision paralysis by your customers who “just want a decent server that works”

https://en.wikipedia.org/wiki/Analysis_paralysis

https://en.wikipedia.org/wiki/The_Paradox_of_Choice

Conclusion

Here is the trick of doing charge back:

Define the goal of the charge back system. Simple models are about allocating funds, more complex models are about changing behavior. While the model should be consistent, transparent, and be well understood, it can contain all of IT, just hardware and software or hardware, software and labor, floor space and power. Whatever costs are to be recovered.

Then find helpful items to charge back on. These items will be assigned / selected by the business and are proxies for what you are recovering for.

Floor space and power are not suitable chargeback lines. They come with the server and are not optional, so the cost of the server must account for these items.

Create enough line items to be useful to the business to control their costs, but not so many that it is impossible to select.

Recognize that the COST of goods sold conversation has no place in the PRICING of the items conversation.

Know that the **pricing of line items is a useful consistent lie**, and has nothing to do with the cost to produce.