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Business strategy

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COST MANAGEMENT

Ross Maynard ponders lessons from a firm that forgot to link its costs to performance.

The company that I'm writing about no longer exists: a victim of the recession. Based in the Midlands of England, it assembled electrical components to order. It was a small subsidiary of a large international group and its cost performance was erratic. All employees were salaried, so profitability varied according to sales, which were driven by an international sales team that often seemed to overlook the interests of the minnow. When the recession struck, the group decided to move some of its production to Europe and outsource the rest to save fixed costs.

I never worked with the firm and don't know the underlying reasons for its closure, but business decisions are too often driven by cost alone, with no appreciation that performance drives cost, not vice versa. To make effective decisions we must first understand performance and how it affects cost. To reduce the cost of a process you should not arbitrarily slash budgets or cut jobs. You should study the performance of, and then improve, the process to maintain or improve customer service for less.

The flow time of a business process – sometimes called the lead time, although it's not always the same – is how long it takes a product (or service) to move from start to completion. But only part of this time is spent actually working on the product. The rest is spent waiting, checking, reworking, transporting etc. The productive time is often 25 per cent or less of the total flow time. The rest adds no value and generates no revenue. If you cut the flow time, you increase productive work from the same resources. Assuming that you can sell the extra products, this means you could increase profitability, improve efficiency and boost customer satisfaction simply by reducing delays and waste – without putting pressure on people to work faster.

So how do you measure performance to work out where there's room for improvement? Taking our late company as an example, the data in the table on the next page covers ten weeks of activity in summer 2008, at least nine months before its closure. This is real data, so trends aren't always clear and fluctuations caused by the product mix and other events do cloud matters, but we can use it to identify the main cost drivers and work out some other solutions that the group might have considered.

First we need to measure the flow time: it's clear from the table that efforts to improve the process are having an effect – the number of days it takes falls from 6.5 to 3.5 over the ten weeks – and this is also reducing inventory. But the data indicates that the mix of products sold varies from week to week (illustrated by the revenue per unit indicator).

The number of units produced per employee doesn't seem to be linked to the value of each unit. You might expect higher-value goods to take longer to assemble and test, but this doesn't seem to be the case. The profitability of the process depends on the sales mix, so the first priority should be to work with the sales team to review the market and plan how to target customers who want higher-value products and also try to understand the weekly fluctuation in orders. Making the demand side of the process more stable would help other improvement activities significantly.

The data does not give us a measure of productive time, but there are proxies we can

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Key process data for ten weeks of production

Week	25	26	27	28	29	30	31	32	33	34
Output (units)	1,943	1,856	2,523	1,988	1,827	2,016	2,340	2,050	1,225	1,470
Employees	29	29	29	28	29	28	26	25	25	21
Units per employee	67	64	87	71	63	72	90	82	49	70
Revenue per unit (£)	24.46	22.23	29.82	15.20	22.03	12.26	20.03	18.28	25.83	31.29
Material cost per unit (£)	6.07	5.51	7.39	3.31	4.80	2.67	4.37	3.46	4.88	5.91
Revenue per head (£)	1,656	1,411	2,595	1,091	1,374	881	1,796	1,492	1,268	2,141
On time to request (%)	71	87	86	65	65	72	88	88	92	79
Flow time (days)	6.5	5.5	7.0	7.0	8.0	5.5	4.0	3.0	3.0	3.5
First time through (%)	74	88	77	73	91	79	83	85	88	91
Inventory turns	10.71	10.71	10.71	10.94	10.94	10.94	10.94	11.11	11.11	11.11
Sales revenue (£)	47,520	41,262	75,227	30,221	40,224	24,711	46,862	37,479	31,643	45,994
Materials purchased (£)	11,785	10,223	18,656	6,588	8,773	5,387	10,216	7,084	5,981	8,693
Conversion labour (£)	9,274	9,274	9,274	9,245	9,245	9,245	9,245	9,610	9,610	9,610
Other costs (£)	5,184	5,184	5,184	5,135	5,135	5,135	5,135	4,008	4,008	4,008
Value stream profit (£)	26,243	24,691	33,114	20,968	23,153	19,767	24,596	20,702	19,599	22,311
Value stream profit (%)	45	40	56	31	42	20	48	45	38	51

use: productive time differs from flow time because of delays, checking, reworking, downtime etc, and we can measure these interruptions. Inventory turns are improving slightly, but this is hardly significant. In addition, "first time through" quality is 91 per cent at best. This is costly and affects customer satisfaction – measured in the "on time to request" line, which shows an improvement, but is still variable. Stabilising quality in the process should help the company to improve throughput and delivery performance. This may stabilise material costs and in turn help to reduce inventory. Training to improve quality in the process should be the second priority.

The throughput of the process ("units per employee") doesn't link clearly to the product mix. But the weeks with the highest throughput (27, 31 and 32) are generally the most profitable ones, although this isn't true in weeks 25 and 34, which are highly profitable but with a much lower throughput. Again, the level of demand and the product mix affects the profitability of the process and the employees can't necessarily influence these factors. Nevertheless, identifying best practice and training employees in it would increase throughput per person and help to reduce the number of days between order entry and delivery, thereby reducing inventory and improving customer service.

We need to know more about the process and a longer period of data to establish full links between performance measures and finances. Even so, a small number of indicators, measured frequently, provide a good picture of how well a process works and the potential to bring total flow time nearer to productive time. If we connect this data with the financial performance of the process, we start to see how performance drives cost and which improvements will deliver financial benefits.

This combination of measures and cost data for the process gives us more to work with than costs alone. In this case it allows us to predict the impact our actions might have had. First, working with the sales team to stabilise demand and focus on higher-value customers and products could have helped to smooth out the workflow and the number of employees required. Improving quality would have brought greater control to material costs and helped to improve performance ("on time to request"). Working out best practice and training people in it would have helped to improve quality and should have reduced flow time. This would push stock levels down, benefiting cash flow.

Perhaps together these actions could have stabilised the process with a value stream profit of 45 per cent or more. Would it have saved the company? I don't know – perhaps the group simply didn't want such a small subsidiary any more. But I do know that its failure was disastrous for its staff and I wonder how many other companies have gone the same way because managers have focused too closely on costs without adequately understanding what drove them.

We need to stop focusing on costs alone and strive to understand performance. Management accountants in every business must take more interest in linking the costs of processes with performance. A better grasp of the connections will lead to better decisions. When you next make a costing decision about a process, look at the flow time for the product or service in question and see how it differs from the productive time. Ask yourself whether you can reduce costs by cutting the flow time of the process and so increase its capacity to do profitable work. It must be worth thinking about.

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