

The Economics of Technical Documentation

Transcript of a lecture given at the ISTC Conference, Saturday 24th September 2005
by Andrew Marlow

Introduction

Welcome everyone and thank you for joining me for this presentation about the economics of technical documentation.

I've been involved in technical communications for more than 20 years from different sides of the profession. As a technical writer, I've worked as both an employee and a freelancer. As a publications manager, I've been responsible for hiring and firing full- and part-time authors, editors, typographers and subcontractors. And I've also run a technical documentation service business, sometimes engaging the services of freelance authors to help serve my clients.

But apart from my technical communications background, I'm also a businessman and today I want to share a view of the economics of technical documentation from a business perspective.

One of the things that's become clear over time is that *in almost all circumstances, technical documentation is more expensive than it needs to be.*

Of course, we expect very high quality documentation to be expensive, just as we expect a Rolls Royce to be expensive. The trouble is, as I'm sure many of you are aware, 'rubbish' documentation can be just as expensive; sometimes costing more than the good stuff.

Yet companies continue to throw good money after bad. Organizations and individuals try hard to bring down documentation costs, but often fail. Or at best, people *think* they've cut costs, when they haven't.

It's not that costs can't be reduced. The problem is that the people involved — and I don't just refer to technical communicators—don't fully understand the economics of technical documentation.

I'm just going to discuss two or three areas to examine expenditure related to technical documentation, so you can see how some costs are distributed, see what really happens when you try to cut costs and perhaps understand why it doesn't always work out.

Maybe some of it seems controversial. Some of it you may not agree with. But like it or not, this is how business decision-makers can view the costs of technical documentation and of employing of technical communicators.

I hope you'll learn something about the economics involved that perhaps wasn't apparent to you before.

Simple Economic Theory

I'd like to begin with some very simple economic theory. Nothing complicated, just a simple model that even Gordon Brown could grasp:

Most organizations are interested in profits. And especially in increasing profits. To increase profits, a business can do one of two things:

- ◆ Sell more, so that revenue increases.
- ◆ Increase the profit margin.

And there are two ways to increase the profit margin:

- ◆ Increase prices or fees.
- ◆ Reduce costs.

Most organizations have a preoccupation for cutting costs, because the other options for increasing profits are less clear-cut; perhaps a little harder to achieve. Selling more is not guaranteed. Increasing prices or charges runs the risk of pricing oneself out of the market and scaring customers away. So chipping away at costs is a favourite method of increasing profit margin.

To reduce costs effectively, you need to what you are spending your money on and why.

There are many costs involved in the production of technical documentation, so where do you begin?

Well, I think a good place to start is with us: the technical communicators.

When we think of ourselves as a source of costs, the first thing that usually springs to mind is salary.

Salary is clearly very important to technical communicators—there always seems to be a new salary survey being published somewhere. I've seen a few from the ISTC. I suppose salary surveys are important so we can compare our earnings with our peers—so we can either feel smug or depressed, depending on our circumstances.

One thing's for sure, salary surveys are not used by business executives and accountants on the lookout for cheaper technical communicators.

Salary is a significant part of the cost, but I want to take you through a list of the costs of employing a technical communicator as seen through the eyes of a cost and management accountant.

Here's how they would see the cost of employing a technical communicator:

Recruitment

Until an organization has recruited a technical communicator, there's not even a salary to worry about, so the first cost to enter on our ledger is the cost of recruitment.

This is the cost of finding the right employee and includes such things as

advertising, recruitment agency fees and interviewing time and expenses. Don't forget it costs the company money even when another employee does the interview.

Time is not free—except when you're doing a talk at an ISTC Conference!

Salary

This is straightforward and is the amount of money paid to the technical communicator by their employer, for working hours. Some people use this to determine the basic labour rate used to estimate projects on a time and expenses basis.

Statutory Costs

These are costs required by legislation. For example, here in the UK, the employer is required to pay the Inland Revenue between 9.8% and 12.8% of each employee's earnings. This is the *employer's* National Insurance Contribution and is separate to the NI collected from the employee.

It's perhaps worth pointing out to any self-employed technical communicators in the audience thinking of changing status and becoming an employee within their own limited company instead: be prepared for a much higher National Insurance bill!

Benefits

Some of you may be fortunate enough to enjoy other additional benefits on top of your basic salary.

And organizations usually offer one or more benefits to attract high-calibre personnel. These benefits include pension schemes, life and health insurance, travel expenses, company car if you're lucky, professional subscriptions, vocational education, personal access to the Internet; that kind of thing.

Training

It's highly unlikely that a technical communicator will 'waltz' into a new job totally familiar with all aspects or a company's operational peculiarities, company policies or products.

New employees need at least some training on specialist skills and knowledge of these things.

Apart from direct training costs—like sending an employee on a course—there is the cost of the time the employee spends learning the ropes, rather than actually being a technical communicator. And the cost of other people's time who are involved in bringing on the new recruit.

Materials

This is the cost of materials peculiar to technical communicators—things not otherwise used in the organization by other employees. For example, software for DTP, help authoring, indexing, document management, single sourcing and multimedia applications.

Apart from the initial costs of these tools, there are associated costs like extended user licences, maintenance or support contracts, and endless software upgrades.

Consumables

All employees tend to use things the organization has to pay for, like paper, toner, inkjet supplies, pens, pencils, coffee, toilet paper and so on.

Depreciation

The technical communicator will need at least a chair to sit on and a table at, along with other items like a computer, printer, a scanner and filing cabinet.

These are assets and, as you may be aware, accountants don't treat assets in the same way as other costs. It's not the purchase cost that counts against profits so much as the depreciation. The value lost over a given period of time as the assets age.

Share of Overheads

The organization that employs a technical communicator has to spend money just to stay in business and pursue its business goals.

Even office space is not free.

Overheads include all sorts of expenses such as building insurance and maintenance, heating and lighting, public liability insurance, finance such as loans and overdrafts, accounting and professional fees, logistical expenses and environmental costs.

The scale of these costs is related to the number of employees. The more staff employed, the higher these costs have to be. For example, the bigger the premises, the higher the insurance.

So a share of all these overheads must be considered as part of the expense of employing staff. Some cost and management accountants allocate overheads on a departmental basis. So the technical documentation department, for example, has its own share of overhead costs.

This is a long list already and these are all real costs, paid for with real money.

These costs get recorded in the accounts somewhere, so there's not really any excuse for an organization to overlook them.

There are other costs involved too. Sometimes these are not so obvious in the accounts. Nevertheless, they exist and are usually related to productivity:

Absence

Apart from paid leave for holidays, employers often bear the cost for employees who are off sick or away from their desk for other reasons, like jury duty, compassionate leave such as attending funerals, rushing the kids to hospital and so on.

Administrative Burden

Every time an organization takes on a new recruit, it increases someone else's workload. Someone has to do all the paperwork, the personnel records, the payroll, the supervision and management. The more employees, the more time someone spends looking after them.

Allied to this is the time the newly-recruited technical communicator will spend on non-project activities or in non-project meetings. This includes taking part in employee appraisals, fire drills, teambuilding weekends, Christmas parties, and attending ISTC conferences.

These activities usually occupy other people's time and affect their productivity.

One way or another, the organization pays.

Interaction

People interact with other people—even technical communicators. The more people there are in an organization, the more time is spent interacting. A good deal of that time is nonproductive, personal and social conversation.

Again, the employer pays.

Quite a list of costs isn't it?

There's so much more to the expense of a technical communicator than salary. In fact, it's enough to put you off employing anyone.

Now, some people argue that a many of these costs are incurred by companies anyway, in the normal course of events. That it doesn't matter whether a technical communicator is added to the list of employees, because the office space is already there, the admin. clerk is already employed, there a spare desk going free anyway.

But this very conveniently glosses over some hard truths. If the object of the exercise is to be cost effective, having spare capacity is *not* the way to do it.

To quote from one of the foremost business management theorists of the 20th Century, Peter Drucker, what happens inside any organization is effort and cost. Results really only happen from the outside. Such as when a customer puts their hands in their pocket to pay good money for products or services.

So, the *less* an organization has to do to produce results, the more efficient that enterprise becomes. Put another way, the fewer people employed, the smaller the outfit, the less activity required to achieve the *same* results, the closer the organization is to achieving maximum effectiveness.

As technical communicators, we are very much on the "effort and cost" side of the equation. Which leads to the conclusion that:

in most circumstances, in house technical communicators are more expensive than outsourced technical communicators.

If you believe that the cost of outsourcing technical documentation is more expensive than employing technical communicators in house, you might just be surprised to learn that, more often than not, it's the opposite that's true.

Having in house technical communicators might be more convenient. They might even be easier to control. But it's a different argument. What we're talking about here is the *economics* of technical documentation.

Convenience is all very well and may be very important, but in terms of economics, convenience comes at a price.

The simple fact is that most subcontracted freelance technical communicators don't have to incur all the costs I've just listed. Some costs simply don't apply to self-employed people anyway, like the employer's NICs that I mentioned.

Sometimes independent documentation houses can run more efficiently than the equivalent technical documentation department within the client's organization.

This can make subcontractors cheaper resources, even when you take into account their own profit margin or uplift.

Why Bother To Understand Costs You Can't Control?

Now, you might think this information is okay for cost and management accountants, but if you're already employed as a technical communicator there's not a lot you can do about these costs, so why bother to take an interest?

There is a very good reason:

If you are involved in managing documentation budgets, or estimating for technical documentation projects, you need a realistic basis on which to determine your project costs.

Some estimating and budgeting models use a unit cost, per hour or per day, for technical communication activities. Sometimes these unit costs are based on labour rates, which may be uplifted to include overheads and indirect expenses.

If you don't have the true costing information available, if you don't include the real and consequential costs that I've just outlined when you determine your resource rates, then your budgets and estimates will be incomplete—they will tell only part of the story.

If you are in the business of selling technical communication expertise to others and you don't include these sources, it could be a costly oversight.

All you need to do is take the annual total of the various expenses listed previously—consumables, depreciation, training—then work back from that to establish a daily or hourly uplift.

In fact, if only organizations did that and worked out a *true* hourly rate for their employees, they would be better prepared when faced with the choice between, say, taking on another technical author or subcontracting.

Case Example

I have been in situations as a freelancer when I've quoted my hourly rate and the client has said to me "I could employ someone for half that".

Invariably they cannot. They are only thinking in terms of net salary. They conveniently forget all the other costs of employment.

Not only that, they assume my hourly rate is all for me—that somehow it goes straight into my pocket and I don't have to pay for my software or training, or depreciation, or income tax and somehow I get a free pension, free travel to visit the client and so on.

In these situations, clients simply fail to compare like with like.

I'm not going into the fundamentals of costing, estimating and budgeting in this talk, but if you do want a more detailed approach and some really useful costing and estimating techniques, I can thoroughly recommend the book *The Economics of Technical Documentation*¹.

Can Good Documentation Really Reduce Costs?

We've looked at the costs of simply existing as technical communicators. What about the costs associated with what we do?

Asked to justify their job, technical communicators will say something like:

- ♦ "you need us because clear and effective documentation reduces support costs"

or

- ♦ "good documentation can add value to a product and increase sales".

These claims sound good. But what do they really mean in economic terms?

Let's look at the first the idea: that the technical documentation, if done properly, by professional technical communicators, reduces the cost of support.

Even if that is true, does it really reduce the organization's costs overall or does it simply transfer expenditure from one cost centre to another—from the customer support department, say, to the technical documentation department?

The level of expenditure and investment in technical documentation is usually linked the level of expenditure and investment in alternative methods of information supply.

If organizations don't invest money in technical documentation, then the very information that documentation was designed to convey, assuming it is needed, has to be provided some other way.

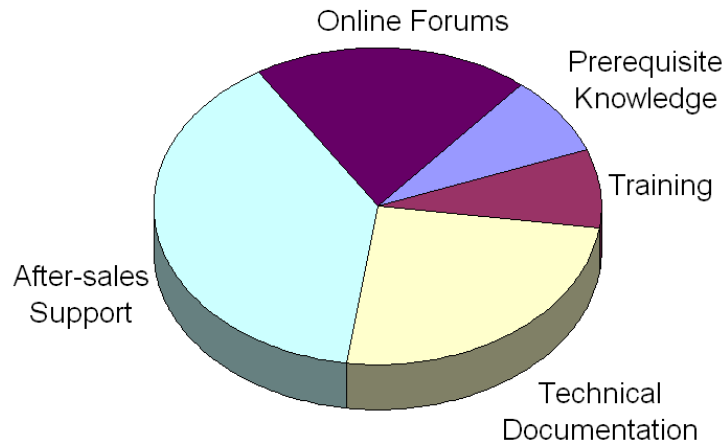
That 'other way' might cost the same as the documentation. Or cheaper. Or more expensive.

¹ Marlow, A. J., *The Economics of Technical Documentation* (2005), Published by Marlow Durdell, ISBN 1-873407-03-3. Available from Amazon.co.uk and other leading book retailers or buy online from www.marlowdurdell.co.uk.

It might be provided by training, or by a telephone-based customer support department, or by an online forum or support group, or by field engineers or maintenance staff.

Investment in Information Sources

Let's have a look at a visual concept.



This diagram demonstrates different sources of information. The full circle or pie represents the totality of the information available to the user of a technical product. Each slice of the pie represents the potential source for that information.

There's one for prerequisite knowledge—the kind of knowledge you expect users to have already from their own experience.

Another for training; perhaps the kind that might be given to someone before they use a product.

And then there are slices for after-sales support, online support forums and technical documentation.

You can add slices, or take some away depending on individual cases.

For a really simple product, the pie might contain nothing but prerequisite knowledge. For example, you could sell a tool, like a hammer, without having to accompany it with a user manual, or training or a customer support department.

Such a model might help a business manager decide where to spend and invest on the supply of information. For all practical purposes, the prerequisite knowledge slice of the pie is difficult if not impossible to control. But the expenditure and investment in the other slices can be controlled.

The organization might want to shift the burden from one information source to another. For example, they might consciously attempt to reduce support calls and expend more effort and spend more money on, say, technical documentation. Give it a larger piece of the pie.

The boundaries between the slices are rarely this clear, and in almost all cases,

there is overlap. A user manual might cover all the same information available from the support, training and online forum slices.

Sometimes this overlap is necessary to make information clearer or because you can't be sure that the user has access to all the information sources shown.

But sometimes there is overlap because no one bothered to check whether the same information is already being delivered from another source. In which case, this could be sign of wastage and unnecessary expenditure.

What this model does highlight is a dilemma when it comes to expenditure:

Cutting costs in one area often leads to an increase costs in another as you plug the information gap.

Like the buttons on an old car radio or a radiogram. You push one down to change channel and the button that's already down pops up. The buttons are "mutually exclusive" because you can only listen to one channel at a time.

It's a similar problem where information supply is concerned. Push down costs on technical documentation and you probably find those costs pops up somewhere else.

Unfortunately, there's no mechanical device to stop organizations pushing down costs in several areas at once. The result can be something of a mess.

Going back to the statement made earlier—asked to justify their job, many technical communicators will say something like "you need us because clear and effective documentation reduces support costs".

Perhaps in an effort to justify expenditure on themselves, technical communicators attempt to highlight that technical documentation is more cost effective than technical support. In most cases, it is true that employing support technicians to answer telephone calls is likely to be much more expensive than supplying a comprehensive manual. But we mustn't assume it's that simple. In economic terms, there might be other factors to consider.

Case Example

I worked as a freelance author on some user documentation for a major European software company.

Being conscientious, I wanted to make sure the documentation covered all the details of the product and suggested to client's managing director that taking a task-oriented approach might be the most effective way.

"Hang on a minute", he said, "let's not get too carried away. I don't want the documentation to be *that* good". "Why not?" I asked, "you've got a telephone support department out there with 40 support technicians. If we get this documentation right, it will reduce support calls and save you the cost of a few salaries."

He replied "But we make money out of support calls and maintenance contracts. For us, customers with problems and queries are a *revenue earning opportunity*".

You see, it didn't matter to him that technical support cost more to provide than documentation. He covered those costs by charging and made a profit

on top. He couldn't charge for manuals, because users expected them to be provided anyway. Of course, whether this approach affected potential sales is another argument altogether.

This case illustrates the point that we have to be careful about how we view the economic benefits of technical documentation.

Cost effective documentation needs to deliver the right amount of information having taken into account the circumstances in which it is used.

People obtain information from a wide range of sources. So a fully comprehensive user manual is not necessarily economical, even if it is really effective in its own right.

When considering which slices in the information pie deserve financial investment, don't forget that some information *must* be delivered in a particular way, regardless of the cost.

I'd much rather an airline invested heavily in training a pilot on the use of the aircraft, rather than providing a fully comprehensive user manual, and just hoping to God the pilot read it thoroughly before take-off.

Can Good Documentation Really Add Value?

If you've failed to convince anyone that technical documentation is cost effective because it reduces support costs, perhaps your next line of argument is "good documentation can add value to a product and increase sales".

That's a tricky one to prove.

If you use this argument, what you are saying is either:

- ◆ that the existence of good technical documentation will *increase* the organization's revenue; or
- ◆ that existence of bad technical documentation (or even the nonexistence of documentation) will *decrease* the organization's revenue.

These are bold statements of economics. In principle, there is an element of truth in these statements. If we think about it logically, if a product is supplied with really poor documentation it reflects badly on the organization that supplied it.

But how bad does it need to be to stop sales? If it's really bad, chances are there are quality problems in other areas too. Perhaps the product is also really bad or perhaps the marketing and sales literature is ineffective, so poor levels of revenue are almost inevitable, and it may be unfair to single out technical documentation.

How many products do you know that are marketed on the strength of the documentation as opposed to, say, the features of the product?

When did you last see an advert for a new car that listed "a clear, precise and effective manual" among the selling points?

The fact is, most technical documentation is not even seen until the sale is made.

If it's bad, it causes frustration. Perhaps the user makes a support call they wouldn't have done otherwise. But suppose the support technician on the other end of the phone is really kind and helpful and funny and makes the caller's day?

That might be a good thing. It might even increase sales.

The point is this: *we all feel instinctively that good technical documentation adds value to a product, and it should. But it's difficult to prove.*

Can Technology Come to the Rescue?

At the start of this talk I said that to make any attempt to reduce costs effectively, you need to know what you are spending money on and why.

We've looked at the money spent on technical communicators and how allocation of expenditure can shift from one area to another without expenditure going down overall.

Are there savings to be made elsewhere?

Well, technology is often sold on the premise that it cuts costs. So perhaps technical communicators can use technology to become more cost effective. I'm only going to look at a couple of examples right now.

So firstly, how about cutting down on printed documentation?

Electronic Documentation Instead of Printed Manuals

Probably the single most important cost-saving development for technical documentation in the last ten years has been the shift from printed documentation to online.

Across the industry, the savings on printing, distribution and finishing costs have been tremendous.

But the scrapping of printed documentation was an industry led development. It suits the supplier not the customer. How often have you received requests from end users, customers or readers actually asking you *not* to supply printed documentation?

The demise of the printed manual was not customer led, even if it appears to have been endorsed passively because not enough people complained.

After thousands of years of written communication, humans are still conditioned in favour of printed information. Some surveys have shown that users have a tendency to neglect online documentation, while the tactile nature of printed manuals at least invites some investigation.

If this is true, then the cost savings made by delivering online documentation is being outweighed by an increase in support costs elsewhere.

It's another of those radio button problems—you save the company printing and distribution costs, only to find other costs surfacing elsewhere.

What About Single Sourcing?

There's been a lot of hype and interest in single source solutions for technical documentation in recent years. It's fashionable to seek new technologies and techniques that enable authors to re-use or re-engineer documentation for different formats, delivered through different media.

Single sourcing seems like an obvious way of keeping documentation costs down. But how much does it really save in the long term, and what are the consequences for the end user of the documentation?

As a concept, single sourcing seems to make sense, especially for those projects that require documentation to be delivered in both online and printed formats. But there are problems with this. There are factors that can undermine the benefits.

Like all technology, the technology used for single sourcing changes. Sometimes as rapidly as the output formats it supports. Apart from the time you spend investigating and understanding single sourcing technologies, there is little evidence of a ready-made solution that can be implemented without having to make changes.

Almost always there has to be some redesign of your existing documentation source to accommodate it. Perhaps content has to be more modular in construction, or procedures have to change. Compromises are inevitably made.

Perhaps you succeed in making a solution work, and after six or nine months of hard work the single sourcing solution is up and running and starting to improve efficiency and help reduce costs. Then, along comes a new single sourcing application, another technology or platform, or different approach that suggests we've been doing it all wrong.

The whole re-engineering process begins again.

Technical communicators might be shocked to find that a time-management study of their activities before and after the implementation of any new technology, like single sourcing, would show a significant shift of focus from documentation content to procedures and mechanics.

And who does this technology help: the end user, the customer, the reader? No, because it's not designed for them. Another radio button is pressed. Another one pops up.

Summary

I'll now recap on the main points I've made in this talk.

1. The reason why some organizations and individuals fail to control costs is because they haven't grasped the economics involved. Sometimes they think they are making savings when they are not.
2. In house resources are usually not cheaper than outsourced personnel; they are just more convenient. Again, it's lack of knowledge about the real costs involved that can lead people to conclude otherwise.
3. When people try to cut costs of support or information supply in one area, there is usually an increase in costs somewhere else in the supply chain. The 'radio button' effect.
4. Sometimes technology can help, but you have to be careful about the true benefits in the long term. Just keeping up with technology can increase the burden on the technical communicator, while the actual purpose of their job—to impart information to others clearly and concisely—gets lost along the way.

Cost savings can be made. We just need to understand the economics involved so we can make the right decisions. So we can help prevent technical documentation being more expensive than it needs to be. Keep down costs and we're more likely to keep our jobs.

Copyright © 2005 Andrew J Marlow

Speaker Profile



Andrew J Marlow
BA (Open), BSc, PGDTech (Open), MSc, DBA, MISTC

Andrew Marlow has over 25 years' business experience including 20 years in the IT industry, specializing in the field of technical communications. After several years as a publications manager, he co-founded Marlow Durndell in 1989—an independent documentation service provider and publishing house.

A devotee of lifelong learning, Andrew has qualifications in various disciplines including science and science history, computing, technology, manufacturing, business management and administration. He has written over a dozen books on technical communication, IT and business financial software.