

Full-cost Maturity Model

from cost transparency to fully burdened rates,
a standard metric of an organization's capability
to plan the full costs of its products and services

by

N. Dean Meyer

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Version 1.2

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Executive Summary

***You are expected to trim your budget
despite an overwhelming workload.***

***Once you get your budget, no matter how big it is,
you can't satisfy all clients' demands; and
clients blame you when they can't get all they want.***

***Your staff work nights and weekends;
they cut corners, take risks, and
sacrifice their time for training and innovation;
but they still can't keep up.***

***Clients accuse you of costing too much
or unfairly allocating your costs,
and of failing to satisfy their needs.***

All these common problems are rooted in an organization's business planning, budgeting, and costing processes.

If an organization cannot attach *all* its costs to its products and services, then it cannot explain what its budget does (and does not) pay for, and what additional funding is needed to satisfy incremental requirements.

It has no foundation on which to build client-driven demand management (portfolio management) processes.

It can't set aside time for innovation or other critical sustenance functions.

It can't fairly allocate costs to business units, or compare its costs to outsourcing.

The Full-cost Maturity Model (FMM) is a standard metric of an organization's capability to plan its business, its service catalog, and the full costs of its products and services. It defines the right way to assign costs to products and services, and five levels of capability in attaining that ideal. It also provides a clear definition of an ideal business planning, budgeting, and costing process; and it describes practical evolutionary steps for implementing this critical business discipline.

FMM focuses on cost *planning*, not tracking. It addresses the processes by which an organization develops its operating plan, budget, allocations, and rates. It is not a metric of

financial accounting systems, broader resource governance processes, or billing systems – although all of these other things are founded on the budget and rates.

FMM defines five levels of capability – from simple cost transparency to fully burdened rates – and the essential elements (methods, processes, and tools) required to make each level work.

FMM is a practical framework used to help an organization (e.g., an internal service provider like IT) assess where it is in the maturity process, decide the target level needed to support its governance and tracking processes, and guide the implementation of exactly the methods and tools required to attain or fine-tune that target level.

This report examines the problems caused by traditional budgeting and costing methods. It presents a detailed vision of the solution – calculating the full cost to shareholders/taxpayers/donors of an organization's products and services. It catalogs the benefits of doing so.

Then, it introduces the five levels of the Full-cost Maturity Model that explain the practical challenges of implementing such a business and cost planning process, and a step-by-step path forward.

1. Introduction

"We know there's fat in your budget. Do more with less! Last year minus a few percent!" You're expected to trim your budget despite an overwhelming workload.

"It's your problem to find the resources to do all I need!" Once you get your budget, no matter how big it is, it's not enough to do all that's expected of you. And clients blame you when they can't get all they want.

"Here's another unfunded mandate.... Take it out of hide!" Your staff work nights and weekends, and still can't keep up.

"My allocation is too big. You're overcharging me. Let's outsource your function!" You're accused of costing too much or of allocating your costs unfairly, and outsourcing comparisons don't look good.

These symptoms all trace their root cause to the way you present your budget and set your prices – to your business planning, budgeting, and rate-setting process.

What's the Problem?

The real problem is not lack of sufficient budget. Get a bigger budget, and you'll have all the same problems on a larger scale.

The problem is not people. No doubt your staff are already working hard, and perhaps even sacrificing their training time to try to satisfy clients' overwhelming demands. But they still can't keep up.

The problem is not staff's skills. You can improve productivity by training staff in time management and project management methods. But no matter how productive people are, demand will still exceed supply. When you're on a treadmill, running faster won't help!

The problem is not the needs of the business. Clients' appetites always exceed available resources. They always have, and they always will – until the root cause of the problem is fixed.

The real problem is traditional methods of business planning, budgeting, allocations, and rate setting, all of which are based on forecasts of a department's costs.

Specifically, traditional budgets forecast costs but don't explain what products and services can be expected for a given level of funding, or how much more funding is needed to fulfill additional needs.

This monograph examines the problems caused by traditional planning, budgeting, and costing

methods. It presents a detailed vision of the solution – developing a business plan that forecasts internal "sales" of an organization's products and services, and then calculating the full cost to shareholders/taxpayers/donors of those products and services. And it catalogs the benefits of doing so.

Then, it introduces the five levels of the Full-cost Maturity Model that explain the practical challenges of implementing such a business and cost planning process, and a step-by-step path forward.

The Root Cause of Problems: Traditional Budgeting

How does the way most organizations plan their budgets cause the myriad symptoms mentioned above?

Consider a budget spreadsheet, where the columns represent expense codes such as salaries, travel expenses, professional development, etc. The rows represent deliverables – specific products (projects) and services. (See Figure 1.)

Figure 1: Budget Spreadsheet

DELIVERABLES	EXPENSE CODES				
	Compensation	Travel	Training	Licenses	
	Project 1	\$	\$	\$	\$
	Project 2	\$	\$	\$	\$
	Service 1	\$	\$	\$	\$
	\$	\$	\$	\$	

This kind of spreadsheet is a common, and a sensible, way to develop a budget.

The problem is this: After filling in the cells in the spreadsheet, most organizations *total the columns instead of the rows, and present a budget for each of the expense codes*. In other

words, their budget is an estimate of how much money each manager will need for various costs such as compensation, travel, training, and so on.

The crux of the problem is that traditional budgets do not give customers an understanding of what they're buying. They don't document what an internal service provider will deliver with that money – what specific products and services customers can expect to receive for a given level of funding.

Problems Generated by Traditional Budgeting

Numerous problems occur when an organization's costs are not linked to its products and services.

Poor decisions: The traditional budget provides no basis for fiscally sound decision making. The right way to decide a department's budget is to fund all the good investment opportunities, and not those with poor returns. But lacking an understanding of the cost of deliverables, it's impossible to calculate the return on proposed investments. One cannot calculate the ROI of travel and training. Executives can't even understand what value the organization proposes to deliver for the budget, or judge any linkage to corporate strategies.

Without knowing the cost of proposed deliverables, executives cannot make fact-based decisions about the allocation of the corporation's resources.

So instead of analyzing investment opportunities, they're forced to make seemingly arbitrary budget decisions, for example, basing budgets on meaningless benchmarks such as last year's budget plus or minus a few percent, or as a percentage of corporate revenues. Wrong as this may be, they haven't got the data to do anything else.

Of course, the prior year's budget and what other companies spend on the function have little to do with the coming year's investment opportunities. As a result, the corporation may over- or under-invest in a function, reducing its return on shareholders' equity.

Mistrust: Another effect of traditional budgeting is mistrust. Executives say to department leaders something to the effect of, "I don't necessarily believe what you're telling me about your requirements. I believe you have fat in there. Go sharpen your pencil, and cut another few percent, but keep delivering all the same services. In other words, *do more with less*."

Since executives don't know what value they're getting for their money, the function seems expensive and unrelated to corporate strategies. That leads to mistrust and cost pressures.

If the organization allocates its costs to clients' business units, the allocations are viewed as arbitrary. They're not based on the deliverables each business unit receives. Allocations create controversy and more mistrust, and increase pressures to cut costs without regard for the impacts of cuts on value delivered.

Micro-management: The traditional budget begs for micro-managing internal service providers in a way that executives would never do to an external vendor. Corporate executives challenge department leaders on expense codes – e.g., "Why do you need all that training?" – rather than a rational discussion of what the corporation will and won't buy from the internal service provider.

This is the wrong kind of dialog between a department executive and corporate leadership during the budget process. But what else have you given them to talk about?

In addition to inducing micro-management, traditional budgets lead to poor decisions about indirect costs. Only *you* know the kind of reinvestments you need to sustain your organization. But by presenting your budget by expense codes, you're asking executives to make decisions they really aren't qualified to make. As a result, you may not gain approval for investments you really need to keep your organization viable in the future.

The most common example is training, necessary to survival but a favorite target for cuts. If you're unable to acquire critical training, productivity falls and turnover rises. After years of underinvesting in innovation, staff skills become perilously obsolete and outsourcing is often on the horizon.

Unrealistic expectations: Perhaps the worst effect of traditional budgeting is unrealistic expectations. With funding associated with expenses like travel and training, how can anybody know what *deliverables* the budget does and does not pay for?

Since clients don't know what's funded and what's not, they expect the department to provide everything they feel they need. They say something like, "Hey, we gave you all that money. Now it's your job to satisfy all the needs of the business."

Absurd as it may seem, the corporation gives you a finite amount of money in your budget, and, in trade, expects infinite services – anything people might ask for throughout the year – all for a fixed price! Of course, they blame you when your organization can't satisfy their seemingly unlimited demands.

Meanwhile, the nature of the budget induces even more demand, not less. From the clients' perspective, everything appears "free." Without an understanding of the costs of their requests, everything goes in the hopper.

Entrepreneurs love demand, as long as it's funded. But with the traditional approach to budgeting, staff have no basis for telling clients, "That wasn't covered in the budget; we'll need incremental resources."

Strained relationships: A customer-focused internal service provider shares all it knows with its customers, and then respects their decisions about what they will and won't buy from the department. But while clients are qualified to decide which deliverables they will and won't buy with limited funds, they cannot decide how to cut a traditional budget for expenses.

Thus, when executives challenge you to cut your budget, you may be forced to evaluate customers' requests and decide which projects to cut. (It's either that, or promise to do more than resources will permit and then fail.)

Clients whose projects are cut are naturally disgruntled. They blame you for not defending them properly, or for being the villain who cut their favorite projects. To them, you're a hurdle – an adversary whom they have to convince of the merits of their needs – rather than a customer-focused internal supplier who's their business partner.

Judging customers in this way is the opposite of customer-focus. Instead of working to please customers, staff come to believe that it's their job to control those "unruly users." As staff take on the role of controlling "stewards," relationships deteriorate.

Later, if they do find funding for the projects that were cut from your budget, they're less willing to spend it on you since the relationship has been strained. Instead, they may hire their own staff (decentralization) or hire vendors directly (outsourcing).

Lost opportunities: Exacerbating this anti-customer-focus sentiment, when overwhelmed with unconstrained demand, the last thing staff want is more work. They're unlikely to suggest new, entrepreneurial ideas that might be high in payoff but will require more resources – people and money that just aren't available. There's a good chance that great ideas and high-payoff opportunities are lost.

Ineffective governance: In response to the imbalance between expectations and resources, and to the internal service provider being forced to make clients' purchase decisions for them, some organizations have set up "governance" processes that engage clients in prioritizing the demands – often called a "portfolio management" process. But without an understanding of the cost of deliverables, these committees cannot make fiscally sound decisions based on ROI. Instead, they rank-order projects. It's all they have the data to do.

They may choose as their first priority a big project with a very good payoff and inadvertently forego a number of small projects that together add up to an even higher payoff. That is, they cannot optimize the portfolio as a whole.

Furthermore, in many cases, portfolio managers don't understand when they've run out of resources – "where the line is drawn" – and remain frustrated with the performance of the internal service provider when it cannot deliver everything on their priority list.

Poor quality: In the spirit of satisfying the needs of the business – even though it's more than you have resources to deliver – your staff try to do all the key projects your clients want, but are forced to cut corners, reduce quality, and stretch timeframes. In doing so, they often make promises they can't keep – the Rolls-Royce for the price of a Chevrolet – sacrificing your credibility and reputation.

These short-term decisions lead to a loss of your competitiveness, and ultimately a loss of market share. Over time, decentralization and outsourcing look better and better.

Eating your seed corn: As hard as staff try, they cannot satisfy unbridled demand with finite resources. Trying to please clients, they sacrifice time for training, product research, organizational improvement, customer relationships, and other critical sustenance activities. You may also cut internal support (overhead) services, making everybody less productive and vulnerable to outsourcing.

Doing so may get one more project out the door. But even so, staff can never fulfill all customers' expectations. And it's futile. In the long term, it undermines the organization's ability to deliver its products and services efficiently in the future. We call this "eating your seed corn."

Insufficient investments in infrastructure: Another type of activity that often gets cut when under pressure to "do more with less" is "discretionary" but critical reinvestments in your own capabilities – your infrastructure, internal support services, product research, and organizational improvements.

Eliminating these budget items makes everybody less productive. Ultimately, the department falls behind in efficiency, cost competitiveness, innovation, and effectiveness, and becomes vulnerable to outsourcing.

Lack of teamwork: While one group may want help from another, if the support function is over-committed, it cannot be counted on to deliver. Teamwork deteriorates and "stovepipes" develop as managers, who have a job to do, replicate each other's skills so as not to be dependent on other over-committed groups. With less teamwork and less use of qualified specialists, costs rise, and quality and reliability are diminished.

Bureaucracy: Without meaningful data on the cost of products and services, budgeting is a matter of haggling over expenses. Budget decisions seem arbitrary or predestined, and the entire budget planning process is perceived as a low-value, administrative task, not as a critical business planning process.

Understandably, managers are reluctant to get involved. They defer business planning and budgeting to their finance staff, offering the minimum effort to provide necessary inputs. They also play games like building in fat because they know that cuts will be demanded.

The lack of broad managerial participation leads to a less meaningful plan. It also misses the opportunity to empower managers as entrepreneurs who run their respective businesses within the business.

In summary, business and budget planning processes are the root of a great deal of all-to-real pain, and take an organization in a direction exactly the opposite of what most leaders envision. They undermine shareholder value, strategic alignment, client relationships, customer-focus, entrepreneurship, teamwork, and careers.

Success is, of course, impossible without a fundamental change in the way organizations plan their business, present their budgets, and calculate their rates.

2. Vision: Full Cost of Products and Services

As Chapter 1 explained, traditional budgets don't support rational financial decision making, and they set organizations up for failure. Why? Because they forecast the cost of expense codes, but not the cost of an organization's products and services.

The solution is straightforward in concept: It begins with a business plan that forecasts what products and services ("deliverables") the organization will "sell" in the coming year.

Note: The word "sell" is used to emphasize the focus on products and services – ends rather than means – *whether or not money changes hands*. The word "deliverable" includes both products and services; there is no difference in the treatment of products (i.e., projects) and ongoing services in this model.

Based on that business plan, an effective budget then forecasts the full costs of those products and services, as well as the traditional expense codes by manager.

Then, to match expectations to resources, clients pay for the products and services they consume. This can be done *with or without actual chargebacks*. It may be as simple as linking the budget to a defined set of deliverables to explain what the organization's funding does and does not pay for.

As governance processes evolve, clients may be allowed to adjust priorities during the year, as long as all deliverables fit within the available budget. Clients may be given the opportunity to supply additional funding for incremental services. And in some organizations, chargebacks may give clients the power to choose between a shared-services provider and alternatives such as decentralization and outsourcing.

To implement any rational system of governance requires a definition of products and services, and a calculation of the full cost of each (whether charged to clients or to the core budget).

Problems Generated by Marginal-cost Pricing

Some have suggested that internal service providers charge clients for only the marginal costs of the work they do for them, and allocate their fixed (i.e., indirect) costs to the business units or fund them via the core budget.

They believe this is simpler (it is), and that it will more accurately recover fixed costs (also true).

They also argue that it will prevent customers from moving their business off of infrastructure that the corporation cannot shed quickly. For example, in IT, a mass exodus from the mainframe leaves corporate staff with an unfunded albatross. While marginal cost pricing has

this effect, this problem could be solved just as well by establishing long-term service contracts with clients when the internal service provider must make long-term commitments to assets or vendor services.

Although it has some benefits, marginal-cost pricing leads to a number of very serious problems:

- * Marginal-cost pricing sends inappropriate price signals to the internal marketplace. By implying that products and services are much cheaper than they really are, it induces customers to buy more than is economic. The organization will then find that it doesn't have the resources to meet the increased demand.
- * Marginal costs cannot be compared to competitive benchmarks. This covers lots of sins. The internal service provider can be very inefficient and still appear cheaper than external vendors who must amortize indirect costs in their prices.
- * The organization finds it difficult to expand support services and infrastructure as its business grows, since increasing the allocation is extremely controversial. This creates bottlenecks on client deliverables, and forces the primary delivery staff to do work that could be done by less-expensive or more-specialized support staff. As the business grows and support staff are stretched more thinly, the result is higher total cost, lower quality, and delays.
- * Similarly, ongoing investments in the organization's capabilities (which are, by nature, indirect) are controversial and difficult to expand as the business grows.

Even costs as fundamental as professional development and process improvements are in jeopardy. They must be debated as budget items since they're not imbedded in prices, and corporate executives are generally quite willing to cut them.

As a result, providers become less and less efficient over time. Ultimately, their competencies and infrastructure deteriorate to the point of failure.

- * Clients resent and justifiably fear allocations of indirect costs that are outside their control ("taxation without representation"). Generally, they'll attempt to regain some control by micro-managing the internal service provider.

For example, in a Fortune 100 company, the CIO wanted to establish the role of "account representatives" to improve relationships with clients and identify strategic opportunities for IT. Business unit executives blocked him because they didn't want this cost in their allocations.

Since they're billed for indirect costs (indirectly through the core budget or directly through allocations), clients believe it's their right to control decisions on them. Clients examine the organization's indirect costs, and attempt to meddle in the way its leaders

manage the business. In the process, an organization loses control over its infrastructure and internal support services.

- * Clients may avoid doing business with the organization, even when it is the best value, because they don't want to trigger an increase in their allocations or get hit with hidden charges via the allocation.

For example, in a large pharmaceuticals company, a divisional IT executive refused to *ever* buy the testing service offered by Corporate IT. Of course, she couldn't really know if Corporate IT was a good deal since the marginal-cost rates couldn't be compared to outsourcing vendors. But she was smart enough to know that ultimately she'd pay both the marginal and the indirect costs.

She feared that if she used the service from time to time, Corporate IT would hire employees to fulfill her occasional demand. Then, if these people sat idle between her requests, they would drive up her fixed allocation. The Corporate CIO assured her that they wouldn't build excess capacity; rather, they'd staff to the valleys and bring in contractors to handle peak loads. Nonetheless, she didn't want to put her division at the mercy of Corporate IT's staffing decisions.

The truth is, marginal costs do not represent the true long-term cost to shareholders/taxpayers/donors of providing the product or service. As all accountants know, nothing is "fixed" in the long term. The concept of fixed costs only refers to those costs which change in steps rather than continuously, or those which take time to adjust.

For example, an IT department may have a computer server with excess capacity. Is adding one more application free? And then does the next application after that, which requires more capacity, have to pay for the entire cost of another server? Does the ROI of these investment opportunities change based on the order in which they're considered?

Obviously, every application on that server should bear part of the total cost of the server; and the "straw that breaks the camel's back" should not be burdened with the entire cost of a new server.

More generally, even when costs rise in a step function (e.g., where capacity is bought in chunks), each customer should pay a fair share of the total cost of the assets used – and that's exactly what "full cost" means.

In summary, pricing products and services is the right idea. But pricing at marginal cost, while simple, creates as many problems as it solves.

The only effective approach to product and service costing is to calculate the *full cost to shareholders/taxpayers/donors of all products and services*, including a fair share of all indirect costs – both the so-called fixed costs and other indirect support services. Said

another way, revenue-producing sales to customers must be priced so as to cover all the many unbillable activities throughout the organization.

What's In Full Cost

"Full cost" means not only direct costs, but also a fair share of all indirect costs (often mistakenly called "fixed" costs). Indirect costs are not presented as separate budget items; they are not separate deliverables and they should not be subject to clients' purchase decisions. Instead, rates for deliverables actually sold to clients (and the enterprise) should cover all the reasonable costs of doing business.

This gives clients the right to decide what products and services they buy, but leaves the internal service provider free to decide and manage its sustenance activities without intervention (other than scrutiny by its chain of command). It precludes clients from saying, "I don't want the people I'm paying for to take time for training."

In other words, *no* costs should be billed (or allocated) to clients or to the core budget other than through the sale of products and services.

Direct costs are those are directly associated with a specific deliverable. They would not be incurred if the deliverable were not bought. Direct costs include the cost of staff's time (billable hours), plus any vendor costs specific to the deliverable.

The cost of staff's time should represent a blend of the various kinds of employees and contractors, incorporating a weighted average of their different costs (with all of their compensation and benefits), different billable-time ratios, and different productivity levels. This blended rate avoids the problem of clients vying for less-expensive employees over contractors, leaving the organization free to manage its own resources.

Also, blending the compensation cost for all types of staff within a group treats all deliverables equitably. There should be no incentive to be considered early in the business negotiation process ("approve mine first, so that it will be priced with staff rather than more expensive contractors"). The cost of one project should not change when another project is approved and uses up the last available staff hours, forcing the rest of the work to contractors. And the cost of new business that arises during the year should not be higher than projects approved during the budget cycle just because they'll require contractors, an artificial incentive to wait for the next budget process and forego needed benefits in the meantime.

Figure 2: Layers of Costs



Indirect costs include the following five layers:

- * **Unbillable time:** Time spent on necessary activities that keep the organization running, done for the benefit of the organization itself, at the discretion of the organization, and not directly billable to customers. Examples include holidays, vacations, personal leave, administration, professional development, business development and customer relations, product research, planning, and organizational improvements.
- * **External indirect costs:** Money spent outside the organization (on vendors or other departments within the corporation) that is not directly related to a particular product or service, but rather maintains or enhances the capabilities of a group. For example, a department may buy tools that augment staff's capabilities.
- * **Internal indirect costs:** Services from peers within the organization that are not directly related to a particular product or service. For example, an infrastructure-engineering group may sell its services to a peer group that owns and operates infrastructure in order to sell services to clients.
- * **Overhead within the department:** Costs of support services that apply to all groups within the organization, such as the organization's business office and management of the whole organization.

- * **Corporate costs:** Costs of services acquired from other departments within the enterprise.

Primes and Subs

When multiple groups are working on a deliverable, a project or service-delivery team is formed. In the business-within-a-business paradigm, the participants include a "prime contractor" – the group with direct responsibility for a project or service – plus one or more internal "subcontractors" – peer groups within the organization on the team.

To calculate the full cost of a deliverable, each group develops its own costs, including amortizing all its indirect costs. Then, the costs incurred in every group participating in the team are aggregated into the total cost of the deliverable.

What's Not Amortized in Costs

Staff may rightly fear that fully burdened costs will chase customers to the competition (decentralization and outsourcing). In fact, in like-to-like comparisons, this is rarely a concern. And if it is, a serious business problem needs to be addressed.

The key is to ensure like-to-like comparisons. To do so, not all costs should be built into the cost of the products and services that clients buy. Deliverables should not be burdened with any costs that competitors, both decentralization and outsourcing, would not build into their prices. This ensures fair comparisons, and also follows Generally Accepted Accounting Principles (GAAP).

Specifically, some deliverables are sold to the corporation as a whole. These costs are *not* amortized into the cost of the department's sales to clients. Instead, they're budget line items in their own right.

In this light, there are three types of deliverables (products and services) that are described in a budget:

Client deliverables are those projects and services which benefit specific clients. They may be sold to a single business unit, or to a consortium that combines a number of business units that will share ownership of the asset or jointly use a service. These deliverables represent the majority of most internal service providers' budgets.

Subsidies are things an internal service provider does for the good of the corporation as a whole, not for individual business units. This includes services like policy and standards facilitation, coordination of decentralized functional counterparts, and unrelated activities like corporate committees and community-action initiatives – all things which an internal service provider's competitors (decentralization and outsourcing) don't necessarily have to do.

One example of a Subsidy is the service of generating policies that ensure corporatewide consistency in decision making.

Consider, for example, IT standards facilitation. Standards are not for the benefit of the IT department itself. Without standards, IT would receive more "revenues" to support a miasma of solutions; in a sense, it would be paid to learn a diversity of new technologies. But this is a cost to the enterprise. The corporation benefits from technology standards since it saves money on IT and improves the integration of its systems and its databases.

If the costs of such corporate-good activities are embedded in the cost of client deliverables, it would distort prices upward and the corporate IT department's costs would no longer appear competitive. Clients might buy from outsourcing vendors to avoid this incremental cost. Then, if clients reduce their spending on corporate IT, these unrelated costs would be amortized into a smaller base, and prices would be distorted even more (or important corporate-good activities would have to be abandoned).

Another example illustrates this. Most corporate IT departments assess the various brands of personal computers and recommend safe, standard configurations to the corporation. This is akin to a "consumers report" function.

If the cost of this research were embedded in the IT department's price per PC, then PCs provided by the IT department would appear unrealistically expensive compared to mail-order sources of the same configuration. They may lose business for the wrong reasons, or at least be unfairly accused of costing too much.

Furthermore, if the cost of the consumer-report function were buried in the price per PC and clients stopped buying PCs from the corporate IT department (perhaps establishing their own IT groups), then funding for the consumer-report function would disappear. But the corporation benefits from this function *whether or not it buys PCs from the corporate IT department*. The consumer-report function should be funded on its own merits.

Another thing to note is that if these corporate-good activities appear to be free, there may be a tendency to burden staff with too many such activities. Too often, corporate initiatives such as community-action programs are mandated without a clear understanding of their impacts on subordinate organizations. By attaching a separate price to these corporate initiatives, executives can judge which initiatives are worthwhile and which are not.

Clients are generally not willing to pay for these services, and the department itself wouldn't fund them since it would be just as well off if it didn't perform these services. The beneficiary is the overall enterprise.

Instead of embedding these costs in client deliverables, corporate-good services should be funded by the corporation, independent of clients' purchases. Even in a fee-for-service environment, Subsidies should be paid directly to the department as a direct budget, rather

than expecting the internal service provider to recover all its costs by building these corporate-good activities into its prices.

By the way, "mass-market" products and services that everybody in the company buys – e.g., telephone and email services – may benefit the entire corporation, but they are not eligible for Subsidy funding. These services benefit clients who choose to buy them, not the greater good. Thus, clients should be willing to pay for them.

Ventures: On occasion, an organization needs one-time funding for significant investments that improve its effectiveness. Examples include the purchase of infrastructure, the costs of starting up a new line of business, and significant organizational improvements.

To illustrate the importance of this channel of funding, consider two vignettes:

In a large entertainment company, the cost of IT infrastructure was funded within clients' applications development projects. As a result, they bought a new computer server for each new IT application. After a number of years of this practice, they found themselves with hundreds of servers, all operating well below full capacity. They developed an enterprise capacity plan which revealed that the corporation could save millions of dollars each year by consolidating these servers.

However, clients blocked them, understandably feeling that since they paid for the servers, they own them; and they didn't want others using "their" assets. By asking clients to supply the funding for infrastructure, this IT department gave away the assets they need to sell computer-based services, and gave up their right to manage enterprisewide capacity.

A branch of the US Army provides another example. The IT department did not have a source of Venture funding and was required to break even (on a cash basis) each year. They bought a large mainframe computer near the end of their fiscal year, and were forced to raise the price to clients of computer time in the last few months of the year to pay for it. With this sudden, unexpected, and immense hike in prices, clients naturally questioned their IT costs and initiated an outsourcing study.

How should these internal investments be funded?

When an independent business needs to make such investments, it might borrow money from a bank. It pays the bank back through depreciation and interest. These "mortgage" payments are embedded in the price of its products and services, not the one-time investment itself.

Similarly, an internal service provider needs a bank to fund significant, one-time investments in itself. These Ventures should be budgeted as deliverables in their own right, not buried within the cost of client deliverables.

In return for Venture funding, the corporation expects its investment to pay off over time in the form of better, value-generating services to clients. It also expects to recoup its capital

through depreciation. Depreciation expenses should be incorporated into the cost of client services, not the one-time cost of the Venture (e.g., the capital).

By treating these internal investments as distinct deliverables, corporate executives can explicitly analyze and decide these major investments based on their merits. This is far more effective than alternatives like inflating the costs of other products and services, leaving it to clients to decide the funding of their internal service provider's investments, or hoping for a surplus of unknown size at year end.

Explicit funding also avoids the trap of clients thinking they own the organization's infrastructure, leaving the organization free to plan and manage its total capacity to meet the needs of the entire client community.

Venture funding is not limited to capital for infrastructure. Like all other types of deliverables, it can be a mix of capital and expense. A proper Venture proposal should include not only capital costs, but all the costs of readying an asset for use, plus the costs of operating a new service at a loss during the period in which utilizing is ramping up.

There are a number of candidates for Venture funding, including the following:

- * The one-time costs of expanding the organization's product line, for example, developing new products and services that may contribute to the corporation's strategies and competitive position.
- * Major improvements in the internal service provider's business, such as a transformation of its organization.
- * Capital for investments that will pay off over a term greater than one year, such as additions to infrastructure (plant and equipment) and some research and development projects.

Five Types of Products and Services

Initially, the planning process includes five types of deliverables. (See Figure 3.)

Once each group's costs are planned, Internal deliverables are "sold" to a peer group and the costs are amortized into this internal customer's deliverables.

Then, Overhead costs are amortized into all Client and Subsidy deliverables.

Note: Overhead is not amortized into Ventures for two reasons: An ongoing overhead cost must not be funded by a one-time source of money; if it were, then when the Venture project is completed, other rates will have to spike up to absorb the cost. Second, it's not proper to charge a "bank" overhead for loaning you money. Overhead is not amortized into Internal and other Overhead deliverables to avoid circularity.

By the way, overhead should not be applied to Venture rows. It's not appropriate to charge your "bank" overhead for loaning you money. Furthermore, if ongoing overhead costs are applied to a one-time source of funding, at the end of the venture, other rates that suddenly have to absorb this portion of overhead will artificially jump up. Venture deliverables are assigned the internal (no overhead) rate.

Figure 3: Types of Deliverables in a Budget

- * **Client:** Deliverables which benefit a specific client or consortium. Also includes mass-market products and services that any and all clients might buy.
 - * **Subsidy:** Products for the good of the client community as a whole (i.e., the shareholders/taxpayers/donors) which competitors do not have to do in the course of selling similar products and services.
 - * **Venture:** Funding to set up a new product or business, or to make significant improvements to existing businesses. Includes all capital expenditures that will be depreciated on the organization's books (not the clients'), as well as expenses.
 - * **Internal:** Deliverables sold to peers within the organization.
 - * **Overhead:** Deliverables sold to the entire organization.
-

In this process, groups that sell their products to peers (Internal and Overhead deliverables) are treated as entrepreneurs, just as are those who sell externally to clients. Everybody gains the beneficial effects of the process, and none are treated as second-class citizens.

After the amortization of Internal and Overhead costs, the three remaining types of deliverables – Client, Subsidy, and Venture – are presented in the budget proposal.

Rates

Using the same data – the cost of its products and services – an internal service provider can also calculate rates (unit prices, like the cost per engineering hour).

Obviously, rates are essential for internal service providers that charge back (fee-for-service). But rates are valuable to all organizations, *with or without chargebacks* for the following purposes:

- * Rates are used to estimate the cost of incremental work that arises mid-year.
- * Rates are essential to a demand-management (portfolio management) process that constrains clients to spend no more than the resources provided in a budget. If the

organization's budget is treated as a checkbook managed by clients, then rates are needed to decrement the checkbook as work is delivered and to know what remaining funds will buy.

- * Rates also communicate valuable information to clients. They represent the true cost to shareholders/taxpayers/donors of all purchase decisions. With this information, clients can decide whether or not it's economic to buy a product or service.
- * Rates provide the best basis for competitive benchmarking (outsourcing comparisons).

Rates, like budget items, must represent the full cost to shareholders/taxpayers/donors of each product and service. If they do not, then some clients will be overcharged (and the organization will appear uncompetitive) and other clients will be undercharged.

Where rates are set too high, clients will ultimately find another way to get the work done (decentralization and outsourcing), leaving the department with only lines of business that are losing money. Meanwhile, when other products are under-priced, clients tend to buy more than is economically wise and waste money on poor investments.

It's not advisable to develop rates as an analytic process separate from the budget process for two reasons:

First, a separate analysis is a lot of unnecessary work. Consider the analysis of unbillable time, the proper amortization of all indirect costs, the separation of Subsidies and Ventures, management scrutiny for frugality, volume forecasts (the divisor in the rate equation), etc. There's no advantage to doing all of this twice.

Second, if rates don't match the budget, clients may get budget approved to spend on the internal service provider, and later find that their budget won't buy what they thought it would. Meanwhile, staff may find themselves collecting insufficient revenues to pay their costs (running at a loss), or making a profit and exposing themselves to criticism for overcharging customers.

Rates should be extracted directly from the budget data, saving time and ensuring consistency. Budgeting can be done alone, without calculating rates. But if a department wishes to calculate rates, it can do so with very little additional effort with an integrated planning process.

By using the same full-cost data, a department can be confident that its rates are fair, defensible, directly comparable to benchmarks like outsourcing, and consistent with the costs described in the budget.

3. Benefits of Knowing Full Costs

When presented with the facts, executives willingly (seemingly automatically) abandon the traditional approach of budgets based on prior years, haggling over expenses, and arbitrary cuts. Sure, changes in the costs of ongoing services from year to year have to be explained. But in general, budget decisions become simple purchase decisions rather than a political and emotional nightmare. As one executive said, "The facts are totally disarming."

There are many benefits to this straightforward, mechanical change in an organization's business and budget planning method.

The obvious benefits are financial. Decision-making is improved, which has a positive impact on shareholder value. This includes budget decisions as well as decisions made throughout the year regarding resource governance.

In addition, we've found through experience that there are positive impacts on an organization's culture and structure as a result of the process of calculating the full cost of products and services.

As described below, forecasting the full cost of a department's products and services addresses all of the problems generated by traditional budgeting discussed in Chapter 1. The specific benefits are described in this chapter at an overview level. A summary of benefits to an internal service provider is provided in Appendix 1; the benefits of enterprisewide implementation are summarized in Appendix 2. With each of these benefits, the ultimate result is enhanced shareholder value.

Financial Benefits

Knowing the full costs of your products and services has significant and persuasive financial benefits.

Improved shareholder value: When a budget forecasts the full cost of an internal service provider's products and services, the debate during the budget process becomes much more businesslike. Instead of micromanaging you or demanding that you do more with less, client executives – your *clients* – decide what products and services they will and won't buy with the corporation's finite spending power.

Executives make fact-based decisions on the allocation of scarce corporate resources. They understand what the proposed budget pays for, and with their business knowledge of the value of specific deliverables – perhaps even with ROI calculations – they can allocate budgets based on the investment opportunities at hand.

This approach is far more effective than arbitrary benchmarks (like prior years' budgets plus or minus a few percent) or industry averages (like IT cost as a percent of corporate revenues).

It ensures that those projects with the highest returns get done. Just as important, it discourages projects with poor or negative returns.

Strategic alignment: When budgets are based on deliverables, corporate executives will fund investments that are most relevant to their business strategies and operational needs. This approach to budget decision making naturally aligns internal service providers with corporate strategies.

"I definitely would recommend [FullCost] to any organization where demand outstrips the corporation's ability to pay for it.... It really does align your resources to the strategic goals of the organization."

– Robert Bender, CIO, SMDC Health System

Clients defend the budget: Experience shows that when an internal service provider submits a budget for deliverables, clients naturally step forward and justify the funding for the projects and services they wish to buy – that is, clients defend your budget. And they're highly effective at doing so.

With their superior knowledge of their business strategies and how your products and services will help them achieve their objectives, clients make a strong case. With clients' input, corporate executives have the information they need to make better decisions.

If cuts must be made, decisions are based on a better understanding of the needs of the business. In fact, when clients learn the true cost of their requests, they often voluntarily withdraw some of their requirements.

An added benefit is that the internal service provider will not be blamed if it isn't given enough budget to deliver a client's favorite project.

As an interesting side effect, clients defending your budget often results in an increase in funding, even in difficult years.

For example, CIO Lew Davison of the Missouri Department of Transportation first submitted a budget for his organization's products and services in a year when tax revenues were down. Initially he was expected to cut his budget by 7 percent, as were all the other departments. But when clients argued that they needed more IT to save money building roads, his budget actually went up 10 percent!

The result: Whether the total budget goes up or down, engaging clients in defending your budget results in better decisions and improved client satisfaction.

"My organization had been under-spending on information technology for years. With [FullCost], at a time where other budgets were shrinking, my budget actually went up because clients favored the new process and were able to defend their worthwhile investments."

– Lew Davison, CIO, Missouri Highway and Transportation Department

Fair rates and allocations: If an internal service provider charges for its services, its rates are fair, defensible, understandable, and completely in synch with the budget plan.

If an internal service provider gains its funding through an allocation of its costs to business units, the amount of the allocation can be based on utilization. Allocations are fair, and clients understand that a larger allocation means they'll get more service. Ultimately, many clients find themselves arguing for a larger, not a smaller, allocation!

Managed expectations: Once decided, a budget for a department's products and services clearly defines what's funded and what's not. Thus, clients understand what they can expect with the currently planned resources, and what would require incremental funding. Their expectations match available resources.

If clients want more, you can willingly supply it – at an additional cost. If clients supply additional funding, internal entrepreneurs can expand supply (e.g., hire contractors and vendors) to satisfy incremental demand – far better than turning clients away.

The result is more than just improved relationships. Clients can better deliver their objectives if they're no longer surprised and disappointed when they depend on getting more than internal service providers have resources to deliver.

Appropriate reinvestment: Internal service providers can build into their costs the appropriate investments in sustainment activities like training, product research, customer relationships, and organizational improvements. They won't see these critical investments displaced by clients demanding more than the budget permits.

Large investments in the organization itself, termed Ventures, are priced as deliverables separate from clients' products and services. These investments are decided on their merits, based on the internal service provider's business proposals. This explicit decision process is far more fiscally sound and reliable than embedding the cost of organizational improvements in clients' projects or hoping for a surplus of unknown size at year-end.

Valid financial metrics: Rates are comparable to outsourcing, on a like-for-like basis. Like vendors' prices, all costs are associated with products and services that customers buy. Rates include a fair share of indirect costs, and are not inflated to fund corporate-good activities which vendors don't have to do.

Proper metrics enhance efficiency through fair, healthy competitive pressure. They also provide a sound basis for deciding when to use vendors (outsourcing) rather than producing products and services internally.

*"My budget is now much more realistic.
[FullCost] has made the institution aware of what services we deliver
and how much each of those services cost to deliver."*

– Dr. Joyce A. Mitchell, Associate Dean, University of Missouri Health Services

Impacts on Governance: Portfolio Management

Beyond the once-per-year budget negotiations, knowing the full costs of products and services is essential to effective resource governance processes throughout the year.

To appreciate the powerful impact of full-cost budgeting on governance processes, consider the business-within-a-business paradigm. From this perspective, every department, indeed every small group, views itself as an entrepreneurial business. Everyone is clearly focused on producing products and services for customers, both within the organization and among the client's business units.

The business-within-a-business paradigm views budgets in a very different light than the traditional perspective, and has powerful implications for resource governance processes.

In the traditional paradigm, your budget is considered yours, and it's your job to do the best you can with it to please your internal customers. This old paradigm suggests that *you* make decisions about priorities (instead of customers deciding what they'll buy from you), and that you're to blame if your budget isn't sufficient to allow you to satisfy all your customers' needs.

The business-within-a-business paradigm suggests a very different way to look at your budget. Think of the money given to you in your budget as a *prepaid account* – money put on deposit with you at the beginning of each year by your clients so that they can buy your products and services throughout the year.

In this paradigm, your budget creates a "checkbook" that belongs to your clients. While a

portion of it may be yours to pay for investments in your organization (Ventures) and resources set aside for corporate-good services (Subsidies), the bulk of your budget buys products and services that benefit clients.

Thus, client-driven "portfolio management" processes take on a new meaning. A client committee becomes the "purser" responsible for that checkbook. Its job is to evaluate clients' requests and decide which checks to write.

The internal service provider's job is to deliver anything that's funded – and no more! If there's not enough money in the clients' checkbook, it's the clients' job to either constrain demand or gain incremental funding for you.

A budget that describes the cost of products and services is fundamental to portfolio management. It provides the list of all proposed investments, from which client portfolio managers can then choose which checks to write. It also provides the information they need to know when their checkbook is fully committed – that is, where the line is to be drawn.

This is required to optimizing the return on the entire portfolio, rather than just rank ordering the projects. For example, it may be that priority one – a very large project – has excellent returns; but its significant cost means that the organization cannot afford priorities two and three – two smaller projects which together add up to an even better return. Portfolio managers cannot make such trade-offs unless they know the cost of all products and services.

Note that as new business needs arise during the year, clients have the opportunity to buy more than was planned in the budget process, as long as they can supply the incremental funding. There's no need to miss good investments or postpone them until the next fiscal year. By the way, the purser committee has no power over any sales funded directly by business units, since they don't require any of the funds in its checkbook.

Conversely, this paradigm discourages projects with poor returns. When clients learn the full cost of their requests, they voluntarily withhold demands that they don't feel comfortable defending to corporate executives or to the committee of peers (the purser of the checkbook).

Presenting a budget in terms of the full cost of an organization's products and services changes the conversations an internal service provider has with its clients. It removes many of the sources of conflict, and induces a fact-based budget decision process and makes possible a truly client-driven resource governance process.

Transformational Impacts

In practice, we've found that the benefits of knowing the full cost of products and services go far beyond the financial. Transformational benefits are those that improve the effectiveness of the organization, its culture, and its structure. These include the following:

Culture of customer focus: A culture of customer focus is reinforced in a number of ways through the process of costing products and services.

First and foremost, staff learn that they're in business to produce products and services for customers, that customers decide what they'll buy, and that they must please their customers to stay in business. In the planning process, staff define their product lines (service catalogs), and who their customers are for each. Vague assertions like "for the good of the company" are replaced with clearly defined clients (or consortia of clients), lists of clients for mass-market services, and internal customers within the organization.

Furthermore, in the spirit of customer focus, staff should never have to judge the merits of customers' requests, or be positioned as an obstacle rather than an ally. With knowledge of the full cost of products and services, business leaders (not internal service providers) can make decisions about what to fund and what to cut.

By shifting the job of defending projects and services to clients, and by shifting the job of deciding what to fund and what to cut to executives, a budget for deliverables gets providers out of the "bad guy" role of judging clients' ideas and telling some clients no for lack of budget – the opposite of customer focus.

As an added benefit, clients learn that staff aren't the constraint, but rather that the corporation has limiting spending power. They don't blame staff when their projects are not funded.

The net effect is greatly improved relationships between clients and internal service providers.

Culture of entrepreneurship: Entrepreneurship means running your business-within-a-business as you would your own business.

Through the process of planning the full cost of products and services, staff gain a clear understanding of the lines of business they run and the specific products and services they sell, encouraging a focus on results rather than effort.

They learn to plan their businesses within a business, forecast revenues, and understand what business they can count on and what their growth opportunities are. They also plan staffing strategies and expenses for the various business scenarios.

Staff also learn to be frugal about their costs (including their unbillable time, the support services they purchase from their peers, and overhead costs), while reinvesting in their businesses where most needed. They proactively set aside time and money for critical reinvestments (unbillable activities such as training, product development, and responding to

clients' calls). And they learn to better manage their businesses with key efficiency benchmarks such as billable-time ratios.

Furthermore, the portfolio management processes that can be built on a full-cost model give staff entrepreneurial opportunities to expand their businesses by proposing new ideas to meet new business needs, rather than forcing them to police clients to pre-determined levels of spending. Without the pressure of unlimited demand, staff feel safe putting forward creative new ideas for serving their customers. This entrepreneurial behavior may lead to the discovery of new, high-payoff investment opportunities.

Culture of teamwork: Cross-boundary teamwork is enhanced when project teams are planned at the beginning of the year, necessary to add up the full cost of a project or service.

By planning in advance all the resources that will be needed – not just the prime-contractor group but all the needed subcontractors and support functions – peers don't surprise one another with demands for help at the last minute. The process induces collaboration to synchronize the delivery of projects and subsequent life-cycle support services.

Since entire projects are funded, all participants on the project team are funded, avoiding the situation where one group's highest priority is another's lowest. Thus, a budget for deliverables and rates based on full cost ensure that the resources are there to support teamwork and complete the job.

The quality of teamwork is also improved when prime contractors and internal subcontractors precisely define their respective deliverables and sub-deliverables. Subcontracting with peer groups for specific deliverables (instead of just for people) clarifies roles and relationships within project teams.

Note the flexibility inherent in this approach to teamwork. When prime contractors buy what they need from peers throughout the organization, business processes are generated and tuned dynamically, and internal alignment of resources with the department's priorities is automatic.

Managers also recognize their peers as customers for support services and departmentwide overhead services. They plan what they need to buy from, and sell to, one another, with a forum for dialog about these indirect costs. No function is left out of the culture of entrepreneurship and teamwork.

Culture of integrity: Integrity refers to behaviors that inspire trust. Central to an organization's integrity is its ability to meet all its commitments.

An organization's integrity is protected when staff have the resources they need to fulfill every approved commitment, and don't make commitments they can't keep.

Structure: Insights on the organization's structure are gained in the process of defining the lines of business under each manager, necessary to determine the products and services each manager will cost. This has led managers to see opportunities for improving their organizational structure by consolidating fragmented lines of business.

For example, at a healthcare provider in Minnesota, the IT organization had a separate computer server that was managed and used by the applications developers. The operations staff knew that if they could manage this server, they could improve security, reliability, and efficiency. But they'd been unable to convince the developers to let go of "their computer."

In the full-cost planning process, the applications developers were required to develop a business plan and budget for their computer operations function, distinct from their applications engineering line of business. The experience of doing so convinced them that it was indeed an operations function, and they willingly moved it into the data center.

Facilitating this small structural adjustment, the business plan clearly documented both the resources involved and the services that the data center was to "sell" back to the developers.

"We continue to find ways of using the FullCost methodologies to better understand and manage our lines of business. FullCost has enabled us to run our business more efficiently and effectively."

– Matt Frymire
CIO, Riverside County, California

Implementation advantages: Unlike many approaches to changing culture and building teamwork, these positive transformational impacts are largely "free" in that they occur in the course of preparing a budget, something people have to do anyway.

Furthermore, these changes come more easily than some other approaches to cultural and structural change. Since implementing a new budget process seems to be simply a mechanical change, it doesn't engender the same level of political tensions or fears of change.

The result is a process that makes sense financially, while contributing to the transformational goals of an organization.

Enterprisewide Benefits

There are compelling benefits to knowing the full cost, enterprisewide, of every department's products and services. Not only does this produce all the benefits described above (and in Appendix 1) within each department. In addition, there are benefits to the entire corporation when all departments present their budgets in this manner.

Chief among the many benefits is strategic alignment across the entire enterprise. When this discipline is implemented enterprisewide, executives see the cost of, and fund, entire strategies. Knowing the total cost to shareholders/taxpayers/donors, enterprisewide, of proposed strategic initiatives improves planning and decision making.

Furthermore, allocating resources based on each department's participation in strategic initiatives aligns entire corporations in a manner far more explicit than strategic plans alone. This is far better than deciding budgets organization-by-organization, with no explicit process for ensuring that all the pieces of a corporate strategy are included.

Additionally, knowing the full cost of each product and service is invaluable to pricing and product management. Even when pricing is market- rather than cost-based, analysis of full costs is beneficial for these reasons:

- * It allows management to identify unprofitable activities, and either improve or discontinue them.
- * Subsidies and Ventures should be charged to the corporation at cost, not at market rates.
- * In some cases, such as government contractors or regulated utilities, internal clients are contractually restricted to charging outside customers for internal services at cost plus a percentage markup.

In firms where only a subset of the clients are bound by cost-based external contracts, keeping two sets of books may be required to ensure that all internal clients are treated equally from a budgetary standpoint, and yet external reimbursements are all that's allowed.

The benefits of enterprisewide full-cost planning are listed in detail in Appendix 2.

4. Full-cost Maturity Model

The concept of budgeting for products and services is not new. It's been envisioned in discussions of zero-based budgeting (circa 1980s), activity-based budgeting (circa 1990s), and portfolio management (circa 2000s). However, the practicalities have been challenging.

What's new is this: Research over the course of the last decade, in over two dozen diverse public, private, and not-for-profit organizations, has resulted in a comprehensive understanding of the mechanics required to plan an organization's costs of products and services.

While the research was done primarily within IT organizations, it applies universally to any organization that provides services to clients within its company, as well as to entire enterprises.

Now, these requirements have been sorted into levels of capability – the ***Full-cost Maturity Model*** (FMM).

The Full-cost Maturity Model (FMM) is a standard metric of an organization's capability to plan the full costs of its products and services.

The focus of FMM is on cost *planning*, not tracking. It addresses the processes by which an organization develops its operating plan, budget, allocations, and rates. It's not a metric of financial accounting systems, broader resource governance processes, or billing systems – although all of these other things are founded on the budget and rates.

The FMM scale describes five levels of capability. The scale ranges from simple budget cost transparency to, at the highest level, the calculation of budgets and consistent rates in a manner fully comparable to outsourcing.

As an organization moves up the scale, the benefits grow. Of course, you get what you pay for. Concomitantly, the mechanics become more challenging. FMM documents both the benefits and the essential mechanics (methods, processes, and tools) required to make each level work.

Each FMM level is complete, in that it includes all the mechanics needed to deliver the intended benefits.

Each FMM level is sustainable, in that prices include all of the direct and indirect costs necessary to deliver the products and services as well as the indirect costs necessary to sustain the organization in the future.

Each FMM level builds upon the last, so that investments in implementing a lower level are never lost. This allows an organization to evolve its cost-planning methods and tools in stages and to different levels of detail, depending on its needs. Starting at the first level, many of the

benefits can be attained quickly; then more benefits can be realized in subsequent years as the organization evolves. And not every organization needs to attain the highest level.

Overview: The Five Levels

The five Levels of FMM are as follows:

Level 0: Traditional Budgeting

Costs are not linked to products and services. This is the current state of many organizations (even those which calculate rates).

Level 1: Transparency

Costs are linked to high-level product sets, and the cost model is transparent – that is, well documented and based on consistent principles.

Level 2: Fair Allocations

Products sets are subdivided by client (business unit), documenting utilization as a basis for allocations.

Level 3: Demand Management

Product sets are broken down into detailed products and services – specific client purchase decisions – required for demand management and portfolio management processes.

Level 4: Accuracy

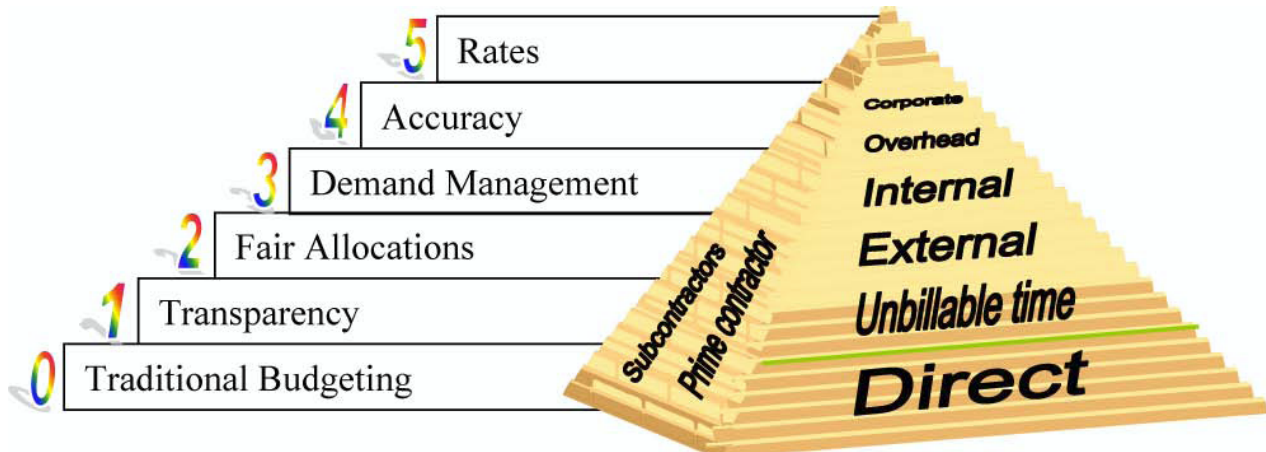
Accuracy is greatly improved since all indirect costs are amortized to just the right products and services, and billable-time ratios and compensation costs are calculated separately for each line of business under each manager.

Level 5: Rates

Costs are portrayed in total for products and services (the budget), and also rates (unit costs) are extracted from the same data.

Note that an organization which allocates its costs may or may not be at Level 2. Similarly, an organization that has implemented portfolio management may or may not be at Level 3, and an organization that has implemented chargebacks may or may not be at Level 5. Current practices such as these dictate the *target* level, but the organization may or may not have satisfied all the detailed requirements of that level.

Figure 4: Levels of Maturity



The next chapter documents the starting point – Level 0 – and the fundamental requirements to move up to any level. Then, a chapter on each level explains how that level works and its benefits. The detailed mechanics are documented in Appendix 3.

5. Level 0: Traditional Budgeting

Understanding Level 0 is the starting point for understanding the FMM model.

Basic to the concept of FMM is the assignment of *all* costs to an organization's products and services. Level 0, the current state in many organizations, takes a variety of forms; but in all cases, it does not link all costs to deliverables.

Traditionally, managers plan their individual budgets by forecasting expenses by their general-ledger (GL) expense codes – categories like compensation, travel, training, vendor services, etc.

These budgets are then aggregated as they roll up through the organizational hierarchy.

At Level 0, organizations may calculate the direct costs of some products and services. A common example is engineering time. They may even assign some local indirect costs, such as management time. But not *all* costs throughout the organization are assigned to products and services. Thus, these calculations represent partial, not full, costs.

Level 0 organizations may allocate their costs to clients using formulas based on high-level drivers. But for lack of full-cost data, these allocations are not driven by clients' actual utilization of the organization's products and services. Rather, they are based on simple formulas only loosely related to usage. For example, a pool of costs loosely related to end-user computing may all be allocated based on the number of PCs.

Some Level 0 organizations may allocate costs based on utilization; for example, PC support costs may be allocated based on the number of PCs in each client organization. But if that allocation doesn't represent full cost (as defined in Chapter 2), then the department is still at Level 0 of FMM.

Level 0 organizations may even charge clients for some of their products, for example, charging the direct costs of labor to clients' projects. Indirect costs are either allocated to clients or paid through a traditional budget.

Level 0 organizations experience many (if not all) the problems described in Chapter 1: mistrust, arbitrary budget decisions, lack of strategic alignment, clients' expectations far exceeding resources, obstacles to teamwork, insufficient investments in sustenance activities, complaints about high costs, unfair comparisons to outsourcing, etc.

At this level, attempts at allocations can create additional problems and make matters even worse. Allocations invariably create resentment and controversy since they are a cost that the business units cannot control. The internal service provider will find it difficult to

justify allocations that are not calculated through a transparent cost model and apportioned based on business units' utilization of its products and services.

At Level 0, attempts at chargebacks are dangerous. Since the full cost of products and services is not known at this level, rates may represent partial costs (e.g., direct costs only), creating the many problems described in Chapter 2 in the discussion of marginal-cost pricing.

The key to rising above Level 0 is calculating the full costs of an organization's products and services – that is, assigning *all* costs to deliverables.

The next five chapters describe each level and the benefits it generates. The detailed mechanical requirements are described in Appendix 3.

6. Level 1: Transparency

At Level 1, costs are linked to high-level product sets, rather than detailed products and services.

How It Works

In contrast with traditional expense-code budgeting, assigning all costs to high-level "product sets" is the first step toward calculating full costs.

Product sets are broad bundles of related products and services. Examples of product sets in IT include personal computers, network services, applications services, and end-user computing.

Thinking as a business within a business, managers define these broad product sets and then attach all costs – direct and a fair share of indirect – to them.

Then, primes and subcontractors are linked to calculate the full cost of each product set.

IT example at Level 1: Applications Hosting (holding a client-owned application in trust and ensuring that it's running as required).

A high-level product set may be defined as "Applications" (to include all engineering and operations), or more specifically as "Applications Operations" (to include applications hosting, help-desk support, and other ongoing costs). The cost of Applications Hosting services for all applications and all clients would be imbedded in a single cost for this entire high-level product set.

Benefits

The key benefit at Level 1 is transparency – that is, the cost model is well documented and based on consistent principles.

Budgets are more understandable and justifiable because costs are presented in terms of recognizable deliverables. All indirect costs are documented and explainable. The budget is fully "transparent" in that all costs are clearly documented, as are the formulas that amortize indirect costs to product sets.

Transparency builds trust, and the association of costs with high-level deliverables is the first step in building an understanding of value. Clients' response at Level 1 is hopefully something to the effect of, "I understand why you need that much money and understand what we're getting for our money. And I can see that you're being reasonably frugal with your indirect costs."

In the course of planning costs, managers within the organization set aside time and money for critical sustenance activities. Indirect costs are also planned. Thus, Level 1 does give an internal service provider the opportunity to plan a budget that includes appropriate reinvestments in the organization to maintain a viable business.

Of course, the department's leadership team scrutinizes all indirect costs before the budget is submitted. This scrutiny process ensures that managers are being frugal, at least with regard to the indirect costs within their respective groups. (More detailed scrutiny and greater frugality are enabled at higher FMM levels.)

This first level drives a significant culture change within internal service provider organizations. The process itself is a learning experience for managers. They learn to think about their group as a business, and understand products versus tasks.

A culture of teamwork is enhanced at all levels, and that benefit is realized from the start at Level 1. The process requires managers to identify project and service delivery teams – the prime contractors and internal subcontractors who together produce the deliverables.

Since teams are planned at the beginning of the year, peers don't surprise one another with demands for help at the last minute. And since entire projects are funded, all participants on the project team are funded, avoiding the situation where one group's highest priority is another's lowest.

Also, since prime contractors buy specific products and services from subcontractors (not just people's time or vague deliverables like "project support"), individual accountabilities are clear and the quality of teamwork enhanced.

Additionally, internal support services are planned. This includes services one manager "sells" to another, and general overhead which serves the entire department.

Figure 5: Summary of Benefits, Level 1

- * Transparency builds trust.
 - * Everyone understands what the budget pays for, and perceives the value.
 - * Builds in appropriate reinvestments.
 - * Staff understand products versus tasks.
 - * Saves money through frugality: within groups.
 - * Fosters culture: teamwork.
-

Product sets are at a very high level of granularity, which makes Level 1 relatively simple. However, note that these large bundles are well above the granularity of clients' purchase decisions. Clients cannot decide which they will and won't buy; they need them all.

Thus, Level 1 does not give clients meaningful control over costs, and it does not provide the level of detail needed to support portfolio management.

7. Level 2: Fair Allocations

At Level 2, costs are subdivided by client (business unit), forecasting utilization, as a basis for allocations.

How It Works

The step from Level 1 to Level 2 is relatively simple – managers' thinking has already been shifted from expense codes to product and service costs; they've defined their deliverables (albeit at a very coarse level of granularity); and they've planned teams by identifying prime contractors and internal subcontractors.

At Level 2, each product set is divided among the various client business units, and costs are subdivided based on forecasted volumes.

The most significant additional work is forecasting volumes by business unit. Of course, subcontractors must divide their costs in the same way that prime contractors do, to permit the calculation of the full cost of a product set to each individual client.

A few consortia may be defined, representing a simple, short list of allocation pools.

In addition, greater accuracy in the assignment of indirect costs to each client is required. At this level, the most important step is to direct external indirect costs to just the right products and services. For example, each piece of infrastructure has costs that should be amortized into only those products and services that use that infrastructure.

IT example at Level 2: Applications Hosting (holding a client-owned application in trust and ensuring that it's running as required).

A high-level product set may be defined as "Applications" (to include all engineering and operations), or more specifically as "Applications Operations" (to include applications hosting, help-desk support, and other ongoing costs). The cost of Applications Hosting services for all applications would be imbedded in a cost for this entire high-level product set *for each client business unit*.

Figure 6: Additional Requirements, Level 2

- * Deliverable for each client (business unit) for each product set.
 - * A few high-level consortia to represent allocation formulas.
 - * Assign external indirect costs to the right products and services.
-

Benefits

Dividing the cost of product sets by client (business unit) provides a rational basis for allocations. Clients typically respond, "I used to say my allocation is too big, but now I understand that my allocation is fair because it's driven by the things I'm actually getting."

More insightful clients (and eventually all of them) will understand the relationship between their allocation and the deliverables they get, and say something like, "My allocation is creating a checkbook to buy things from you. Now I see that my checkbook isn't large enough to buy all I need; it only pays for basic services. I need to help IT get a bigger budget and *increase* my allocation!"

From a transformational perspective, this level induces a culture of customer focus. Staff recognize that business units are their customers and pay their bills. In the planning process, they define who the specific clients are for each of their product lines. Vague assertions like "for the good of the company" are replaced with clearly defined customers or consortia, including lists of customers for mass-market services.

Figure 7: Summary of Benefits, Level 2

- * Allocations are driven by consumption of product sets, and are understandable and fair.
 - * Some clients support their allocations and defend the internal service provider's budget.
 - * Fosters culture: customer focus.
-

8. Level 3: Demand Management

Level 3 moves the granularity of the deliverables to the level of discrete purchase decisions, fundamental to demand management and portfolio management processes. At this level, clients can be empowered to decide what they'll buy.

This level of granularity is significantly more work than Levels 1 and 2. But it has powerful benefits (such as demand management) and is generally necessary to meaningfully address the problems most organizations face.

How It Works

At Level 3, managers forecast the sale of specific products and services to specific clients.

Also, managers plan speculative sales as well as the "keep the lights on" assured sales. If the corporation makes an acquisition, for example, it will need more PCs and more network services. The corporation needs to know the cost of these things to evaluate the total cost of the acquisition.

At Level 3, it's not adequate to just plan and cost what will fit into last year's budget levels. Internal service providers need to bring into the plan all the discretionary purchases that clients and corporate executives may or may not approve. Thus, at this level, every client request has a forecasted cost, as do ideas for new products and services proposed by staff.

With all the potential projects and services represented in the plan, clients naturally defend their projects (even without being "trained" to do so). In many cases, we've found this leads to an increase in budgets, even in difficult years.

Now that both an optimistic and a pessimistic (assured) budget are presented, managers learn to plan for growth. For example, costs now take into account the fact that business growth may increase the average cost of products and services, since a higher proportion of contractors and vendors will be utilized (typically at a cost greater than employees). It's essential to include in the cost of all deliverables some "headroom" to account for an increase in the blended compensation cost as the business grows. This sets a rate that applies to speculative projects as well as the "keep the lights on" work, and is sustainable throughout the year.

At Level 3, whenever a consortium is defined, managers and clients must agree on exactly which business units are members and the proportion of the total cost each will pay.

IT example at Level 3: Applications Hosting (holding a client-owned application in trust and ensuring that it's running as required).

The cost of *each Applications Hosting agreement* (for each major suite of applications) would be calculated, with summaries available by client and product set.

Figure 8: Additional Requirements, Level 3

- * Costs by product and service (catalog)
 - * Clients defend their requests and choose what they'll buy
 - * Costing considers "headroom" for growth
 - * Consortia defined by specific sale.
-

Benefits

Attaining FMM Level 3 is well worth the added effort it requires. Level 3 addresses the bulk of people's complaints about their existing resource governance processes.

Since the budget forecasts the full cost of each product and service sold to each client, at this level budgets can be justified based on the payoff of specific investments. This is a significantly more defensible budget. When clients and corporate executives can see the specific products and services that they're getting for their money, trust grows.

It also improves the strategic alignment of, and the overall return on investments in, an internal service provider organization. Since clients defend their requirements – contributing their deeper understanding of business needs and expected benefits – the case for investments is more convincing, and corporate executives make better informed decisions. Out of this dialog, the most strategic investments rise to the top of the priority list, and the budget funds the optimal portfolio of products and services.

Relationships also improve when the job of defending projects and services shifts to clients. Staff no longer judge their clients ideas, and instead are customer focused. Everything requested is included in the plan, and the purchase decision is left to clients and corporate executives. When clients decide what to fund and what to cut, the internal service provider no longer appears to be an obstacle.

Once the budget is decided, everyone clearly understands what it pays for, and what other

products and services would cost if clients want to supply incremental funding. Level 3 matches clients' expectations to available resources.

Level 3 is required to make portfolio management effective. The budget determines the amount in their checkbook, as well as what various deliverables cost. This takes portfolio management well beyond merely rank ordering investments. Clients can now be empowered to decide exactly what they will and won't buy from an internal service provider.

Level 3 also provides the basis for contracting, both project contracts and service-level agreements. It produces a product/service catalog, with costs. This improves client relationships by reducing misunderstandings. Contracting improves the organization's integrity by making clear exactly what staff have and have not committed to. Contracts may also improve delivery by focusing staff on results rather than on effort.

The plan produced at Level 3 is a comprehensive tactical (1-year) operating plan. It structures the resources, developmental investments, deliverables, and performance benchmarks for the year ahead.

At Level 3 managers learn to plan their businesses within a business. They forecast sales – both pessimistic and optimistic – understanding what business they can count on and what their growth opportunities are. They plan their expenses, conscious of the need for frugality to remain competitive. And, they plan staffing strategies for various scenarios.

The impact of this on the culture of entrepreneurship within the organization is profound. By the nature of the planning process, staff think about earning revenues to cover their costs by delivering specific contracted deliverables to specific clients. They understand that they must *earn* the position of "provider of choice" in clients' minds, even though staff and clients are within the same corporation.

Beyond that, entrepreneurial managers continually seek new ways to serve the business. Level 3 gives them opportunities to expand their businesses by proposing new ideas to serve their customers, rather than forcing them to limit customers to pre-determined levels of spending.

Figure 9: Summary of Benefits, Level 3

- * Budgets are justified by deliverables; trust grows.
 - * Customer expectations match available resources.
 - * Strategic alignment is improved.
 - * A full products and services catalog, produced as part of the process, provides a basis for contracting and portfolio management.
 - * A detailed operating plan is produced as part of the process.
 - * Fosters culture: entrepreneurship (external sales).
-

9. Level 4: Accuracy

Greater accuracy is needed when comparing internal costs to outsourcing, or when calculating quantitative returns on investment options (ROI). Level 4 improves accuracy by amortizing all indirect costs to just the right products and services, and by improving the analysis of billable-time ratios.

How It Works

At prior levels, organizations may consolidate most internal support functions and other indirect costs into one or more pools, and then amortize indirect costs directly into external (client) products and services. In some approaches, an indirect cost pool may be amortized into other indirect cost pools, and ultimately into external products and services – a so-called "cascade" model. This greatly simplifies calculations, but it can introduce significant distortions in costs.

For example, in IT, systems engineers install, support, and upgrade networks and servers. Infrastructure operators own and operate infrastructure in order to sell to clients services like network connectivity, applications hosting, and email.

Of course, infrastructure engineers may also sell their time to others. For example, in IT, they're commonly included in application development project teams to help design software for performance on the intended platform, to develop the physical data model, and to help install the applications software. Thus, it's not accurate to lump all the engineering costs into the cost of infrastructure-based services; doing so inflates the costs of infrastructure services, and artificially reduces the cost of applications.

Note also that IT consumes some of those infrastructure services, like its own use of email and network storage. At prior FMM levels, the cost of these internally consumed services may be amortized into clients' costs for infrastructure services, when in fact it should be spread into the cost of applications and infrastructure engineering and a variety of other IT services. Again, infrastructure services appear more expensive and other services are discounted.

Through research, we've measured distortions in product pricing commonly exceeding 30 percent, and in some cases exceeding 100 percent. That is, some products may absorb an unfair portion of indirect costs to the point of doubling their prices!

The key difference at Level 4 is that internal "sales" are properly amortized. If a group sells a product or service to clients, it might very well sell the same thing to peers within the organization. And there are some functions whose customers are only within the organization.

At Level 4, all these internal sales are represented in the plan alongside client sales. The costs

of Manager A supporting Manager B is spread strictly over the products and services sold by Manager B. Only truly departmentwide support costs are amortized as overhead over all the external products and services.

In practice, transferring costs among peers via these internal sales creates a spider web of internal customer-supplier relationships – a representation of reality, but difficult to deal with from a calculation perspective.

The problem is circularity. When A sells to B, B's costs go up... including any services B sells back to A. That, in turn, will increase A's costs, including that sale to B. Consider, for example, infrastructure engineers who sell upgrades and performance tuning to the operations group, which in turn sells email services back to the engineers.

In real-life business models, the spider web is very complex, involving many multi-party loops. A sells to B, and B sells to C, who sells to A and B, etc. Simple iteration of the calculations cannot resolve circularity when the full web of internal relationships is represented in the model.

Level 4 requires tools and techniques to resolve this circularity without introducing material distortion. In some cases, internal-indirect costs are not burdened on other Internal deliverables to avoid circularity. Doing introduces some distortion since other deliverables must bear a little more than their fair share of these internal-indirect costs. The challenge is to identify the right places to break circularity such that minimal distortion is introduced.

The ability to spread indirect costs through a complex network of internal buy-sell relationships distinguishes a *second-generation* costing tool from the simplistic first-generation cascade models that only spread indirect costs onto external products and services.

Another critical accuracy issue is resolved at Level 4: Managers learn to better plan the "unbillable" time and money they set aside for critical activities such as training, product development, and responding to customers' calls.

This is a material driver of costs. If set too low, costs per billable hour will be too high and the organization will be uncompetitive. Conversely, if set too high, the organization will under-invest in critical sustenance activities and will soon find itself under-trained, under-equipped, falling behind in innovation, weak on relationships with clients, and ultimately out of business.

Simple "one-size-fits-all" targets that may have been used at prior FMM levels are far from accurate or appropriate. The optimal billable-time ratio varies by line of business. In operations functions – where service-level agreements are relatively standard and annual, and where the pace of innovation is low – the billable-time ratio can be relatively high. Conversely, in engineering – where every project requires a unique proposal and contract,

and where the pace of innovation is high – the billable-time ratio should be much lower (and the annual compensation is typically much higher).

The appropriate billable-time ratio also varies within a line of business by the type of staff – managers, supervisors, full-time staff, part-time staff, and contractors – and by skill set (e.g., engineers versus technicians).

At Level 4, managers plan billable-time ratios and compensation costs for each of their lines of business, and for each type of staff and professional specialty, separately. As a result, for each specialty within each of their lines of business, a distinct blended compensation cost per *billable* hour is calculated and applied to the appropriate deliverables.

As a basis for both of the above accuracy improvements, Level 4 requires that managers understand the lines of business under them. In many organizations, both engineering and operations functions are structured under the same manager. Not only is this suboptimal from a structure perspective; it creates problems representing internal sales and planning compensation costs.

After defining the lines of business reporting to them, managers develop a distinct plan and cost structure for each.

Level 4 costing tools must accommodate varying billable-time ratios and compensation costs by line of business, type of staff, and specialty under each manager, and calculate the appropriate set of blended compensation costs per billable hour to apply to deliverables.

IT example at Level 4: Applications Hosting (holding a client-owned application in trust and ensuring that it's running as required)

The cost of each Applications Hosting agreement would be calculated (i.e., a price per application), with summaries available by client and product set. The cost would include an *accurate amortization of the indirect costs* of operating the underlying infrastructure required by each specific application.

Figure 10: Additional Requirements, Level 4

- * Internal sales properly amortized
 - * Refined analysis of billable-time ratios and compensation costs
 - * Separate the lines of business under each manager
-

Benefits

At Level 4, the budget portrays accurate, full costs of all products and services, comparable to outsourcing. This should further improve the quality of budget and portfolio-management decisions.

Level 4 forces explicit consideration of the services that groups within the organization provide to one another. This induces frugality at another level: not just the indirect expenses within each group, but now including the indirect costs of services bought from peers.

At Level 4, the culture of customer focus is extended to include internal customers within the organization. A healthy culture does not permit "two classes of citizenship." Customers within the organization are every bit as important as clients in the business units. Note that a failure to serve internal customers will ripple through the organization, making others less effective, and will ultimately disappoint clients.

At this level, every customer (internal and client) is considered equal, and the plan represents every sale. This is a strong cultural signal that improves teamwork and collaboration throughout the organization.

Similarly, Level 4 gives internal support functions all the same benefits as client-facing functions. Like everybody else, they plan their sales and calculate their costs. Thus, they too are brought into the culture of entrepreneurship.

An interesting side benefit of Level 4 is that staff learn to distinguish the various lines of business under each manager. They develop a common language for labeling the lines of business, and managers often discover that a given line of business is scattered throughout the organization. This has frequently led to insights on structural changes that could improve the organization's performance in the future.

For example, in IT it's not uncommon to see a manager with responsibility for both infrastructure engineering and infrastructure operations. Analysis generally reveals that \$100/hour engineers are doing work that \$20/hour operators could be doing, and perhaps doing so without the discipline one expects of an operations group – 24-hours-per-day monitoring, physical and logical security, routine backups, business continuity planning, etc.

As a result of these insights, engineering managers have chosen to transfer their operations functions to the groups that specialize in infrastructure operations (the data center), and focus their expensive staff strictly on engineering.

Structural change is outside the scope of costing and rate-setting processes; but the insights that lead to it are an interesting by-product of the full-cost planning process at Level 4.

Figure 11: Summary of Benefits, Level 4

- * Indirect costs are amortized accurately, producing an accurate budget for all products and services and costs comparable to outsourcing.
 - * Saves money through frugality: use of internal support services.
 - * Fosters culture: customer focus (internal support functions).
 - * Fosters culture: entrepreneurship (internal support functions).
 - * Staff learn lines of business, insights on future structural change opportunities.
-

10. Level 5: Rates

In organizations that charge some or all their clients for their purchases, a price list is critical. But even if an organization does not charge back, rates are useful (as discussed in Chapter 2). They provide a basis for costing new work that arises between budget planning cycles. They are essential to an effective demand-management (portfolio management) process. And they provide the best basis for benchmarking (e.g., outsourcing comparisons).

At Level 5, rates (unit costs, like price per billable hour) are extracted from the same cost data that produced the budget.

How It Works

In addition to costs in total for products and services (the budget, as at all prior levels), rates (unit prices) are extracted from the same data.

Price lists are calculated for each line of business under each manager. However, if a number of managers are in the same line of business (e.g., a number of applications engineering groups), they may be combined to share a price list.

Calculating rates is, essentially, a matter of totaling the cost of all deliverables sold by a given unit, and then dividing the total cost by the forecasted number of units.

For example, in an engineering group, most of the services are sold by the billable hour. The total cost of all sales, divided by the forecasted billable hours, yields a rate per hour.

To make this work, managers must think carefully about the units by which they'll sell their products and services – the items that will appear on their price list. At this level, they learn principles that guide them in the choice of units.

They must also ensure that their volume forecasts are reasonably accurate.

There are three complexities to consider before total costs are divided by forecasted units.

1. With and Without Overhead

Mechanically it may not be possible to amortize overhead services to other internal support services; doing so generally creates irresolvable circularity.

Thus, all overhead costs are burdened on external sales to clients or to the corporation (Subsidies). We've found that this practice does not introduce material distortion, since ultimately all costs wind up on external sales anyhow; and overhead costs spread on the basis

of the costs of each external sale are distributed in the same proportion as they would have been had they been applied to the components of that total cost.

Since overhead is applied only to external sales (Client and Subsidy deliverables), two rates are needed: one with overhead for external sales, and one without for internal sales and Ventures.

Think of the flow of money this way: When clients buy from an internal service provider, the overhead portion of the revenue stream is stripped off to fund overhead activities. The internal entrepreneur gets the remainder – the price without overhead – just as he/she would have gotten from an internal sale.

In this way, there's no reason for prejudice against internal customers, since they pay the same rates as clients. And the overhead-funded support services are managed centrally.

2. Direct Costs Included?

Some rates include direct costs, and others do not. For example, when you subscribe to an infrastructure-based service, you expect the price to be complete; it must include *all* costs.

On the other hand, the rate per engineering hour does not include direct costs (sometimes called "pass-throughs") which are billed directly to the customer. For example, in IT, the rate per applications developer hour does not include vendor software licenses which are billed separately as a project expense.

Thus, some rates include direct costs, and others do not.

3. Subcontractors Included?

Some rates include subcontractors and others do not. When you subscribe to an email service, you have the right to call their help desk when you have problems. Their prime contractor, the product manager for subscription services, subcontracts to a peer who runs their help desk. The rate for the service must include the costs of both these groups (as well as many others that go into the total service).

Conversely, an applications development project may require database engineering, but the cost of the database specialists is not built into the cost per developer hour. Database engineers simply charge their hours to the project, just as applications engineers do.

At this level, managers must decide which of the costs in their budget are embedded in rates, and which are reimbursed separately.

In summary, managers decide which of their units should include direct costs and which should not. Similarly, they decide which rates include subcontractors and which do not. Then, two rates are calculated: with and without overhead, for client and internal sales.

IT example at Level 5: Applications Hosting (holding a client-owned application in trust and ensuring that it's running as required)

The cost of each Applications Hosting agreement would be calculated (i.e., a price per application), with summaries available by client and product set. The cost would include an accurate amortization of the indirect costs of operating the underlying infrastructure required by each specific application. In addition, *rates would be calculated* for Applications Hosting administration and for each of the component services such as computer time, storage, DBMS services, CMS services, etc.

Figure 12: Additional Requirements, Level 5

- * Care in choosing units
 - * Accurate volume forecasts
 - * Decisions as to which units include direct costs
 - * Decisions as to which units include subcontractors
 - * Calculation of rates with and without overhead
-

Benefits

If an internal service provider already charges clients fee-for-service, then the benefits of calculating fair, defensible, understandable rates are obvious. The transparency of the data model generally quiets controversy over the rates; they represent the full cost to shareholders/taxpayers/donors, and are difficult to dispute.

But there are benefits to calculating rates beyond just chargebacks.

It's far easier to do competitive comparisons with rates than it is with the total costs of products and services at prior levels. Level 5 rates are fully comparable to outsourcing. They do not include extraneous costs, such as Subsidies (corporate-good activities), which vendors don't have to do. And they're fully burdened with all indirect costs, as are vendors' prices.

Benchmarking on this basis may lead clients to discover that the internal service provider is very fairly priced, and staff to discover opportunities for cost savings.

Another use of rates is to estimate the cost of new projects that arise between budget planning cycles. When based on Level 5 rates, the costing will be entirely consistent with the projects planned during the budget cycle.

Figure 13: Summary of Benefits, Level 5

- * Produces defensible, fair chargeback rates.
 - * Rates are comparable to outsourcing, saves money through competitive benchmarking.
 - * Provides basis to estimate costs for new business opportunities mid-year.
-

11. Full Cost Versus Activity-based Costing

Activity-based Costing (ABC) has been cited as a means of associating costs with products and services. ABC first associates costs with "activities" (not products and services). This creates cost pools, which are then allocated to the external products and services that the organization produces.

In practice, the concept of activity-based costing (ABC) can be used in two ways: budgeting/rate-setting – termed "activity-based budgeting" (ABB) – and cost accounting. Both ABB and ABC accounting involve the principles of activity-based costing. ABB is done before the year begins, while ABC accounting is a modification to accounting systems that track costs during the year.

Why ABB Before ABC

ABC for cost accounting is the more commonly cited application of the concept of activity-based costing. It means gathering actual costs (after the fact) by product.

ABC cost accounting is not necessarily the best place to start.

One reason is that it's not easy to implement. Not only does it involve time-cards and expensive software to capture source data (e.g., infrastructure utilization) and to enhance production accounting systems. It also requires a significant investment in training your staff. People need to understand which activities are billable, and which are not; and for the activities which are billable, people need to understand the system of project codes to assign their hours to the right items.

In addition to the learning curve, it's not uncommon to experience significant resistance to the ongoing administrative burden.

True, some of this investment has already been made if the organization bills (charges back) for its services. But if your organization isn't ready for full-scale chargebacks, the benefits of implementing all this change may be limited to what you learn from the data.

As expensive as it is, the benefits are somewhat limited. ABC accounting helps managers understand costs and improve the efficiency of the business. But the data is after the fact. Improvements may affect future years, but it's too late to impact the year you're measuring.

On the other hand, activity-based budgeting (ABB) is easy to implement, and has many immediate benefits.

Implementation involves changing only the budget planning process.

The management team must learn some new concepts and tools. But note that this learning curve is, in itself, beneficial. Managers learn to sort out their lines of business, define their

products and services, recognize their customers (both clients and peers within the organization), plan projects in advance with their team members, and learn entrepreneurial concepts of business planning – all the benefits of developing a full-cost model.

Meanwhile, the rest of the staff are not affected. So the issue of resistance to change is limited to the management team itself, and is far less of a problem.

The tools are inexpensive, and do not impact production accounting systems. In fact, with minimal effort, the budget-planning tool can feed the "plan" data (as in "plan versus actual") to any existing accounting systems.

Although the costs of ABB are far less than ABC accounting, the benefits are greater.

As to financial benefits, the impacts on the bottom line are more immediate since the discovery of opportunities to drive costs out of the system occurs before the year begins, in time to do something about them.

Limitations of ABC

ABC advocates insist that costs are assigned first to activities (tasks, not deliverables), and then these "cost pools" are allocated to products and services sold to clients.

The alternative recommended by FMM is to assign all costs to each group's products and services (not activities), whether those products and services are sold to clients or to peers. The costs of deliverables sold to peers are then allocated to the receiving group's products and services, which also may be sold to clients and to peers. This creates a network of internal customer-supplier relationships, with costs flowing through the network until they ultimately are assigned to products and services sold to clients.

With ABC, internal customer-supplier relationships are not documented. This has a number of disadvantages.

First, those groups which primarily support their peers don't receive the benefits of clear product and service costing – benefits like balancing expectations with resources, customer focus, and perceived value. In a sense, they become second-class citizens. One self-proclaimed ABC guru told me, "The only thing that really counts are the products and services sold to clients in the business. Everything else is just an activity done to produce those external products/services."

Second, ABC misses an opportunity to enhance teamwork. By contrast, when every group defines its products and services (internal and external), then teamwork is the natural result of a "prime contractor" (one internal group) buying deliverables from internal subcontractors (peer groups). Just like in the real world, project and service-delivery teams automatically

form and individual accountabilities are clear. Strict ABC lacks the concept of prime contractors and subcontractors.

Third, the simple assignment of activities to external deliverables introduces significant distortions. As discussed in Chapter 9, in practice, rates have been distorted by 20, 30, even 100 percent; that is, the cost of some products doubles as a result of receiving more than their fair share of indirect costs.

ABB methods can, at best, achieve FMM Level 3.

12. Utilizing FMM

FFM is a practical tool for making your business and budget planning processes more effective. This chapter explains how to put the model to practical use.

FMM Assessment and Implementation

To apply FMM, consider the following steps:

Step 1. Assessment: Assess your current planning, budgeting, and costing practices, and determine the level that best describes your current state.

Step 2. Target level: Determine your target level. This may be simply the level assessed in step 1. However, your governance and tracking processes may force you to a higher level.

- * If you've already implemented allocations, you must be at least at Level 2.
- * If you've already implemented a product/service catalog, contracting (SLAs), or portfolio management, you must be at least at Level 3.
- * To respond to an outsourcing challenge or to use external benchmarks of specific services, you must be at least at Level 4.
- * If you've already implemented chargebacks, you must be at Level 5.

Step 3. Identify gaps: Compare your current capabilities with all of the required mechanics up through your target level, and identify any missing tools, methods, competencies, and cultural perspectives. Gap analysis becomes the basis for selecting new tools and implementing new methods – your project plan.

Appendix 3 provides the details on required mechanics.

Step 4. Implement: Acquire and implement any needed tools, methods, training, and cultural change. You may optionally include, as part of this project plan, adjustments to governance and tracking systems to utilize the results of your improved cost planning process.

Step 5. Next step: Assess the organization's need and will to progress to the next level.

Time Required

With the experience of more than two dozen implementations of FMM, we've found that implementing a full-cost planning process for the first time (with the inherent learning curve) requires from six to ten months, depending on level and the dedication of the management team.

Generally, participants (including the organization's top executive) spend a day or two each week working on the plan, not too different from most business planning and budget processes. The project manager (perhaps a budget director) typically spends half time throughout the process, and full time in the last month of preparation and during the negotiation process.

This is a lot of time, but it's more than an investment in the mechanics. The length of time is driven by managers' learning curves, and the shift in paradigm – to the business-within-a-business organization – that occurs through the process. Organizations which are already entrepreneurial will find the process easier and move through it more quickly.

Of course, once the business model is set up, subsequent years' planning becomes easy. With the right tools and methods, a full-cost planning process takes no longer than traditional Level 0 budget processes, and may even take less time.

Timing

If the implementation of a new process coincides with the next budget cycle, then the new process can produce the actual budget for the following year.

However, there's no need to wait for the next budget planning cycle to implement a new process. Indeed, there are a number of advantages to implementing mid-year.

A mid-year implementation of a new budget planning process replicates the current year's budget in the new tool and method – essentially "reverse engineering" the current budget. This allows the management team to learn the process without the hard deadline of a budget submission due date. It also allows them to tune the data to a known reality.

This mid-year recasting of the budget has the immediate effect of clarifying what's funded and what's not, an important benefit. It will match clients' expectations to available resources, and bring immediate relief on that issue. Of course, the amount of the budget won't be affected until the following year.

The mid-year implementation prepares the organization to do the following year's budget quite easily. The conversion of the data to the following year's budget is relatively straightforward: Some deliverables are deleted; a few new deliverables are added; and the numbers are revised.

Broader Resource Governance System

A business and cost planning process has powerful benefits in itself, but it's only one piece of comprehensive resource governance system.

During the year, business conditions invariably change and new investment opportunities arise. Once the budget is established, an ongoing, dynamic process is required to adjust priorities to match ever-changing business strategies.

Consider the planning process as a means of filling up "checkbooks." The amount put in the checkbook is based on the investment opportunities known at that point in time.

Checkbooks are held on the clients' books if the internal service provider charges for its services (chargebacks, or fee for service). Alternatively, checkbooks are held on the books of the internal service provider if it receives the budget (directly or via an allocation). But in either case, it represents spending power that's intended to benefit clients.

Throughout the year, clients should be empowered to "write checks" based on their needs at that point in time. This may be termed a "portfolio management" or "priority setting" process. From the perspective of market economics, it may be termed the "purchase decision" process.

Of course, clients must live within their means. If the checkbook is not sufficient to fund their requests, it's up to clients to either provide more funding or adjust priorities to fit within available budgets. This is the key to matching clients' expectations with available resources.

Note that approving a deliverable in the budget does not, in itself, mean that the project will be approved. It means that the purser (the one who controls the checkbook) has the funds to do the project if he or she wishes. During the year, the purser must still approve the project, and has the right to use the funds for other, higher-priority projects.

So, what is the incentive for a client to defend a project in the budget (when the purser may use the money for something else)? If the funds are not available, the purser will have difficulty funding the project during the year. Furthermore, pursers generally favor those clients who helped them acquire funds through this budgeting process.

Also throughout the year, accounting (tracking) systems capture costs. In an effective resource governance system, they also measure the delivery of products and services, invoice customers, and decrement the checkbook.

All these dynamic systems (which operate throughout the year) can be effectively implemented only *after* product and service costs are known – that is, after the implementation of FMM level 3 or above.

Conclusion

Knowing the full cost of an organization's products and services is a fundamental component of an effective resource governance process. It impacts shareholder value, client relationships, strategic alignment, staff job satisfaction, and organizational performance. And it enables the implementation of an effective client-driven portfolio management process.

Getting the planning process right is not a small investment, but the very high payoff makes it a worthwhile organizational improvement initiative.

The Full-cost Maturity Model offers a clear vision of the end point. FMM documents the detailed mechanics needed to develop an effective process. And it describes an evolutionary path forward that permits an organization to mature, step by step, gaining benefits quickly while implementing the right foundation for the future.

APPENDIX 1: Benefits of Knowing Full Costs: Departmental

This appendix summarizes the benefits to a single department, such as an internal service provider like IT, of planning the full cost of its products and services. (Appendix 2 summarizes the benefits of doing so enterprisewide.)

1. Manage clients' expectations.

Document exactly what your budget does and does not pay for, so that clients don't expect the unreasonable.

Translate budget cuts into "What do you want to not buy from us?" (rather than "Take it out of hide").

Deal with unfunded mandates without "stealing" resources from, and risking failure on, other commitments.

2. Counter accusations that you cost too much.

Explain exactly what products/services your budget (or allocations) pays for.

Document the incremental costs of business growth (driver-based budgeting).

Kill the unrealistic "do more with less" demand.

3. Save money.

Frugality 1: Justify costs within each group.

Allocate budget (spending targets) to groups based on their deliverables in the coming year, not their past costs or existing staff.

Frugality 2: Justify the internal support services that groups produce for peers within your organization.

Drive non-value-added steps out of your cost structure (consistent with Lean+ Six Sigma).

Frugality 3: Consolidate redundancies in the organization.

Clarify the organizational structure and precisely who sells which products-services, and document both the resources and commitments that would be moved if you consolidate fragmented functions.

Frugality 4: Objectively compare "make versus buy," and make optimal use of vendors.

4. Better defend your budget.

Negotiate budgets based on the investment opportunities at hand (not arbitrary benchmarks like last year +/- a few percent).

Link resource requests to business results (zero-based budgeting).

Induce clients to defend your budget for things they want from you, adding their credibility and depth of knowledge of their business needs to justifications.

Show governance bodies what they'll get for various levels of funding (scenarios).

Improve strategic alignment with a portfolio-management approach to budgeting that funds products/services based on ROI and strategic value.

5. Ensure equitable allocations.

Calculate allocations based on the products and services each business unit actually receives, ensuring that you don't overcharge one client while undercharging others.

Instead of treating allocations as a bill, treat them as a checkbook that clients use to buy your products/services. Then, rather than complaining that their allocations are too high, clients will learn that a bigger allocation allows them to buy more from you.

6. Set fair and defensible chargeback rates.

For full-cost-recovery organizations, ensure that you don't fall short of breakeven, or inadvertently lose money on one product/service while overcharging for another.

Even if you don't charge back, rates based on full cost are essential to determine incremental budget needed mid-year for unplanned projects, and for benchmarking and outsourcing comparisons.

Use a consistent cost model organizationwide.

7. Manage your business for sustainability.

Calculate your budget/allocations/rates with appropriate set-asides for training, product research, client relations, and other critical sustenance activities.

Develop a source of funding for infrastructure and organizational improvements (rather than getting funding from clients).

Build "headroom" into your budget/rates for the potential increase in average cost due to growth (which causes you to utilize a higher percentage of contractors and vendors).

Coordinate capital investments with operating-expense budgets, so that capital is not wasted for lack of the expense budget to implement or sustain it.

8. Improve internal teamwork.

Fund or cut entire project/service-delivery teams. It's unrealistic to expect an internal "prime contractor" group to deliver results if critical internal subcontractors go unfunded.

Ensure that, as the business grows, internal support services grow in proportion.

Within each team, define every group's deliverables (not just planned resources) as a basis for project planning and clear individual accountability.

9. Improve client relationships and your reputation.

Eliminate any suspicions about your budget/charges with absolute cost transparency.

Deliver on all commitments, since you'll have the resources you need to fulfill all commitments.

Provide a factual basis for client contracts and SLAs/OLAs, and for portfolio management processes.

Link your work to clients' strategies.

Avoid having to judge clients' ideas in the course of deciding what does and does not go in your budget (which makes you an obstacle to those you're supposed to serve).

Never have to turn clients away, since additional business won't dilute resources slated for other projects if you charge full cost for additional requirements.

10. Build a customer-focused, entrepreneurial culture.

Develop a product/service catalog for each group, and build a "results orientation" through clearly defined deliverables.

Reinforce customer focus by identifying each group's customers, both clients and peers within your organization.

Help managers plan how they'll deliver their products/services optimally.

Teach managers to think like empowered entrepreneurs by making each manager responsible for a business within a business.

And for US Federal Government organizations...

Satisfy OMB-300 which requires analysis of, and budgeting based on, the total cost (organizationwide) of projects (and services).

Demonstrate leadership on Program-based Budgeting.

For Working Capital Funded organizations, comply with the Anti-deficiency Act and ensure that you don't fall short of breakeven.

APPENDIX 2: Benefits of Knowing Full Costs: Enterprisewide

This appendix summarizes the benefits of planning the full costs, enterprisewide, of all products and services.

1. Save money.

Frugality 1: Scrutinize costs within each group.

Make decisions based on absolute cost transparency.

Frugality 2: Scrutinize internal support services that departments provide to others within the enterprise.

Drive non-value-added steps out of your cost structure (consistent with Lean+ Six Sigma).

Frugality 3: Consolidate redundancies in the organization.

Clarify the organizational structure and precisely who sells which internal support products/services, and document both the resources and commitments that would be moved if you consolidate fragmented functions.

Frugality 4: Objectively compare "make versus buy," and make optimal use of outsourcing vendors.

Provide a fact-based foundation for outsourcing studies, ensuring like-for-like comparisons (not falling for the fallacious pitch: "We'll do half as much for 80 percent of the cost, a 20 percent savings").

2. Ensure reliable delivery.

Fund entire projects/service-delivery teams, not just the internal "prime contractor" without critical support groups.

Don't set staff up to fail by expecting more than their resources will allow them to deliver (the fanciful "do more with less" demand).

Decide necessary budget cuts in a fact-based manner, eliminating projects/services of marginal value (not the unrealistic "take it out of hide" demand or "unfunded mandates" where impacts are unpredictable).

Coordinate capital investments with operating-expense budgets, so that capital is not wasted for lack of the expense budget to implement or sustain it.

3. Enhance shareholder value.

Optimize resource-allocation (budget) decisions by focusing budget discussions on the investment opportunities at hand (rather than arbitrary benchmarks like last year +/- a few percent or existing staff).

Decide budgets in a fact-based manner (rather than through political haggling or arbitrary top-down decisions).

Understand what the enterprise will get for various levels of funding (scenario-based budgeting).

Induce the primary strategy-delivery and product/service-delivery organizations to defend the enterprisewide budget for their initiatives (rather than expecting internal support organizations to independently defend their sub-contributions).

Fund internal service providers based on their internal clients' needs, with resource requests clearly tied to business results (zero-based budgeting).

Explicitly decide funding for "corporate good" activities like standards and policies (rather than leaving the costs buried in everybody's budgets).

4. Improve enterprisewide strategic alignment.

Improve strategic alignment throughout the enterprise by linking all budgeted resources to enterprise deliverables (such as strategies, internal sustainment, or the delivery of products/services).

When you fund a strategic initiative, fund everyone involved (not just the internal "prime contractor") to ensure that priorities are aligned enterprisewide.

5. Enhance organizational flexibility and response time.

Provide a foundation for internal "portfolio management" that adjusts priorities dynamically throughout the year as business conditions change.

Preclude staff's resistance to incremental work mid-year, since additional projects won't dilute resources slated for other projects since everyone gets incremental budget to cover the full cost of additional requirements.

6. Set prices based on a clear understanding of full costs.

Ensure that you don't inadvertently lose money on a product/service by knowing the fully burdened costs.

Provide a basis for accurate product profitability analyses.

Calculate prices for internal support products/services as a basis for benchmarking and outsourcing comparisons.

Use a consistent cost model organizationwide.

7. Calculate accurate business-unit profits.

Calculate allocations of internal-service costs based on the products and services each business unit actually receives.

Empower business units to control their internal-service allocations by changing the paradigm: Allocations create "checkbooks" owned by business units to buy internal-support services (rather than "Why is my allocation so big?").

8. Manage your business for sustainability.

Calculate budgets and prices with appropriate set-asides for training, product research, client relations, and other critical sustenance activities.

Explicitly manage funding for infrastructure and organizational improvements (rather than burying the costs of infrastructure in individual project proposals, which undermines enterprise capacity planning).

Document the cost of business growth (driver-based budgeting).

Build into budgets and prices the potential increase in average cost due to growth (which causes you to utilize a higher percentage of contractors and vendors).

9. Enhance internal teamwork.

Improve internal teamwork by funding entire enterprisewide project teams, not just the internal "prime contractor" department.

Define every group's deliverables (not just planned resources) within each team as a basis for project planning and clear individual accountability.

Ensure that, as the business grows, internal support services grow in proportion.

Provide a factual basis for internal contracts and SLAs.

10. Build a customer-focused, entrepreneurial culture.

Avoid asking internal service providers to judge their clients' ideas in the course of deciding what does and does not go into their budgets (which positions them as obstacles to the business units they're supposed to serve and undermines their customer focus).

Develop a product/service catalog for each manager, and build a "results orientation" through clearly defined deliverables.

Reinforce customer focus by identifying the customers for all products/services, both external and internal.

Help managers plan how they'll deliver their products/services optimally.

Teach managers to think like empowered entrepreneurs by making each manager responsible for a business within a business.

APPENDIX 3: Mechanics by Level

Appendix 3 is available in the unabridged version.

Contact NDMA Publishing at 203-431-0029 to order a copy.

APPENDIX 4: Integrated Planning, Budgeting, and Rate-setting Process

Appendix 4 is available in the unabridged version.

Contact NDMA Publishing at 203-431-0029 to order a copy.

Know your cost of services!

Transparent budgets, fair allocations, managed expectations, portfolio management, accurate rates – knowing the full cost of your products and services is essential.

Whether you're a shared-services organization, an internal service provider, a budget director implementing activity-based budgeting or chargebacks, or simply want to run your organization in a businesslike manner, you need a reliable method and capable tools to identify and cost your products and services.

After two decades of research and practical application, NDMA has developed **FullCost (tm)**, a combined business planning process and a software solution – overlaid on a set of Excel-based spreadsheets – that satisfies the requirements of all levels of FMM.

***"We continue to find ways of using the FullCost methodologies
to better understand and manage our lines of business.
FullCost has enabled us to run our business more efficiently and effectively."***

Matt Frymire
CIO, Riverside County, California

FullCost includes a detailed, step-by-step manual that walks an organization through the development of a service catalog, a business plan, a budget for deliverables, and rates.

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FullCost has all the capabilities you need to know your cost of services.

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