

Demand Forecasting and Service-based Funding

Demand Management, Service Costing and Investment-based Budgeting As a Single Integrated Process

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To truly add value to the business – indeed, to survive – internal IT organizations need to be savvy about their financial and resource-governance processes. And to design effective processes, four distinct ITIL® processes must be integrated. Here's why....

The IT Industry is no stranger to change. Those changes typically come in the form of technology advancements, which prove “[Moore's Law](#)” and revolutionize the technology landscape. Recently, many internal IT functions are facing a new type of pressure to change, one that has little to do with technology. With the rise of cloud computing and the growing sophistication and marketing prowess of the managed-services vendors, IT is competing to maintain its market share as business units shop IT services outside.

To compete against the growing consumerization of IT services, internal IT departments need to move from a technology-centric focus to what is being called an “IT Services Organization.” The goal is not to establish IT as an arm's-length business, but rather to move from simply a technology supplier to a strategic partner that understands business strategies and can communicate the strategic value of IT.

As a key part of this partnership, a competitive internal IT function must be able to demonstrate how business investments in IT are mapped to services and products which deliver business benefits and enable business objectives. Without this ability to map investments to outcomes, business clients see IT's costs but may not appreciate its value, putting an internal IT function in an unfavorable light compared to external service providers.

Essentially, this means running IT as a *business within a business*, with sound business practices like product marketing, account management, and financial management. The financial management of an IT Service Organization includes practices such as publishing a catalog of services with costs, and negotiating a budget based on the costs of the services and products that IT is expected to deliver – an investment based budget. In short, IT must move beyond a discussion about what it *does* to what it *sells*.

To address these challenges, ITIL defines four process areas – demand forecasting, service portfolio management, service costing, and budgeting. In ITIL, these are four distinct processes. But to be effective, these four processes should be integrated in a single annual planning process.

Four Critical Processes

These four essential processes can be briefly defined as follows:

Service Portfolio: Before an IT organization can effectively define its demand forecast or continue on to service costing and budgeting, it's critical to understand its service and product offerings. The service portfolio is a comprehensive list of all IT services and products, regardless of their current availability. The Service Catalog, on the other hand, provides the basis for ordering services that are currently available.

Demand Forecasting: A demand forecast identifies the projects and services that IT expects to deliver in the coming year. Demand comes from a variety of sources, including:

- Volume trends for existing services
- Projected demand for new services and service-level upgrades, another part of "business as usual"
- Requests for commodity products (like PCs), repairs, enhancements, and other small, ongoing services
- Major projects to satisfy business needs; and major projects to enhance IT's abilities such as new technologies, foundational infrastructure, and process improvements (such as ITIL implementations)

A demand forecast includes both assured business and speculative projects and services.

Service Costing: IT spends money (capital as well as expense) on the various general-ledger codes such as compensation, travel, and vendor services. Traditionally, these costs are mapped to internal IT departments (cost centers), and perhaps from there to business cost centers through allocations. Service costing associates all those costs first to the products and services that IT delivers, where it may then be mapped to the business units based on utilization.

Budgeting: Budgets forecast spending in the coming fiscal year. In some cases, budgets result in money given to IT functions to cover their costs. In other cases, budgeted funds are given to clients (business units) and then IT charges its costs back to the business (either through allocations or fee-for-service charges). In either case, budget decisions are critical not only to IT, but to the clients who consume IT services. If IT is underfunded, business needs go unmet and good investments are missed. Conversely, if it's over-funded (rare as that may be), money is wasted on low-payoff services.

Each of these processes plays an important role in ensuring the effective utilization of precious IT resources.

Demand Forecasting and Budgeting

Let's start with how budgets are determined....

Typically, IT submits its request for funding, and then negotiates with enterprise executives and the CFO who attempt to whittle that number down to a final budget. Already, we have a problem. Budgets focus attention on IT costs, not on the services that deliver value to the business. This process reinforces the notion that IT is an overhead cost to be minimized, not a strategic investment.

To make matters worse, the way in which IT develops and presents its budget request may be problematic.

Some organizations simply peg the budget to last year's spending, plus or minus a given percentage. More thoughtful organizations project past years' spending trends into the future, and then overlay a few big projects and a wish-list of new things they want to buy. Either way, these traditional approaches may be effective from the CFO's point of view at controlling spending; but this is not an effective way to determine the right level of funding for IT based on business needs and strategic investment opportunities.

What is the "right" budget? The enterprise should fund all the good investments, and no more. That is, it should set a budget that just pays for the essential needs of the business and the high-return investment projects. (In Lean terms, this is a pull-based budgeting model, versus a push approach where budgeting is based on projected customer demands.)

So the right way for executives to determine the IT budget is to decide which projects and services they will "buy" (whether or not money changes hands) in the coming year. ITIL describes this analysis as zero-based budgeting, but it's so much more than building a budget from the ground up; it means deciding the IT budget as a series of investment decisions. "Keeping the lights on" is generally high return; but perhaps some lights should be turned off to free up funding for more strategic investments.

Of course, one cannot judge returns on investments (ROI) on general-ledger codes like compensation, travel, and vendor services. To equip executives to make the right budget decisions, IT must submit its budget in a different format.

Consider a budget spreadsheet, where the columns represent general-ledger codes, and the rows represent deliverables – specific outcomes (projects and orderable IT products) and services planned for the year ahead. The IT budget should total the *rows* (as well as the columns), forecasting the cost of proposed deliverables. This is called "investment-based budgeting" (ITIL fans may rename it "service-based budgeting"). It's the only way executives can decide the budget based on the needs of the business and the investment opportunities at hand.

Where did those rows come from? An effective planning process begins with a demand forecast that defines what IT could deliver in the year ahead, both essential services and speculative new projects and

services. These forecasted sales (the demand forecast) constitute the rows in an investment-based budget.

Then, IT plans how it will produce those deliverables, including what resources it will need to do so. This is where costs are forecasted.

Thus, the demand forecast is the basis for a meaningful investment-based budget. After all, you have to know what's expected of you in the coming year before you can know what resources you'll need to deliver all that.

Budgeting and Service Costing

Service costing results in rates (unit costs) for the products and services in the catalog. Examples are the rate per billable hour for engineering time, per gigabyte for each tier of storage, per instance for the various types of computing resources, and per subscription for services like email.

Rates are distinct from allocation formulas in that they're associated with specific items in the service catalog. On the other hand, cost allocations are based on high-level drivers and attempt to fairly distribute costs, but without linking those costs to specific services and products consumed; in fact, allocations typically pay for many catalog items.

Obviously, establishing rates for services and products is essential for IT organizations that charge (fee-for-service) some or all their clients for any portion of their workload. But rates are valuable to *all* organizations, with or without chargebacks, for a variety of reasons:

- Rates are used to estimate the cost of incremental work that arises mid-year.
- Rates are essential to a demand-management (priority setting, or work in-take) process that constrains clients to expect no more than the resources provided in a budget can deliver.
- 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 an IT product or service.
- Rates provide the best basis for competitive benchmarking (outsourcing comparisons).

Rates include direct costs; that's the easy part. But rates also include a fair share of all indirect costs. A "cost model" apportioned indirect costs into just the right rates. This is the heart of service costing.

Now consider an investment-based (or service-based) budget. IT costs must be apportioned onto the rows (deliverables in the demand forecast). This too requires a cost model.

In practice, both the rates and the budget should be based on the same cost model. There are many reasons for this, including:

- It would waste effort to develop two separate cost models.

- The cost models must be consistent; that is, the rate you charge throughout the year should add up to the costs forecasted in the budget. If there are inconsistencies, clients may get budget approved to spend on IT, and later find that their budget won't buy what they thought it would.
- Rates should be held stable throughout the year. Thus, rate-setting requires knowledge of the range of demand levels, from pessimistic to optimistic, to appropriately apportion indirect costs and plan for the right level of staff-augmentation contractors.
- Costs that go into a rate must include planned services that are internal to IT (and not delivered directly to clients). For example, the rate for infrastructure services must include planned infrastructure engineering projects (be it the cost of small repairs, enhancements, and configuration tuning, or the depreciation on major projects). In other words, internal demand is essential to knowing the full cost of external services.

If these processes are integrated, an investment-based budget and rates are just two views of the same cost model. The math is simple:

$$\text{Budget (total cost of a product/service)} = \text{Rate} * \text{Volume} + \text{Reimbursables (pass-throughs)}$$

The Importance of an Accurate Cost Model

Rates and budget deliverables both must represent the *full cost* to the enterprise, including their appropriate share of indirect costs. If they do not, problems such as the following occur:

- If the budget includes line-items for indirect costs (such as change management, professional development, or the Project Management Office) which weren't apportioned into rates, they may *not* be funded, crippling IT's ability to deliver the projects and services which *are* funded.
- If costs exclude some indirect costs – i.e., some products and services are underpriced – then customers tend to buy more than is economically wise, and waste money on poor investments. As IT sells more of these bargain services, funding for included costs increases. But any indirect costs that were not included in those rates (but instead were separate budget line-items) are not scaled up proportionally. Ultimately, essential support systems become strained and delivery suffers.

Furthermore, indirect costs must be assigned to *just the right* products and services. If the cost model isn't accurate, other problems arise:

- Some rates will be too high and others too low. Where rates are too high, some products will appear uncompetitive. Clients will ultimately find another way to get the work done (inappropriate decentralization or outsourcing – i.e., loss of internal IT market share – leaving IT with only lines of business that are losing money.
- As demand shifts among overpriced and underpriced services, IT may collect insufficient revenues to pay its costs (running at a loss), or make a profit and expose itself to criticism for overcharging customers.
- Some clients will be overcharged, while other clients will be undercharged; and clients will accuse IT of being unfair.

Thus, a robust cost model must calculate the true, full cost of all IT's products and services. [1]

Overview of the Steps in the Process

Putting all these pieces together, an integrated annual IT business-planning process accomplishes the following:

- It defines or refines the service portfolio and the published offerings in the service catalog, and assigns rates to each item in the catalog.
- It develops a demand forecast, and produces an investment-based budget.
- At the foundation of both, it builds (or refines) the service cost model.

The business-within-a-business paradigm means a lot more than running IT as a whole in a businesslike manner. Every leader, at every level (i.e., "Service Owner") is an entrepreneur with a line of service, accountable for one or more service offerings.

The annual IT business-planning process should engage every leader in planning his or her own business within a business, building individual accountability for every business, technical, and professional service. Ideally, all the steps in the process are done by each leader for his or her domain, and then the pieces are assembled into an IT plan.

The integrated process is comprised of the following sequence of management planning tasks: [2]

1. Project planning; engage leadership team; identify the businesses-within-a-business ("lines of Service") under each leader. [3]
2. For each business within a business under each leader, define/refine the service portfolio and the product/service catalog (business, technical, and professional; internal and external); choose a unit-of-charge for each catalog item ("service offering"). [4]
3. Establish a forecast of demand within each line of service (specific projects and services, both assured and speculative) by planning which catalog items will be provided to which customers (internal to IT and business customers); document the dependencies between deliverables for all members of project and service-delivery teams ("primes" and supporting "subs"); forecast volumes.
4. Develop a fulfillment plan within each line of service, including staff costs (employees and staff-augmentation contractors, with appropriate billable-time ratios), direct costs, and vendor indirect costs; assign indirect costs to the right catalog items.
5. Negotiate internal deliverables (group-to-group sales, and overhead to all lines of business); within each line of service, assign internal-indirect costs to the right catalog items.
6. Identify sources of revenues (direct budget, allocations, fee-for-service, grants, etc.); note fixed prices (as on preexisting contracts with external parties); tune the model; conduct executive scrutiny to ensure frugality.

7. Present the budget to client business units, adjusting deliverables based on their inputs; then submit it to the enterprise budget process and negotiate the final budget.
8. Re-run the cost model once the budget is finalized to recalculate and publish rates; upload tracking data and metrics.

End of the Rainbow

The benefits of this integrated process are many. To name a few:

- Clients defend the IT budget because they understand that it is based on their needs.
- Clients gain a sense of control over their IT spending.
- IT is able to discuss with IT clients their forecasted consumption of IT Services.
- The dialog with the business shifts from defending costs to analyzing the value of investments in IT.
- Budget decisions are fact-based and driven by business needs and investment opportunities.
- Executives can shift the investment portfolio from "keep the lights on" to more strategic investments.
- While IT is expected to improve its value proposition continually over time, there's no expectation that it can magically "do more with less."
- IT staff feel safe proposing new, innovative products and services, since they know that increased demand will come with increased funding.
- Expectations are managed, since everybody understands exactly what the budget does and does not pay for.
- Rates are accurate, fair, and consistent with the budget.
- IT can defend itself against accusations that it costs too much with like-for-like comparisons with outsourcing (e.g., cloud) and industry benchmarks.
- Controversies over allocations (taxation without representation) fade when they're based on projected consumption of IT products and services.
- IT can build into its rates essential sustenance activities such as process improvements, professional development, and innovation.
- IT has an explicit channel of funding for major investments in infrastructure and innovation.
- The planning process provides the data needed for an effective, business-driven demand-management (work intake/prioritization) process.

The principles outlined in this paper are no different than the basic economic practices that any business must master to stay in tune with its market and deliver the products and services its clients need, and, of course, to ensure that they don't go out of business while being busy.

They also ensure that an internal IT function can keep up with growing pressures for financial transparency, and give business clients meaningful control of their IT costs. This may very well be a matter of survival. The adoption of these integrated processes reverses the deadly loss of trust, loss of market share, and loss of funding caused by traditional financial practices.

Whether the you look at this from the perspective of strategic value or pure survival, Demand Forecasting and IT Budgeting are imperative. Demand forecasting, service costing, and investment-based budgeting processes, when well designed and properly integrated, are a very strategic, high-payoff investment in the IT organization.

References

- [1. Meyer, N. Dean. *Internal Market Economics*. Appendix 4. Ridgefield, Connecticut: NDMA Publishing. 2013.](#)
- [2. Ibid. Appendix 7.](#)
- [3. Meyer, N. Dean. *The Building Blocks Approach to Organization Charts*. Ridgefield, Connecticut: NDMA Publishing. 2002.](#)
- [4. DuMoulin, Troy, Rodrigo Flores, Bill Fine. *Defining IT Success Through The Service Catalog: A Practical Guide*. Toronto, Ontario: Pink Elephant. 2008.](#)