

# Budgeting

By: Bob Denis, Maureen Vavra, and John Dick  
In conjunction with Harris Kern's Enterprise Computing Institute

Bob Denis, Maureen Vavra, and John Dick bring more than 50 years of collective experience to this article on budgeting—one of the most important aspects of any CIO's career. They discuss:

- How to approach budgeting for success.
- How to simply break down the elements of a solid budget.
- The role of relationships in budgeting.
- Useful budgeting metrics.
- The budget toolbox.
- A simple budget process flow.
- Budget philosophy.

It is important for a CIO to have a philosophy around budgeting. More important is that the philosophy be aligned with other members of the senior management team. Some philosophies that you may see include

- **Budgeting is a necessary evil.** This philosophy reduces the overall impact IT can have on improving the health of a company. This approach can lead to companies that feel IT is not a major component of their competitive front, a conservative approach that might result in very tight spending, few to no projects, and a largely a sustaining-only environment. If this philosophy inhabits the entire enterprise, the CIO may need to boldly but carefully evangelize the value of change, persuading the executive team of the value of IT as a competitive weapon and a change stimulus. This can be a difficult situation, but very rewarding if a turnaround is achieved.
- **The budget is the bible.** This means very tight monitoring of all major spending categories and little to no flexibility in adjusting for changes in major influencing factors. Although the budget components might be very well planned, forcing a budget to survive for a full period of 12 months with little flexibility can lead to mediocre results in energizing the enterprise. If this is the way of the enterprise, you must work on relaxing this boundary so you gain the flexibility you need to react appropriately. Keeping executives abreast of trends in external influencing factors is one way to address this; another is to take advantage of opportunities created by significant changes in the enterprise (acquisition, divesting, reorganization, a new product line launch, a new line of business) to revisit your budget and propose necessary adjustments to make the change a success.
- **The budget is a guide.** This looser definition implies flexibility, but too much of it over the course of 12 months can lead to overreacting to changes that do not necessarily critically impact the success of your enterprise. This philosophy can result in major overspending in one or several areas of IT. If managed well, this approach is a good one; allow corrections based only on major changes in influencing factors.

- **The budget is an opportunity to influence change and support overall corporate direction.** This means the IT budget is considered an investment, not a cost. A budget stemming from this philosophy is usually balanced and filled with corporate and line of business (LOB) strengthening projects, a very healthy approach. Adjustments are made for significant changes in influencing factors and in harmony with the rest of the senior management team. This is the most effective in our opinion.

Overall, the budget is a significant aspect of managing for success, but it is only one of many. Be serious in defining and using it in balance with the other aspects of successful IT management such as people, internal and external relationships, organization, and technology.

### **BUILDING BLOCKS FOR A STRONG BUDGET**

The following are some important elements in building an effective budget process.

- **Having a budgeting philosophy:** It is important to know the rationale behind the budget: Control? Change? Conservation?
- **Investment justification (the ROI thing) and planning:** A solid planning phase with clear budget impact statements, using a solid justification for the investments and attracted yearly expenses, is a necessity.
- **Building support for investments:** The CIO can recommend investments within the IT “plumbing” domain. For all other investments, build the necessary support between the LOB and corporate function primaries.
- **An enterprisewide architecture:** It is difficult to build a structure without a blueprint. This is your reference point for all adds and changes in the infrastructure, and it is simply a must.
- **Simplified view of the budget:** Typically, people need to know about large expenses and major changes year over year. They also need to know the rationale behind the investments and their impact on the budget. Avoid getting lost elsewhere. Avoid getting too deep in details.
- **Review, acceptance, and signoff of initial budget and of all significant interim course corrections:** Any major change impacting budgets (plus or minus) should be reviewed and ratified by the executive team at least.
- **Review of previous years’ actual spending (two years worth is enough):** History has good value for adjusting ongoing expenses and for normalizing ratios. Make good use of it.

### **RELATIONSHIPS AND BUDGETS**

The long and short of it is that a strong relationship with the executive team and the rest of the executive management members is critical to successful IT management, budgeting

being just one aspect of that success. Solid budgeting relies on enlisting the team to support critical investments (strategic or sustaining) and getting their endorsement when significant budget adjustments (up or down) are required.

One way of accomplishing this is to link projects that represent major budget initiatives to specific enterprise or LOB goals and objectives, and then demonstrate how those links benefit and can be tracked back to the business goals.

The strength of the relationship is usually based on the CIO's credibility in managing budgets and projects during his or her tenure as an executive. Managing bad news is critical to credibility; waiting until the last minute to inform the executive team of cost overruns and/or major deliverable delays can be career-limiting and certainly tarnishes your credibility. This is all just common sense. The best advice we have is to leave your ego outside the office when it comes to managing IT investments and expenses; it is a humbling yet very rewarding experience to perform well in this area.

In some companies, there exists an IT leadership group, usually composed of representatives from the LOB and the corporate function groups. This group is tasked with issuing IT investment recommendations to the executive team, who are more than likely to endorse them. IT often co-chairs these groups, but *the leverage comes from getting consensus among the group on investment priorities*. This approach is often slower to produce decisions but does help in gaining acceptance, thus easing implementations. Although this can be a test of patience for CIOs, maintaining composure and good relationships with all members of such a team is highly advised.

The process of determining buy-in on a budget requires support from senior staff and your IT users. You can accomplish this through the empowerment of users via an operational planning layer that includes them in the prioritization process and the strategic participation of the senior staff, which reinforces LOB participation and gives them “ownership” of the results.

## **BUDGET FEEDS: SIGNIFICANT INFLUENCING FACTORS TO CONSIDER**

Significant influencing factors are clustered in two major categories: corporate factors and IT environment factors.

### **Corporate Factors**

**Geographical coverage (local, domestic, international on some or all continents):** Infrastructure complexity and costs go up substantially in a multilocation setup, even more so if multicontinental, especially in locations in which infrastructure and support services are much less developed.

**Size (small, medium, large, mammoth):** The more users, the more complexity and costs. The logical breaks differ between companies, but you can always tell when a barrier has been broken. Anticipating the growth steps just before they happen is an art to develop.

Trajectory (growth, as in investing or mergers and acquisitions, versus decline, as in cost reduction or divestment, versus holding, as in cost containment, flat revenues, or majority market share): The budget philosophy adopted is almost directly related to this factor. Be wary of overbuilding your infrastructure when targeting meteoric growth; it is easier to adjust IT expenses up as revenues are coming in than it is to reduce IT expenses if revenues fail to match expectations.

**Business type (tangibles, services, e-commerce, traditional):** Most companies within a particular industry group have very similar cost structures. The smart CIO keeps abreast of the trends and the major shifts affecting his or her business sector.

**Enterprise business organization architecture:** The organization of the enterprise can have a significant impact on the budget and on project investments: single versus multiple lines of business, centralized versus decentralized corporate services (such as finance, manufacturing, planning, information services, human resources, research and development). Each permutation comes with its pros and cons from IT management and budget impact perspectives.

### **IT Environment Factors**

**Systems availability expectations:** Must be 24/7—but there are shades of 24/7. The closer to full 24/7, the more expensive, with the last four hours of the 24 logarithmically more expensive.

**User support expectations:** On line 24/7; what are the repair time expectations? Again, shades of 24/7 with increased expense in the last four hours.

**Systems response time expectations:** Subsecond response on transaction and R&D systems? Any subsecond expectation costs dearly—weigh the value before jumping to such tight expectations.

**Security:** Spam, virus, intrusion detection systems, encryption—at what levels? Overinvesting in this area can be very expensive and complex to manage. Consider a balance of investments in protection and service restoration.

**Access:** From anywhere in the world at all times? Connectivity and access redundancy to ensure no single points of failure and access at all times is expensive. High-availability technologies (such as ATM and Frame) are also expensive. Research the amount of time you can afford to be out of access before it negatively impacts the business.

**Makeup:** Is your IT shop “buy” or “make”? Do you need more developers or more business analysts? Consider the need to fund and maintain development environments and whether to increase engineering change controls, rollouts, and documentation.

Are your application users advanced or traditional? An engineering environment requires more skilled IT personnel.

Are your IT organization and budget management centralized or decentralized? Since some cost is typically incurred in a decentralized model, ensure that the IT organization is *in synch*

*with the enterprise business organization architecture.* If the enterprise is decentralized (including major decision making), centralizing IT is probably going against the fabric of the company.

How are data and voice responsibility allocated (or not)?

Significant outsourcing versus insourcing? Outsourcing entails management overhead and may be more expensive, but the pros (such as a more flexible staffing model or specialized skills) may be worth it.

Do you have an enterprisewide technical architecture? You are flying blind without it. You need a reference blueprint to build something solid.

What kind of network architecture are you using? More advanced technologies (VPN, VoIP, and so on) are expense savers overall but require technical skills to configure and maintain the environment.

**Legacies from prior commitments and budgets:** Are multiyear projects in progress? Are multiyear equipment and services leases in force? Are outsourcing contracts active?

These lists of influencing factors are partial, and you should amend any factor deemed a major influence in your business context. Writing down your list of influencing factors is what is important. You may consider weighting these factors for complexity of the environment involved; this can be useful during the justification portion of the budget process.

## **PARTITIONING YOUR BUDGET**

IT budgets are stated in two types of dollars: capital expenditures and expenses. Capital expenditure is cash that is treated differently, in financial terms, from operating expenses. Simply put, capital expenditures create assets that are consumed over periods of time. Examples include implementing a new ERP system or expanding the capacity of a storage area network. From a financial reporting standpoint, cash is reduced during the build/acquire phase, with a resulting commensurate increase in the capital asset; for example, pay \$1,000 for a component, and the value of your assets goes up by \$1,000. When the asset is put into production, a “useful life” and “residual value” are estimated based on financial reporting rules. The difference between the cost of the asset and the residual value is divided by the useful life in months, and that amount, called depreciation, is charged to expenses every month that the asset is in service. The theory is to align the expense of the asset with its useful life.

Expenses represent cash outlays for goods and services that are consumed in the period in which they are acquired. Examples include employee salaries, electricity, and copier paper. Consult with your CFO for a deeper understanding of the differences in financial reporting treatment in your organization.

### **Capital Expenditures**

The capital expenditure budget is probably your most important tool in enabling change. CIOs are evaluated on their accuracy in estimating capital expenditure dollars in projects; a

deviation of plus or minus 10 percent is usually an acceptable performance, with 5 percent approaching heroism. Capital expenditures usually include purchases of the hardware and software (including licenses) required for implementation projects and the related professional services implementation fees (for consultants, offshore development, and so on).

Capital expenditure dollars are allocated to a depreciation schedule (between three and seven years, with the bulk in the three-to-five year range), and a depreciation line is entered on your expense budget as soon as a portion or the entirety of the new capital project is officially in service. The impact on the expense budget is important to recognize, as it can be significant. Capital expenditure typically does not include “maintenance and updates” annual fees, nor does it cover end-user training fees; it does, however, cover training for the implementation team.

A final note on capital expenditure money: Some or all of it may be eligible for R&D tax credits depending on the custom nature of the project. Review with your tax primary to ensure you take advantage of this corporate tax feature.

It is very important to track capital spending (quarterly at a minimum) if only as a good project management practice, but also for sound business reasons. Remember that capital expenditure is “cash,” and the company may have bank covenants limiting its cash outlays quarter-over-quarter until its cash position improves. Work closely with the CFO to understand this impact and adjust project spending accordingly. One way to help bring relief to a cash crunch from an IT perspective is to consider leasing as much as makes sense of a new project’s equipment, perhaps even selling existing in-service equipment to financial companies willing to lease it back to you over a decent period for a favorable rate. Application packages are also included in assets that should be considered for leasing.

### **Capital Expenditures for Large Projects**

Dealing with mega projects spanning multiple budget years can be a challenge but one that really boils down to good project management, specifically tying deliverables to capital expenditures in each budget period. Realizing that some deliverables can run over into the next budget year, you need to make the necessary adjustments to compensate in the new budget year.

Here’s a tip: The smaller your time intervals for meaningful deliverables, the easier the challenge of managing multiyear projects. We recommend logically slicing deliverables to no more than three months elapsed time, ideally a single month. Deliverables of less than one month for mega projects can, however, become a management burden. Be careful about getting too granular; thrashing details that bring little value to the project or enterprise can give you a false sense of control.

### **Strategic Versus Sustaining Capital Expenditures**

The difference between strategic and sustaining capital expenditures can be simply explained as follows: *Sustaining investments* are those that keep the infrastructure operating at your advertised availability and performance targets. We are talking about the “two 9” to “six 9”

targets and the 5/8 to 7/24 coverage periods. The closer to 24/7 at 99.9999 you want to be, the higher your yearly investments in this area. Potential investments include:

- Redundancy galore
- End-of-life replacement
- Expansive disaster recovery and business continuity plans
- Complex network analysis and security tools
- Sophisticated backup equipment
- Technology conversion projects
- Asset management

You may find it useful to further divide sustaining expenditures into “survival” and “maintenance” for normal operations. This will ensure at least the network security and connectivity investments typically found in the survival category are retained.

*LOB, corporate functions, or both can initiate strategic investments.* They are usually based on increased revenues, increased efficiency and productivity, business process reengineering initiatives, increased customer loyalty, and integration of mergers and acquisitions. From a pure IT perspective, this area also includes research into technologies and applications for potential future sponsoring by the LOB and corporate functions, as they would best determine the value. Items in the strategic list include

- Typical core systems implementations: ERP, CRM, PDM, APM, OSS, billing, and so on.
- E-business: B2B, B2C, partner sites, and so on.
- Online employee self-services: expenses, timesheets, stationary orders, and so on.
- Data: knowledge, intelligence, and intuition projects.
- Network: voice over IP, wireless, and productivity user devices such as PDAs and handhelds.

There might be value in further splitting strategic investments into “growth” and “breakout.” This helps in securing breakout investments, since they are usually mega projects that typically require investments across multiple years.

### **Prioritizing Capital Expenditures**

Another approach to deciding on capital expenditure investments is to assign a *priority* to each investment proposed. The priority is a combined representation of the ROI and the risk of not doing (which is sometimes difficult to assess in ROI terms). We tend to limit the priority scale to values, as follows

1. **Absolute Must.** Includes security, legal, regulatory, end-of-life equipment; typically externally mandated, that is, you really have little or no choice. Simply stated, if you are under very tight capital expenditure and/or expense budget constraints, the cutoff is drawn here.
2. **Highly Desired/Business-Critical.** Includes short-term “break even” (less than six months), significant short-term “return to top or bottom line” (less than months), and mega projects already in progress. Most priority-2 items are

approved for budget year funding under normal revenue growth projection conditions. Typically, the cutoff for funded projects gets drawn here.

3. **Wanted.** Valuable, with a longer return term (more than 12 months). Typically, these projects get funded only if there is capital money remaining, if resources are available, and if revenue projections are fairly secured. They may find their way to priority 2 or even priority 1 in subsequent budget years.
4. **Nice to Have** Given available bandwidth in people and money, there is a good return on these projects, but typically the ROI has more intangibles. Unlikely to be funded in this budget year; might go up the priority list in subsequent budget years. It is important to have some projects in this priority, as it helps to better calibrate the higher priorities.

Another possibility in prioritization is to continue on the theme discussed above and track the projects back to the business goals and associated resources. Another, more tactical approach that can be effective, particularly in small to mid-sized organizations using a budgeting philosophy that is conservative in its focus on business benefit, justification, and ROI.

## Expenses

The following items constitute what is most typically referred to as “the budget.” The major categories of budget expenses are

### Personnel

- Salaries and benefits (including hiring fees and bonuses)
- Training and education
- Travel
- Morale
- Staff-related depreciation
- Temporary help/consultants
- Miscellaneous (space, telecom, and so on)

### Hardware

- Depreciation
- Maintenance
- Repairs
- Leases

### Software

- Depreciation
- Maintenance
- Customer support



- Updates
- Repairs
- Leases

## Services

- Leased lines
- Outsourced network services
- Security services
- Applications service providers (ASPs)
- Miscellaneous (transport, courier, periodicals, and so on)

The following sections provide rationales for each of the items in this list.

### Personnel

**Salaries and benefits** are obvious. You know where to get the actual salaries for regular full-time employees, and the controller can help you determine what ratio to use to capture the benefits (usually 30 percent of the base salary). For new hires, any public domain salary report contains the high-low for a given job description, and you can simply add the benefits; added expenses are usually a one-time fee for the hiring agency (up to 30 percent of the hiring salary) and a hiring bonus payable to the new employee at specific anniversary date(s).

**Training and education** is probably the most important people investment. We use the rule of \$500/day including expenses and plan for a minimum of five days of development per year per person. Think of it as five out of 220 days, or a 2 percent time investment in keeping skills current. This number needs adjustment if the IT infrastructure is using more new technologies. It is good practice to track training, seminar, and conference days for each of your employees as well as any personal education time spent on business -relevant subjects. We do this, review the information monthly, take action where appropriate, and report on it at the end of the year.

**Travel** should be considered separately. Since many companies are geographically distributed, IT staff are often asked to travel for new installations or repairs. This can amount to a significant expense and may justify a local permanent hire at a break-even point, which makes the expense more visible. This category could be roped into the miscellaneous line if direct visibility is of no value.

**Morale** is a contentious item used to single out in some companies. However, we believe it essential to the proper functioning of the IT group. It certainly should be placed into the miscellaneous line. The important message is to plan a certain amount of group-bonding (team-building) activities to keep the energy level and overall participation at their highest. For budget planning purposes, we suggest an average of some \$500 per head for the year. In more progressive companies, the activities tend to be more elaborate; try to keep a per-head view of this investment in your people.

***IT Staff related depreciation*** includes furniture, personal computers, workstations, desk servers, test equipment, and so on. Again, we recommended that you develop and apply a ratio based on the typical cubicle configuration for your IT folks.

***Temporary help and consultants***, as a talent alternative, charge between two and four times what you pay a permanent employee. However, there are clear instances in which this approach makes for a wise investment:

- For large implementations (such as ERP, CRM, and so on) involving a “bubble” of work.
- For highly technical initial implementations such as security packages, new network technologies, and the like.
- For reengineering initiatives in which the internal bias is removed and best practice is preached by specialists.
- For assessments of the technical or operational health of the infrastructure, the organization, or the environment in general.
- For feasibility studies for which subject-matter experts’ knowledge is required.

Although the instant value is high, without a transfer of knowledge into the IT organization, much or most is lost in sustaining the change or implementation past the initial effort. Make sure that the IT organization can support the results of these efforts. Some organizations, with an avid thirst for change and leading-edge technology, may want to consider an ongoing entry in the operations budget for some percentage of their workforce count to come from outsiders (hopefully under 15 percent unless outsourced managed services are used).

Another increasingly popular form of external resources is offshore development. If you are a “make” shop, this can be a very attractive approach to many somewhat generic projects, by which we mean integration and reports type of work and operations automation as opposed to product related work. For the latter, you need control and assurance of confidentiality with regard to the goods produced (code). Again, there is overhead in managing these arrangements, but the value to the IT shop and the enterprise makes it worthwhile.

***Miscellaneous*** expenses should be managed by establishing a ratio over your headcount base and applying it across the budget period covered. Guard against putting too much in here; a fat miscellaneous line will negatively affect your credibility as a business manager.

### **Hardware**

These categories are fairly standard.

***Maintenance*** in hardware runs typically 15 to 20 percent.

***Depreciation*** occurs over two to seven years, depending on the item. Use a budget tool that allows the insertion of new hardware in a specific month and calculates the monthly depreciation based on the entered depreciation period.

**Repairs** should include relatively little if you cover all your hardware with original vendor maintenance. (This practice is highly recommended, at least for the critical servers and all network elements.) Establishing a solid third-party service contract covering repairs and upgrades is a viable alternative but can lead to trouble if vendor personnel are not certified for all the equipment providers you use.

**Warning:** Saving a few dollars on maintenance is a dangerous game to play unless the company is willing to live with the possible consequences of business downtime due to system unavailability.

Tip: For critical equipment (such as network switches and routers and servers used for business transactions or customer interactions), it is generally more advantageous to replace the equipment at the end of its depreciation period than to keep on paying maintenance on it and “stretching” its useful life.

For critical equipment, you might want to invest in “hot” redundancy. If under budgetary constraints, standardize on a family of servers and maintain “cold” standbys that you can quickly insert in the event of a crash or can pick for parts on a needs basis.

**Leases** of hardware are a very attractive alternative that you should carefully consider. Pros include

- Preserves cash for more business growth-oriented investments.
- Predictable monthly expense hit on the budget.
- Forces the discipline of turning over end-of-life equipment.
- Usually includes full maintenance and support built into the deal.

Cons include

- A bit more expensive over the life of the lease than the original purchase price; nowadays, the leasing premium is around 10 to 12 percent, with good deals still existing in single-digit percentages for some equipment.
- Requires action at the end of the lease (extend lease; new lease/new equipment; buy for \$1, at fair market value, or at predetermined value).
- Can get complicated in the case of vendor or leaser bankruptcies; cover yourself in the Terms and Conditions (T&Cs) of the leasing contract.

Negotiating a lease can be complicated. Using reputable IT infrastructure equipment vendors who offer leasing options is generally safer and easier to deal with.

Tip: Perform a detailed review of the terms and conditions, particularly the fine print. Work closely with the corporate counselor for best coverage. In the absence of a corporate counselor, we recommend the use of an attorney specializing in contract ratification or an experienced broker.

## **Software**

Budgeting for software can be very complex, since it is highly dependent on the contract terms negotiated and the nature of some of the projects on which the software will be used.

**Depreciation** is simple enough in that you determine the useful life of the software purchased (three to seven years, usually four years for enterprise software, three years for others). If the software is part of an overall implementation project for which consultants are engaged, their fees are normally included in the depreciation over the same period as the software. All other project related nontangible expenses (training, travel, and so on) are entered directly in the budget for the year incurred.

**Maintenance** is at the heart of the software budgeting complexity. Vendors vary on how they approach this, and at the moment there are no set definitions of types of licenses, which largely drive maintenance. The bottom line is that this is all negotiable at the time of contract, which can have a major impact on the budget if rushed or overlooked.

Aspects to consider in negotiating software maintenance include the following:

- In many cases the maintenance percentage goes into the customer service bucket, so the P&L is under a different managing executive; the sales representative has little or no power over this part. You may need to deal directly with the service organization to receive more favorable terms.
- Maintenance is often broken into two types: software upgrades and technical support; each type has its own percentage setting. We recommend software upgrades as a must. Technical support can be avoided if you have enough experience and expertise on staff and the vendor offers a fee-per-support call service feature. You are exposed, but the savings may justify it depending on your comfort with the inside knowledge or if the software is not on the list of critical applications.
- If using the fee-per-support call option, attempt to include a clause in the contract providing a credit back for expenses incurred by calls resulting from bugs in the vendor software. It might also be worth negotiating a partial inclusion, like coverage for a preset amount for a predetermined period, usually equal to the implementation plus three months live.
- Some vendors are covering their increased costs in customer service by building in an annual increase, typically in percentages, and applying a cap over a predetermined period. Ensure clear understanding of these terms, or negotiate this out altogether, as it can have a significant incremental impact on your budget for years to come; maintenance fees can run over 30 percent over time if this is overlooked.
- Some vendors' maintenance fees are based on the number of users; typically, they use a sliding scale approach under which the fee per users diminishes with the number of licenses in use. This scheme makes for a lot of ambiguity and unpredictability in your budget. We recommend negotiating this out in favor of a flat rate-based approach.

**Repairs**, as an expense category, is used mainly in cases in which IT has opted away from technical support maintenance and is using the fee-per-support call option, usually set at a predetermined rate per hour with a minimum number of hours charged per call. Also consider using this category for consulting fees for the purpose of repairing software that is not on maintenance. It is prudent to count on two four-hour calls a year for assistance where the applications are stable and under predictable usage.

**Leases** of software are becoming more popular for the same reasons provided for the hardware paragraph. Monthly distribution for leases should be managed separately in this category.

### **Services**

**Leased lines** are the Telco and Internet service provider (ISP) connectivity lines to the Internet or private networks. Although this is a single account in the budget, we strongly recommended that you keep a detailed accounting of the monthly charges by facility, by circuit, and by provider, as this can get complex over a large number of locations and more so if international circuits are involved. One alternative is to turn this management task over to a brokerage firm responsible for provisioning and providing you with unified, detailed billing; they are often very much worth their management fee.

**Outsourced network services** include network management fees (onshore or offshore) that typically represent a flat rate for an entire network or a monthly rate per network node under monitor contract. The flat rate is simplest; divide your contract by 12 to give you the expense line result. This type of contract has thresholds for the number of nodes changed over a defined period, with consequent rate adjustment. The per-node monthly charge method is a bit more complex to keep track of but ultimately gives you more granular control over the costs. In either case, aim to get a detailed monthly bill for all charges from your provider(s).

Also use this budget bucket to collect your equipment collocation fees (such as for Web servers), fees for value-added networks (VANs) such as Electronic Data Interfacing (EDI) transparency nets, and any other network-type services subscriptions.

**Security services** are a collection area for virus protection and spam filter subscriptions, private key infrastructure (PKI) key management services, network security audits, network intrusion audits, security equipment servicing (card readers, fingerprint readers, retina scanners, and so on), and other related expenses. We prefer to differentiate these from standard network services for better visibility of security costs; arguably this category could be rolled into outsourced network services.

**Applications service providers** covers the monthly fees for total ASP services (ERP, CRM, and so on), Web (e-commerce) storefront services, mail and collaborative, and other metered or flat-rate user applications services provided by entities outside the corporation. Again, the contract is of crucial importance, as it sets the distributed monthly fees for a determined period of time.

**Miscellaneous** is a collection bucket for the rest of your expenses. This should be less than 1 percent of a well-constructed budget.

## Headcount Budget

Much has been written on proper project planning. There also exists plenty of literature on establishing functional staffing based on ratios. This section focuses on the operating and functional staffing aspect rather than on project staffing.

The best approach we have found is to use ratios for most functions and plot your target staffing based on an aggressiveness scale. For example, the normal helpdesk technician to user count could be 1:100, whereas a very aggressive ratio to squeeze expenses would be 1:200, which you could choose to manage at 1:150 to remain at an aggressive ratio. The potential consequences of this decision should be captured and presented to the executive team for endorsement.

For business analysts, you may elect to have solid coverage on critical applications and minimal coverage on noncritical applications, compensating as needed by making more effective use of vendor support. In any case, document the rationale in the executive team presentation. The same goes for your DBAs, network people, server team, voice team, and so on. The key is to establish ratios and explain the coverage and exposures.

## Useful Ratios and Metrics to Consider

This section covers some measurements you can use to make sure your budget is well constructed and aligned with your business.

The following items are aimed at getting a handle on IT personnel expense drivers to help normalize the operations budget or detect early signs of a major shift in influencing factors.

**Dollars per megabyte of equivalent bandwidth.** Consider overall, by region, by service provider.

**Dollars spent per long distance call.** It might be worth regionalizing, at least per continent. Compare with other companies with similar demographics.

**Dollars spent per cell phone.** Going to flat rate with maximum minutes free simplifies this.

**Number of helpdesk user requests per week/per month.** Annotate this chart with significant changes in user population served.

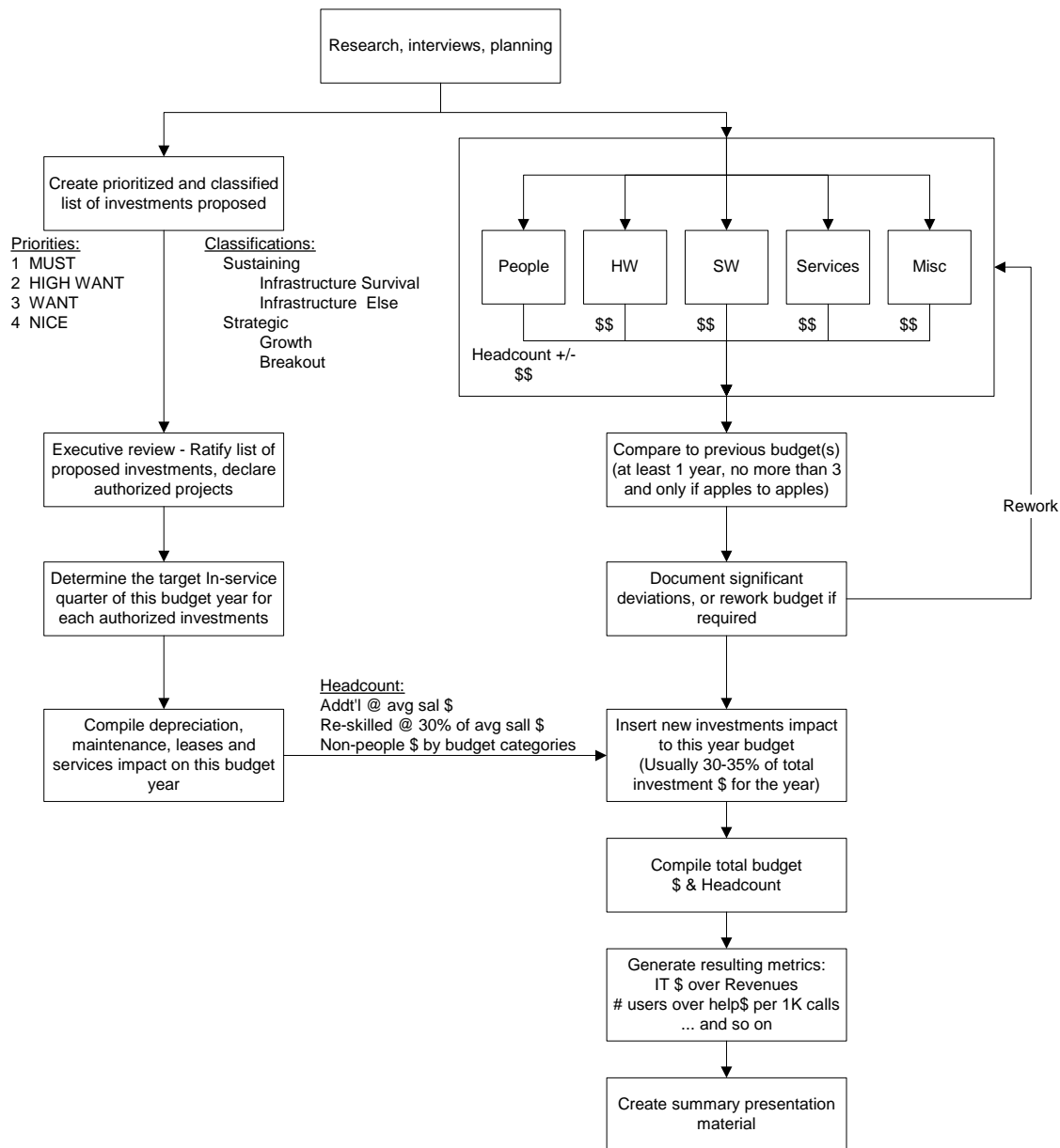
**Number of desktops/laptops, per population group or overall.** There will be different ratios for engineering (2.3), manufacturing (.75), corporate office (1), and sales (1.25). Important in predicting workload and technology turnover investments.

**Cost-based metrics.** TCO per user on desktops and laptops (consider depreciation, maintenance, helpdesk, and so on); TCO per ERP transaction user (consider maintenance, DBA, business analysts, helpdesk portion, and so on).

**Benefit-based metrics.** These are ROI metrics, typically stemming from projects, but how often do we go back to the original justification to assure ourselves of the return? Many payload or cost metrics have a companion benefits metric. For example, increased bandwidth at the same or lower expense can be translated into engineering time returned to the enterprise, while increased server performance throughput can translate into increased revenues if it is used in the partner or customer service realm. Creating benefits-based metrics is well worth your time—just another avenue for better communication with the rest of the executive team.

### **A SIMPLIFIED BUDGET GENERATION PROCESS**

Now that we have defined a working philosophy for the budget, explained capital expenditure and expense budgeting, and reviewed the various budget buckets, let's put this together in Figure 1 below.



**Figure 1 Simplified process flow diagram.**

The timing of the budget process is of some importance. For the capital expenditure portion, if the company has an annual strategic meeting involving LOB and corporate function primaries, the IT investment plan and profile should fall out of that session within, say, two to four weeks. If not, we recommend creating an IT investment review in which the CIO proposes investments based on their business sense for the audience (executive team minus the CEO) to debate and eventually ratify. Based on a January to December budget timeline, this should take place in an August to September timeframe.

The normal operating budget process can operate independently of, but in parallel with, the capital expenditure process during the same August to September period. During October



and November, merge the expenses impact of the new investment profile, targeting the final release of the IT budget for no later than the end of November.

## MANAGING THE BUDGET

Managing your budget typically means tracking spending, comparing it to monthly, quarterly, and yearly targets, reporting on significant deviations, and issuing corrections when a significant change is encountered. Simple enough, and a major component of the CIO's credibility. Here are some guidelines to help you avoid becoming a CIO casualty:

- If managing within 5 percent of budget targets either way, simply and quietly go on about your business.
- If managing under budget by more than 5 percent but within 10 percent, work with the LOB and corporate function primaries to find areas in which this budget excess can potentially help them.
- If managing at 20 percent or better under budget by midyear, you will be called a "sandbagger" (or worse) unless you explain thoroughly and return the excess over 10 percent to the IT controller or CFO. Headcount fluctuations or late project implementations are the usual causes of such significant deviations. Beware: You will most probably be under scrutiny when creating the next year's budget.
- If overspending by more than 5 percent but under 15 percent, be well prepared to explain the causes and generate remedial action immediately.
- If spending more than 15 percent over budget, you are exposed to the CIO terminal virus. Serious attention is required; this can be a critical test of the strength of your relationships with the rest of the executive team *unless* they were preconditioned for this possibility.

These guidelines apply to project spending as well as to the operations budget, but scrutiny of the latter is usually much closer.

Managing project budgets involves different complications. Conditions affecting company revenues and earnings can drive the executive team to revisit the project list and make cut decisions—the "you've got to know when to hold, know when to fold" axiom.

Postponing or eliminating projects yet to begin is relatively straightforward. Before interrupting or stopping projects in full flight, consider the cost of shutting down a project as well as the cost of reactivating it if there is expressed intention to complete it at some point in time; these costs typically amount to 10 to 30 percent of the original estimate. Consider a project as a jet engine: When you turn the engine off, it needs to wind down over a period of time to get to a complete stop, and when you turn it on again, it winds up to full power over a period of time.

If a project has passed two-thirds of spending or deliverables, stop or cancel it only under severe financial downturn conditions; the chances of ever completing that project are slim, as the people involved may not be around anymore or may have been reassigned to other full-time jobs. If forced to interrupt a project with intentions to restart later, make sure enough time and effort is spent in securing the environment (specs, software, hardware

configurations, status of deliverables and financials, and so on) in a “vault” before reassigning the resources.

## **THE BUDGETING TOOLKIT**

Anybody involved in budgeting must be literate in spreadsheet, presentation, and word-processing technologies—in that order. No rocket science here. Intermediate to advanced spreadsheet knowledge is particularly useful. If the enterprise uses a more advanced budgeting tool, you can work directly in that environment or use the spreadsheet package and upload the results.

### **Spreadsheets to Maintain**

**Investment portfolio (multiple sheets):** Proposed for the year (see the discussion of strategic investments in the section “Capital Expenditures for Large Projects”); ratified by the executive team; actual spending versus proposed for the ratified list.

**Purchase order tracking:** Tracking different worksheets for software, hardware, consulting services, data telecom, voice telecom, subscriptions, and a summary.

**Personnel training tracking:** One sheet with specific classes, seminars, and events attended by each employee; another summarizing technical, professional, and personal time in days spent on education per employee.

From an operations perspective, we use a workbook containing all major expenses that generate a purchase order or receive an invoice for IT services. The IT expenses planning workbook is copied to create the tracking workbook for the budget year, in which actual expenses and related details are entered per purchase order required or generated. The IT expenses planning workbook is a copy of the tracking workbook from the previous year, edited with new information as required.

### **Reports Healthy to Generate (From a Budget Perspective)**

- Project-related financials should be reported as a function of project progress reporting.
- From a pure budgeting perspective, report on major category deviations of greater than 5 percent and keep a running log for the year. Any deviation at or over 10 percent will probably need some deeper explanation, so be prepared.
- The selected operating metrics (some discussed earlier) should be presented monthly to the IT people and at least quarterly to the executive team—more frequently if they are under some amount of heat.
- The year-end report should contain a section for the investment progress summary (including finances) plus a section highlighting budget deviations and significant changes in influencing factors.

## IT EXPENSE DISTRIBUTION

This is a controversial topic in many companies, and yet, if the budget has the blessing of the executive team, there is support for the overall spending level. This largely stems from the fact that the CEO/CFO team wants to see the businesses pay fairly for the services they receive from corporate. In companies where there is only one LOB, this is very simple, of course. For companies with multiple LOBs (full profit and loss responsibility), it can become an issue. There is no simple answer to this dilemma, but it is essential that the CIO take an active role in determining a fair repartition of the expenses to each business. The days are over when we took total IT expenses and charged back based on LOB revenues. A blend of metrics is required to help work this challenge at the LOB general manager level as opposed to the CEO/CFO level.

In the case in which LOBs are granted dispensation or reductions of their fair calculated value of allocations (corporate sponsoring for good business reasons), this must be discussed and agreed upon at the executive team level to eliminate bickering behind the scenes. Avoid cutting special allocation deals one on one with executive members; get it all ratified by the entire executive team.

It is good practice for IT-related invoices to be routed directly to the consuming LOB as long as the accounting code (reflecting IT spending) is correct; this maintains the visibility of IT while payment initiates directly from the LOB. Some metrics to consider with shared resources include

**Applications:** Volume based (transaction, lines, overall cost), per named user.

**Network:** Cost per named user per site.

**Voice:** Get detailed billing, direct charge, and subscribe to a communications brokerage firm.

Granularity of allocations flowing to the lines of business can become complex. However, if it is required to get an accurate reading of their profitability, establish the necessary calculation tables and have dedicated staff responsible for producing the correct charge backs at the end of fiscal periods.

Using this approach, you might want to allocate certain costs back to the business using a rational algorithm such as business analyst time spent, specific project benefit for departmental or LOB projects, or applications usage. Such mechanical schemes as square footage are useless; avoid these. In the case of projects that can be identified to specific lines of business, it is almost always advantageous to identify them specifically.

## CONCLUSIONS

Budgeting is an exercise in common sense. Adjusting IT expenses to revenues, buying off the shelf if product provides the required functionality, keeping an eye on the critical influencing factors, keeping the executive team involved and informed, and treating the budget as a change agent all help you successfully manage the IT shop to be viewed as a solid piece of the foundation from which the company pursues its goals.

Remember, relationships with the IT controller and the CFO are two career-enabling relationships within which you should work to build credibility.