

V - CAPITAL AND MAINTENANCE PLANNING

This chapter discusses the capital and maintenance planning processes used within Verizon when developing annual budget estimates for both capital and expense budgets.

A - BACKGROUND

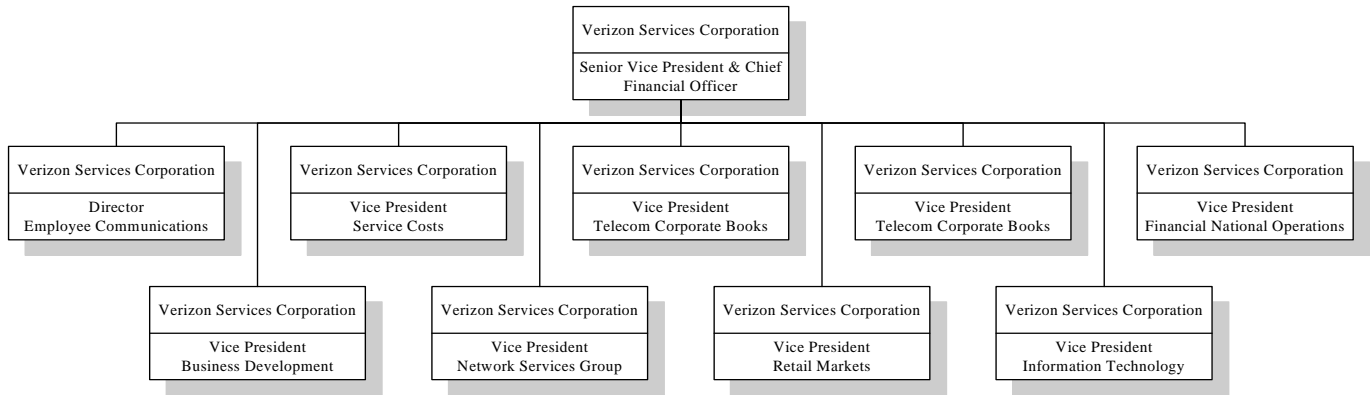
CAPITAL PROGRAM PLANNING

The Capital Program planning process involves many different organizational groups within Verizon. It includes “growth requirements” for the provisioning of service as well as “programs.” Planning for programs consists of three parts: project identification, project selection/approval, and project funding. The project identification process occurs within the various lines of business (LOBs) within Domestic Telecom, including Network Planning and Engineering, Outside Plant Engineering (both of which are part of the Network Services organization), Information Systems, Retail, Enterprise, and Wholesale. Within the Network LOB, projects are identified and submitted by the various engineering and operations areas of Verizon, such as Network Planning and Engineering, and Outside Plant Engineering. Identified projects are scoped and priced (including cost/benefit analyses where applicable) and are then moved to the project selection process, which is conducted by LOB management. The Telecom Capital Management (TCM) group establishes the LOB’s capital targets for a given year, based upon business cases selected/submitted by the LOB through the Business Case System (BuC), subsequent review meetings held with the business unit, risk analysis, gap closure meetings, and final approval by the Chief Financial Officer (CFO) of Domestic Telecom. The LOBs then prioritize/fund their business cases within their final approved target.

Organizations and Responsibilities

Verizon’s Telecom Finance organization (see *Exhibit V-1*), which is headed by Verizon’s Telecom Chief Financial Officer (CFO), has a matrix structure, with direct reporting responsibility aligned vertically through the Finance organization and with horizontal reporting responsibility aligned directly with Verizon’s operational units, often located onsite. Verizon’s Telecom Capital Management group establishes the annual LOB budget targets for all Capital Budgets. The TCM group is headed by a director, who reports through the Vice President – Financial Planning and Analysis, Network Services, who in turn reports to the Vice President, Finance – Network Services, and ultimately to Telecom’s CFO. Although the reporting structure of the TCM group is under Network Services Finance, the group’s responsibilities involve all LOBs within Domestic Telecom.

Exhibit V-1

DOMESTIC TELECOM FINANCE ORGANIZATION

The TCM group is responsible for distributing capital target budgets, subject to approval by the CFO of Domestic Telecom. The targets are first reviewed with the Finance VPs of each LOB. They are then reviewed for approval with the CFO for Domestic Telecom and, after CFO approval, are provided to each of the Telecom LOBs, which include the Network Services Group, the Enterprise Solutions Group (ESG), the Wholesale Group, Retail, and Information Technology. Each of these LOBs then develops its proposed capital project-level detailed budget within the overall designated target numbers.

The TCM group allocates funding for “Strategic Initiatives” to the LOBs as detailed deployment plans are received. TCM also tracks and approves the Capital Budgets at a high level of aggregation (e.g., by states, by project, and by class of plant (COP)) for all LOBs. Strategic Initiatives are subject to initial review and approval by the Management Committee, and possibly up to the highest levels of the corporation, depending on their significance. They include the recent expansion of DSL service coverage and, for 2004, the Fiber to the Premises (FTTP) project. [redacted].

The Network Capital Management (NCM) group is responsible for developing a comprehensive network Capital Program budget. The group is managed by an Executive Director who reports directly to the Senior Vice President Engineering and Planning. This group manages and allocates all network capital consisting of “Modeled Growth” and “Network Operating Programs” for the outside plant (OSP), the central office equipment (COE), real estate, the general equipment, and the terminal equipment classes of plant. The NCM group tracks, manages, and approves capital projects by class of plant at a regional level. The NCM group is also responsible for the New York Public Service Commission’s (PSC) Annual Construction Filing, the Monthly Diffusion Fund Filing, and the Quarterly PSC Million Dollar Contract Filing. The NCM group develops and manages the Verizon NY Network Retirement Program in conjunction with responsible field organizations.

Capital Expenditures

Exhibit V-2 displays the actual capital expenditures, by region, for New York State's Telecom operations for the period spanning 1998 through 2003. It also illustrates the budgeted expenditures for 2004.

Exhibit V-2**VERIZON NEW YORK ACTUAL CAPITAL EXPENDITURES, BY REGION,
FOR THE TWELVE MONTHS ENDED DECEMBER 31 (MILLIONS OF DOLLARS)**

[redacted]

[redacted]

Exhibit V-3

VERIZON NEW YORK VOLUME FORECAST DATA 2003/2004

[redacted]

The data presented in *Exhibit V-3* incorporates forecast data from two different LOB views. Year 2003 was based on the projections developed for the October 2002 business plan; and data for 2004 was based on the forecast developed for the October 2003 view. “Total Gains/Losses” are not Actual Gains/Losses, but rather are the sum of the two forecast years.

[redacted]

- [redacted]
- [redacted]
- [redacted]

[redacted]

Exhibit V-4

VERIZON NY CAPITAL EXPENDITURES BY CLASS OF PLANT

[redacted]

[redacted]

Exhibit V-5

NEW YORK OSP CAPITAL (\$M'S)
GROSS CONSTRUCTION EXPENDITURE—EXCLUDES DISASTER RECOVERY

[redacted]

Budget Development

[redacted]

VCAM

[redacted]

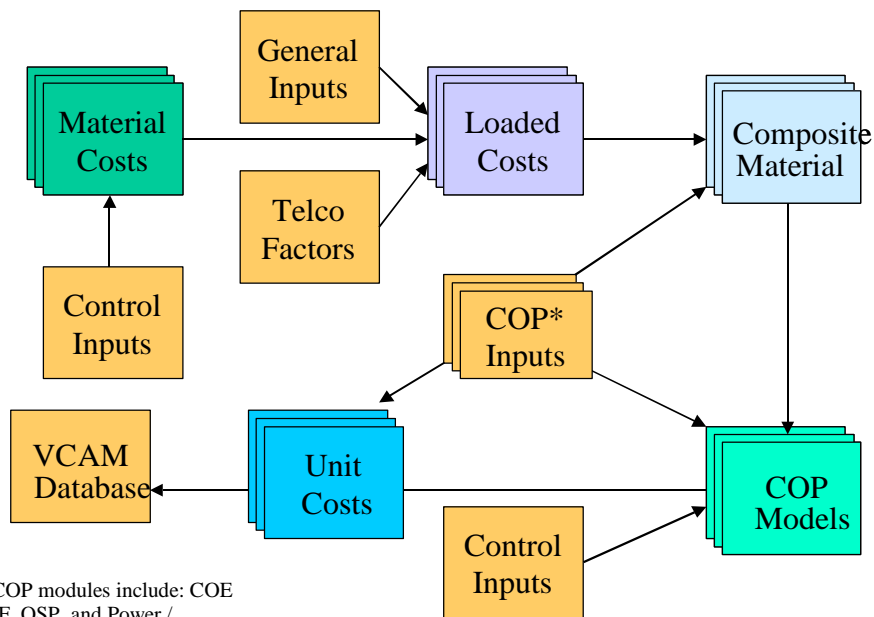
Demand requirements are derived from the current forecast that is used to drive the model. Growth requirements for services are inputs to the model. [redacted]

Many cost models that make up network equipment are involved. [redacted]

Cost model development is coordinated with Engineering and Planning Organization Regional Vice Presidents. Committees are formed to update and enhance cost models and to ensure that the current network architecture is accurately represented. Vendor models are provided to Verizon Subject Matter Experts and, per their advice and counsel, composite vendor-specific models are developed across the Verizon footprint. The resulting vendor-specific models are rolled up into composite costs, reflecting access line growth and other forecasted services. Various configurations are also modeled, consistent with network applications. The disparate models and cost data are compiled into the “SQL service platform” database. Summary information is developed on a service-by-service basis.

Exhibit V-6

VCAM MODEL



* VCAM COP modules include: COE Switch, IOF, OSP, and Power / Maintenance

VCAM 2004 Microsoft Excel Workbook Flow

[redacted] Density differences between areas influence and drive variable cost profiles. Generally, unit costs are lower in urban areas, where fixed charges can be allocated over a larger demand base. [redacted]

Fully allocated costs are derived by predication of the existing network. Equipment profiles associated with each of six density strata are reflected in the cost models. Unit costs are developed for Administrative Forecast Areas. New York State is comprised of 11 Administrative Forecast Areas encompassing its three regions. [redacted]

Composite costs are developed for engineering discipline groups. In many cases, vendor-provided models serve as the point of departure. Factors that differentiate composite costs from one AFA to another include access line density of the wire center, cost models predicated on density, equipment types and vendor penetration, and outside plant network composition (e.g., mix of DLC and copper).

Based on sampling of actual installations and the frequency of drops and pass-throughs, specific cost models are developed for IntelliLight. Synchronous Optical Network (SONET) models are priced out during the budget development cycle by the NCM VCAM Team. Shared optical facilities are funded within baseline growth through the VCAM allocation process. Dedicated optical facilities (e.g., dedicated rings) are held by TCM and funded on a case-by-case basis out of a marketing initiatives' placeholder. The FTTP and Enterprise Advance Strategic Initiatives are external to VCAM production. When a service no longer has growth demand potential and becomes un-forecastable, it may be dropped from the service portfolio and cost-modeling process.

The model is checked by running actual year-end results through and comparing Commitment View results for each allocation. This was done for the 2003 end-of-year results.

Capital is identified at a level of aggregation that is consistent with growth forecasts. [redacted]

Throughout the network, provisions are made for “churn” activity, by which substantial access line add/disconnect activity occurs throughout the service area, regardless of net growth. Statistical models associated with churn are based upon a two-year pattern of add/disconnect activity within each distribution area. The capital requirement to accommodate churn is identified as a separate activity to fund inward movement in addition to growth. [redacted]

BuC\$

[redacted]

The BuC\$ database includes a high-level description of the proposed project’s competition assessment (what they are and their level of entrenchment), a market assessment (the product’s environment), a legal and regulatory assessment, a timeline for expenditure of funds and for introduction of the product, an exit strategy (in case things don’t go well), and financial projections (up to five years’ worth), including revenue, expense, capital, and force, as appropriate. Projects are prioritized as extreme, high, medium, or low and are classified into one of the following groups:

- **Cost Reduction/Efficiencies** – process improvements that will generate cost reductions and will be judged based upon financial merit. Cost reductions must be included in the business case financials and must be linked to the LOB’s business plan, indicating effect on the Operating Budget.
- **Infrastructure** – expenditures necessary to provide and maintain plant or equipment that are required in support of normal operational needs. Included in this category are network, application, and system growth and/or modernization (unless the modernization results in cost reductions or is required because of service problems). Examples would include network growth and technology/generic upgrades.
- **Regulatory/Legal/Mandatory** – contractual obligations or legal/regulatory mandates. Discretionary regulatory programs are not included in this category, nor are programs considered mandatory by executive management, unless they have contractual obligations or are mandated by the FCC or one of the state Public Utility Commissions.
- **Revenue Production** – produce new incremental revenue and are tied to the LOB’s business plan. If the revenue is not incremental, one of the other groupings is used.
- **Service Improvement** – programs directly linked to quality of service improvements. Examples would include replacement of defective or obsolete equipment in response to trouble reports and building improvements required to protect company assets.
- **Strategic Initiative** – programs directly linked to the Corporate Strategic Plan. Corporate Strategic Initiatives are defined as programs that change the direction of the business. An example of this type of program includes FTTP. These business cases are reviewed separately and approved by Strategic Business Planning. If approved, funding for these initiatives is generally an overlay to the business units’ target.

The LOB budget teams use BuC\$ to retrieve the business case submissions, which they then use for further review and prioritization to develop the overall Capital Program for consideration by TCM. The LOBs may require additional documentation and data to support the funding of these business cases.

Budget Timetable

The budget timeline is briefly discussed below. This outlook is a high-level view of the timeline, which may change based on other business processes.

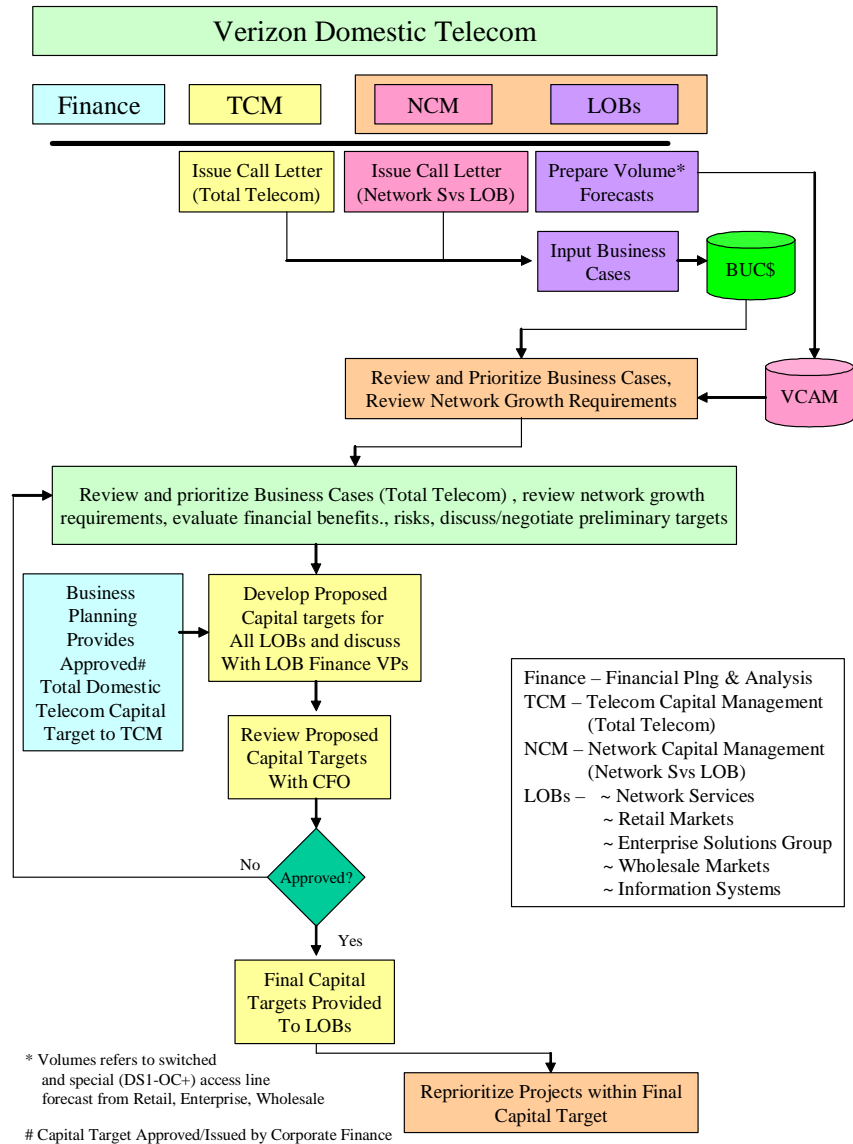
- April–May
 - The initial Commitment View budget process commences.
 - Call Letters are issued.

- Development and submission of business cases associated with overlay programs begin.
- Input of business cases in BuC\$ begins.
- June–October
 - All business cases are entered into BuC\$.
 - Meetings with business case submitters, NCM and TCM are conducted (for Network Services business cases).
 - Business cases are reviewed, prioritized, and approved within the LOBs.
- August–October
 - The TCM group meets with the LOB to discuss proposed budgets and preliminary capital targets.
 - Final output of VCAM is provided to TCM.
 - Capital requirements for growth are evaluated and any concerns with the initial budget allocation are expressed.
 - Negotiations ensue until a buy-in is achieved.
 - Business Planning provides total Domestic Telecom capital target to TCM (as approved and communicated by Corporate Finance).
 - The initial Capital Budget proposal is developed by TCM.
 - TCM discusses the proposed capital targets with LOB Finance VPs first and then with the CFO of Domestic Telecom.
 - Once approved by the CFO, TCM provides final capital targets to the LOBs.
- November–December
 - Negotiations to fund growth and to take into consideration the impact of additional overlay programs (service improvement, proactive maintenance, municipal obligations, and regulatory initiatives) are conducted within Network Services.
 - The final project-level Capital Budget is established.

A flowchart depicting the budget process as described in this timetable is shown in *Exhibit V-7*, following this page.

Exhibit V-7

BUDGET PROCESS



Budget Revisions

The Budget is subject to both formal and informal reviews several times during the year. During 2003, it was reviewed in this manner, resulting in program changes, reallocations, and two Capital Budget reductions. The desire to maintain CAPEX/Revenue targets is important, as are actual results being equal to or less than budgeted amounts. Therefore, if actual revenue growth is different than planned, the Capital Budget may be revised to bring the ratio of Capital Expenditures to Revenue back into the desired range.

Business cases may be submitted throughout the year and can provide a basis for budget reviews and revisions within the Capital Budget framework. Business cases are reviewed and approved by the LOBs, TCM, and possibly the CFO of Domestic Telecom and/or the Management Committee (depending on the significance), and budgets are adjusted as appropriate. Moving dollars within VCAM is approved by the Engineering organizations; however, moving more than \$1M between VCAM and other Capital Programs requires NCM and TCM approval. For all other LOBs, it is expected that the business units will absorb any upward pressures below their relative transfer cap amounts.

Typical Capital Tracking Reports

A number of periodic reports exist, each of which presents actual capital expenditures by various categories and organizational units. These reports include the following:

- **Flash Report** – reports actual expenditures by class of plant per region for capital, reuse, and retirement dollars.
- **OSP Report** – reports OSP capital at a regional level. Provides OSP’s actual expenditures for several OSP categories (e.g., Infrastructure Improvement Plan).
- **COE Reports** – COE capital at a regional level for several COE categories.
- **Project Level Detail Report** – reports annual Current View and Commitment View Capital Budgets, as well as year-to-date capital actuals, by project, for all LOBs.
- **Monthly Network Capital Report** – reports actual expenditures, views, and estimate amounts by project, by class of plant, per region.
- **NY Diffusion Fund Report** – tracks monthly and YTD actuals for the NY Diffusion Program.
- **Million Dollar Contract Report** – quarterly report that provides a copy of the estimate, telephone equipment order (TEO) #s, capital amounts, job details, and bid/no bid statuses for any jobs with Engineering, Furnishings, and Installation (EF&I) costing over \$1 million.

Existing Financial Systems

A number of financial systems are used by Verizon that help the company tally, account for, and report Capital Budget items during the various stages of development and use. These systems include the following:

- **PeopleSoft/Project Costing** – PeopleSoft is an Accounting system. The Project Costing module provides project details for a job level’s actual capital expenditures and authorized level.
- **Capital Budget to Actual System (CBAS)** – tracks budget and actual capital expenditures at a job level

- **Network Capital Request Database** – houses all network capital requests (non-VCAM) by COP and jurisdiction and outlines risks, descriptions, and job triggers. NCM uses this tool to rank programs and to develop various budget scenarios for consideration. The BuC\$ business cases are attached within this database in addition to other supporting documentation.
- **BuC\$ Database** – houses business case information by project and COP for all LOBs.
- **VFRAME** – houses the Commitment View and Current View Capital Budgets, as well as year-to-date actuals, year-to-date transfers, and year-to-date releases by project, by class of plant, by field reporting code, by state, and by time dimension. (It replaced the TCM Transfer Database.)

MAINTENANCE PROGRAM PLANNING

The development and tracking of the maintenance program contains many inputs. Maintenance funding requests originate in various areas within the Domestic Telecom organization. This section addresses maintenance program planning from the viewpoint of the operating budget, including revenue, expense, and net income. It also addresses the budget-process timeframes, decision points, and the organizations that are involved.

Organizations and Responsibilities

Verizon's operating budget is developed using both a top-down and bottom-up approach. Overall responsibility for Domestic Telecom's operating budget process rests with Domestic Telecom Finance, with direction and guidance provided by Verizon Corporate Finance. In conjunction with LOB management, Domestic Telecom Finance is responsible for managing the budget process targets and for consolidating, evaluating, and modifying as required. It also holds responsibility for laterally passing information to Domestic Telecom line of business (LOB) leaders and on to Verizon Corporate management.

In addition to the Domestic Telecom Finance organization, there is a finance organization headed by a Vice President in each of the LOB operating groups: the Enterprise Services Group, the Retail group, the Wholesale group, the Network Services Group, and the Information Technology group. The finance entities embedded into each of the LOBs direct the budget development process within the organizations supported. These finance organizations are matrixed to the LOBs with direct reporting responsibilities to Domestic Telecom Finance and, therein, to the Domestic Telecom Chief Financial Officer (CFO).

Budget Development

The Verizon operating budget development process requires approximately nine months for completion. Development of Domestic Telecom's annual business plan starts in April of each year, with high-level projections of operational volumes (access lines), headcounts, revenues, and expenses for input to the Verizon Corporate Finance Team.

The “expense” component includes a forecast of assumptions surrounding Installation and Repair dispatches, trouble call volume, productivity, and key assumptions surrounding overtime and management spans of control. Verizon develops a five-year business plan, with the first year of the plan becoming the Commitment View or the operating budget. Corporate Finance will establish and agree upon a Commitment View target for Domestic Telecom. This target will be the revenue and expense amounts for core businesses, including regulated telephone operations and revenue, expense, and net income numbers for non-core businesses.

In the June timeframe, the LOB operating units start developing their bottom-up expense estimates based on dispatch volume forecasts, utilizing trend, and regression analysis. This construct of key assumptions is then fed through an Excel-based model to price out cost. By August, these projections are finalized and forwarded to Domestic Telecom Finance. During September, negotiations between Domestic Telecom Finance and the LOBs are undertaken to come up with a negotiated budget for each of the LOBs and all subsidiaries. In the October to November timeframe, budget targets are finalized and the operating expense budget details are completed. During early December, the operating budgets are submitted by the LOBs to Domestic Telecom Finance and, in turn, submitted to Verizon Corporate Finance. At this point, except for some minor tweaking, the operating budget is essentially complete and ready for the upcoming year.

Budget Timetable

- April–May
 - Domestic Telecom Finance develops a long-term business plan.
 - Domestic Telecom Finance develops an annual business plan (1st year of the long-term plan).
 - Verizon Corporate Finance develops a net income target.
- June–July
 - Product Line Managers develop revenue projections.
 - LOB Finance develops bottom-up expense projections (dispatch volume, productivity measures, such as jobs per day, and call volumes used to make expense projections).
- August
 - Expense and net income projections are finalized by the LOB operating units in conjunction with LOB Finance.
 - Budgets are then forwarded to Domestic Telecom Finance.

- September
 - Negotiations take place between the LOBs and Domestic Telecom Finance.
- October–November
 - Budget targets are finalized.
 - Operating expense budget details are completed.
- December
 - Operating budgets are submitted to Domestic Telecom Finance.
 - Operating budgets are reviewed by Domestic Telecom Finance and then submitted to Verizon Corporate Finance.
 - Operating budgets are reviewed and approved.
 - Commitment View of operating budget is established.

A flowchart depicting the budget process, as described in this timetable, is shown in *Exhibit V-8* following this page.

Budget to Actual Comparisons

Both the LOB Finance organizations and the Domestic Telecom Finance organization review actual expenditures in comparison to the monthly budgeted amounts. Prior to Spring 2004, the monthly accounting books began the close process on the fifth working day of the month. That process has now been accelerated to begin on the fourth working day. From the first closing day until approximately the ninth working day of the month, variances are analyzed and a Flash Report is developed for each entity and for Domestic Telecom. Analysis will consist of trying to understand the reasons behind budget deviations that result from volumes, productivity, overtime, force numbers, and other factors. Key drivers will be monitored and changes from expected results will be used as the primary explanation for variances. Deviations that are material in nature are explained against the plan, prior trends, and year-over-year analyses. No set amount or percent of variance has to be explained; rather, variance explanations depend on the judgment of the analyst.

[redacted]

Exhibit V-10 shows that for 2003, repair dispatches exceeded the forecast by 17.23%. Total dispatches for installation and repair overran the budget by 9.85%.

Exhibit V-8

VERIZON DOMESTIC TELECOM OPERATING BUDGET FLOWCHART

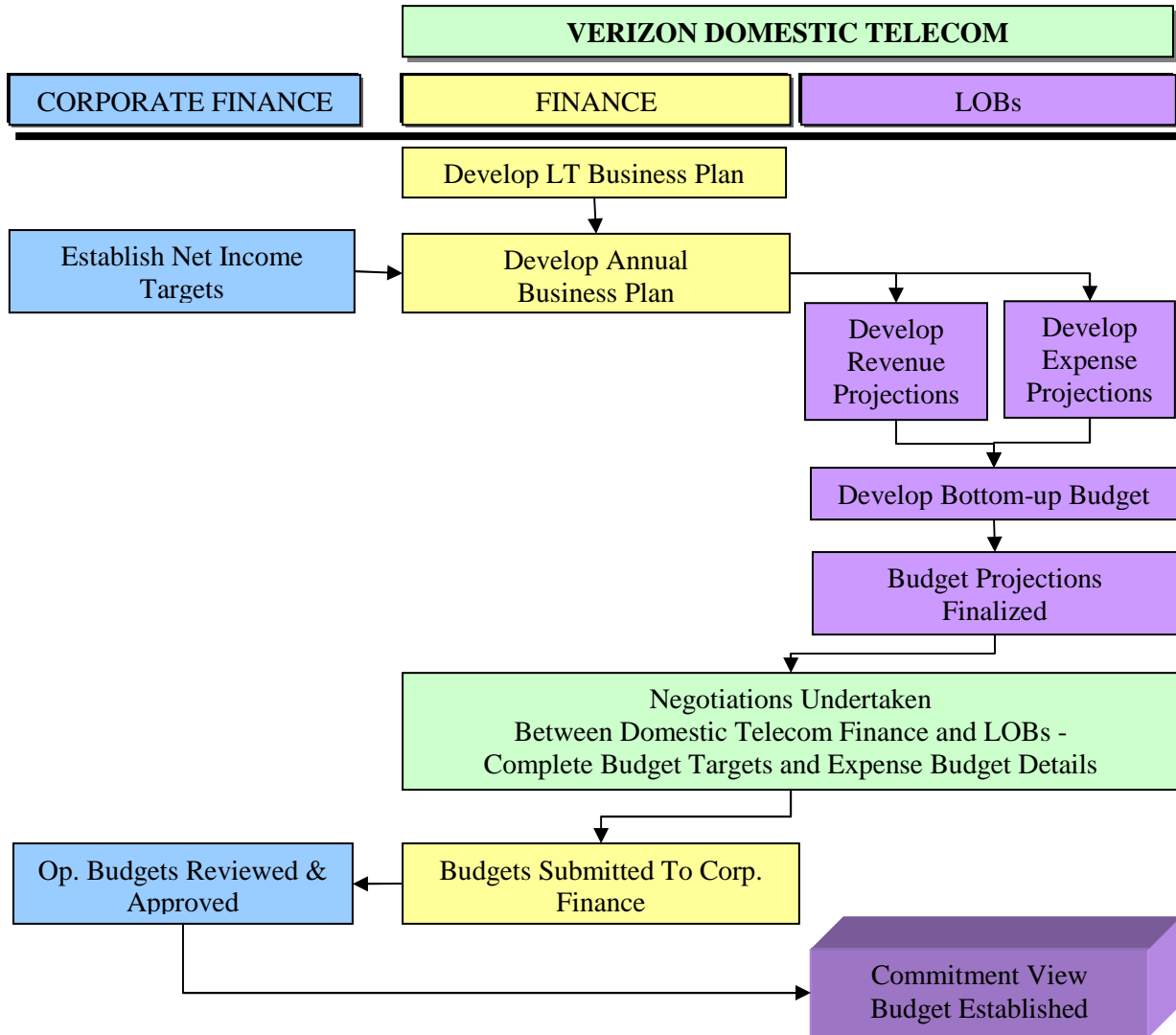


Exhibit V-9

VERIZON NEW YORK REGION'S BUDGET/ACTUAL INFORMATION

[redacted]

Exhibit V-10

**ACTUAL DISPATCHES FOR NY
2001-2003 ACTUALS AND COMMITMENT VIEW FOR 2004**

[redacted]

[redacted]

Exhibit V-11

**EXPENSE COMMITMENT VIEW BUDGET FORECAST OF PRODUCTIVITY FOR NY
AND ACTUALS FOR 2001, 2002, AND 2003**

[redacted]

Budget Revisions

Verizon does not have a formal budget revision process. The Company does not require that budgets be revisited and recast at set time periods during the year, as is the practice in some companies. Once the Commitment View or original budget is agreed upon, it becomes the budget for the entire year. All comparisons of actual revenues and expenditures against budget are made against this Commitment View.

However, the option exists to require all operating units to provide a “Best View” or current best estimate during the budget year. Normally, the directive to develop a “Best View” is not issued until the spring of the year or near the halfway mark in the budget year. The “Best View” version of the budget is tracked offline, although comparisons to it will be part of a results reporting package. Usually only one “Best View” exists for a budget year. In 2003, Verizon required a “Best View” budget estimate in the month of June.

Periodic Budget Reports

A number of budget reports exist that Verizon uses to track and control actual expenditures against the operating budget’s Commitment View. These reports include:

- ***Flash Report*** – report of actual results compiled throughout the flash period, fourth through seventh work days.
- ***Lacouture Report*** – expanded Flash Report with added metrics, hours, number of dispatches, etc.; available to Domestic Telecom management around mid-month.
- ***Monthly Consolidation Explanation*** – month- and year-to-date actual-to-budget variance explanations.
- ***LOB Flux Report*** – reports variances between actual expenses and budgeted expenses; available to Domestic Telecom management by the thirteenth workday of the month.
- ***Pocket Report*** – daily operational report including trend of load, cable failures by region, variance of dispatch volume to plan, expense-hour variance, detail of productive force, etc.
- ***Actual to Budget Comparison*** – monthly comparison of actual results to Commitment View.

- ***Actual vs. Best View Outlook*** – monthly comparison of actual results to “Best View” budget estimate.
- ***Key Earnings Drivers*** – monthly report of key earnings metrics that strongly influence the financial results of Domestic Telecom operations.
- ***Expense Trend Report*** – quarterly (usually) report that is developed on request from management.
- ***Daily Monitoring Report*** – LOB operations report including details such as hours and load; made available to LOB management.
- ***Monthly Report*** – LOB summary report of actual results compared to budget; made available to LOB management.

Financial Systems

Financial systems supporting Verizon’s budget and budget tracking, as well as those supporting control efforts, include the primary Enterprise Resource Planning (ERP), which contains Verizon’s financial management and accounting software. ERP modules that are involved in tracking and reporting budget and budget comparisons include:

- ***PeopleSoft/Budget Module*** – reports budgeted and actual revenue and expense against budget.
- ***PeopleSoft/General Ledger Module*** – reports actual revenue and expense transactions.
- ***VFRAME*** – a management accounting system that accumulates the combination of dissimilar financial data from multiple financial system sources, overlaying the existing Verizon ERP systems.

NETWORK PLANNING

This section considers Verizon New York's Network Planning processes for the deployment of technology, Verizon's ability to satisfy current and future operating requirements, the business case development for projects identified by the planning process, and the management processes associated with planning for introduction of new technology deployment and services.

The Prevailing Network Planning Environment

Verizon is experiencing a loss of access lines throughout its New York service area. This decline has affected the character of Network Planning and planning priorities. Gone are the days of installing extensive capacity for future growth, with the certain knowledge that demand would subsume available capacity sooner rather than later. The paradigm shift to a no-growth/negative-growth environment has dramatically altered the network-planning mindset. As a consequence, the planning organizations have adopted a policy of minimizing capital while fulfilling service obligations on a "just in time" basis. This approach pervades all aspects of the planning process.

One manifestation of this change is that there is no longer a "long-range planning" function in the traditional sense. Rather, Network Planning is short-term and tactical in nature, with an objective of fine-tuning the network to meet service commitments. This strategy is linked to the reduction of capital expenditures through "adaptive engineering," a euphemism for determining the minimum capacity that needs to be provisioned and then providing only that absolute minimum at the latest possible time to continue to provide service.

Network Planning Overview

Network Planning encompasses the determination of network architectures and elements, including central office (CO) and tandem switching, IOF, OSP loop access to customer premises, signaling systems, voice and data service delivery, and operations support systems. Transition planning for introducing advanced technologies and systems into the existing network, as a means of enhancing network performance and increasing functionality, is also included.

This discussion of Network Planning is organized as follows:

- Network Planning Approach
- Network Planning Organization and Responsibilities
- Verizon's Technology Vision
- New Technology Selection and Deployment
- Special Network Planning Initiatives
- The Fiber to the Premises Strategic Program

Network Planning Approach

Forecasting Network Growth

The network-growth capital-planning process begins with forecasting demand for access lines, trunks, digital subscriber lines (DSL), and Hi-Cap services (i.e., DS1, DS3, and OC-n). The impact of access line growth or loss on the network—the principal “network driver”—is gauged through modeling techniques. Provision is also made for “churn,” by which access-line add/disconnect activity occurs throughout the service area, in spite of a lack of net growth. Statistical models associated with churn are based upon a two-year pattern of add/disconnect activity within each distribution area.

Volumes associated with revenue forecasts are used as an input for estimating capital requirements as part of the modeling process. Other considerations include the growth in external markets, the strength of competition, and the status of financial markets. As a result of the substantial loss of access lines, the Company has recently looked at short-term expediciencies in meeting its service commitments.

Planning Horizon

During the past several years, a six-month planning horizon has been used, as contrasted with the one- to two-year horizons that were employed when the network experienced continued growth. This plan is compatible with adaptive engineering, which entails short-term plans that are consistent with limited growth and reduced implementation intervals.

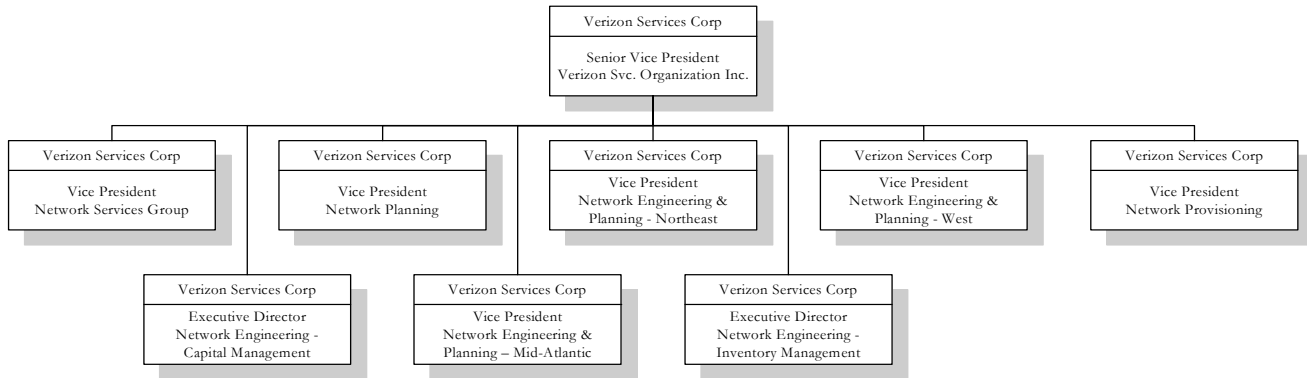
Other considerations include the facts that vendor “next-generation” technologies change so fast and that two-year-old equipment is often “manufacturer discontinued.” Moreover, compatibility issues affect migration to next-generation equipment, an increase in spare inventory is required, and additional training is entailed.

Network Planning Organization and Responsibilities

The Vice President-level Network Planning & Advanced Data Networks organization (shown as the Vice President of Network planning in *Exhibit V-12*) holds responsibility for Verizon’s centralized network planning for the entire Verizon footprint. Specific areas of responsibility include local switching, tandems, transport, signaling, DSL, fast packet switching, and loop access technology. The group provides high-level, fundamental planning and is involved with new technology deployment decisions. The Vice President chairs task forces that are charged with technology selection and sourcing. As discussed below, New Services & Technology Support (NSTS), a director-level organization within the Network Planning organization, holds primary responsibility for expediting the implementation of new technologies throughout Verizon.

Exhibit V-12

NETWORK PLANNING AND ENGINEERING ORGANIZATION

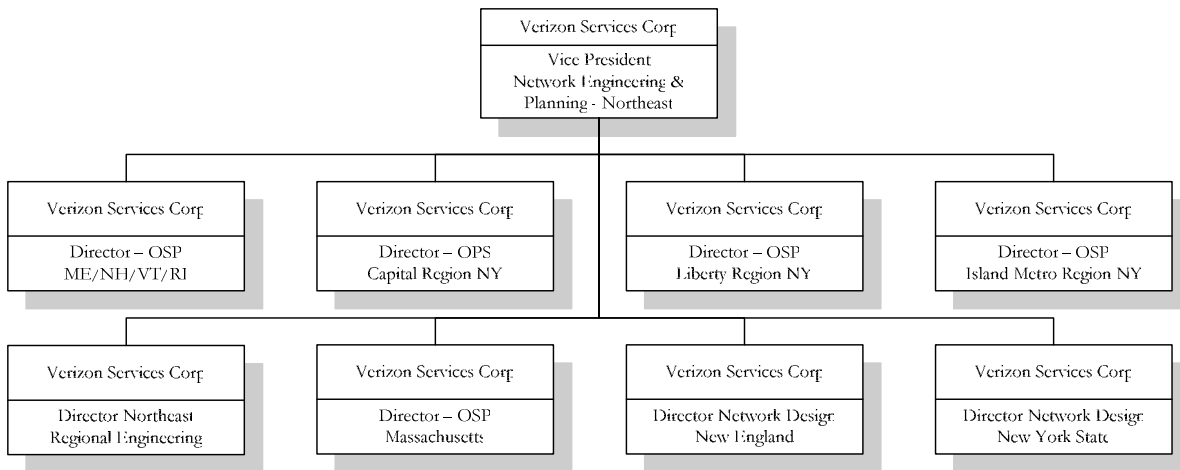


Network Engineering And Planning Organization – Northeast

Outside Plant Planning for the New York region is performed by the Vice President, Engineering and Planning, Northeast Area organization, which is responsible for New York State and New England. This organization is shown in *Exhibit V-13*.

Exhibit V-13

OUTSIDE PLANT PLANNING



There are three directors for New York’s OSP Engineering & Planning. Each of these directors reports to the Vice President, Engineering and Planning, Northeast Area, but matches the serving areas of the Region Presidents for Network Services—who hold Installation & Maintenance and Construction responsibilities. Specifically:

- Director of the Island Metro Region, including Long Island, Bronx, and Queens.
- Director of the Capital Region, comprised of all of New York State north of New York City.
- Director of the Liberty Region, including Manhattan, Brooklyn, and Staten Island.

Central Office Planning and Engineering is performed by one director, with responsibility for all the offices in New York State, who reports to the Vice President, Engineering and Planning, Northeast Area.

The organizational breakdown is shown in *Exhibit V-13*. The total resource devoted to Network Planning and Engineering is approximately 2,100 employees, of which approximately 60% are assigned to the New York Regions.

The OSP and CO Network Planning groups initiate the workflow. Whether “service driven” or for preventive maintenance remediation, they are the first group involved. A planning package is prepared that is “handed off” to the design groups for detailed engineering. The planning disciplines include:

- **OSP Planning** – Planning primarily involves feeder plant and right-of-way. In some instances, the planning packages may address the distribution plant as well, although the organization is somewhat standardized on the means by which this plant is engineered.
- **IOF Planning** – Planning involves the deployment of IOF rings for the core network and SONET rings for enterprise customers. Broadband services on ring facilities generally encompass T1, T3, OC3, OC12, and gigabit Ethernet.
- **Switch Planning** – With limited or no access line growth, planners primarily focus on switch capacity management, tandem traffic management, management of traffic on umbilicals that tie subtending remote offices to their hosts, and retirement of 4ESS tandems. (Present plans provide for replacing all seven 4ESS tandems by the end of 2007.)

Capital Budget development and monitoring of expenditures throughout the year are integral to these responsibilities. Other responsibilities include new technology deployment and integration, infrastructure improvement, and cost reduction.

Planners are generally concerned with optimizing the size of the network, which may require reducing facilities in some locations and limitedly expanding them in others, as Verizon is still the carrier of last resort.

Verizon’s Technology Vision

According to Verizon, the relationship of network architectures and service-bundling strategies is being driven by computer/communications convergence. Inter-modal voice/DSL/long distance/wireless services and integrated voice/data services are here

today. Verizon intends to become an enabler for the deployment of new, innovative inter-modal service packages.

Verizon's "technology vision" is transitioning the core network to an optical transport infrastructure. The strategic thrust of this strategy is to develop a cost-effective, feature-rich broadband optical network in a seamless service environment. Achievement of this aim would include a core Internet Protocol/Multi-Protocol Layered Switching (IP/MPLS) routed network. Under this arrangement, optical transport will accommodate a wide variety of applications, thereby affording the opportunity "to pile on as many applications as possible." Such applications include legacy services, converged multi-media and message services, information and entertainment services, enterprise data services, consumer services, and network security.

[redacted]

New Technology Selection and Deployment

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

Technology Implementation

LOB requirements, engineering methods and procedures, and operations support system (OSS) capabilities are factored into the technology selection process through the creation of cross-functional teams, which represent key technical and business perspectives. This step is followed by system integration and testing, which ensures engineered product performance and evaluation of next-generation technology through the progression of releases (e.g., planned switching system generic software enhancements). The Systems Integration and Test Lab within Verizon Labs is the primary interface in the evaluation of vendor products that offer technology solutions.

As noted above, the New Services & Technology Support organization holds primary responsibility for expediting the implementation of new technologies throughout Verizon. This corporate-wide function includes the development of Engineering guidelines to facilitate new services deployment, the establishment of procedures to ensure proper ordering and installation of new technologies, and participation on technology selection teams. NSTS is responsible for ensuring that standard technologies and configurations are adopted so as to achieve maximum capital efficiencies and streamline training and field operations to the extent practical.

NSTS's primary focus is on new equipment that is associated with transport, local access, and data-networking electronics. In this capacity, NSTS works closely with key vendors to customize technology documentation so as to ensure compatibility with Verizon's OSSs. [redacted]

Increased mechanization in high-density serving areas is being sought by means of interconnecting DS1s and DS3s to Digital Cross-connect Systems (DCSs). Optical Cross-connect Systems, analogous to DCS, are being introduced in conjunction with OC-n services.

Technology Selection Process

[redacted]

Special Network Planning Initiatives

Network planning initiatives that are overlays to the core network are in various stages of network planning and implementation. These initiatives are described as follows:

Fiber Ring Planning and Customer Network Engineering Support

[redacted]

[redacted]

Digital Subscriber Line Service

A strategic program was undertaken during 2003 to make DSL available to more customers. The New York State program qualified facilities to accommodate the maximum number of DSL customers. [redacted]

Video and Radio Broadcast Services

Video and radio planning and engineering services include addressing broadcast-related regulatory requirements, expediting broadcast services in response to customer requests, and providing basic planning and engineering for tower installations. Video activity is largely customer-demanded, high-profile/high-priority, and event-driven (e.g., the Macy's Thanksgiving Day Parade, the Presidential Convention coverage, and other ad hoc situations).

Signaling System 7 and Emergency 911 Services

Planning and engineering is necessary to ensure that the critical Signaling System 7 (SS7) network and the Emergency 911 (E911) network circuits are diverse and reliable. Verification checks are made, and new standards and performance requirements that are consistent with switching system generic software updates are incorporated. Audits are performed to identify possible routing diversity violations and to ensure action plans are being effectively implemented. As these networks are mature, planning is directed towards hardware and software upgrades, including new SS7 switches and E911 feature updates.

Voice Over Internet Protocol Services

Voice over Internet protocol service is planned to be provided on an overlay network, with the business case being driven by Marketing. Planning through first office applications for this technology is being conducted by NSTS.

Using ATM routers, VoIP architecture creates “islands of VoIP.” By employing the Internet protocol and by using Verizon facilities exclusively, these “islands” effectively function as “private networks.” The flagship VoIP initiative in New York State is a Softswitch cluster, an ATM “cloud-type.”

FTTP Service Offerings

Current plans call for high-speed broadband services—in conjunction with voice service—to be offered on the FTTP network, which will prove competitive with high-speed cable modem offerings. Multiple data speeds are to be offered, followed by deployment of a video offering “that would be very competitive with cable company offerings.” Such a video offering is anticipated within the next year or two.

FTTP Initiative

FTTP is intended to be an all-optical network, end-to-end. FTTP employs a Passive Optical Network (PON) design, whereby signals are cascaded through optical splitters. Decisions are still being made as to where active optical elements will be placed, as initially, service will be provided to customers only upon request.

B - FINDINGS

Finding V-1 Verizon NY Over Utilized The “Top-Down” Directive Part Of Its “Top-Down, Bottoms Up” Budget Process That Resulted In Unrealistic Expenses Budget Goals For 2003.

Verizon New York employs a "Top-down, bottom-up" budget process for the development of its Operating Budget. In its simplest terms this means that goals and targets are passed down from top management while the details of the budget to meet these goals and targets are built up or developed from the lowest levels of the organization to meet these targets. Theoretically, this allows the lower level operating units to develop a budget that they can realistically achieve, while still being governed by the targets set by top management.

DCI's review of Verizon New York's actual expenditures compared to their Commitment View Budget for the past three years (2001, 2002, and 2003) revealed that, while variances from budget were fairly small for the first two years (-1.1% and +9.3%), there was a large variance reported in 2003 (42.2%). The variance for each of the New York regions for 2003 was a substantial overrun, ranging from a low of 24.4% for the Capital Region to 46.2% for the Liberty Region, and a high of 58.0% for the Island Metro Region. (See Exhibit V-9)

The amount of the variance in 2003 indicates a serious budget estimation problem. In the absence of a substantial negative operational event such as major weather related occurrences, or a significant change in operating procedures and the way business is conducted, there was a serious disconnect between the "top-down" target and the "bottoms-up" detail estimates.

The most significant contributing factor to the expense overrun was that the 2003 I&M productivity was forecasted to increase from between 23.5% to 41.0% across the three New York regions compared to 2002. However, the actual productivity improvement in 2003 only increased from between 11.2% to 12.2% for the three regions. (See Exhibit V-11) The forecasted productivity objective would appear to be unrealistic for a one year improvement, considering the programs and plans to improve productivity. While the actual improvement was good, it was not in the range of what was forecasted. Indications are that the productivity forecast was a top down edict and not agreed to at the local operations level.

Finding V-2 Umbilicals That Provide Essential Customer Communication Paths And Signaling Links Between “Host” And “Remote” Switches Are Experiencing Some Degree Of Blocking, Thereby Placing Service In Potential Jeopardy.

Because the availability of a path between host and remote switches is so important to customer service, the umbilical interconnecting the switches is generally designed to a very low blocking criterion. This strategy is especially significant in the Capital District,

where a high concentration of remote switches serves rural areas. Switches serving local access transport area (LATA) 134, in particular, as well as LATA 136 evidenced levels of blocking that appear to be unwarranted, with a high degree of variability on a month-to-month basis, with June 2003 being especially troublesome. Finally, it should be noted that host/remote umbilicals are considered final trunk groups and should be reported to the Public Service Commission, yet it appears they are not.

C - RECOMMENDATIONS

Recommendation V-1 Base Budgets On Realistic Achievable Goals With Lower Level Operations Buy In and Follow Up To Ensure Goals are Achieved. (Refer To Finding V-1.)

Verizon claims to utilize a “top-down, bottoms-up” process in setting budgets. This is a good approach to budgeting. Budget targets should be achievable with improvements in expense reductions and productivity improvements tied directly to identified initiatives including new systems, new processes, or plant improvements that will allow managers to accomplish them.

However, to be successful it requires that lower levels buy-in to the premise that targets can be achieved. DCI recommends the following steps to accomplish this objective:

- Conduct cross functional commitment budget meetings at various levels of management to ensure that operations management and finance management agree on budget targets. Also conduct meetings between upper management and local management at the Market level to provide opportunities for dialogue and agreement that goals can be achieved and agreement on how they will be achieved.
- Develop tracking reports for management review on results of how new systems and other initiatives are being implemented, and on the results of these implementations.
- Conduct staff field reviews in locations not achieving the targeted results. These reviews would evaluate shortcomings in the systems, processes, commitment, and implementation.
- Implement action plans to correct problem areas with responsibilities assigned to specific managers as required. Provide for periodic follow-up to ensure that corrective actions are being taken and that they are having the desired impact.

Recommendation V-2 Determine The Quantity Of Umbilicals To Be Provided Between Host And Remote Switches Using Extreme Value Engineering (EVE) And Reduce The Degree Of Blocking Accordingly. (Refer To Finding V-2.)

Perform traffic analysis predicated on non-blocking criteria and add capacity to alleviate blocking between host and remote switches. Establish an objective for the average number of umbilical groups that could block each month that would be considered satisfactory from a service and cost standpoint. Also, define how many months in succession an umbilical group could block and still be regarded as satisfactory. (DCI believes this should not exceed one.) Develop usage tracking reports to be monitored weekly by Network Design, with an objective to implement immediate corrective actions

when blocking is detected. Reports should also be developed and monitored to ensure that any required additions are made as quickly as possible.