

## **VIII - BEST PRACTICES**

This chapter provides a general discussion on best practices, the identification of activities being undertaken in Verizon New York that are considered best practices, and a summation of those best practices identified from other industry sources. It will also summarize the processes used at Verizon to identify internal and external best practices. This section will assist in understanding the findings and recommendations that will conclude this portion of the report.

### **A - BACKGROUND**

#### **BEST PRACTICE PROCESS**

During the portion of DCI's review of retail service quality performance that dealt with Verizon New York's operational aspects, DCI sought to evaluate Verizon's best practice identification (BPI) process as well as to identify instances of best practice applications. It is the goal of the BPI process to identify best practices and to evaluate the impact they do, did, or could have on service and operations. The results of these best practices should not be a function of geography, plant conditions, or some other factor that could not be widely duplicated. Another goal is that the practices could be rapidly deployed to applicable organizations across the footprint. In addition, a monitoring and review process would be included to allow for tracking of the implementation's impact on service and operations. This monitoring and review process would also include provisions for modifications and improvements as enhancements were identified through more widespread deployments. Communication of the progress and any operational improvements would be an essential element of a best practice process.

Much of Verizon's best practice identification and implementation work involves information system replacements or enhancements. A formal process for these efforts begins each year in the May/June timeframe to review information systems work that is needed during the coming year. An initial list of possibilities is put together by the Verizon Telecommunications National Staff with input from: the field; the Remote Operations Staffs (ROS), who report centrally but directly support field operations; the involved lines of businesses (LOBs); and the supporting Information Technology (IT) organization. With field operations' input, the initial list is prioritized and business cases are developed for the undertakings that are thought to be viable. An iterative process is begun to prioritize the business cases, based on the needs of the field and the business, available funding, and the ability to execute. Some projects are considered mandatory and are given the highest priority. Many of the developments and deployments are multiple-year projects and must be funded each year to ensure they are carried out to completion. This identification process is normally completed in the fourth quarter and the undertakings selected are included as programs in the commitment view (CV) budget for the upcoming year.

However, best practice identification at the operations level to address process changes, workflow enhancements, and improvements to methods and procedures appears to be much less formal and has much less activity. Identification of these types of best practices, with the one exception noted below, appears to emanate from line manager initiatives to improve his/her results. The identification process begins with a review of peer results to find a location that appears to have a better operating process than the one in place under the incumbent line manager. In other instances, as managers are moved from one job to another (especially those involving the same responsibilities in a different geographic area), they implement “best practices” based on what worked in their former assignment.

### **BEST PRACTICES—PROGRAMMED SYSTEM DEPLOYMENTS—FORMAL PROCESS**

This section addresses the best practices that were identified with business cases supporting them. They are included as budgeted programs in the capital/expense budgets. Most of these best practices are large projects that require a significant commitment of resources across multiple years for development and deployment. Such projects are primarily systems deployments that are being conducted by the Network/National Operations organization, in concert with their IT support organization. Twenty-four of these programs actively existed in 2003 and 28 have been included in the CV budget for 2004. *Exhibit VIII-1* provides a summary description and the status of each program. As noted earlier, several of these projects are multi-year programs and will be shown in both years. It should be noted that business cases are not limited to system deployments, but rather cover any process change, workflow enhancement, or improvement that requires funding—capital or expense. The best practices listed in this section are limited to the development and enhancement (D&E), or “systems” business cases.

**BEST PRACTICE PROJECT DESCRIPTIONS**

<b>Year-Num</b>	<b>Project Name</b>	<b>Description</b>
2003 – 1	vRepair	In 2003, vRepair was initially piloted in New England (NE) and was subsequently fully deployed for non-design services in all of NE & NY. It fully replaced the Loop Maintenance Operating System (LMOS) in NY & NE.
2003 – 2	Two-hour Appointments	This project included VzWorks for the West (Alert console and Instant Messaging for DRC/VRRC/VOICe), Automation of the Dispatch Priority Matrix (AWAS) deployment changes for primary/secondary duties and work locations.
2003 – 3	CCI Analysis & Action Tool	Established the framework to predict the customer care index or change control identification (CCI) score a customer will provide to Verizon, based on previous history.

**BEST PRACTICE PROJECT DESCRIPTIONS**

<b>Year-Num</b>	<b>Project Name</b>	<b>Description</b>
2003 – 4	SABIT – GPS Reporting	<p>The Service Assurance Business Intelligence Toolkit (SABIT) is a Verizon system that provides high-capacity storage and reporting of operational information from a variety of systems, which combined form the fabric of the Service Assurance environment. Verizon Location Based Services (vLBS) are provided to both Verizon users and operational systems, based upon information stored in SABIT. SABIT enables Verizon staff to access information from different systems, all within one integrated environment. Typical information sources include AWAS and Work Force Administration System – dispatch out (WFA-DO (dispatch information for completed jobs)), global positioning system (GPS (geographic location of field service vehicles)), Intelligent Field Access System (IFAS (field terminal usage statistics)), and Testing (Scrubber). The purpose of this system is to equip Verizon management with a tool to identify opportunities for improving both customer service as well as technician productivity.</p> <p>Enhancements were made to the SABIT system in May and July, further augmenting its value to Verizon management. These enhancements included features such as, but not limited to: home dispatch review, vehicle activity, Verizon Landmark (captures visits to the central office and work centers), vehicle congregation, integrated sup/stop report (integrated supervisor summary of all associated completed job information along with the associated GPS stops), GPS Progress Report (score card), and the stop report, as well as non-business-hour vehicle usage report.</p>
2003 – 5	CXM (construction) Productivity	<p>Enhancements to the existing Construction Activity Measurement System (CAMS) Web interface were made to improve response time, to introduce a new dashboard, and to reformat reports. Expansion of the Quickview site into a one-stop information center for the Construction forces was conducted to allow for easier access to reports as well as audit and analysis tools.</p>

**BEST PRACTICE PROJECT DESCRIPTIONS**

<b>Year-Num</b>	<b>Project Name</b>	<b>Description</b>
2003 – 6	CAD Enhancements	During 2003, many enhancements to the Common Agent Desktop System (CAD) were made that supported the rollout of vRepair. As part of the CAD 2003 business case, Verizon also deployed Windows 2000 to all of the East desktops.
2003 – 7	Service Order Appointment Manager (SOAM)	Includes: functionality to better manage customer appointments; edits to restrict negotiators from assigning closed dates; and audit trails for negotiators who assign closed dates. All these functions result in decreased penalties owing to better appointment management.
2003 – 8	National Operations Data Warehouse/National Operations Results Mart (NORM)	NORM is a common repository for data and metrics that is used in Installation, Maintenance, and Customer Experience. Using Information Builders Web Focus business intelligence software, NORM provides a centralized, accessible, and easy-to-use platform for reporting, analysis, and distribution of standard and user-created reports. Through graphical and user-friendly interfaces, users can more quickly correlate data from different operational systems and apply uniform business rules to information from across the Verizon footprint.
2003 – 9	Due Date Manager in COPS West	This was cancelled. It was intended to provide a due date manager for customer premises equipment (CPE) work.
2003 – 10	Proactive Preventive Maintenance Tool (PPMT)	Deployed the PPMT system and application across the former GTE footprint. PPMT replaced the old Test Analysis Center (TAC) Focus System and TCAF. PPMT is the standard PPM system for Proactive Cable Maintenance (PCM).
2003 – 11	Damage Case Billing	Standardize and automate the damage management process, which currently includes various manual and semi-automated processes. Intended to improve and simplify the billing process and to reduce % Unbilled over 90 Days.

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<b>Year-Num</b>	<b>Project Name</b>	<b>Description</b>
2003 – 12	WFA-DO GPS Integration	Uses technician's current GPS location as enhanced travel time criteria in the WFA-DO load algorithm when dispatching technician's next job. Result: better appointment management.
2003 – 13	Frame Responder	The Frame Responder is an intelligent device that will enable field technicians to perform enhanced loop testing on "working" subscriber lines (wired through the switch), without the assistance of frame personnel. In addition, field technicians will be equipped with an Automated Remote Tester (ART). The ART device is an intelligent tester that provides both individual and macro testing (10-tone sweep, 22-tone sweep, enhanced fault location, line stress, etc.) at the network interface device (NID). The individual test commands will include provision for an open, shorts, etc. at the frame. All test data gathered by ART will be uploaded to the Frame Responder for forwarding to the SABIT database warehouse.
2003 – 14	Construction Scheduling	Standard tool to manage and schedule FTTP projects in outside plant (OSP) Engineering and Construction. Uses vBuild interfaces to ECRIS, case management center (CMS), RAMS, electronic communications gateway system (ECGS), vMobile, and Dispatch System.
2003 – 15	AWAS Server Upgrades	New hardware was installed for AWAS to replace the IBM S7A series, which was outdated and insufficient to handle the workload.

**BEST PRACTICE PROJECT DESCRIPTIONS**

Year-Num	Project Name	Description
2003 – 16	IFAS National Ops	<p>The scope of this initiative is to develop one standard Field Access System to capture existing functionality for the West and to provide a single Field Access System to standardize operations procedures and process flows across the Verizon footprint. This project will align Verizon East and Verizon West to use one application for I&amp;M dispatch and work processing, to include testing and facility management. Verizon West comprises all current AWAS users, including Telus. The application must pre-populate as much information from the various types of jobs and their associated job details as possible. This optimization will reduce errors as well as shorten the job status and timesheet process. The details pertaining to a job will only present appropriate fields that are applicable to the job, such as variations in information from host systems (including customer order processing system (COPS), order tracking and distribution (OTD), network operations center tracking system (NOCTRAC), trouble analysis system (TAS), assignment, activation, and inventory services (AAIS), and NOCV), during the close process. IFAS is a client/server architecture that will provide field technicians with remote access to installation and maintenance work. IFAS automates many facets of the installation/maintenance process flows, such as completed installation work modification, maintenance time and material billing, time reporting, facility management, and automated help for plain old telephone service (POTS)/Specials testing. These functions are performed in the downstream legacy systems, without the need for manual intervention. IFAS will be modified to interface to AWAS, the current backend system in Verizon West that performs the work manager/dispatch function.</p>

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<b>Year-Num</b>	<b>Project Name</b>	<b>Description</b>
2003 – 17	eRepair Enhancements	<p>In 2003, Verizon added the following new functionality into eRepair:</p> <ul style="list-style-type: none"> <li>• vRepair Conversion</li> <li>• Trouble-Specific Process Flow Improvement</li> <li>• New Connect Process</li> <li>• Digital Subscriber Loop (DSL) Repair</li> <li>• Repeat Process</li> <li>• PA Universal Satisfaction Statement</li> <li>• Ordering Inside Wiring Plans</li> <li>• Providing Status and Cancel to General Business (GB) Customers</li> <li>• Voicemail Resets</li> <li>• Auto Feature Repair</li> <li>• Repair Metrics Dashboard</li> <li>• Proactive Notification</li> </ul> <p>These changes have increased the usage of the system throughout the year.</p>
2003 – 18	Business Zone Updates	This project was to evaluate the feasibility of developing a Business Zone Matrix not contained in competitive management performance standards (CMPS). Deemed not cost-effective to continue.
2003 – 19	Admin/Offline Improvements	Enhanced Scrubber to perform testing and outbound calling on outage tickets. Automated requests for Schedule Trade and created an Offline Scorecard for the Verizon repair response center (VRRC).
2003 – 20	iConsole Enhancements	Deployed iConsole into the East, automated CCI match, enhanced VZ.com and referrals, and implemented many other Change Requests.
2003 – 21	Sell One More	This project is scheduled to be rolled out in NY in September 2004 to allow all Verizon employees to submit product referrals.

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<b>Year-Num</b>	<b>Project Name</b>	<b>Description</b>
2003 – 22	Work Plan Governance	Provided for various enhancements to the application used in monitoring and tracking project progression. Also provided a second instance of the application to be used by the Region Staff organization for monitoring and tracking projects as desired.
2003 – 23	mSupervisor	Mobile Supervisor (mSupervisor) encompasses the provision of 2,194 wireless enabled laptops to first-line field managers as well as the development of a Web-based application that will allow the local manager to perform administrative duties via a wireless/wireline device while in the field.  In 2004 the Web application Mobile Visor (mVisor) was available to provide the local manager with the ability to perform timecard approval/edits, quality inspections, and safety inspections. It also enables him/her to view employee job assignment and location information.
2003 – 24	DaVaR	Data Validation and Reporting System (DaVaR) is a process in which the technician uses a computer test set to download, test, and upload facility results to a “Gateway” group for database updates. This project is intended to improve the administration and reporting of pair recovery.
2004 – 1	vRepair	In 2004, vRepair will be fully deployed in all former Bell Atlantic (fBA) regions for non-design services. In addition, a pilot in former GTE (fGTE (TX)) for both non-design and design services will occur in the fourth quarter. Full deployment in the fGTE areas is currently slated for CA, Northwest, and HI regions.

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<b>Year-Num</b>	<b>Project Name</b>	<b>Description</b>
2004 – 2	SABIT – GPS Reporting	Three software releases are planned for the SABIT system to reduce administrative requirements and to enhance its real-time feed capabilities. These enhancements will provide management with added benefits. Management will be further equipped to analyze opportunities that impact customer service. Moreover, planned enhancements, such as the ability to view real-time job information in conjunction with technician location information, will allow management to provide timely coaching.
2004 – 3	Speech IVRU	This project's objective was to design, develop, and deploy speech VRUs, including a completely new architecture, by August 1, 2003. The scope included all VRRc and VOICE locations for the East jurisdictions of: NY, New England, PA, DE, NJ, and Potomac. The goals of the project were to: improve the customer's experience through speech technology's ease of use; improve the self-serve rate; deflect calls from the centers; and provide full-screen pop-ups of all data collected by the voice portals to the agents' desktops.
2004 – 4	Fluid Work Force	Accommodates and provides rapid transition among Construction, Installation and Maintenance (I&M), and PPM workforces to assist with the fluctuating workload. This strategy will result in a more efficient flow of work, an improved response time, and improved CCI and mean time to repair (MTTR) results. Hand-held terminals (HHTs) provide a mechanized process to pick up and close out work in real time.
2004 – 5	PPM Tool	PPMT system and application deployed in New Jersey, Potomac, and Mid-Atlantic by the end of April 2004; in New England, Island Metro, and Liberty by the end of July 2004. PPMT system and application will then be fully deployed across the Verizon footprint.

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<b>Year-Num</b>	<b>Project Name</b>	<b>Description</b>
2004 – 6	CXM Productivity	Enhances the existing CAMS Web interface to improve response time. Introduces a new dashboard and reformats reports. Expands Quickview site into a one-stop information center for the Construction forces, enabling easier access to reports as well as audit and analysis tools.
2004 – 7	AWAS IT Security	This project will make AWAS compliant with Verizon's Security CP-810 policy. Includes data encryption between systems.
2004 – 8	CCI Analysis & Action Tool	Displays the predicted CCI score to the repair associate and field technician.
2004 – 9	Associate Scorecard	Verizon will be providing a mechanized associate scorecard to the VLBSC and VOICe Centers. In addition, Verizon is looking at the current VRRC Scorecard. Currently, all data is collected monthly. Verizon will look to provide weekly data whenever possible.
2004 – 10	eRepair	The eRepair budget was cut for this year. Verizon is still in the process of determining what changes can be made this year. As vRepair moves west, Verizon will continue to update the system to match these changes. In addition, Verizon will monitor the system to determine whether FTTP has any impact on eRepair.
2004 - 11	Out-of-Service (OOS) Credit NY	Redirects the OOS credits in NY for reported TN/billed TN variances to a vRepair file, feeding directly to Customer Record Information System (CRIS). Retires the current aged PC-based platform.

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2004 - 12	mSupervisor	The focus will continue to be placed on further enhancements to equip the field supervisor with a suite of functionality, thereby freeing him/her to manage more of his/her work through the use of the Web application (in conjunction with his/her wireless-enabled laptop). The Web application mVisor will undergo enhancements in four releases planned for February, March, July, and November. Added capabilities will include scheduling of safety and quality inspections, timecard approval enhancements, printing and saving capabilities, and GPS integration, as well as usage statistics and hierarchical metrics for management performance measures.
2004 – 13	Test and Isolation	Provide a standard Demand Test Interface (graphical user interface (GUI)) for special circuits and TNs. Establish a Test Result database to improve isolation and dispatch recommendations and to provide testability reports and metrics to measure recommendation accuracy.
2004 – 14	STORC	Develop STORC East—to replace current StarMEM North and South applications—for switch update capabilities.
2004 – 15	NORM	Improves usability via “smart filters” and user-friendly reporting objects. Adds vRepair as source data system. Adds COPS data to West Provisioning domain. Retires Mechanized Trouble Analysis System (MTAS). Retires Integris Management Voluntary Separation (MVS). Adds Query Patroller software. Adds high-speed unload to support improved data request (DR). Adds report writing, which is also for use by “super-power” users.
2004 – 16	Damage Claims Web	Standardizes and automates the damage management process, which currently includes various manual and semi-automated processes. Improves and simplifies the billing process. Reduces % Unbilled over 90 Days.

**BEST PRACTICE PROJECT DESCRIPTIONS**

<b>Year-Num</b>	<b>Project Name</b>	<b>Description</b>
2004 – 17	Mechanized PWI	Enhances the vMobile East Workforce WEB application to open the lines of “electronic communication” by providing additional tools that would give field forces access to “Information on Demand.” This strategy would include mechanizing the T&M billing forms (PWI) and enabling access to methods and procedures (M&Ps), driving directions, e-mail, and damage claims.
2004 – 18	4 Walls Support	Provides enhancement to vMobileWeb so that I&M techs can process routines on network elements and so that time-sensitive billing for special services orders can be efficiently handled.
2004 – 19	Appointment Manager	No longer scheduled.
2004 – 20	Tollgrade Open Enhancements	Tollgrade’s LoopCare Opens Reduction feature will allow Verizon to identify non-standard CPEs in the Verizon network, thus reducing the number of false open-out Verification (VER) Codes that actually test OK. This proper classification results in a reduction of dispatches and repeat manual screenings. These test algorithms are also applied to CPE in the Coin & Private Branch Exchange (PBX) classes of service and protected service lines, thus saving operating expenses.
2004 – 21	SOAM	Continuation of 2003 project deployment to NJ, PA, MD, VA, DC, and WV.
2004 – 22	Map-Based AWAS	Creates a visual map for viewing work, technician truck location, correct failed address location, and location of trucks if GPS is activated.
2004 – 23	CAD Enhancements	In 2004, there are many changes in CAD to support vRepair and FTTP. Verizon had about 75 Change Requests from the clients, none of which are related to either of these two projects. They have been forwarded to the Development team for LOEs. The plan is to have these changes coded and delivered in the last quarter of 2004 so that neither vRepair West nor FTTP is impacted.

**BEST PRACTICE PROJECT DESCRIPTIONS**

<b>Year-Num</b>	<b>Project Name</b>	<b>Description</b>
2004 – 24	Billing for I&M – UMA	This project will provide the technician with the capability of billing market price for jacks and materials incurred on an installation or repair visit. Currently, all jacks are billed via universal service order codes (USOCs) in the CRIS systems. The billing system carries the rate for each USOC. The primary benefit of the UMA FID is the provision for real-time billing of installed material. This field identifier (FID) and process is currently functioning in Verizon South. The dependencies include, but are not limited to, upgrading of the provisioning system to accept a variable field and to bill the dollar figure provided.
2004 – 25	Can Be Reached	Provides additional customer contact numbers in an effort to reduce No Access. This project was bundled into the SABIT requirements for 2004.

**BEST PRACTICE PROJECT DESCRIPTIONS**

Year-Num	Project Name	Description
2004 – 26	VeCTR Enhancements	<p>Custom Relations (CR) enhancements are necessary to optimize system functionality for complaint handlers, for the customer relations support team, and for all LOBs that access the system for complaint data. The key enhancements allow CR to meet Commission requirements, to minimize complaint duplication, and to drive down the average handling time per complaint. The most critical enhancements are:</p> <ul style="list-style-type: none"> <li>• Multiple point of contact referrals and point of contact attachments</li> <li>• Building of a point of contact response sheet to assist in a correct complaint closure</li> <li>• Automation of populate key information needed on complaints</li> <li>• Provision of necessary reporting for quality and reporting integrity</li> <li>• Open complaint notification, reducing potential complaint duplication</li> <li>• Provision of building maintenance tables so that CR Ownership can become self-sufficient in their ability to make changes to the system without IT intervention. An essential result of such provisioning will be the reduction of maintenance dollars.</li> </ul>

**BEST PRACTICE PROJECT DESCRIPTIONS**

<b>Year-Num</b>	<b>Project Name</b>	<b>Description</b>
2004 – 27	VeCTR PA PUC Data Enhancements	The VeCTR application is used throughout Verizon to track and report on customer complaints. Verizon currently has automatic feeds with the NY, NJ, and PA State Commissions that are utilizing VeCTR. This project further enhances the functionality of VeCTR by allowing a daily reconciliation with the PA Public Utility Commission (PUC). Verizon faces problems if complaint information is not communicated to the PA PUC in a timely fashion. Without these reconciliation reports, Customer Relations has no means of determining how many complaints the PUC has referred, nor does the PUC have a means of determining how many responses have been sent back. Reconciling these data streams ensures that customers are not left without resolution to their complaints. It also provides a method for CR and the PUC to easily identify records requiring responses to the PUC and creates an early warning system for detecting system problems on either end.

**BEST PRACTICE PROJECT DESCRIPTIONS**

Year-Num	Project Name	Description
2004 – 28	Archive Data & VeCTR Blueprint	<p>Because of the increasing amount of data storage required and the growing quantities of State Commission supporting documentation that must be stored, the VeCTR System has reached the point where users will begin experiencing lethargic response times. As a result, there is some danger of overall system reliability being in jeopardy.</p> <p>VeCTR was developed and placed in service during 2001. To date, Customer Relations has been able to operate VeCTR within its original specifications and design. However, they have periodically been experiencing issues with the system's operating speed over the past year. They have been advised by IT that it is necessary to begin archiving files in order to prevent further deterioration. All routine methods of compressing data files have reached near exhaustion. If CR is unable to take corrective steps, the adverse system speed will begin impacting the average handling time productivity on each complaint and will ultimately affect user productivity and satisfaction as the system reaches saturation.</p> <p>CR must also consider that some State Commissions require CR to retain several years of complaint data. (Examples: PA/4-years, NY/5-years, and NJ/Current year + 15 years.) Continuing requirements from the NY and PA Commissions are causing CR to store additional complaint documentation, such as add-ons, rebuttals, lengthier closings, and precise topical/departamental analysis, thereby adding data storage requirements to the VeCTR system. As a result of this system overload, the Federal Communications Commission (FCC), PUC, and interdepartmental POCs will all be adversely affected by the inability to access the VeCTR system in a timely manner.</p> <p>In addition to this pressing need for system purging, there is also a critical need to solidify data so secure linkage between the VeCTR Complaint System and the Data Warehouse occurs. This solidification will ensure that data extracts match official report numbers, without the need for burdensome manual intervention to continually true up reports and respond to questions from the user community. Finally, much needed system documentation is paramount to assisting the user in efficient system usage and to providing operational security documentation that doesn't exist today.</p>

The genesis for much of the work depicted in *Exhibit VIII-1* is based on the “Service Assurance System Architecture Roadmap.” The majority of the Transition projects that will make East look like West (or vice versa) and that were required as a result of the Bell Atlantic/GTE merger were completed by 2003. There are no separate funding sources for Transition in 2004 and beyond (as there were in 2001–2003). The programs implemented in 2004 and beyond are selected based upon commitments to cost reductions, service improvements or revenue production. Having common systems across the entire footprint, while desirable, is in many cases cost prohibitive. In some cases, programs are phased in across the Verizon footprint throughout multiple years in order to fit within total Telecom annual affordability targets, as well to as allow time to adequately trial/improve the technology prior to full deployment.

### **BEST PRACTICES—FROM WITHIN VERIZON**

While conducting interviews, visiting centers, participating in “ride-alongs” with technicians, or reviewing documents and information requests, DCI identified a number of Verizon activities that we considered to be “best practices” in addition to those formally listed by Verizon New York. These identified best practices are discussed below, in no particular order of importance. Rather, they are brought up randomly to illustrate some of the things that fall outside the level of the formal programs included in the previously discussed programmed system deployment. The best practices noted here address process changes, workflow enhancements, and changes to methods and procedures. Furthermore, they range in application from footprint-wide to a second-level manager group, or to a single center.

#### **1. Dispatch Resource Center (DRC) Results Matrix**

This first best practice is a tool used to identify best practices. It is followed by the DRC, which holds the responsibility for dispatching the I&M load and managing the technicians who are charged with either installing new service or repairing existing service for customers. The DRC can also provide dispatch and control for technicians involved with the proactive maintenance of the outside plant. At the national level, 51 DRCs are operational, with 11 of these located in New York.

The National Verizon Staff for National Operations (now, with the reorganization, called Network Services) supporting these centers developed the DRC Results Matrix to capture selected weekly and monthly metrics for the centers. This matrix will serve as a means of facilitating comparisons. Results that clearly stand out, and appear sustainable over time, are highlighted. In concert with the ROS, an analysis is made to identify a best practice that might be contributing to the accomplishments, and communications for implementation are made to the remaining DRCs. According to Verizon NY, in addition, ROS is responsible for sending best practice findings to the Network Services Group (NSG) for its review and for advising other Verizon regions of the potential opportunities for improvement created by these best practices.

## **2. Suffolk Operation Progress (SOP)**

Throughout the New York area, the Service Excellence Plan (SEP) is used to measure the quantity and quality of the outside technicians' performance. The SEP is viewed by some managers as being administratively intense and inconsistent in application and enforcement. Seeking a better way, or a best practice, several of the managers in the Suffolk County area of Long Island made a decision during October 2003 to visit some of their counterparts in Pennsylvania. They selected the location based on an analysis of the results being attained, on a comparable serving area, and on having "heard" that some good and different things were being done. As a result, they returned to Long Island and developed SOP. As part of the continuing effort to implement best practices identified in one area throughout the state, Verizon is currently conducting a trial of the practices developed in Suffolk as a complement to the SEP. While the SEP focuses on team results, SOP would focus on the individual results as outlined below.

SOP provides for a Global Positioning System (GPS) analyst position for each second-level manager group. The GPS analyst is charged with performing daily informational analysis of this system. When associates are identified who seem to warrant special attention, the data is immediately furnished to the involved line manager for further investigation and personnel actions, as appropriate. In addition, a Resource Manager was introduced to relieve the line manager of much of the administration that is required. Automation was developed to provide a system that facilitates this work and tracks most of the administrative items. Thanks to these positions and the automation functioning, the line managers are able to spend the vast majority of their time in the field, working with and assisting the technicians. The first-level managers receive daily information, which details work completed the day before, from their technicians. First-level managers are expected to discuss the technician's results in "real time," providing coaching or scheduling training as needed. In contrast, SEP called for discussion of results on a monthly basis. Preliminary results have been encouraging, with month-by-month improvements shown in the quantity of work accomplished, with no deterioration of quality.

## **3. Installation Dispatch Avoidance**

During one DRC visit, an associate was performing a review of the installation orders to be dispatched that day. The best practice she was using was simply one of identifying orders that could be completed without dispatching a technician. She was then able to pull the orders from the dispatch pool, complete them through the systems, and provide the customers with the specified service. Furthermore, she was also able to contact competitive local exchange carriers (CLECs) on winbacks and CLEC-to-CLEC transfers to get the serving pair released. This allowed the end-user customer continued service on the existing facility, thereby avoiding a dispatch to establish service on a new facility. As a result of these activities, more than thirty costly installation dispatches are avoided daily, with no adverse effect on customer service.

#### **4. Cable College Associate Training**

With the recent force losses, a great deal of outside technician experience was lost in some locations. As a result, the “cable college” program has been re-instituted to serve locations in the Capital Region. This program, imported from the old Bell Atlantic Company, had been started in a few locations but was later totally abandoned. The re-instituted training is focused on advanced cable splicer and cable maintenance capability. As presently configured, it contains three modules: one for new technicians, one directed at cable maintenance technicians, and one for advanced cable splicing.

#### **5. Proactive Preventive Maintenance Center (PPMC)**

Preventive maintenance plays a key role in sustaining customer service, especially as it relates to the OSP. The centers that support this effort with analysis, dispatch, and tracking were operational in two of the three regions. In the Capital Region, the functions had been moved to the DRCs, where proactive maintenance competed with efforts to meet the requirements of the daily demand load. Recognizing that this loss of concentrated focus was making the PPM program less effective than it could be, the region elected to re-establish the PPMC, a best practice from the other New York regions. The center will be set up in conjunction with the deployment of the new Proactive Preventive Maintenance Tool (PPMT), now scheduled for second quarter 2004.

#### **6. Wireless Order Delivery for Central Office Employees and eCOT**

Verizon is testing this capability in several New York offices. Certain technical issues have prevented completion of the trial and Verizon has yet to gather and analyze sufficient results to determine whether this process will be effective or whether to continue this process on a permanent basis in any offices. Wireless Order Delivery allows the central office technician to pick up and close out work and to perform tests without having to go to a printer or terminal location. These capabilities will save the technician time and will allow for faster customer response, as the required work functions can be obtained from anywhere in the office. As part of the central office (CO) system enhancements, a system called enabling (the) Central Office Technician (eCOT) is also being deployed where LANs are in place. This capability replaces the COT’s multiple logins for the various systems with a single sign-in. The technician is provided with a single interface via eCOT and with mobility by wireless order delivery.

#### **7. Trouble Report Volume Reduction**

A best practice process was brought into the Liberty Region from the New England Market Area. This best practice changed the procedures for preventive maintenance that were aimed at reducing customer trouble reports. This strategy was a twofold change that had proven to be very successful in the Boston area. The first change used analyzers to identify poor-performing plant locations as opposed to almost exclusive reliance on field identification. The analyzers were able to use fact-based decision-making from detailed data analysis to prioritize the worst-performing plant. After identification, these locations were dispatched to technicians who either fixed them or made a determination

that an Engineering authorization would be required. The second change involved identification of specific cable counts, where large numbers of pairs are being changed on demand dispatches (installation and repair). A trouble report analysis and a PREDICTOR run were conducted on the location to develop a repair package that would recover defective pairs. At the same time, the condition that was causing the pair swaps was repaired.

### **8. On Time Performance (OTP) for DS1 Service**

Provisioning for DS1 service is a major part of special services work in New York. Consequently, this activity is a significant contributor to the State's OTP results and goes a long way towards meeting the Public Service Commission's (PSC) special services metrics. The vast majority of the service is provisioned on copper plant, but it was often found that the facility would not support the service when the technician was dispatched on either the plant test date (PTD) to test it or the due date to install it. As a result, there was rarely time to recover, so the due date was missed. A team effort was undertaken by Engineering, Construction, and Special Services Operations to test and, if necessary, correct any facility faults and record problems. This effort ensured that the facility would support the service before all the work was done, thereby greatly enhancing the likelihood of meeting the due date.

### **9. Improving Attendance**

In one center operation the consultant team visited, Verizon NY management is addressing attendance with monthly conference calls that involve all the centers within the Director's organization. From these calls, management takes initiatives that seem to work in one center and quickly moves them to all centers. Furthermore, management is reviewing results from comparable operations in other states and calling or visiting those that have obtained good results. As an example, a Virginia center was identified where "National Health Days" are held with commensurate center activities. Management is trying to move these and other comparable programs into the New York centers. At the same time, they are focusing on the basics of documentation and follow-up as well.

### **10. Use of Dedicated Inside Plant (DIP)—Switch is Connected to Outside Plant Pair**

The copper facility serving a customer may be found defective as a result of a technician dispatch in response to a customer trouble report. An installation dispatch may also find that the assigned facility is defective. In some instances, these facilities can be readily repaired by the technician in the field. In many other cases, however, a decision is made to "change the pair" and move the service to a "good" facility. This strategy would ordinarily require the outside technician and the central office personnel to coordinate the change, with the installation and repair (I&R) technician making the changes in the outside plant and the CO rewiring the frame to cross-connect the customer's originating equipment (OE) in the switch to the new cable pair. However, software tables have been changed in some Verizon NY offices that allow the use of DIPs on the pair changes. In this instance, the OE is already cross-connected to the pair selected for the change. Consequently, no frame wiring is necessary; only a software change is required to

associate the customer's telephone number with the new OE. Application of this best practice may not be possible in some central offices in view of issues unique to those offices (such as, for example, amounts of available spare office equipment in the office).

## **B - FINDINGS**

**Finding VIII-1      While There Are New Systems Being Deployed To Assist Field Technician’s Productivity And To Improve Operations, Implementation And Follow-Up To Ensure Field Adaptation Is Inadequate.**

“Field techs are not required to use their CAT and stop sending paper. Field techs themselves are deciding to use the CAT to receive or clear work driving wasted calls (sic) the time taking to dispatch.” An analysis was made of usage on the Integrated Field Access System (IFAS) for Verizon New York operations. *Exhibit VIII-2* shows the percent usage of IFAS by month for a three-year period.

**Exhibit VIII-2**

### **PERCENT IFAS USAGE—NEW YORK**

Month	2001	2002	2003
January	70.00%	67.00%	62.00%
February	68.00%	67.00%	67.00%
March	67.00%	65.00%	66.00%
April	66.00%	67.00%	64.00%
May	67.00%	60.00%	73.00%
June	66.00%	62.00%	63.00%
July	64.00%	61.00%	60.00%
August	65.00%	54.00%	50.00%
September	64.00%	55.00%	54.00%
October	64.00%	56.00%	58.00%
November	63.00%	57.00%	57.00%
December	61.00%	60.00%	54.00%
Yearly Average	65.00%	61.00%	61.00%

The Field Technician (FT) IFAS usage shown in the preceding table indicates FTs are not fully utilizing the terminals to close out orders and trouble reports. The percent usage is determined as follows. The numerator is taken from WFA and is a count of all dispatched orders and troubles closed through the IFAS portal. The denominator is also taken from WFA and is a count of all dispatched orders and troubles closed, regardless of who closed them. In an explanation of why the indicated usage was so low, it was pointed out that “there are additional factors that affect this performance.” In general, these factors could be attributed to special studies being done by the DRCs that require live close-outs so that on-the-spot analysis can be done. In addition, DCI also notes that CXM Field Technicians loaned into the demand load are not equipped with CATs and

would contribute to lowering the percent usage. While these “special” situations may account for some of the monthly variability seen in *Exhibit VIII-2* above, the overall usage indicates that FTs are not fully utilizing the terminal for closing out work. This results in lost time by FTs for calls to the DRCs and lost time by associates in the DRCs. While an AOM reported that an “estimated” 85% of the FTs are using the CAT, it was not apparent to DCI that any program existed to identify those that were not using it or were inconsistent in its usage, which would provide the basis for management follow-up.

The Direct Access Test Units (DATUs) that have been installed in selected COs allow the FT to make tests on working lines without assistance from the CO personnel. This capability allows the FT to proceed without having to wait on a response from the CO, thus improving productivity and customer service. DCI requested information on usage of this capability, which is presented in *Exhibit VIII-3* for selected central offices. The usage is for a ten-month period spanning April 1, 2003 through February 1, 2004. The DATU usage data is a count of the number of times that someone dials into the unit.

**Exhibit VIII-3**

**DATU USAGE IN SELECTED COS**

[ redacted ]

*Exhibit VIII-3* indicates inconsistent usage by FTs. DCI would anticipate that, with full utilization by the FTs, there would be some correlation between the number of calls into the unit in a CO and the number of access lines working in that CO. However, as can be seen from the above exhibit, there is little, if any, relationship that can be identified between usage and lines in service. DCI believes this to be reflective of either inconsistent usage by the FTs or DATU problems that would prevent the Field Technicians from using the system. In either case, the operations improvements are not being achieved. Again, it was not apparent to DCI that a program existed for determining the causes of the inconsistent usage. In a related system enhancement, Frame Responder units are being installed in a number of central offices throughout Manhattan as a replacement vehicle for DATU. While the new units provide enhanced capabilities, if the system is not utilized, the operational improvements will not be achieved.

During 2002 and 2003, GPS was deployed in I&M Field Technician vehicles. However, as reported in the Operations Analysis Team review that was made of the Island/Metro Region in March 2003, the “AOMS felt it was being used, but not to its potential. Local Managers generally reported using it, but reports did not substantiate it. GPS Administrators agree with our observations.” In November of 2003, it was noted that a best practice imported from Philadelphia will provide a GPS Administrator with the capability to collect and feed data to the Local Manager. Eventually there will be one analyst per AOM to allow for more real-time monitoring, as opposed to the weekly and monthly summaries now being performed. This methodology indicates that a major system deployment was conducted without supporting processes and procedures for its utilization. Either staff support to the field was inadequate or the practices and procedures were not developed.

While there have been a number of enhancements and new system deployments in Verizon NY, “getting them used properly is a big issue, bigger than any unfunded programs that an LOB might have.” These examples indicate significant problems with the implementation of new systems. Either training is inadequate, usage is not being required, or the system is not performing. In any case, there is inadequate follow-up as to the cause.

**Finding VIII-2      There Is No Identified Process In Place To Identify, Develop, And Deploy Operations Best Practices That Would Address Process Changes, Workflow Enhancements, And Improvements To Methods And Procedures.**

Information systems or other program-level best practices (those that are included as programs in the budget) are being identified, designed, and funded by a Business Case process that appears to be working well. As noted in the *Best Practices from Within Verizon* section above, a number of excellent activities were identified that DCI considered as best practices. However, in most instances, they were the result of a line field manager recognizing a need within his/her organization and starting a search for ways to improve by reviewing peer organizations’ results. In others, they were the result of the transfer of a manager, who brought with him/her some things that had worked well in their previous assignments to a similar position in a new location.

The lone exception DCI found is identified as a best practice and an example of how a best practice identification process could work at the operations level. That example was usage of a scorecard that was developed and implemented by the Network Services Group National Staff in support of the DRCs. The scorecard provides a comparison of metrics across all the DRCs. The “process” includes frequent conference calls to compare results and to discuss the reasons for those that stand out. It also includes communication to the DRCs on changes that need to be implemented to improve overall results. On a continuing basis, the scorecard provides a follow-up mechanism to determine if the intended results have been attained, and if not, why.

Aside from the above practice, DCI saw little evidence processes exist to identify, develop, and deploy operations best practices (aside from information system related

practices) that would address process changes, workflow enhancements, and improvements in methods and procedures. In response to a review of DCI's background drafts, Verizon provided additional information relative to the Quality Management Program, in particular, that DCI was unable to verify during our earlier interviews and observations. Verizon NY has stated the following:

“The Domestic Telecom Quality Management System and related Quality Strategy business improvement methodologies provide a formal framework for process improvement, organizational learning, and sharing of best practices in all areas of the business, including New York State. In addition, Quality Forums and Consortiums are conducted with Verizon employees nationwide—including New York—to facilitate sharing of best practices. Verizon organizations use these tools, forums, and consortiums to help them focus on best practice sharing so as to drive continuous improvement and high performance. In addition, learning and best practice sharing are embedded in the way Verizon work units operate day-to-day and are practiced at personal, team, and work-unit levels. Sources for learning include employees' ideas, best practice sharing, benchmarking, customer input, and research and development.”

**Finding VIII-3      Operations Support Staff Activity Is Inadequate To Provide Sufficient Support To The Field In Relation To The Implementation Of New Systems And The Provision Of Adequate Follow-Up.**

DCI requested copies of compliance/staff reviews that were conducted in 2003. The response provided Remote Operations Staff (ROS) reviews for the Island Metro Region. For I&M, four reviews were furnished, the first of which was performed in December 2002 and the last in May 2003. In addition, there was an “ad hoc” customer contact review that was performed in May 2003. For CXM, four reviews were furnished, with the last one dated June 2003. Six reviews were furnished for the DRCs, the first of which was dated November 2002 and the last in June 2003. Three of the reviews focused on the Bronx DRC.

DCI was also furnished with a copy of the Operation Analysis Team (OAT) analysis of the Island Metro Region, which was conducted during the period spanning March 11 to April 2, 2003. The OAT consisted of subject matter experts in all aspects of the organization who were drawn from various locations throughout Verizon. Their purpose was to conduct a thorough assessment of all aspects of the organization, based on the following mission statement: “Partner with the Island Metro Team to perform an unbiased analysis of the planning and execution of their processes, practices, and procedures. The Team's goals are to identify strengths and areas of opportunities and to develop defined action plans that will enable the Team to obtain key objectives.”

This operations support staff activity is not adequate enough to provide implementation of new systems support to the field nor is it sufficient enough to provide adequate follow-up. (Refer to *Finding VIII-1*.) Deployments are not being followed up on to determine the cause of deficiencies in utilization.

**Finding VIII-4**      **There Are A Number Of “Best Practices” From DCI Industry Experience Not Identified At Verizon NY.**

To provide the most currently relevant best practice information to Verizon, the consulting team supplemented its knowledge with input from outside sources. Interviews were conducted with several representatives from other regional Bell operating companies (RBOCs) and with an executive from a national vendor to identify industry best practices being used, or planned for use, that might be applicable at Verizon, NY. These interviews captured a number of potential best practice opportunities from United States applications, as well as some that are being pursued internationally.

**1. I&R and Cable Maintenance Measurement**

Productivity and quality are being addressed through a system that has been developed in concert with the United Parcel Service (UPS) Professional Services organization. To determine statistically-valid times for both installing and repairing service, the UPS consultants rode with a number of technicians. (Roadblocks were identified and statistically quantified as part of the riding exercises.) Time and motion studies were conducted as part of this process, and standard times were developed for the various types of orders based on service order information (USOCs and FIDs). Likewise, standard times were developed for dispatched trouble reports based on disposition and cause codes. Moreover, RBOC personnel were trained to conduct the time and motion studies. In addition to having participated with the UPS personnel in a number of rides, they also conducted independent riding exercises.

Cable maintenance and DSL have been addressed in the same manner. Standard times are then used to measure technician productivity. The overall measurement plan measures technicians in three areas, which are then aggregated for an overall result. Productivity, as a percentage attainment against standard (based on the time and motion study work), counts for 50% of the overall measurement. Dispatch efficiency, defined as a percentage of jobs that result in service being installed or trouble being cleared on the initial dispatch, counts for 25% while seven-day repeat reports account for the remaining 25%.

This three-part measurement is aimed at improving productivity through the use of statistically-valid times and at recognizing that “jobs” are different. At the same time, it strives to encourage “good” dispatches that result in orders worked or troubles cleared without multiple dispatches. The repeat report measurement provides a quality component to the overall measurement. It was noted that the standard times could be tailored for whatever level within the organization is desired, but a second-level manager group would likely be optimal. A significant side benefit of this process has been the detailed identification and quantification of the effect of roadblocks on productivity and customer service.

## **2. Measurements for Other Organizations**

The approach noted in the preceding best practice is being used with RBOC central office forces and for outside technicians who are dedicated to special services, although additional rides and further time and motion study work are being conducted by RBOC management employees. An effort is also underway in a control center to apply the same techniques to measuring center work. This effort is somewhat complicated by the diverse number of jobs this center's personnel tend to handle. However, it is believed that standards can be developed that will cover all the jobs, or at least the vast majority of them. It was noted that further mechanization will be needed as well, as the process for developing the standards has turned out to be rather labor-intensive. Furthermore, the focus of the RBOC's management has been greatly intensified, as this process involves a number of steps that require extensive management engagement and follow-up.

## **3. Outside Plant Engineering**

The Engineering organization uses a system that allows for tracking all jobs and their statuses. Engineering work authorizations are developed using computer aided design (CAD) techniques and all plats/prints are maintained in a digitized database. On a periodic basis, CDs are developed from this database and are furnished to the outside technicians for their use in clearing trouble conditions. (The technicians can read the CDs in their terminals, which are hardened PCs that are capable of being submerged in water, of withstanding extreme temperatures, and of being dropped onto concrete from heights of four feet.)

## **4. Construction**

As work is designed and released, it is "encoded" to a system that is used by the Construction forces. This technique enables Construction to keep track of all work in progress, the time remaining on each job, and cable and other material on hand. It also serves as a measurement vehicle for the technician. Based on thousands of samples taken from the system, a standard time has been established for each work step the technician is to perform. From the encoding that is performed from the Engineering authorization, the technician is measured on percentage attainment of standard times.

## **5. An Alternative Approach to I&R Measurement**

Using the data available from the various RBOC systems, an effort has been undertaken to develop standard times for installation orders and troubles. A geographic area is defined to provide a level playing field so that technicians will be measured against standards that are developed for similar conditions. Data is then accumulated to develop standard order times for the selected geography, based on service order information (USOCs and FIDs), and for troubles, based on disposition and cause code. The number of orders and troubles measured will be very large, providing statistically-valid standard times. The standard times can be continuously updated, if desired, or the data can be revisited periodically. This approach contains both pros and cons in comparison to the UPS method discussed above. Obviously, the standard times will be valid because no

sampling is involved. Conversely, the standards developed will be averaged from whatever level of productivity is being attained from the geographically-selected aggregation. The “ride with” approach is more likely to capture what is “possible” than what the existing average is. It is also more likely to provide an opportunity to identify roadblocks and to quantify their impact. Being able to prioritize roadblock removal and quantify the impact on productivity should be of enormous value. As noted, the database approach better lends itself to updating than the “ride with” approach does.

#### **6. Dial Tone on Connected Through (CT) Facilities**

Until a few years ago, a common practice was to leave dial tone on pairs that were connected through to a customer premise when the customer disconnected service. This would allow a new customer to reach 911 as well as a Verizon NY business office (to order new service). With additional competitors in the market, this practice of allowing a customer to contact Verizon NY’s business office was discontinued after complaints by the CLECs maintained that it afforded the incumbent local exchange carrier (ILEC) an unfair competitive advantage. Instead, customers would get a taped message informing them to consult their local directory for an available local exchange company. Subsequently, Verizon NY discontinued this practice. While CT pairs without dial tone are maintained, they are subject to being used by technicians in the field, as the perception is that because there is no dial tone, the cable pair is vacant. In addition, the cable pair is more likely to develop trouble because the “sealing current” is not maintained on those cable pairs without dial tone. A number of locations have returned to this practice, and Vermont has mandated that it be done (Vermont Telecommunications Plan August 2000). Given the loss of access lines in New York, there should be originating equipment available in the central offices to perform this mandate with minimal capital required.

#### **7. Pre-CT and Re-CT**

In concert with the dial tone on connected through facilities discussed above, aggressive programs are being undertaken to pre-CT multi-family locations. Furthermore, aggressive programs have been put in place to identify cross-boxes with high installation visits and then provide sufficient facilities to re-serve these areas with dial-tone CT facilities. These efforts are aimed at preventing dispatches to high-churn, multi-family locations, nursing homes, college campuses and the surrounding areas, and seasonal locations to the maximum extent possible.

#### **8. Scrubbing the Installation Load**

In the Dispatch Resource Center at the Capital Region’s Garden City, DCI found that an associate was reviewing the installation orders and removing those that could be made into a non-premise visit order. However, in one RBOC, a software program exists that pulls the installation orders from the service order dispatch flow and electronically makes many of the same comparisons that the Verizon associate is making manually. Orders that are questionable are dropped out for an associate review to either change the status or return them to the dispatch pool. In this manner, not only are unnecessary dispatches

removed from the daily load, but database discrepancies, which in many instances caused the order to be dispatched, are identified and resolved to prevent recurrences.

### **9. Integrated Approach to Dispatching**

An integrated dispatch system is being deployed in the US and internationally. This system replaces the functionality of Work Force Administration System – control (WFA-C), Work Force Administration System – dispatch out (WFA-DO), and Work Force Administration System – dispatch in (WFA-DI) with a new dispatch engine that supports both POTS and special services. GPS is integrated with the dispatch platform, as is a system that provides field technician access via a laptop computer, either wirelessly or over a landline.

### **10. Uniformity of Process**

In one RBOC, a group has been formed at the National Network Operations Staff level to review processes being used in the various centers, to determine what is considered to be “best practice,” and to implement it across the company. This group has the backing of upper management to ensure that the implementation is performed and that it is used until an agreed-upon new “best practice” is invented. The RBOC is reaping the benefits of more uniform and efficient approaches as afforded by the best practice. Best practice implementation is also allowing for creativity and innovation through sponsored trials that can be given a thorough review for becoming the next best practice to be implemented.

### **11. Addition to the Management by Objective (MBO) Process**

In one RBOC, as objective setting for the MBO process is undertaken, each first-level manager is charged with identifying one thing that he/she and his/her group is going to totally commit to “fixing” during the year. This decision is made part of the MBO agreed-upon objectives. As an example, a first-level group that had some serious safety problems during the preceding rating period could decide to make this an area that will be absolutely corrected during the upcoming period. As another example, a group might decide that there is a real issue with quality as measured by seven-day repeats, and they might declare this as an absolute “fix” objective.

### **12. Wireless Craft Access Terminals (CATs)**

The use of wireless craft access terminals to receive and close out work is being used by the I&R and cable maintenance technicians in an RBOC. The terminals also have access to other systems that allow the technicians to make pair changes without assistance, to automatically initiate tests and receive the test results, and to make line and station transfers without center assistance. The technicians can accomplish tasks from the vehicle, which is equipped with a docking station that allows the terminal to use the vehicle’s battery, thus conserving the CAT’s battery life. The terminal can be used away from the vehicle at a cross-box or terminal, for example, if this capability is desired. A capability is also provided to use a landline facility in the case where a wireless failure

occurs or in the event that the technician happens to be working in an area with limited coverage.

### **13. Printers for Technicians**

In concert with the wireless CAT discussed above, a printer with eight-and-one-half- by eleven-inch paper capability has been installed in the docking stations. When the CAT is placed into this station, it is automatically connected to the printer. This capability allows the technicians to print instructions as well as methods and procedures, to make copies of bills for customers, and to print feature instructions for customers. Pertinent information for troubles and installations can also be printed if desired.

### **14. GPS Emergency Response Capability**

In one RBOC, technician vehicles that are equipped with GPS are provided with two emergency response capabilities. The first is a button located under the driver's seat. When pressed, a signal is sent to a 24-by-7 Network Operations Center that activates an alarm indicating that an emergency exists with this vehicle. The second is a remote device that the technician can use to signal an emergency when outside the vehicle. The emergency alarm takes precedence over all other alarms and the center personnel have been thoroughly trained on the proper responses.

### **15. Hands-Free Telephones for Central Office Technicians (COTs)**

While conversing with outside technicians or other CO personnel, much of the work done by the CO personnel requires the use of their hands. With regular handsets, the COT is often required to leave the line, perform a work function, and then return to determine if the desired effect was accomplished. In some instances, this process is performed multiple times and extended distances are traversed to get from the telephone location to the equipment location and back. The capability provided by this technology allows COTs to perform their work functions on the equipment or the frame while simultaneously conversing with the supported person or persons. This added capability should result in time savings and improved customer service.

### **16. Preplanned Work for Demand Load Technicians**

In some instances throughout the year, especially during the more lightly loaded winter months, the demand load will be "caught up." During these situations, the dispatch centers have several options for productively putting the technicians to use. In some instances, they may choose to dispatch on installation orders that have flowed through so as to "verify dial tone," or they may dispatch on trouble reports that are legitimately tested as OK by the system. Assuming the systems are working correctly, these dispatches will be wasted.

In other situations, the dispatch center may decide to open futures, meaning they are dispatching on jobs that are due the next day or beyond. This decision will tend to drive up the "no accesses" because the customer is not expecting the dispatch. More wasted dispatches will result.

In at least one RBOC, a best practice used to mitigate this situation requires each first-level manager to have a detailed, prioritized list of routine work available at all times that has been surveyed and is known to be workable. The dispatch center and the first-level manager coordinate to put the demand technician on the routine work desired by the first level. In this way, routine dispatches should be controlled, the technician should be put on work that is known to be productive, and the technician should get credit for the work in the system.

### **17. Tracking Productivity and Quality for CXM Technicians Loaned to the Demand Load**

Instances exist when it will be essential to loan Construction technicians to work on the demand load. This inevitability is especially true during periods of intense weather that result in high trouble report conditions. To determine the effectiveness of this practice, it is necessary to measure the productivity and quality (repeat reports) of the technicians involved. A best practice that allows such measurement is being conducted in a telephone company, whereby the loaned technicians are set up in the system with special pre-assigned technician numbers, so their dispatches, hours, and repeat reports can be captured. With this information, it should become possible to make informed decisions concerning training, the number of technicians needed, and the type of dispatches for which the loaned technicians are best suited.

### **18. Cellular Telephones for Technicians**

At one RBOC, all customer-facing outside technicians are equipped with company-provided cellular telephones. This includes the I&R POTS and special services technicians. The technicians use these phones to contact the customers to advise of them of their arrival time, especially if they are delayed. They can also call the COs or the centers for assistance from their cell phones, and they can contact other technicians or management when they need field help. In some instances, the POTS technicians will use the cellular capability as a pseudo test set. The biggest advantage to cellular access, however, is the ability to leave a callback talk number as opposed to a pager number. Inbound calls to the technician from the centers or their management are greatly facilitated. Special rates could be negotiated with the cellular provider and a minute-based rate plan known to be in effect would allow the technician “reasonable minutes” for what appear to be personal calls, although this perk does require some monitoring by management. Typically these calls are placed home, advising family of changes to the work schedule and the like. The technicians like the freedom provided by the cell phones and they advise that such access not only helps them with their customer contacts but also aids them in their productivity.

## **C - RECOMMENDATIONS**

### **Recommendation VIII-1 Include Objectives For Usage In All System Enhancements And New Deployments And Provide A Capability For Monitoring Compliance. (Refer To Finding VIII-1.)**

Every enhancement and new deployment must include objectives for usage and provide a capability for tracking with defined milestones as deployments are being made. Follow up by line management and reviews by the staffs are essential to ensure the systems are used as intended. In this manner, the benefits of the investments made can be realized and reflected in improved customer service.

### **Recommendation VIII-2 Provide Staff Subject Matter Experts (SMEs) At The Network Services Group National Level Who Will Be Empowered To Review Various Centers And Work Groups To Determine “The Best Practice” For A Particular Process Or Operation. (Refer To Finding VIII-2.)**

The best practice should then be deployed and implemented across the footprint to gain consistency in both methods and processes. The deployment should include metrics to ensure that the desired purpose is being accomplished and to provide a basis for determining the degree of implementation in locations that are lagging. As additional improvement opportunities are identified, the SME group should act as a clearinghouse to ensure they are consistently implemented.

Experience-sharing forums, whether face-to-face or via conference calls, should be championed by the appropriate staffs. Such sharing should be based on results-oriented accomplishments and should be preceded by a staff review of the organization achieving the results to ensure that the underlying best practices are capable of duplication. Key metrics should be identified for tracking purposes to ensure implementation is consistent across the affected groups.

### **Recommendation VIII-3 Increase And Focus Staff Reviews On Best Practice And System Implementation. (Refer To Finding VIII-3.)**

Situations of inadequate system utilizations need to be followed up on to identify causes and solutions. DCI believes that additional OAT-type peer reviews would be of significant benefit for any organization using the OAT mission statement as quoted above. However, the resulting defined action plans must be followed through to conclusion to ensure the potential benefits identified by the team are gained. Periodic reports, with measurements, should be required of local management until the plans are implemented and effective.

**Recommendation VIII-4 Investigate Each Of The Other “Best Practices” For Possible Adoption At Verizon NY. (Refer To Finding VIII-4.)**

Verizon NY needs to investigate each of the identified “best practices” for possible adoption at Verizon NY. DCI has identified 18 different best practices, although some of them address similar issues and could be combined for analysis purposes. Therefore, DCI expects that Verizon NY might combine some of these best practices recommendations to develop both qualitative and quantitative procedures, including cost/benefit analysis, for the implementation of those best practices that prove beneficial for improving service quality at Verizon NY. DCI’s recommended order of priority for Verizon NY to investigate these best practices is shown in *Exhibit VIII-4*. A high, medium, or low priority has been assigned to each recommendation as follows:

- A – **“Short Term Improvements”**- These recommendations should be implemented by Verizon. Little or no incremental capital or expense dollars would be required to implement the recommendation. The recommendations can be implemented easily and offer cost savings and/or productivity or service improvements. These recommendations should be implemented within 90 days.
- B – **“Intermediate Term”** - Verizon should implement these recommendations unless it can justify that implementation of the recommendations is not cost justified. Implementation would result in meaningful cost reduction and/or service improvements. Some incremental capital and expense dollars may be required. Verizon’s analysis of the recommendations should be completed within 3 months. Verizon’s analysis should be filed with the Director of the Office of Telecommunications. The Director should consult with Verizon on the analysis of the recommendations and the implementation (if applicable) time frame. An implementation plan for these recommendations should be submitted within 3 months with the actual implementation expected to occur within 12 months.
- C – **“Strategic Longer Term”** - These recommendations may offer significant cost savings, yet require further study/additional analysis by Verizon to determine the potential costs of implementing and the strategic implications. Implementation should result in significant cost reduction and/or service improvement. These recommendations may require more significant incremental capital and/or expense dollars requiring further study. Verizon should have the opportunity to complete any additional analysis of these recommendations within six months. Verizon’s analysis should be filed with the Director of the Office of Telecommunications. The Director should consult with Verizon on their analysis of the recommendations and the implementation (if applicable) time frame. An implementation plan for these recommendations should be submitted within three months with the actual implementation expected to occur longer than 12 months.

## Exhibit VIII-4

**BEST PRACTICES INVESTIGATION PLAN**

<b>Best Practice</b>	<b>Priority</b>
1. I&R and Cable Maintenance Measurement (combine with 2 and 5)	C
2. Measurements for Other Organization (combine with 1 and 5)	C
3. Outside Plant Engineering	C
4. Construction	B
5. An Alternative Approach to I&R Measurement (combine with 1 and 2)	C
6. Dial Tone on Connect Through (CT) Facilities	A
7. Pre-CT and Re-CT	B
8. Scrubbing the Installation Load	A
9. Integrated Approach to Dispatching	C
10. Uniformity of Process	A
11. Addition to the Management by Objective (MBO) Process	B
12. Wireless Craft Access Terminals (CATs) (combine with 13)	B
13. Printers for Technicians (combine with 12)	B
14. GPS Emergency Response Capability	C
15. Hands Free Telephones for Central Office Technicians (COTs)	C
16. Preplanned Work for Demand Load Technicians	A
17. Tracking Productivity and Quality for CXM Technicians to the Demand Load	B
18. Cellular Telephones for Technicians	A