

Workforce Automation: Improving Customer Service

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Introduction

Deregulation, complex product delivery models, mergers and acquisitions, rising customer expectations, decreasing operational budgets, reduced workforces and technological changes are driving broadband organizations to do more with less.

In harsh economic times there is a tendency for firms to dramatically curtail spending with the objective of maximizing profitability. This is a common but often shortsighted response. A heavy-handed and reactionary approach to cost reduction can seriously damage both the operational health of a firm, and its prospects for future growth.

Firms that instead, invest wisely to lower their structural costs during tough times are the ones that are best able to survive revenue setbacks and emerge from a slow economy positioned for growth and success.

So the question becomes, “What constitutes a wise investment in a weak economy?” According to AMR Research, the number one and two spending imperatives in a down economy are to reduce costs and improve customer satisfaction.

In buoyant times the focus is on growth and revenue generation. Customer Relationship Management boomed along with the economy because it promised to help companies better understand their customers and how to sell to them. In a down economy, the focus is on defending market share by delivering rock-solid service while decreasing the cost of service delivery.

There is only one enterprise application that both promises to deliver these benefits and has been proven to do so: Workforce Automation (WFA).

Operational Analysis

To determine whether or not WFA is the right solution to meet a specific corporate objective, such as improving customer service, it is integral for a broadband organization to understand the root of its challenges. To accomplish this, an operational analysis is required first. Operational analysis is a key component of developing a business case for the feasibility of your solution investment.

Defining Current Workflow

Performing an operational analysis is necessary for having a complete understanding of the organization's current workflow and performance. From end-to-end, the current workflow is defined for all affected operating areas, including the field, dispatch, call center, warehouse, and finance/accounting, for example. Defining the workflow includes observing and gathering information on the current environment including:

- Overall sequence of events
- Processes and procedures
- Work order flow (all human and technology touch points)

- Workforce performance metrics (e.g., overtime, repeat calls, appointments missed, response times)
- Technology being used, (e.g., the billing system, communication infrastructure, trouble ticketing system, etc.)
- Human resources including their roles and responsibilities, associated costs, and the challenges they face
- Operating costs (e.g., vehicle, administrative, communication, facilities, penalties paid out)

Information Analysis

With the current workflow defined and the requisite data gathered, analysis is performed to determine opportunities for improvement (i.e., where weaknesses exist in the current workflow) as well as the improvements required to meet corporate objectives (i.e., improved customer service).

The analysis should examine inefficiencies in the workflow, such as duplication of effort and time spent unproductively by the workforce. It should also incorporate a quantitative component using reports on workforce performance measurements to indicate and validate operational weaknesses.

It is also important that each individual operating area is examined along with the interdependencies of each department in the organization. As positive changes are made to one department, negative results could be the outcome in another department.

Solution Evaluation

With the current environment and workflow defined and their weaknesses identified, it is possible to distinguish and evaluate potential solutions that meet the organization's corporate objective(s). Each alternative solution must be evaluated using standard criteria to enable fair comparison against one another. The key components for evaluating a solution and building a business case around it are as follows:

- **Workflow** – Define the workflow for the potential solution to determine process improvements. This will enable a gap analysis to be performed between the current and the new solution.
- **Project costs** – Estimate project costs including capital expenditures, ongoing operating costs, and project labor. Project costs are integral to financial and cost-benefit analyses.
- **Financial analysis** – Quantitative data (i.e., costs and performance metrics) and financial models are used to determine the quantitative feasibility of the solution. This includes cost-benefit calculations analyzing the project costs in comparison to the potential savings gained by the investment, as well as return on investment (ROI) calculations.
- **Solution benefits** – From the solution evaluation the overall benefits can be assessed, including both tangible (i.e., quantified benefits such as savings) and intangible benefits (i.e., benefits that are difficult to quantify such as employee satisfaction).

Manual Workforce Management: Typical Operational Challenges

In light of the process of operational analysis, we can now examine how customer service can be improved for a broadband organization. Traditionally, broadband organizations deploy voice and paper based systems for dispatching, processing and closing out work orders. Typically, this involves the following workflow:

1. Customer places work order with call taker
2. Work order is created in billing system and sent to appropriate dispatch center
3. Dispatch sorts and assigns work orders to technicians
4. Printed work orders are picked up by technician at the office
5. Technician plans his route
6. Technician drives to customer site and performs work
7. Technician calls in to dispatch for box hits and to close out work order
8. Dispatch enters completion information into billing system
9. Technician goes on route to the next job (this process continues until the end of the shift)
10. Technician drives back to the office at the end of the day
11. Technician checks-in/reconciles work order completions and collections

With a manual, paper-based system numerous hurdles are encountered daily within the various operating areas – call center, dispatch office, field and warehouse – often affecting customer service. Typical challenges associated with manual workforce management are as follows:

Call Center

- Quota issues
 - Under utilized calendars used to schedule out appointments by job type
 - Quota is not manually reallocated in an effort to maximize customer demand
 - Administrative constraints resulting in customers being offered appointments into the future
- Unavailability of real-time technician status
- Long hold times when contacting dispatch
- Discontent customers due to late appointments
- Only broad appointment windows are available to customers

Dispatch

- Lack of accurate and real-time field status
- High call volumes from Customer Service Representatives, or CSRs (e.g., to obtain work status), and from the field (e.g., to obtain account information, close out orders, and trigger box hits)

- Quota availability issues
 - Too much work in some geographic areas
 - Not enough work in adjacent geographies
- Difficulty monitoring the field due to high call volumes, manual routing and dispatch, and lack of notifications of jeopardy situations

Field

- Long hold times when contacting dispatch
- Routing errors resulting in longer travel times and wasted truck rolls
- Too much work to complete in a shift, often resulting in overtime
- Dealing with irate customers

Warehouse

- Technician lines at check-in to turn in work order copies, money and equipment
- Inventory tracking difficulties and poor technician feedback on defective equipment resulting in duplication of effort
- Little insight into daily equipment demand making it difficult to manage inventory and plan for the future demand

The root of the customer service problems encountered by broadband organizations extends beyond what is listed above. Many of these hurdles result from workflow inefficiencies, which reduce productivity and consequently low customer satisfaction. One solution for these challenges, which also meets the corporate objective to improve customer service, is Workforce Automation (WFA).

Workforce Automation: A Solution for Operational Challenges

In a down economy, broadband service providers are compelled to seek out proven means of achieving immediate and measurable cost reductions. In search of a bottom line that meets analyst expectations, the focus turns to the part of the organization that has the greatest impact on the cost of service delivery—field operations.

WFA is a proven solution with the ability to reduce operating costs while still delivering services that meet customer expectations. In a challenging market, WFA enables broadband companies to cost effectively manage work across organizational boundaries—for all types of work, for all types of services, and for all operating regions.

The introduction of mobile computers and wireless communications has delivered proven benefits to broadband companies: lower operating costs, better customer service, increased workforce effectiveness, and improved workforce safety. In measurable terms, WFA increases the number of jobs completed each day, reduces drive time, shortens the time to provide and restore service, reduces the need for informational middlemen such as dispatchers and data entry clerks, eliminates infrastructure such as dispatch centers, improves customer and asset data quality, and reduces overtime.

It does so by automating the end-to-end workflow from work order creation to completion. WFA:

- Integrates with enterprise applications (e.g., service provisioning and assurance) to receive work requests and deliver work results
- Manages resource planning and shift scheduling to meet work commitments
- Optimally assigns work to the workforce
- Dynamically adjusts to changing work conditions
- Wirelessly dispatches work assignments to the field
- Provides technicians with on-line field access to customer and asset data
- Delivers real-time feedback on work progress
- Automates capture and validation of work results
- Provides measures of workforce performance

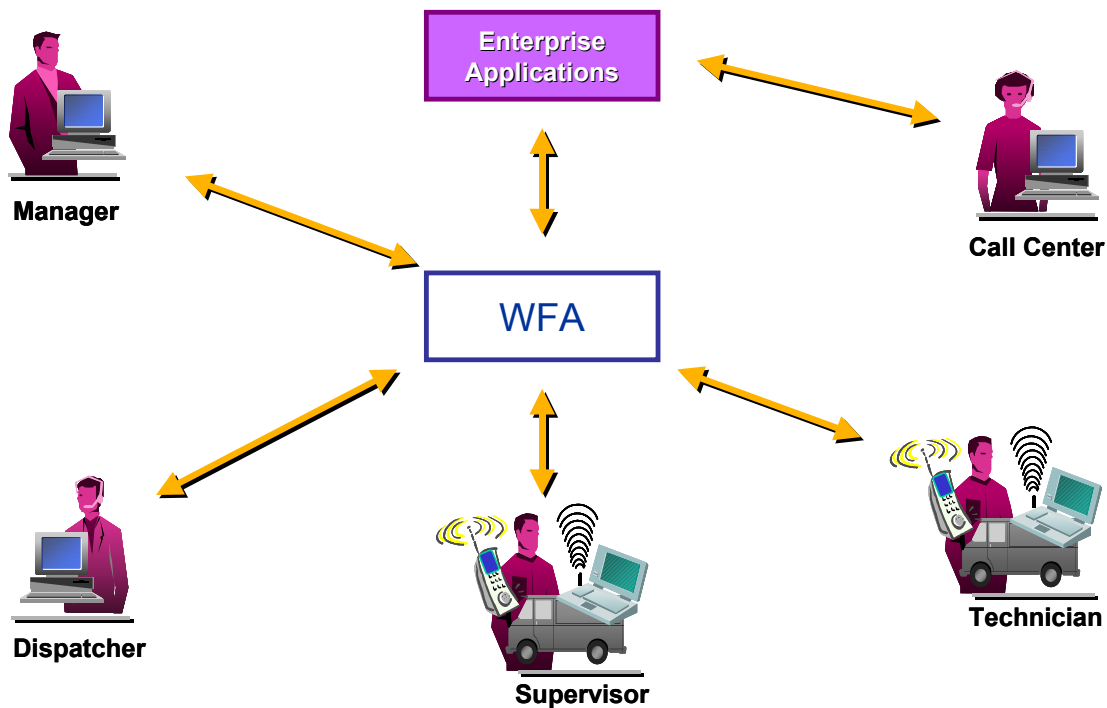


Figure 1 - Typical WFA Workflow

A Single System for the Entire Enterprise

WFA can provide a single, enterprise-wide system for managing the entire mobile workforce and its work regardless of the type of work, the field organization that performs the work, where technicians work, or the enterprise application that generates the work. This means using the same platform to manage both service and repair work for video, telephony and high-speed data service offerings.

The business case for deploying WFA enterprise-wide is compelling. While enterprise applications are responsible for managing customer, service, and asset information, only enterprise WFA can provide a platform for managing work across the enterprise, regardless of the enterprise application from which the work is generated. Enterprise WFA delivers an integrated, operations-centric view of the mobile workforce and its workload. It promotes operational efficiency in individual operating areas while taking advantage of opportunities to manage work across departmental boundaries. The benefits are clear:

- Workforce processes and procedures may be applied uniformly across the field organization.
- Barriers to distributing work across organizational boundaries are eliminated.
- Dispatchers can dynamically define global or local views of work and workforce.
- Managers have an enterprise view of overall work status.
- Performance measures are generated for the entire workforce.

Improving Customer Service

Through automation and process enhancements, WFA improves workflow efficiency and workforce productivity for more effective service delivery. Subsequently, this decreases the cost of service delivery and improves employee satisfaction, each contributing to enhance customer service.

Improved Productivity & Service Delivery

Workforce productivity and service delivery are improved with the deployment of WFA by enabling the following:

- **Work orders are automatically scheduled and routed to the optimal technician** – Automated scheduling frees up a significant portion of the dispatchers' time allowing them to focus on monitoring the fleet and attending to exceptional conditions.
- **Work orders are assigned to the most optimal technicians** – Automated assignment ensures the right technicians with the right skills, equipment, territory and availability are assigned to the work orders. As a result, technicians spend less time traveling and more time working. This reduces the number of wasted trips, multiple visits, and the distance driven due to optimal routing of work orders.
- **Wireless delivery of work orders and work results** – WFA enables technicians to start and end their day in the field thus, reducing overall travel time. Wireless delivery of work orders also means that technicians have real-time, accurate information about customers and installed services. Field data collection and validation ensures that work results reported by technicians are complete and accurate. Data entry errors are eliminated and wireless communication means that work results are immediately posted to enterprise databases. The result: fewer customer account errors and better service delivery.

- ***Real-time work status from the field*** – Dispatchers can better monitor and manage the field as WFA provides real-time work order and technician status updates. Dispatchers have an up to date view of work in progress, automatically receive jeopardy alerts when a technician is in danger of not making an appointment, and are able to adjust technician workloads to accommodate changes in the field after initial assignment. Improved dispatch monitoring results in better response times, fewer missed appointments, and the ability to provide customers with accurate updates on progress and work order status.
- ***More accurate and timely work order information provided to the field*** – Technicians can receive real-time schedule updates from dispatch or the call center. Thus, technicians know when work orders have been rescheduled or cancelled at the last minute, reducing wasted trips and travel time.
- ***Staffing levels correspond to workload requirements*** – WFA makes it simpler to plan staffing levels according to workload requirements. The call center makes customer commitments based on an understanding of the actual resource availability. WFA also enables call takers to schedule and commit appointments of smaller time windows. Instead of morning, afternoon, or full day appointment windows, customers can book appointments of 2-hour time windows, for example. Consequently, more appointments are committed and kept, and overtime work is reduced.
- ***Shorten time to provide or restore service*** — With manual workforce management, the call center is forced to book appointments far enough in the future to be confident that resources will be available. The field efficiency of WFA shortens the gap between call and service delivery. As well, the call center and dispatchers have a complete and accurate view of both future and current day availability to do work, based on the actual state of work in the field so same day service can be provided (i.e., jobs can be slotted into gaps in the current day).

Reduced Cost of Service Delivery

The costs associated with service delivery are significantly reduced with improved workforce productivity and operational efficiencies consequent of WFA. These savings are shared with customers, helping to further improve customer satisfaction and competitive positioning of the organization. Key sources of cost savings from WFA include:

- ***Vehicle costs*** – WFA reduces total drive time. Technicians can start and end the day from their driveway, eliminating time wasted traveling to a depot to pick up and drop off paper orders. Scheduling ensures technicians are assigned work close to their start location and the travel time for the overall route is minimized. Optimized scheduling and real-time alerts notifying the technician when an order is canceled or rescheduled make the occurrence of wasted trips less frequent.
- ***Voice communication costs*** – With WFA, the field is less dependent on dispatchers as they do not need to contact them to close out orders, for additional account information, or to trigger a box hit. Thus, technicians rarely need to call into dispatch via voice communication. As well, since there are fewer reasons to communicate with dispatch wait time is significantly reduced or eliminated.
- ***Administrative costs*** – Administrative costs in both the office and the field result from WFA. In the office, cost savings result from the elimination of the majority of work orders that need to be assigned manually as well as the time spent capturing work order information from the field. WFA also presents fewer opportunities for data entry errors, and thus a reduced need for data correction. Automation and wireless technology reduce paper usage and associated supplies, printing and storage costs. In

the field, technicians spend less time retrieving and sequencing work orders, and work orders are submitted and reconciled electronically.

- **Staffing and facilities costs** – With improved workforce productivity, fewer staff and facilities are required and their associated costs (i.e., salary, benefits, bonuses, utilities, fewer new hires required, etc.) are reduced. Three key components of the reduction of staffing and facilities costs due to productivity improvements are as follows:
 - **Reduce “bricks and mortar” infrastructure** — Automation of workforce management eliminates the need for local dispatching and monitoring. Anyone, anywhere in the organization with access to a computer can view workforce availability and the real-time progress of work. Technicians receive work orders and report work results wirelessly eliminating the need to pick up orders and drop off results. Call center and dispatch activities can be centralized to one or two centers allowing the organization to operate fewer dispatch centers.
 - **Eliminate “informational middlemen”** — End-to-end workflow automation, from order creation in the call center to order completion in the field, eliminates the manual activities performed by dispatchers and data entry clerks. Orders are assigned and wirelessly distributed automatically. Work results are collected in the field, validated, and posted to enterprise applications with no manual intervention. Changes to work order assignments, modifications, cancellations, and reschedules are all communicated automatically through the wireless network. The result is that the ratio of technicians to dispatchers increases dramatically while the need for data entry clerks is eliminated.
 - **Reduce overtime** — The call center books appointments with an accurate view of both total capacity and consumption of capacity, ensuring that overbooking is eliminated and the workload is evenly distributed across work days and regions. Reduced travel time and informed dispatcher workload adjustments guarantee that more jobs are completed during regular business hours.

Enhanced Employee Satisfaction

Imperative to improving customer service is harnessing employee commitment through a focus on employee satisfaction. WFA empowers your employees to more effectively perform their job and, therefore, to deliver higher quality service to your customers. The operational improvements from the automation and wireless nature of WFA simplify the day-in-the-life of a mobile worker. As carrying out their daily activities is made easier, stress levels of the mobile worker is decreased. Subsequently, morale and mobile worker efficiency and effectiveness are improved, meaning better customer service. With WFA, employees have:

- **Access to real-time information** – Enables technicians to provide expedient service to customers, with a minimum delay in the decision making process.
- **Complete, accurate information about the job at their fingertips** – Technicians endure fewer retries, misunderstandings, and interference of voice transmission.
- **Improved safety in dangerous situations** – The field is always in contact with the office with their known location and can alert dispatchers of emergency situations.

- **Reduced stress** - Employees can access order status easily without having to call into dispatch and endure long hold times. Technicians also deal with fewer angry customers as service delivery is improved. Dispatchers operate in an organized and quiet environment, Instead of one that is chaotic and constantly requiring multi-tasking of tedious activities taking away from their core responsibilities.

Real, Measurable Benefits

WFA brings the benefits of enterprise applications to the field. The work order cycle is completely automated from work order initiation to work closure. Workforce automation helps broadband organizations retain existing customers and attract new customers by improving customer service, and reduce operating costs by improving the efficiency and effectiveness of service delivery. WFA provides broadband companies with the tools they need to respond to competitive pressures and to achieve a competitive advantage.

WFA has the proven ability to allow organizations to achieve key benefits. The following key performance indicators and measures are a compilation of the achievements of organizations that have deployed WFA. These achievements contribute to enhanced customer satisfaction.

Key Performance Indicator	Improvement Measure
Jobs completed	10 – 30% more
Travel time or distances driven	15 - 30% less
Commitments met	99% or more
Dispatcher : Technician ratio	25:1 or better
No. of dispatch centers operated	1 production and 1 backup
No. of “information middlemen”	Eliminated
Overtime	30 – 50% less
Data quality	Most errors eliminated
Time to respond to work requests	Depends on work type (e.g., 1 day or less for routine service work)
Asset and service availability (time to restore)	20 – 30% decrease
Increase up selling	10 – 25%
Improve customer data quality (reduction of errors)	95%
Increase in employee satisfaction	25 – 50%



Conclusion

Capital investments in an uncertain economy can be difficult to justify, but far-sighted executives understand the value of looking beyond short-term economic conditions and positioning the organization for future growth by attacking structural cost inefficiency. There is no single investment that a broadband organization can make that offers the certainty and magnitude of productivity, customer service, and financial payback as an investment in Workforce Automation.