

**Underpinnings of Service Excellence:  
Synchronizing Resource Capacity with Service  
Demand**

August 2007

## Executive Summary

Gunning for improved customer satisfaction, loyalty and reduced service costs, service organizations are taking steps to tightly align service demand with resources comprised of technicians, spare parts and fleets. This benchmark study shows that forward-thinking companies have taken strategic actions to achieve service excellence by accurately forecasting service demand and effectively planning and provisioning service resources to meet that demand.

Such strategic initiatives have yielded **22%** increase in first-time fix rate, **18%** higher SLA compliance rate, **27%** improvement in workforce utilization, and **14%** lower overtime costs.

### Best-in-Class Performance

In this research effort, Aberdeen used six key performance indicators (KPIs) to distinguish Best-in-Class from the rest of the group. The Best-in-Class performance metrics include **87.1%** SLA compliance rate; **84.6%** first-time fix rate; **80.7%** workforce utilization; **81.8%** first-time part fill rate **8.7%** work-orders completed late and **1:19** dispatcher to technician ratio. Best-in-Class firms were also:

- **8 times** as likely as the rest of the companies to report **first-time fix rate of over 96%** and;
- 4 times as likely as the rest of the companies to report work-order completed late of less than 5%

### Competitive Maturity Assessment

Survey results show that the firms enjoying Best-in-Class performance shared several common characteristics. A majority of such firms are:

- Likely to systematically integrate demand forecasting, capacity planning and service execution processes
- Likely to conduct “what-if” analysis to examine the impact of change in service demand and capacity variables on profitability and performance

### Required Actions

To achieve Best-in-Class performance, service firms must:

- Document all constraints that impact field service work order allocation to effectively plan, forecast and provision resources
- Improve productivity by establishing guidelines for type and frequency of communications among dispatchers and field technicians

*Send to a Friend* 

#### Large Industrial Equipment Manufacturer

“Aligning forecasting and planning initiatives has impacted our financial performance. We experienced a 9% growth in service revenues and a 14% growth in aftermarket parts sales”

Roy Squires, Manager, ITT Corporation

#### Large Hi-Tech Equipment Manufacturer

“We have Service level Agreements with our customers and need to have parts available to provide service to those levels. Until they perfect the Star Trek transporter technology so that we can have the parts to service the world in one place we will have to forecast and plan and forward deploy parts to meet customer expectations.”

Director, Customer Service

## Table of Contents

---

|  |    |
|--|----|
| Executive Summary.....   | 2  |
| Best-in-Class Performance.....   | 2  |
| Competitive Maturity Assessment.....   | 2  |
| Required Actions .....   | 2  |
| Chapter One: Benchmarking the Best-in-Class .....                              | 5  |
| Aberdeen Analysis .....  | 5  |
| Market Pressures Driving Focus on Planning and Forecasting<br>Initiatives..... | 5  |
| Maturity Class Framework .....   | 6  |
| Best-in-Class PACE Model.....  | 8  |
| Chapter Two: Benchmarking Requirements for Success .....                       | 11 |
| Competitive Assessment.....  | 12 |
| Organizational Capabilities and Technology Enablers .....                      | 13 |
| Organization .....   | 13 |
| Technology.....  | 13 |
| Performance .....  | 15 |
| Chapter Three: Required Actions .....  | 16 |
| Laggard Steps to Success.....  | 16 |
| Industry Average Steps to Success.....   | 16 |
| Best-in-Class Steps to Success.....  | 17 |
| Appendix A: Research Methodology.....  | 20 |
| Appendix B: Related Aberdeen Research.....                                     | 23 |

## Figures

---

|  |    |
|--|----|
| Figure 1: Market Pressures Driving Alignment of Demand with Capacity<br>(People, Parts, Fleets).....                       | 6  |
| Figure 2: Top Strategic Actions Taken to Align Demand with Capacity<br>(People, Parts, Fleets).....                        | 9  |
| Figure 3: Top Inputs Used to Forecast Service Demand.....  | 10 |
| Figure 4: Improvements As a Result of Technology Deployment to Align<br>Demand with Capacity (People, Parts, Fleets) ..... | 14 |
| Figure 5: Top Challenges Preventing Companies from Aligning Demand with<br>Capacity (People, Parts, Fleets) .....          | 15 |
| Figure 6: Current and Planned Technology Adoption by Best-in-Class<br>Companies .....                                      | 17 |

## Tables

---

|  |    |
|--|----|
| Table 1: Companies With Top Performance Earn “Best-in-Class” Status:....                         | 6  |
| Table 2: Potential Savings from Achieving Best-in-Class Dispatcher-to-<br>Technician Ratio ..... | 7  |
| Table 3: Best-in-Class PACE Framework.....   | 8  |
| Table 4: Competitive Framework.....  | 12 |

Table 5: Potential Cost Savings from Improved Technician Productivity..... 14  
Table 6: PACE Framework Key.....21  
Table 7: Competitive Framework Key.....21  
Table 8: Relationship Between PACE and Competitive Framework.....22

## Chapter One: Benchmarking the Best-in-Class

### Aberdeen Analysis

In the face of myriad planned and unplanned constraints and activity, service organizations are being asked to meet increasingly rigorous SLA commitments and shorter response windows while reducing service costs. At stake is not only customer satisfaction and loyalty, but overall company growth as organizations turn to service to grow the top and the bottom lines. In this somewhat unpredictable and dynamic environment, companies that do not forecast the service workload and plan or provision resources accordingly not only forfeit enormous cost savings as a result of imbalance in technician and inventory utilization, but also operate in a chaotic environment which involves constant firefighting.

The latest Aberdeen research initiative reveals that across all companies, nearly 17% of work orders are not completed on-time. Lack of insight into near- and long-term service workload and resource capacity resulting from poor planning and forecasting is to blame for the sub-optimal service performance.

Forward thinking companies however, have taken various strategic actions to achieve service excellence by accurately forecasting service workload, effectively planning (territory, multi-day, crew) and appropriately provisioning service personnel, spare parts and fleet to meet the expected demand. With up-to-date service demand forecasts and resource allocation plans in place, companies are better equipped to prevent periods of over- and under-utilization resulting in lower service costs and higher customer satisfaction.

### Market Pressures Driving Focus on Planning and Forecasting Initiatives

Aberdeen research indicates that companies that accurately identify the market pressure are the ones that take the most transformational and effective actions to achieve performance excellence. In other words, a company performance strongly correlates with the PACE choices it makes and how well it executes on its strategies.

The study clearly indicates that customer demand for shorter service windows, rigorous SLA provisions and faster work order resolution is driving the initiatives to align demand forecasting and resources planning and provisioning initiatives (Figure 1).

#### Fast Facts

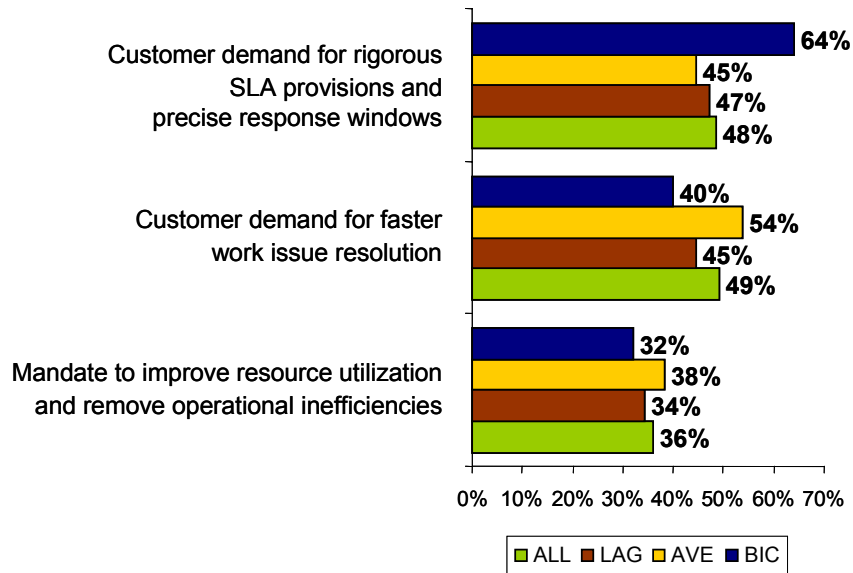
- √ Best-in-Class firms are **8 times** as likely as the rest to report **First-time Fix Rate of over 96%**
- √ Best-in-Class firms are **4 times** as likely as the rest to report **Work-order Completed Late of less than 5%**
- √ Best-in-Class firms are **3 times** as likely as the rest to report **SLA Compliance Rate of over 96%**
- √ Best-in-Class firms are **2 times** as likely as the rest to report **Worker Utilization of over 91%**

#### Mid-size Material Testing Equipment Manufacturer

"I believe that forecasting is as predictable as your installed base is. The issue of product breakdowns is somewhat of a known thing if you know the use of the product."

John Durkin  
North American Field  
Service Manager, Instron

**Figure I: Market Pressures Driving Alignment of Demand with Capacity (People, Parts, Fleets)**



Source: Aberdeen Group, August 2007

### Maturity Class Framework

The value of aligning service workload with resource capacity can be assessed by measuring the resulting change in financial and operational performance. In the following analysis, Aberdeen used six KPIs to distinguish Best-in-Class companies from Industry Average and Laggard organizations.

**Table I: Companies With Top Performance Earn “Best-in-Class” Status:**

| Definition of Maturity Class  | Mean Class Performance  |
|---|---|
| <b>Best-in-Class:</b><br>Top 20% of aggregate performance scorers       | <ul style="list-style-type: none"> <li>87.1% SLA Compliance Rate</li> <li>84.6% First-time Fix Rate</li> <li>80.7% Workforce Utilization</li> <li>81.8% First-time Part Fill Rate</li> <li>8.7% Work-orders completed late</li> <li>1:19 Dispatcher to Technician Ratio</li> </ul>  |
| <b>Industry Average:</b><br>Middle 50% of aggregate performance scorers | <ul style="list-style-type: none"> <li>83.0% SLA Compliance Rate</li> <li>76.6% First-time Fix Rate</li> <li>73.7% Workforce Utilization</li> <li>76.6% First-time Part Fill Rate</li> <li>16.6% Work-orders completed late</li> <li>1:13 Dispatcher to Technician Ratio</li> </ul> |

| Definition of Maturity Class                                   | Mean Class Performance   |
|--|--|
| <b>Laggard:</b><br>Bottom 30% of aggregate performance scorers | <ul style="list-style-type: none"> <li>• <b>73.7%</b> SLA Compliance Rate (<b>77%</b> Don't Know or Don't Measure)</li> <li>• <b>70.8%</b> First-time Fix Rate</li> <li>• <b>72.9%</b> Workforce Utilization (<b>65%</b> Don't Know or Don't Measure)</li> <li>• <b>76.1%</b> First-time Part Fill Rate (<b>74%</b> Don't Know or Don't Measure)</li> <li>• <b>30.7%</b> Work-orders completed late</li> <li>• <b>1:12</b> Dispatcher to Technician Ratio</li> </ul> |

Source: Aberdeen Group, August 2007

As evident from Table 1, the difference in the service performance between Best-in-Class organizations and Laggards is significant. However, even **more compelling is the maturity exhibited by the Best-in-Class companies over the past two years.** Best-in-Class companies reported a first-time fix rate increase of 26% compared to 9% for all others, 29% improvement in worker utilization compared to 12% for all others and 14% reduction in overtime costs compared to 6% for all others.

Moreover, Best-in-Class firms are **8 times as likely as the rest** to report **first-time fix rate of over 96%**, **4 times as likely** as the rest to report **work-order completed late of less than 5%**, **3 times as likely** as the rest to report **SLA compliance rate of over 96%** and **twice as likely** as the rest to report **worker utilization of over 91%**.

It is also interesting to note that an improvement of dispatcher-to-technician ratio from the Average to the Best-in-Class metric can yield significant cost savings (Table 2). Assumptions include average total compensation per dispatcher equals \$75,000.

**Mid-Size Industrial Equipment Manufacturer**

"It is difficult to plan for the emergencies which makes forecasting and planning an absolute. Improved planning and forecasting of non emergency events will create capacity to address emergency service events."

Jim McGovern, Service Manager, CSTK

**Table 2: Potential Savings from Achieving Best-in-Class Dispatcher-to-Technician Ratio**

| # Techs. | # Disptchs @1:14 Ratio | # Disptchs @1:19 Ratio | Difference in # Disptchs | Cost Savings from Reduced Headcount (\$ millions) |
|----------|------------------------|------------------------|--------------------------|---|
| 100      | 7                      | 5                      | 2                        | <b>\$0.2</b>                                      |
| 500      | 36                     | 26                     | 10                       | <b>\$0.8</b>                                      |
| 1,000    | 71                     | 53                     | 18                       | <b>\$1.4</b>                                      |
| 5,000    | 357                    | 263                    | 94                       | <b>\$7.1</b>                                      |

Source: Aberdeen Group, August 2007

### Best-in-Class PACE Model

Aberdeen’s PACE framework is designed to illustrate strategic actions, capabilities and enabling technologies adopted by Best-in-Class companies to achieve service excellence. It also provides a roadmap to Industry Average and Laggard organizations attempting to improve their performance.

**Table 3: Best-in-Class PACE Framework**

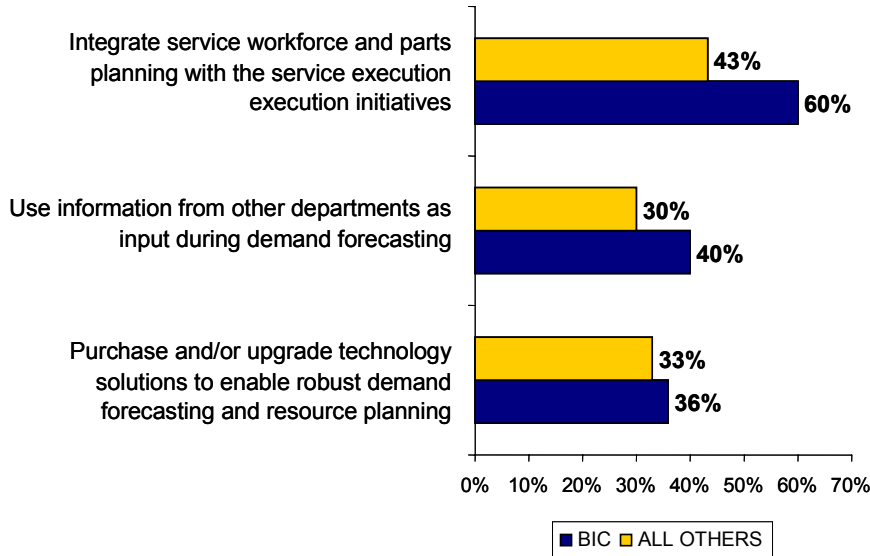
| Pressures  | Actions  | Capabilities  | Enablers  |
|--|--|---|---|
| <ul style="list-style-type: none"> <li>• Customer demand for rigorous SLA provisions and precise response windows</li> </ul> | <ul style="list-style-type: none"> <li>• Integrate service workforce and parts planning with the execution initiatives including scheduling, routing, parts management</li> <li>• Use information from other departments as input during demand forecasting (e.g., sales and marketing plans)</li> <li>• Purchase and/or upgrade technology solutions to enable robust demand forecasting and resource planning</li> </ul> | <ul style="list-style-type: none"> <li>• Conduct “what-if” analysis and examine the impact of change in service demand and capacity variables on profitability and performance</li> <li>• Systematic integration between demand forecasting, capacity planning and service execution processes at the lowest level of detail</li> <li>• Closed loop integration of customer, warranty, SLA, historical asset information with the demand forecasting process</li> <li>• Senior executive accountability for field service performance including forecasting, planning and budgeting</li> <li>• Real time updates on field service performance, inventory levels, demand forecast and resource capacity</li> </ul> | <ul style="list-style-type: none"> <li>• Integrated planning and forecasting system with an intuitive, web-based graphical display of service workload and capacity</li> <li>• Resource planning applications (Territory, Parts, Multi-day, Crew)</li> <li>• Demand Forecasting application</li> <li>• Dynamic Scheduling &amp; Route Optimization</li> </ul> |

Source: Aberdeen Group, August 2007

As shown in Figure 1, two-thirds of Best-in-Class service organizations have taken steps to align their service workload with the resource capacity in order to meet customer demand for rigorous SLA provisions and precise service windows.

In order to get the right technician with the right part at the right time to the customer site, a service organization needs to accurately forecast future workload and provision resources accordingly. Hence, 60% of Best-in-Class firms have integrated their service workforce and parts planning processes with service execution processes such as scheduling, routing, and reverse logistics. Another 40% have started using information from other departments such as marketing, sales, and corporate as input in the demand forecasting processes (Figure 2).

**Figure 2: Top Strategic Actions Taken to Align Demand with Capacity (People, Parts, Fleets)**



Source: Aberdeen Group, August 2007

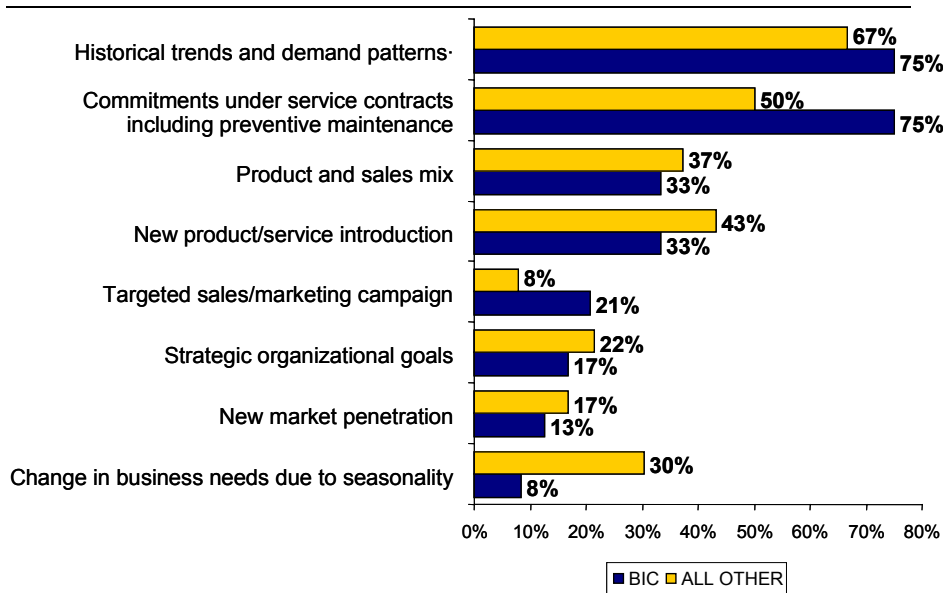
**Global Chemicals Manufacturer**  
 “Dynamic understanding of work loading is required in order to determine true resource requirements (real-time) - or at least in the approx. ball park.”  
 Service Manager

**Aberdeen Insights – Reasons for Inaccurate Demand Forecasting**

Despite the fact that most companies provision resources based on some form of a demand forecast, there seems to be a misalignment between the resources available and the actual demand. This is evident from the poor service performance metrics in Table I, including those of Best-in-Class companies. As a result, companies have to either cut corners in delivering service, or sub-contract expensive labor to fulfill their obligations. The reason why service organizations cannot accurately forecast demand is because over two-thirds of them only rely on the historical trends and demand patterns. They fail to take into account changes in business direction or activity — such as new market or new product introduction, product obsolescence or targeted sales and marketing campaigns — all of which have a direct impact on service workload (Figure 3).

**Large Construction Equipment Manufacturer**  
 “If historical trends are all you look at to forecast service workload, then you need to take your rose colored glasses off and see what is really happening. There are so many changes that are taking place every day, only using one method of planning is far outdated.”  
 Manager, Services

**Figure 3: Top Inputs Used to Forecast Service Demand**



Source: Aberdeen Group, August 2007

## Chapter Two: Benchmarking Requirements for Success

Technology by itself cannot sustain long-term service excellence. Best-in-Class service organizations have adopted certain business processes, changed their organizational structure, implemented knowledge management rules and above all have started measuring their operational and financial performance to affect their transformation.

### Case Study: Direct Energy Leverages Technology to Optimize Service

Following deregulation, Direct Energy - one of the largest energy retailers in North America providing gas, electricity and related services to business and residential customers was faced with the challenge of managing 1.1 million rental customers, a half million service calls, and approximately 400,000 contracts for furnaces.

Since Direct Energy's service order entry system was not linked with the resource scheduling system, the company habitually scheduled a greater number of daily service calls than its field technicians could manage. The company wanted to avoid over-committing its resources, which resulted in chaos, and dissatisfied customers.

Direct Energy executives sought to integrate a service planning and forecasting tool with their existing CRM. The company adopted a technology solution which not only enabled a better alignment of the service workload and resources in the 26 operating districts, but also optimized schedules based on a change in business needs. For example, the business rules could be dynamically changed to assign more air-conditioning work than water heating during the summer season. This would automatically optimize the demand forecast and corresponding resource needs throughout the system. Moreover, the service managers were able to conduct "what if" analysis based on various parameters to examine the impact of their decisions on the financial and operational performance.

Post deployment, the company was able to improve service delivery efficiency and reduce overall service costs. In fact, they reduced the number of dispatchers from 120 people at six locations to 75 at two sites. Key benefits of the solution included:

- 70% reduction in dispatch labor
- 20% increase in technician productivity
- Realistic and accurate appointment windows
- Real-time view of workload and progress in the field
- Flexibility to change business policies and rules

### Fast Facts

- √ Best-in-Class firms are **4 times** as likely as the rest to measure planning and demand accuracy in **real time**
- √ Best-in-Class firms are **2 times** as likely as the rest to use a **forecasting and planning specialist**
- √ **80%** of the Best-in-Class firms have senior executive accountability for demand forecast, resource planning and provisioning
- √ **60%** of the Best-in-Class firms conduct "what-if" analysis to examine the impact of change in service demand and capacity variables on profitability and performance

## Competitive Assessment

Aberdeen research reveals the shared characteristics and capabilities that are integral to Best-in-Class performance. These fall into five key categories: (1) process (established frameworks for decision making); (2) organization (integrated operations with executive oversight); (3) knowledge management (contextualizing data and sharing among key stakeholders); (4) technology (selection or appropriate tools and intelligent deployment of those tools); and (5) performance measurement (ability of the organization to measure its performance and use the metrics as a gauge to improve results).

**Table 4: Competitive Framework**

|                     | Best-in-Class   | Average   | Laggards  |
|---------------------|---|---|---|
| <b>Process</b>      | Systematic integration between demand forecasting, capacity planning and service execution processes  |   |   |
|                     | <b>53%</b>  | <b>34%</b>  | <b>25%</b>  |
|                     | Conduct “what-if” analysis to examine the impact of change in service demand and capacity variables on profitability and performance  |   |   |
|                     | <b>60%</b>  | <b>31%</b>  | <b>36%</b>  |
| <b>Organization</b> | Senior executive accountability for demand forecast, resource planning and provisioning   |   |   |
|                     | <b>80%</b>  | <b>71%</b>  | <b>48%</b>  |
| <b>Knowledge</b>    | Closed loop integration of customer, contract and asset information with demand forecasting and resource planning   |   |   |
|                     | <b>40%</b>  | <b>29%</b>  | <b>14%</b>  |
| <b>Technology</b>   | Technology currently in use to forecast service demand and plan resource capacity:  |   |   |
|                     | <b>40%</b> Business Intelligence<br><b>36%</b> Demand Forecasting<br><b>28%</b> ERP Service Mod.<br><b>52%</b> Parts Planning<br><b>44%</b> Workforce Planning<br><b>32%</b> Mobile Field Service | <b>23%</b> Business Intelligence<br><b>18%</b> Demand Forecasting<br><b>22%</b> ERP Service Mod.<br><b>35%</b> Parts Planning<br><b>28%</b> Workforce Planning<br><b>28%</b> Mobile Field Service | <b>18%</b> Business Intelligence<br><b>16%</b> Demand Forecasting<br><b>21%</b> ERP Service Mod.<br><b>29%</b> Parts Planning<br><b>21%</b> Workforce Planning<br><b>16%</b> Mobile Field Service |

|             | Best-in-Class   | Average | Laggards |
|-------------|---|---------|----------|
| Performance | Real time updates of key performance metrics such as utilization, inventory levels, forecasting and planning accuracy |         |          |
|             | 44%   | 28%     | 15%      |

Source: Aberdeen Group, August 2007

## Organizational Capabilities and Technology Enablers

Regardless of industry, competitive maturity, or depth of technology experience, every company can take specific actions to improve the alignment of service workload with planning initiatives.

The first step should be to develop a consensus within the executive ranks that service optimization delivers a substantive impact on the company's financial and operational performance. This can be accomplished by conducting a Return on Investment (ROI) analysis based on industry-specific benchmarks.

### Organization

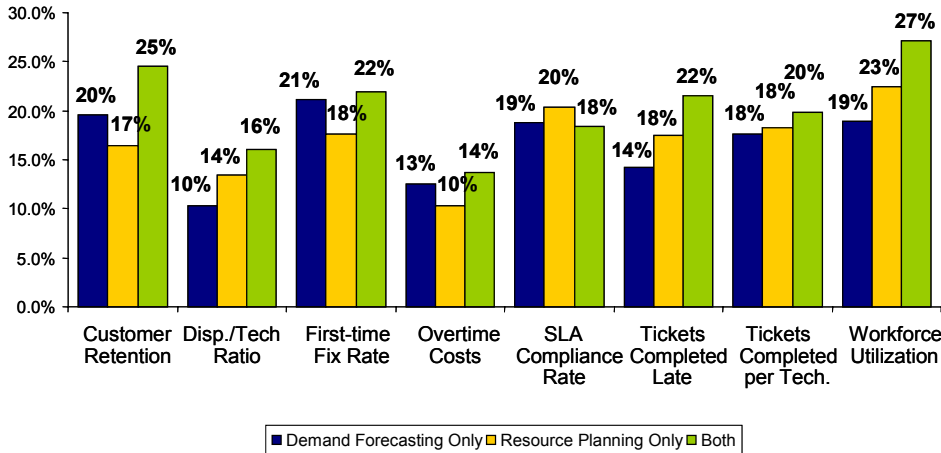
The current survey indicates that 74% of all service organizations assign forecasting and planning responsibilities to individual functional managers such as parts manager, dispatch supervisor, field service manager and so on. Unless a single entity provides the guidance and direction to the individuals within all these silos, the conflicting priorities among stakeholders will result in sub-optimal performance. Hence, 80% of the Best-in-Class organizations have a senior executive accountable for the entire service operation. In fact, **Best-in-Class firms are twice as likely** as the rest to use a **forecasting and planning specialist** for this purpose.

### Technology

The second step should be to consider technology-enabled optimization as such initiatives can deliver the most robust stable of benefits (Figure 4). According to the survey, many companies rely on spreadsheets for demand forecasting and capacity planning. However, making decisions based on mountains of data, managing the process and accommodating updates can be challenging in the spreadsheet environment. So, Best-in-Class companies are using solutions that provide robust reporting, a snapshot of the operations via in dashboard, and real time updates to optimal workload allocation based on predefined and prioritized constraints. Not surprisingly, **Best-in-Class firms are 4 times as likely** as the rest to measure **planning and demand accuracy in real time**.

|   |
|---|
| Large Telecom<br>Equipment Manufacturer   |
| "Service is only unpredictable today because the information from the manufacturing process is not adequately translated into predicted field failure rates and estimated mean time between failures. If properly analyzed service becomes more predictable." |
| Director, Customer Service  |

**Figure 4: Improvements As a Result of Technology Deployment to Align Demand with Capacity (People, Parts, Fleets)**



Source: Aberdeen Group, August 2007

If one takes into account the financial impact of improvement in productivity metrics, highlighted in Figure 4, such as work orders completed per technician, work utilization or the reduction in overtime costs – the ROI of investing in such solutions becomes easier to comprehend (Table 5). Assumptions include average total compensation per technician equals \$75,000.

**Table 5: Potential Cost Savings from Improved Technician Productivity**

| # Techs. | Avg. Work Orders/Day | Increased Avg. Work Orders/Day | # of Techs. Needed to Complete Same Work | Cost Savings from Reduced Headcount (\$ millions) |
|----------|----------------------|--------------------------------|--|---|
| 50       | 3.3                  | 3.96                           | 42                                       | \$0.6   |
| 100      | 3.3                  | 3.96                           | 83                                       | \$1.25  |
| 500      | 3.3                  | 3.96                           | 417                                      | \$6.25  |
| 1,000    | 3.3                  | 3.96                           | 833                                      | \$12.5  |
| 5,000    | 3.3                  | 3.96                           | 4,167                                    | \$62.5  |

Source: Aberdeen Group, August 2007

**Performance**

Best-in-class companies have adopted a two-pronged approach to measuring the efficacy of their service optimization efforts. They track operational metrics such as workforce utilization, daily work orders completed per technician, first-call fix rate, overtime costs, percentage of work orders completed late and dispatcher-to-technician ratio.

However, they are also tracking customer-facing metrics such as customer retention rates, SLA compliance, contract renewals, percentage of service contracts with priority-based time constraints, and service revenue growth.

It is critical for companies to adopt a customer-centric approach and to weigh every decision with regard to the technology, business process, strategy, and performance against the backdrop of overall customer impact.

**Large Public Utility Company**

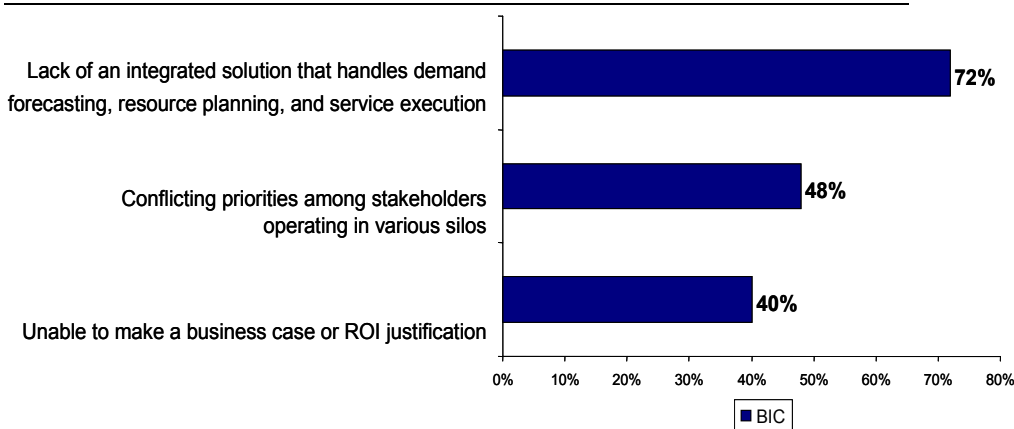
“Proper planning process will impact on asset reliability and thus our operational performance.”

Greg Rimmer, Service Delivery Manager, Water Corporation of WA

**Aberdeen Insights — Impediments to Service Optimization**

A leading capability for Best-in-Class companies is systematic integration between demand forecasting, capacity planning and service execution processes. It is not surprising then that the leading impediment for companies when it comes to aligning the service demand with resource capacity is that of a lack of an integrated solution that handles all three components (Figure 5).

**Figure 5: Top Challenges Preventing Companies from Aligning Demand with Capacity (People, Parts, Fleets)**



Source: Aberdeen Group, August 2007

## Chapter Three: Required Actions

Whether a company is trying to move from “Laggard” to “Industry Average,” or “Industry Average” to “Best-in-Class,” they would be well-served in considering the following action items as potential building blocks of a successful service organization.

### Laggard Steps to Success

- Identify the cause(s) of sub-optimization by measuring the degree of variance between planned and actual service costs and demand.

55% of the Laggard organizations do not measure the variance between planned and actual service costs and demand. Tracking of such variances will allow the companies to gain insights into the cause/s of sub-optimization in their service operations.

- Improve productivity by establishing guidelines for type and frequency of communications among dispatchers and field technicians.

Set standards for customer and work order information that must be communicated on the first call from the dispatcher to the field technician. Much of the wasted and misused time in the service chain results from incomplete and ad hoc phone interactions.

- Optimize service operations by focusing on metrics that highlight the impact on customers’ business.

39% of the Laggard organizations never measure service related performance. Thus, such companies are unaware of the state of their operations. In order to achieve service excellence, companies need to not only measure internal performance metrics such as mean time to repair, overtime costs, and workforce utilization, but also customer-centric metrics such as first time fix rate, SLA compliance, work orders completed late.

### Industry Average Steps to Success

- Move toward real-time schedule assessment.

Fully 74% of companies are either aligning service supply and demand on a daily batch basis or not at all. Due to the dynamic nature of the service chain, it is imperative for companies to more frequently assess the cost-effectiveness of their service schedules.

- Document all constraints that impact field service work order allocation to effectively plan, forecast and provision resources.

#### Fast Facts

- Take multiple factors into account in order to accurately forecast work-order demand
- Identify the cause/s of sub-optimization by measuring the degree of variance between planned and actual service costs and demand
- Improve productivity by establishing guidelines for type and frequency of communications among dispatchers and field technicians
- Document all constraints that impact field service work order allocation to effectively plan, forecast and provision resources

#### Small Medical Equipment Manufacturer

“Proper planning is critical to the company’s future. Good planning allows us to perform closer to budget.”

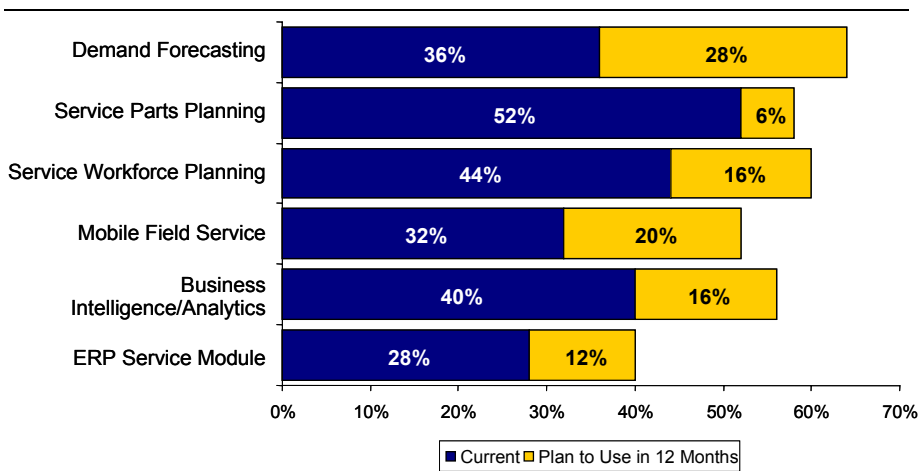
Nick Pompar, Service  
Manager, BioTek  
Instruments

This will lay the foundation for building an optimization program that is aligned with the company's unique business goals. As a starting point, consider constraints in these three categories:

- Technician-based constraints (e.g., skill sets, physical location, local geographic knowledge, preference for location and type of work)
  - Environment-based constraints (e.g., road and weather conditions)
  - Business-based constraints (e.g., marketing campaigns, SLA commitments, overtime restrictions, customer preferences, inventory, equipment, and vehicle availability)
- Take stock of existing technology infrastructure and plug the gaps to enable closed loop service management.

Companies that have already deployed ERP, order management, CRM, or service execution systems (SMS) are well positioned to add service optimization functionality such as demand forecasting and planning capabilities. When evaluating optimization solution providers, companies should make sure that full integration with existing systems is possible without unreasonable extensions to the implementation timeline or price hikes.

**Figure 6: Current and Planned Technology Adoption by Best-in-Class Companies**



Source: Aberdeen Group, August 2007

**Mid-size IT Solution Provider**

“The services business has changed so rapidly that historical trends have had a diminishing value over the last few years. People and teamwork within the service group are still the key to every service operation’s success. Our number one priority is always customer satisfaction, and we do whatever necessary to maintain outstanding customer satisfaction.”

Dale Cunningham, Director

**Best-in-Class Steps to Success**

- Take multiple factors into account in order to accurately forecast work-order demand.

75% of the companies take only historical demand patterns and contractual obligations into account. With a more accurate demand

forecast, companies can reach new performance heights with such tactics as pre-positioning technicians and parts to meet anticipated customer demand.

- Integrate customer, contract and asset information with demand forecasting and planning processes.

Only 40% of Best-in-Class companies Aberdeen surveyed currently have a closed loop process that integrates the customer, contract and asset information with the forecasting and planning processes. Adequate visibility into customer preferences, historical break-fix or preventative maintenance information can enable better provisioning of resources resulting in higher customer satisfaction.

- Adopt an enterprise-wide perspective to service optimization.

Only 11% of companies Aberdeen surveyed currently optimize service scheduling and delivery on an enterprise-wide basis. The rest optimize on a divisional or regional basis, or not at all.

While it may be unreasonable to expect Average or Laggard firms with limited field service technology experience to immediately embark on an enterprise-wide deployment of service optimization, it should be every company's ultimate goal to optimize on this scope. It might indeed be necessary for a company to begin with local or regional pilot programs to secure executive or IT buy-in.

With an enterprise-wide view, a service optimization program can appropriately weigh all relevant schedule constraints, more effectively allocate human and inventory assets, and provide more accurate control and reporting of overall service chain performance.

The objective should be to provide service consistency for customers who interact with multiple divisions or regions of a company. For instance, if one division offers 2-hour appointment windows, then all divisions should strive for the same level of service.

**Small Medical Equipment Manufacturer**

"Life is unpredictable, but a distinguishing human trait is planning. Planning allows mankind to more effectively manage the randomness of life events. The same can be said about service. If you plan you are better able to manage the things you cannot predict. If you fail to plan, you may not be able to respond. Part of all planning is to think about what if."

Nick Pompar, Service  
Manager, BioTek  
Instruments

**Aberdeen Insights – Summary**

Best-in-Class companies are tightly aligning service demand — comprised of the backlog and pipeline of work orders — with service resources — comprised of technician capacity, proximity, aptitude, spare parts and fleets. The ultimate goal: Achieve the most cost-effective, productive, and profitable service operation while driving customer loyalty and satisfaction.

**Consequences of Sub-Optimization**

- I. Mismanaged and underutilized technician time

**Mid-Size Industrial Equipment Manufacturer**

"I utilized forecasting and planning to develop a service revenue stream via contract maintenance services which contributed to 10-13% annual revenue growth for a three year period."

Jim McGovern, Service  
Manager, CSTK

## Aberdeen Insights – Summary

A way to assess whether a company's service operation is running optimally is to examine a typical day in the life of the company's field technician. Sub-optimized schedules will result in large chunks of idle, misspent, or over-committed time for the technician, which equates to low productivity levels, elevated service costs, and a high risk of missed service delivery targets.

### 2. Inefficient dispatcher-to-technician ratio

Another manifestation of a sub-optimized service operation is the dispatcher-to-technician ratio of less than 1-to-10. This is due to the fact that dispatchers in a sub-optimal setting must spend significant time juggling incoming service requests and disseminating work-orders to available technicians. Moreover, repeated clarification and status calls back and forth between the dispatch and the technicians are also common. The average dispatcher-to-technician ratio among firms participating in this study is 1-to-14, but optimal ratio is over 1-to-19 or more (Table 1).

### 3. Lost revenue opportunities

Companies that optimize their service operations are able to deliver higher levels of service at premium prices, due in part to the ability to shrink appointment windows and improve on-time delivery. Seven out of 10 companies in a recent Aberdeen study indicated that a key strategic objective for service optimization was to increase service-related revenues with more time-definite service contracts.

### 4. Customer dissatisfaction and churn

Sub-optimal first-time fix rate, SLA compliance rate and percentage of work orders completed on-time affect asset utilization. Asset downtime has a significant impact on the asset owner/operator's financial and operational performance. If service organizations cannot meet client need for rigorous SLA provisions and short service response windows, fewer customers will renew service contracts and more will seek service elsewhere.

[Send to a Friend](#) 

## Appendix A: Research Methodology

Between July and August of 2007, Aberdeen Group examined the Demand Forecasting and Resource (People, Parts, Fleet) Planning initiatives of nearly 200 companies across many industry verticals.

Responding executives completed an online survey that included questions designed to determine the following:

- The degree to which company's align service demand with resource capacity across their service organization and the impact of such initiatives on the company's overall financial and operational performance;
- The change over the previous two years;
- The actions and strategies organizations have used to improve the effectiveness of their service operations;
- Current and planned use of software solutions and technologies to aid business processes; and
- The benefits realized from implementing new business initiatives, processes and solutions.

Aberdeen supplemented this survey effort with telephone interviews with select survey respondents to gather additional insights on pressures, actions, experiences, and results.

This study focused on identifying best practices and provide a framework by which readers can benchmark their own capabilities.

Responding enterprises included the following:

- **Job title/function:** The research sample included respondents with the following job titles: C-level executive (12%); V.P. (8%); Director (22%); Manager (47%); Other (11%).
- **Industry:** The research sample included respondents from a variety of industries. Some well represented industries were: Industrial Manufacturing (23%); High-Tech Manufacturing (21%); Telecom (15%); Distribution (11%); Medical Device Manufacturing (11%); Consumer Goods (9%); Utilities (8%).
- **Geography:** The majority of respondents (59%) were from North America. Remaining respondents were from the EMEA (25%) Asia-Pacific region (13%), Other (3%).
- **Company size:** 32% of respondents were from large enterprises (annual revenues above US\$1 billion); 39% were from midsize enterprises (annual revenues between \$50 million and \$1 billion); and 29% of respondents were from small businesses (annual revenues of \$50 million or less).

Solution providers recognized as sponsors of this report were solicited after the fact and had no substantive influence on the direction of the Benchmark Report. Their sponsorship has made it possible for Aberdeen Group to make these findings available to readers at no charge.

**Table 6: PACE Framework Key**

**Overview**

Aberdeen applies a methodology to benchmark research that evaluates the business pressures, actions, capabilities, and enablers (PACE) that indicate corporate behavior in specific business processes. These terms are defined as follows:

**Pressures** — external forces that impact an organization’s market position, competitiveness, or business operations (e.g., economic, political and regulatory, technology, changing customer preferences, competitive)

**Actions** — the strategic approaches that an organization takes in response to industry pressures (e.g., align the corporate business model to leverage industry opportunities, such as product/service strategy, target markets, financial strategy, go-to-market, and sales strategy)

**Capabilities** — the business process competencies required to execute corporate strategy (e.g., skilled people, brand, market positioning, viable products/services, ecosystem partners, financing)

**Enablers** — the key functionality of technology solutions required to support the organization’s enabling business practices (e.g., development platform, applications, network connectivity, user interface, training and support, partner interfaces, data cleansing, and management)

Source: Aberdeen Group, August 2007

**Table 7: Competitive Framework Key**

**Overview**

The Aberdeen Competitive Framework defines enterprises as falling into one of the following three levels of practices and performance

**Best-in-Class (20%)** — Practices that are the best currently being employed and significantly superior to the Industry Average, and result in the top industry performance.

**Industry Average (50%)** — Practices that represent the average or norm, and result in average industry performance.

**Laggards (30%)** — Practices that are significantly behind the average of the industry, and result in below average performance

In the following categories:

**Process** — What is the scope of process standardization? What is the efficiency and effectiveness of this process?

**Organization** — How is your company currently organized to manage and optimize this particular process?

**Knowledge** — What visibility do you have into key data and intelligence required to manage this process?

**Technology** — What level of automation have you used to support this process? How is this automation integrated and aligned?

**Performance** — What do you measure? How frequently? What’s your actual performance?

Source: Aberdeen Group, August 2007

**Table 8: Relationship Between PACE and Competitive Framework**

**PACE and Competitive Framework How They Interact**

Aberdeen research indicates that companies that identify the most impactful pressures and take the most transformational and effective actions are most likely to achieve superior performance. The level of competitive performance that a company achieves is strongly determined by the PACE choices that they make and how well they execute.

Source: Aberdeen Group, August 2007

## Appendix B: Related Aberdeen Research

Related Aberdeen research that forms a companion or reference to this report include:

- [\*Service as a Profit Center: The CFO's View\*](#) (August 2006)
- [\*The Emergence of the 'Chief Service Officer'\*](#) (September 2005)
- [\*Best Practices in Service Chain Performance Management\*](#) (August 2006)
- [\*Service on Time, All the Time\*](#) (April 2007)
- [\*Service on the Move: Driving Profitability via Fleet Management\*](#) (March 2007)
- [\*The Mobile Field Service Benchmark, 2007 and Beyond\*](#) (December 2006)
- [\*The Service Network Optimization Benchmark Report\*](#) (March 2006)
- [\*Industry Best Practices in Reverse Logistics\*](#) (January 2007)
- [\*Service Parts Management Update\*](#) (October 2006)
- [\*The Convergence of People and Parts in the Service Chain\*](#) (March 2006)

Information on these and any other Aberdeen publications can be found at [www.Aberdeen.com](http://www.Aberdeen.com).

**Author: Amit Jain, Research Director, Service Management**  
([amit.jain@aberdeen.com](mailto:amit.jain@aberdeen.com))

Aberdeen is a leading provider of fact-based research and market intelligence that delivers demonstrable results. Having benchmarked more than 30,000 companies in the past two years, Aberdeen is uniquely positioned to educate users to action: driving market awareness, creating demand, enabling sales, and delivering meaningful return-on-investment analysis. As the trusted advisor to the global technology markets, corporations turn to Aberdeen for insights that drive decisions.

As a Harte-Hanks Company, Aberdeen plays a key role of putting content in context for the global direct and targeted marketing company. Aberdeen's analytical and independent view of the "customer optimization" process of Harte-Hanks (Information – Opportunity – Insight – Engagement – Interaction) extends the client value and accentuates the strategic role Harte-Hanks brings to the market. For additional information, visit Aberdeen <http://www.aberdeen.com> or call (617) 723-7890, or to learn more about Harte-Hanks, call (800) 456-9748 or go to <http://www.harte-hanks.com>