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Operations Practice

How lean is your field force—really?

With the right approach, lean management can reduce your field force's cost, even while improving customer experience. But getting the details right matters.

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Many organizations recognize that they need to improve the productivity of their field forces. The problem is that it's hard to do. Simply put, there's a lot to get right—and all the elements of the solution need to work in unison to fully capture the benefits.

The failure to take a well-coordinated, multifaceted approach to field-force management creates waste, increases cost-to-serve, and undermines customer experience. For example, we have found that field technicians waste up to 40 percent of their workday on non-value-adding activities, such as filling out timesheets. Idle time amounts to two to three hours a day, and an additional hour may be spent on unnecessary driving time. Customer satisfaction may fall 20 percent below benchmarks. What's more, although technicians can see the customer's unmet needs firsthand, they often don't upsell the relevant products or services.

Much of the time, the underlying causes of the field force's low productivity are clearly visible. Many field forces operate without fundamental approaches to ensure efficiency and optimize utilization. Inadequate performance management, poor visibility into technicians' activities, a reactive approach to dispatching, and inaccurate forecasting are among the most common obstacles.

To address these challenges, many organizations have turned to lean-management techniques—and may be satisfied that they have implemented these effectively. However, when looking deeper at the actual activities and culture, we typically see that companies struggle to do everything they need to do in an orchestrated way. Organizations may have metrics, but not act on them; hold weekly meetings with technicians, but not talk about the right topics beyond safety; or ask administrators to spend time in the field without guiding them on how to coach technicians to promote improvement.

But new digital tools and advanced analytics make it easier to plug the value leakage that flows through these gaps in lean-management practices. Companies can track technicians' performance in real time, making decisions on the fly about how to improve productivity—while also accurately predicting job times by disaggregating a large install or repair job into discrete tasks. Dispatchers can receive live updates on a technician's progress at the task level and intervene as needed, such as by connecting them with experts via augmented reality (AR) or virtual reality (VR). And supervisors can identify technicians' coaching needs by looking at their performance across each granular task.

Leading companies have applied such advancements as the basis for a holistic "lean journey" in field operations that generates step-change improvements in productivity. This lean journey becomes a virtuous circle in which continuous improvement and cultural change enhance the application of new technologies (Exhibit 1).

The five-step lean journey

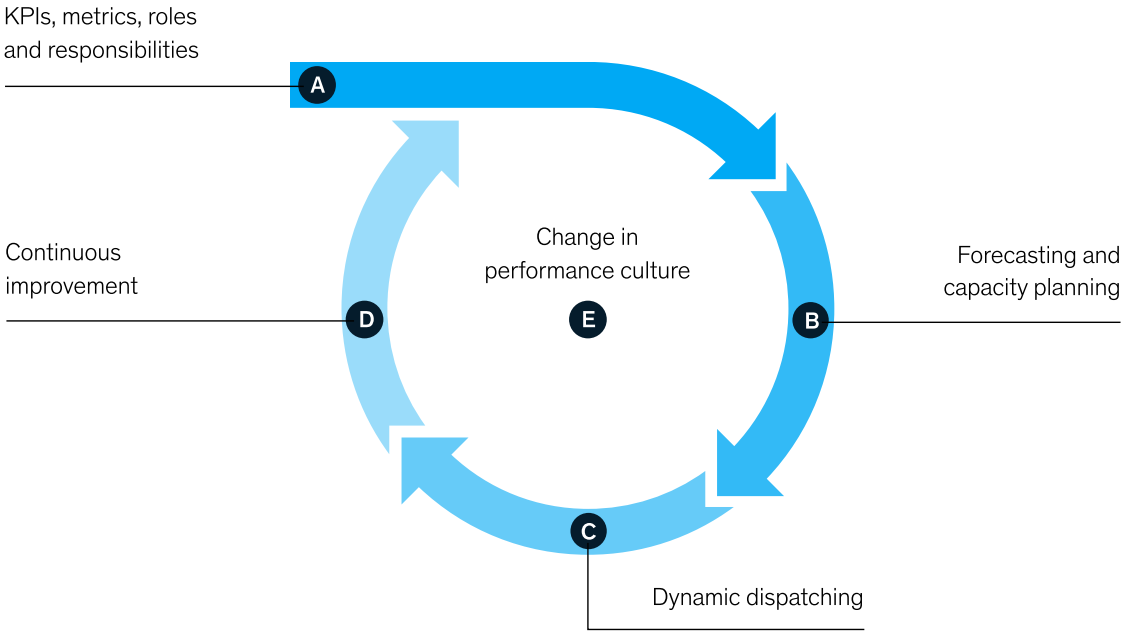
The following five-step approach outlines how organizations can implement lean effectively to address these productivity dimensions—and what they can achieve. Two cases provide the context.

— **A telecommunications company's** field force comprised more than 5,000 internal and contract personnel. Productivity was poor—each technician only completed approximately four jobs per day—and customer-satisfaction scores were low. A pilot program to test a comprehensive lean approach increased the internal work rate by more than 20 percent. Productivity gains, together with improved collaboration between the dispatchers and the field force, also led a nine percentage-point increase in customer appointments met. The national rollout achieved a 25 percent increase in productivity within six months and is on target to achieve a 40 percent increase by the end of the first year.

— **A North American utility** with a large workforce of unionized and non-unionized labor focused on several integrated initiatives to improve productivity. On-site productivity rose by 20 percent and customer-satisfaction by nearly 50 percent, while the number of repeat visits for servicing fell by half.

Exhibit 1

The journey to a lean field force creates a virtuous cycle.



Step 1: Establish KPIs, metrics, and roles
Performance measures must be clearly explained so that people in the organization understand the objectives that underlie their targets. Technicians' performance can be measured in terms of the dimensions of availability, utilization, and efficiency (Exhibit 2).

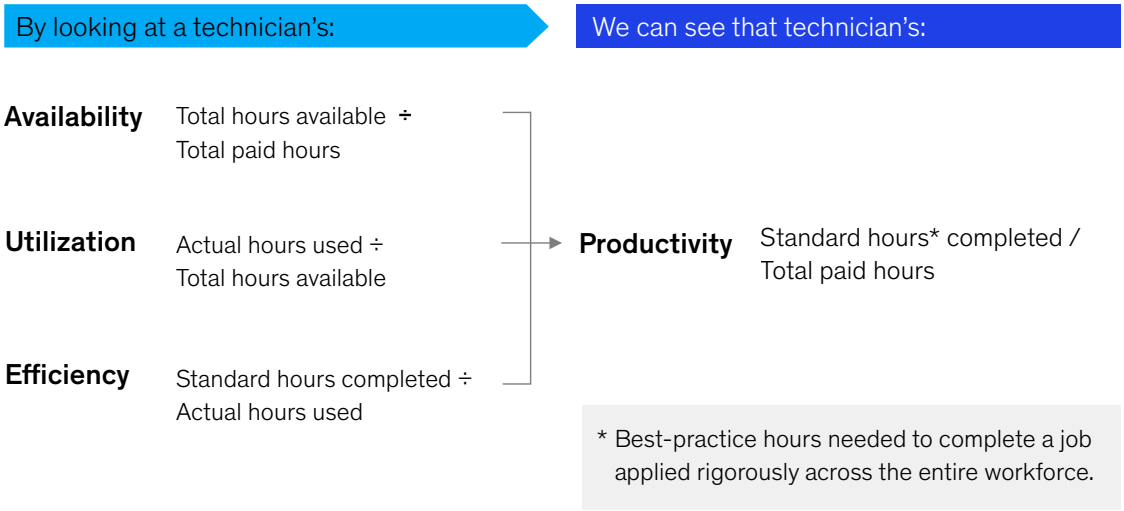
In designing a performance-metrics strategy, it is essential to link metrics directly to economic value, service quality, and other corporate objectives—a fundamental connection that many companies still struggle with. Metrics should be cascaded from the executive level down to the front line, so that the right metrics are tracked at the right level.

Once an organization aligns on productivity metrics, it must communicate them to stakeholders consistently, and through a variety of channels. Scorecards should be simple in format, containing a limited set of primary metrics that are under the control of employees. At the same time, the management system should allow for a drill-down diagnostic to look up more detailed indicators when a metric is below the target.

Once the content is agreed upon, the scorecards should be widely available to technicians, such as on the company's intranet and on prominently displayed performance boards. Other approaches include presenting the scorecards in daily emails, weekly team meetings, or meetings of operational support teams and steering committees. The telecom company started by establishing a top-down performance cadence nationwide, including metrics, targets, and a weekly performance meeting. Similarly, the utility redesigned metrics and KPIs for all roles and restructured the agenda for performance huddles.

Exhibit 2

The productivity metric combines technician availability, utilization, and efficiency.



But metrics alone are only part of the calculation. Organizations should also clarify roles and responsibilities to reflect best practices:

- **Field technicians** self-manage to achieve productivity and quality targets. They receive jobs on a mobile device throughout the day, using a one-at-a-time allocation model. They use a GPS navigation tool with real-time traffic optimization to find the fastest route to the next job.
- **Frontline managers** conduct diagnostics and review performance. They analyze metrics to understand the drivers of lost productivity, conduct weekly five-minute calls to discuss performance measures, and lead monthly discussions of performance plans based on the performance scorecard.
- **Dispatchers** monitor automatic job allocation and technicians' progress, and escalate in real-time based on red flags. They also communicate with managers during the day and in more formal sessions to escalate field-performance issues as needed.
- **Performance-management coaches** train technicians when skills gaps are identified, and work with low-performing technicians as requested by managers. They also identify continuous-improvement opportunities in the field and encourage the sharing of best practices.

Step 2: Improve forecasting and capacity planning

Effective capacity management requires accurate forecasting, right-sizing of the business-as-usual workforce, and flexible allocation of activities in response to demand. Modeling must cover multiple time horizons:

- **Weekly**. Forecasting and demand modeling incorporates historical data from similar periods to account for seasonality and other demand spikes. It includes shorter-term demand drivers (such as weather) and monitors external factors that could affect demand (such as regulatory changes, competitor offers, and ad-hoc events). To identify expected demand, the modeling relies on advanced analytics–based models that account for historical trends,

future expectations, weather conditions, and equipment conditions, among other factors.

— **Day minus 1.** The weekly demand model is refined using current data—such as to account for spillover work from the previous day, or demand shortages. Right-sizing is based on the weekly model using updated attendance data. The short-term levers utilized at this stage are more costly, such as cancelling training, pulling coaches into queues, and requiring overtime.

— **On the day.** At a minimum, planners re-run the "day minus 1" model to account for the previous day's capacity imbalances. The re-run should occur immediately after appointment-book closure for the afternoon or end-of-day planning.

Step 3: Transition to dynamic dispatching

Dynamic dispatching, in which dispatchers proactively adjust the allocation of field tasks, is essential to improving productivity and customer experience. At the utility, a dynamic-dispatching model reduced idle time and improved on-time arrival. It also enhanced coordination between the field technicians and dispatchers to reduce "white space," or time periods in which no work is allocated.

To make dynamic dispatching work, the organization transitions from a single dispatch group responsible for inbound and outbound functions to a split-control function with a customer-facing dispatcher and an exceptions controller. Customer-facing dispatchers are dedicated, proactive controllers of outbound work. They are responsible for the tactical execution of field tasks and the efficiency of the field force. Responsibilities include:

— **Customer champion coaching.** Dispatchers proactively act on all alerts to ensure timely service delivery and increased field productivity. They also enforce the idle-time process.

— **Reporting and escalation.** They escalate performance issues to frontline field managers when intervention is required and deliver an end-of-day report on continuous improvement.

— **Schedule management.** Dispatchers maintain on-the-day appointment books and liaise with the capacity-management team to optimize the schedule and system configuration.

Dynamic 1-to-1 job allocation allows organizations to better monitor a technician's task progression by tasking a technician with only his or her next job. The work-manager tool can still allocate multiple jobs to each technician, but the dispatcher only communicates the technician's next job.

Dynamic dispatch can lead to significant improvements, including a freed capacity of 20 percent and a 40 percent reduction in travel time (Exhibit 3).

However, 1-to1 allocation must be managed properly to capture the benefits. Lessons learned from organizations that have improperly implemented this process point to several risks.

— **Improper goals or targets.** Technicians need optimal productivity targets to ensure that they pull more jobs from control when they are running ahead of schedule to offset the days in which they fall behind because of a long job.

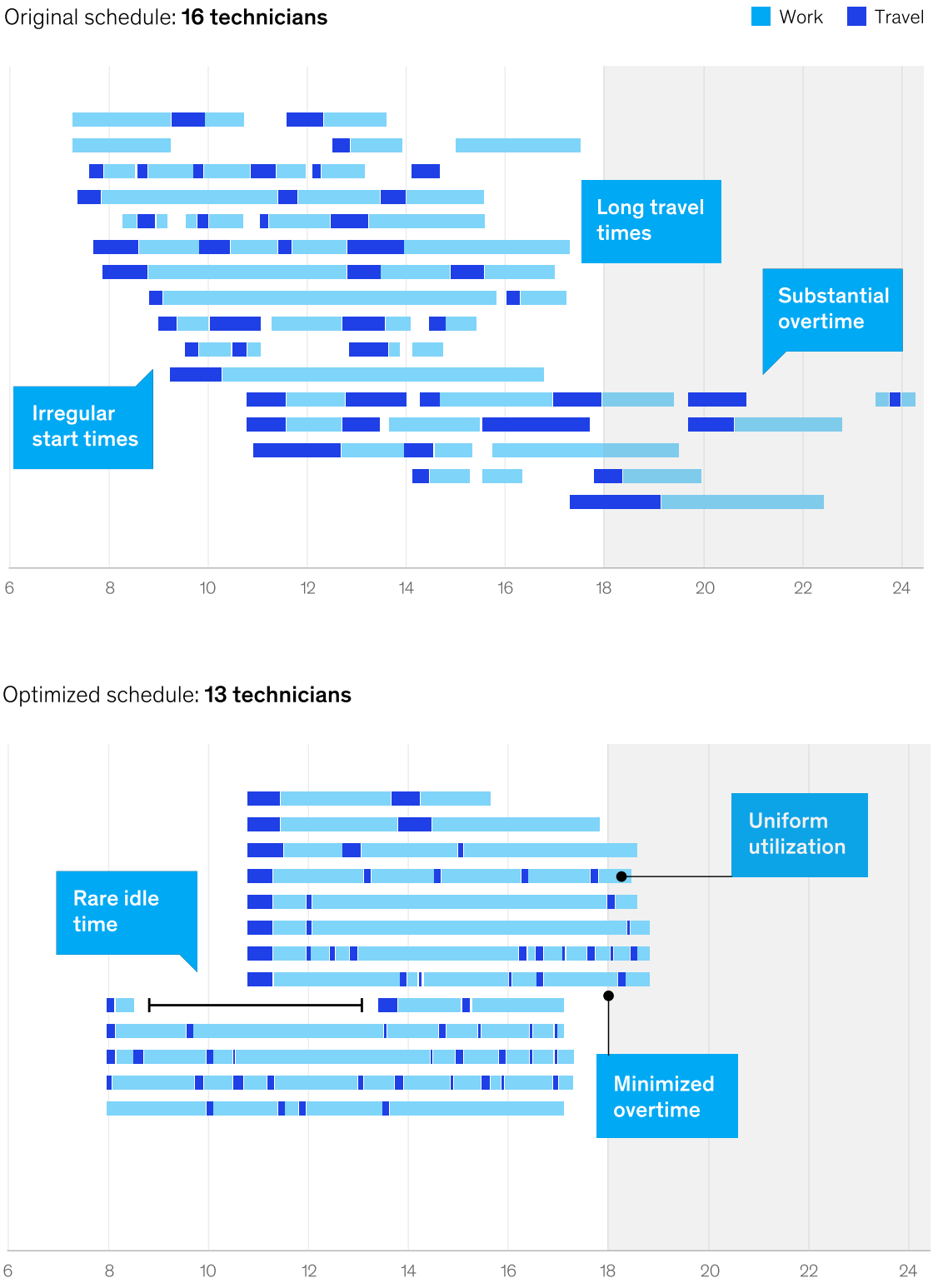
— **Misaligned dispatcher mindset and skill set.** Dynamic dispatchers must become proactive, keeping an eye on technicians who lose time, watching out for appointments at risk, and taking corrective action early.

— **Poor staffing model or under-staffing.** Dispatchers often have other responsibilities, such as processing service activations or closing out jobs, that may distract them from managing technicians. To limit distractions, service functions should be staffed separately by people focused on average handle time, while dynamic dispatchers should be focused solely on optimization.

— **Incorrect statistical data.** If dispatchers receive systematically incorrect data on how

Exhibit 3

Optimization and dynamic dispatch yield a 20% reduction in resources and 40% reduction in travel time.



long it takes to do a job, they will be unaware of idle time and unable to police it.

— **Failure to optimize capacity management.** Capacity management must be optimized to maximize utilization through overbooking and dynamic quota adjustment.

Step 4: Promote continuous improvement

Companies must establish a systematic process to drive continuous improvement through the focused application of improvement tools and techniques. Although the concept of continuous improvement is not new, the use of data-driven, in-depth investigations can significantly reduce the business impact of equipment and operational failures. For example, a company can use machine learning models to identify the patterns that result in service tickets.

Systematic continuous improvement has tremendous benefits, but resources must be focused on the most critical areas of improvement: we find that 80 percent of the improvement can be achieved by addressing 20 percent of current causes of poor performance. An in-depth investigation of service failures provides the basis for eliminating root, systemic, and organizational causes.

At the telecom company, these basic guidelines led to continuous-improvement efforts that focused on eliminating waste, creating incentives for field personnel, and enforcing consequences in dispatch operations. Dispatchers were trained to play a more proactive role in managing daily performance, such as by using huddles and introducing new metrics relating to productivity and on-time rate that more closely aligned the goals of dispatchers and field team leaders.

At the utility, leaders defined a toolkit for continuous improvement that includes a new operating model for managers, with targeted deep dives to eliminate waste in the system. It also trained and coached technicians and the frontline on soft skills, such as communication and teaming, to improve the customer experience.

In most situations, organizations should follow a multistep approach to address the causes of unreliability: *Identification* is supported by unit-specific productivity tracking and development of an incident database. *Prioritization* requires identifying the most expensive failures and largest improvement opportunities. *Investigation* of selected failures entails understanding what happened and what could be improved, finding the root cause, and developing and documenting corrective actions. *Implementation* of corrective actions should be diligently monitored. And finally, *standardization* of corrective actions across sites can be accomplished by identifying potential trends of organizational and systematic failures.

Step 5. Build performance-management culture

To reduce waste and improve productivity, organizations need to start building a culture of lean performance management. A lean management system is an end-to-end, integrated approach that takes employees on a continuous-improvement journey consisting of four distinct components.

— **Connect.** All employees understand how their work relates to the organization's vision, and everyone is fully engaged in meeting individual goals and targets.

— **Discover.** Best practices are systematically identified, shared, and improved. Everyone is actively engaged in identifying errors and defects before they reach customers.

— **Enable.** The organization develops its people so that they can surpass expectations for performance. Managers understand that their primary role is to lead and develop their teams. The telecom company defined a new operating system for team managers that included the skills and tools needed to achieve change and elevate technician engagement. The introduction of the new system was supported by intensive training for team managers.

— **Deliver.** Employees continuously adapt to the ever-changing customer and business needs.

Regular discussions on team performance and an emphasis on the work at hand help to keep employees focused on their tasks.

This five-step journey requires investment and change management. But the effort to bring lean to field operations will be rewarded: less waste, lower cost to serve, and higher customer satisfaction.

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