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Operations

From field to remote operations: Embracing change to enable growth

As field forces age and wages increase, reimagining field operations through a unified equipment life cycle strategy could hold the answer to enabling continued growth in services businesses.

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Service operations

July 17, 2024 - Waiting for a service technician to show up and fix a critical piece of equipment is frustrating for all involved. Customers must absorb losses associated with equipment downtime, while service providers have to manage and maintain costly field operations teams. Now digital tools are enabling B2B companies to reimagine field operations and service delivery through remote connectivity.

A number of major companies, including manufacturers and software firms, are already offering remote or virtual assistance services to their customers. And the business case for reimagining field operations is growing ever stronger, as organizations grapple with an approaching "silver tsunami" of retiring field workers,[1] changing customer expectations in the post pandemic era, as well as new opportunities from digital technology and generative AI (gen AI).

Costs are a concern, too. The underlying struggle with an aging field force has intensified, and growing competition for experienced technical resources has seen technician wages in North America increase 16 percent over the last five years.[2]

Reimagining field operations through a unified equipment life cycle strategy

Much of the pressure to change how service is delivered was born during the global COVID-19 crisis, when operations went through a period of accelerated digitization that enabled many organizations to continue servicing equipment without putting technicians at risk. This caused a whiplash effect, however, as B2B customers experienced more digital interactions and remote support—raising their expectations for B2B channels to reach the digital maturity of B2C channels.

Despite the benefits to B2B businesses and their customers, many organizations still struggle to offer a true digital and remote experience for their customers given a number of issues, ranging from multiple legacy systems to unclear opportunities for monetization.

To effectively shape the future of field operations, companies could look to reduce their overall field operations by taking an end-to-end approach that brings together digital, IT, product, and services functions to orchestrate a "unified equipment life cycle strategy" that reduces the need for field servicing.

This reimagination of service delivery could ultimately help increase service capacity without requiring additional field resources, while also harnessing technology and data to inform new ways to provide the experience B2B customers increasingly expect.

One global manufacturing company is doing this by harnessing digital tools—including cloud and augmented reality—to provide customers with operations and diagnostics support from anywhere in the world. Begun during the pandemic, this approach has been rolled out to all customers globally, minimizing travel-related costs and time, and speeding up customer service.

Other B2B companies looking to reimagine their field operations through a unified equipment life cycle strategy could consider four key elements to get started:

- **Redesigned value proposition.** Businesses would need to redesign the value proposition to build an equipment offering that clearly articulates the benefits of higher uptime and remote connectivity versus traditional siloed field interactions.
- **Technology-backed remote servicing.** Product and IT functions would need to collaborate to enable higher serviceability of equipment by increasing connectivity and remote capabilities.
- **Overhauled commercial model.** As well as redesigning the pricing strategy to match the higher value generated for customers, organizations would need to train the sales force to sell new value-based offerings, and work with existing and new customers to fully migrate to the new value proposition.
- **Optimized operations.** Key to success is taking an end-to-end approach across the service funnel to increase the effectiveness and efficiency of each channel—from automated troubleshooting to self-service digital channels and remote operations that ultimately increase field productivity with better information and tools.

Those companies that truly invest in digital enablement—and harness the catalyzing power of gen AI, wearables, and digitization through a holistic approach—could pull ahead of their peers. Moving with the tide of change, instead of resisting it, could ultimately enhance their capacity to service equipment and increase their right to win as the true owners of equipment and operational insights.

Be part of the conversation with McKinsey Talks Operations. Learn more and register for events with our Operations experts here.

[1] *2023 Voice of the Field Service Engineer Report*, Service Council, October 2023.
[2] Bureau of Labor Statistics for Industrial Machinery Installation, Repair, and Maintenance Workers, 2019-2023, U.S. Bureau of Labor Statistics, accessed April 2024.

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McKinsey and ALICE Technologies collaborate to transform capital project delivery with generative scheduling

The alliance brings AI- and advanced-analytics-enabled scheduling to project delivery, allowing owners and contractors to move faster, manage risk, and unlock measurable value.

By Erikhans Kok
Leads our Capital Excellence practice globally, advising clients on capital productivity, operations, and strategy

By Martin Linder
Leads the Firm's Battery Accelerator Team; global colead for the McKinsey Platform for Climate Technologies as well as our sustainability work within advanced industries in Europe

By Mark Pitcher
Brings vast expertise across operations topics, including capital project development, planning, and execution to clients in the advanced industries, data centers, energy, and materials spaces

By Tim Drake-Brockman

April 14, 2026 - Capital project development today faces a paradox: demand is accelerating, while productivity remains an evergreen challenge. Capital projects are essential to global infrastructure and economic growth, but rising investment has not translated into better outcomes.

Industry leaders are increasingly using AI and advanced analytics to strengthen the data-driven nature of decision-making in capital projects—solving complex, nonlinear problems in engineering, procurement, construction, and commissioning. When combined with deep industry expertise and new ways of working, these technologies can create a significant opportunity to reduce costs and schedule overruns.

Over the past several years, McKinsey has collaborated with ALICE Technologies, a pioneer in generative scheduling, to help clients quickly create, test, and optimize construction schedules. Together, they bring a fundamentally new approach to capital project planning on complex programs, helping owners and contractors improve how projects are planned and delivered. Based on a proven track record of tangible client impact, McKinsey is pleased to formalize our alliance this week.

"We're excited to continue our collaboration with ALICE Technologies, building on more than five years of work across industries to improve how large capital projects are planned and executed," says Mark Pitcher, a partner in McKinsey's Capital Excellence Practice. "Building more robust,

analytics-driven schedules is a critical opportunity for the industry, and one that can drive significant improvements in cost and schedule performance."

Together, the firms have successfully introduced generative scheduling to more than 35 clients across capital-intensive industries, including infrastructure, data centers, energy, mining, and manufacturing, achieving schedule accelerations of up to 20 percent and significant cost savings.

"Generative scheduling creates a step change in capital project performance," says Erikhans Kok, senior partner and leader of McKinsey's Capital Excellence Practice. "When embedded within the right operating model and supported by strong project controls, it can help organizations make faster, more informed decisions."

The solution provides teams with dynamic, parametric models of the execution plan and uses advanced analytics to evaluate millions of sequencing and resource-loading scenarios. By treating labor, equipment, materials, space, and sequence as adjustable variables, teams can stress-test alternatives, understand the ripple effect of each decision, and make informed trade-offs across cost, duration, and risk impact.

The results are tangible. A leading global data center provider applied generative scheduling to simplify schedule logic, eliminate inefficiencies, and optimize sequencing and resource allocation. This effort uncovered more than 13 optimization opportunities and ultimately enabled a ~40 percent reduction in the baseline construction schedule.

"Generative scheduling is reshaping how complex capital projects are planned and delivered," says René Morkos, CEO and founder of ALICE Technologies. "Together with McKinsey, we are helping organizations integrate this capability into broader transformation efforts and drive sustained impact at enterprise scale."

Technology alone, however, does not close the performance gap. Capturing the full value at stake requires rewiring the entire organization. Lasting impact goes beyond the software implementation: it takes robust

capability building, an integrated operating model embedded in existing planning and delivery processes, and continuous benchmarking that feeds execution data back into future plans. ALICE enables scalable insight by ingesting BIM models and P6 schedules to simulate millions of execution paths and identify the most efficient and resilient options. Deep scheduling and construction expertise allow contractors and owners alike to accurately model real-world project conditions to improve on-time delivery.

“Rethinking capital project planning and delivery is essential to address the stagnant performance in cost and schedule outcomes,” says Martin Linder, senior partner and leader of McKinsey’s Capital Excellence Practice. “By leveraging advanced technology, data-driven decision-making, and collaborative planning, stakeholders can optimize project delivery, maximize value, and adapt to the increasing complexity of modern capital projects.”

The future of capital projects lies in embracing innovation and continuously improving planning methodologies, and stakeholders must commit to these changes to achieve transformative results. As capital projects grow more complex and the value of capital at stake continues to rise, the organizations that combine AI-enabled tools with disciplined ways of working will be best positioned to deliver large-scale projects with greater certainty—on time and on budget.

Through an open ecosystem of alliances, McKinsey continues to collaborate with leading technology providers to help clients unlock lasting performance improvements.

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