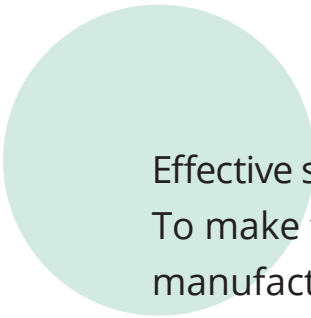
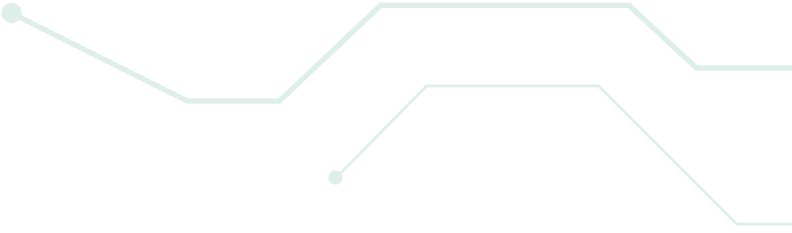


STREAMLINING SUPPLY CHAINS  
AND PHYSICAL PLANTS WITH

# MODERN WORKFLOW MANAGEMENT

How workflow management  
can eliminate constraints,  
save plant workforces time  
and unlock new supply  
chain efficiencies





Effective supply chains have always been about visibility. To make the right decisions on orders, shipments, manufacturing, and more, supply chain managers need visibility into demand, inventory, and the status of suppliers and shipments en route. The same applies to manufacturing, where plant managers need visibility into schedules, machine performance, and environmental factors to ensure that goods are produced as efficiently as possible.

Along with visibility, managers need close coordination between people and machines up and down the supply chain.

Many organizations fall far short of this ideal of visibility, coordination, and control. Inventory demands and the multiple moving parts in today's supply chains and physical plants can leave organizations struggling and mired in outdated processes and workflows built around emails, phone calls, and other ad hoc communications.

In addition, a lack of integration among disparate systems, people, locations, vendors, and suppliers contributes to a fragmented view of data, making it virtually impossible to fully optimize supply chains and field operations.

Fortunately, new technologies can help—especially with the aid of experienced implementors.



**Deloitte's and ServiceNow's relationship provides a path for supply chain and plant managers to capture the advantages of modern workflow management.**

# The business challenge

Today's just-in-time economy requires more efficient and responsive supply chains. There is no room for slow and inefficient processes that can lead to miscommunication, delays, or prolonged shutdowns. One report found that 40 percent of plant turnarounds miss their schedules or budgets by 30 percent or more.<sup>1</sup> The pressure is on to create what many have come to think of as the factory of the future.



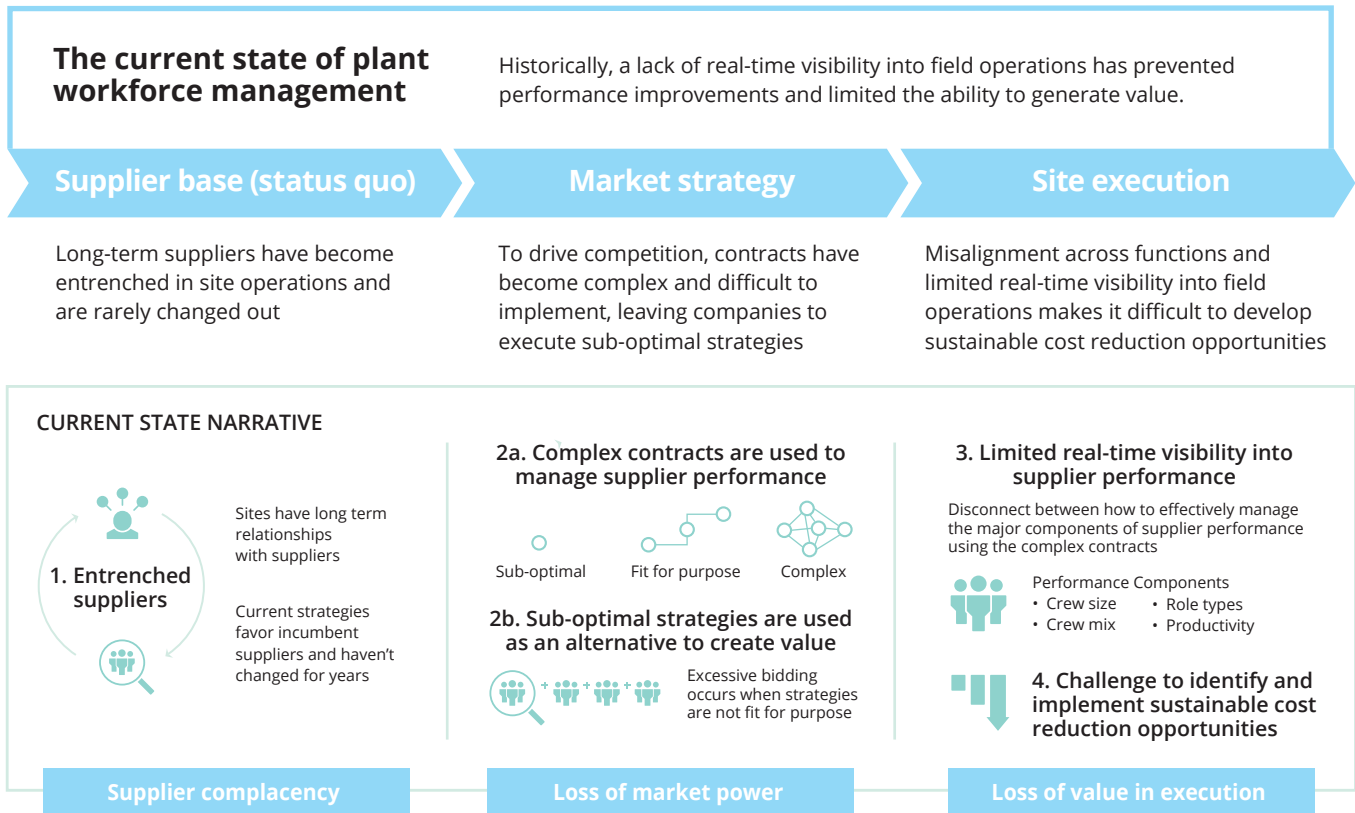
***“ With the factory of the future, we're seeing a greater need for orchestration across disparate solutions, and the ability to coordinate information flow and actions from one step to the next. ”***

- Don Good, principal in Deloitte Consulting LLP's Supply Chain and Network Operations practice.

That kind of tight coordination won't happen with slow, inefficient manual processes. What's needed is a unified engagement platform that coordinates disparate systems across an enterprise and between organizations.

# Existing technology poses challenges

Organizational change management is always a challenge in switching to new systems, no matter how beneficial the eventual outcome. And the kind of change needed to harmonize all of the different systems, people, and teams in a plant and across a supply chain is especially daunting given the large capital investments in legacy equipment/systems that are typically in place.



For example, linking industrial equipment so that it can share data with new systems requires standardizing data taxonomies that may have been in place for years or even decades. "You can't have one asset representing one system and another asset in another system using the same terms or words or fields," Good explains.

Navigating this change for plant operators—who equate every minute of downtime to lost revenue—requires a balance between cleaning up data and keeping legacy systems intact. "You want to make sure that you're doing no harm in the siloed applications while trying to drive efficiency across them," Good says.

While this balancing act can be challenging for plant managers, they can get help from a state-of-the-art "platform of platforms" such as ServiceNow, along with help in implementing the platform with the guidance of an experienced consultant such as Deloitte.



# How new technology helps solve the problem

Deloitte works with its industrial customers to help them drive end-to-end workflows, including supply chain and plant workforce management. The process involves examining an organization's existing workflows, standardizing and cleaning up data between systems, and aiding in organizational change management.

## Applying a digital lens to plant workforce management

Applying advanced digital technologies to field operations will increase automation and improve transparency, safety, and efficiency.

### Digital capabilities



**“Manager of manager”** that connects business systems together allowing for seamless integration



**Workflow enablement** that provides end-to-end visibility into key business activities and metrics



**User experience** provides a consistent consumer-like experience for employees within a single portal



**Mobility enables** users to engage with platform in the field outside of traditional office settings

### Plant workforce management solution features

#### Scheduling/dispatching/tracking

Use maps to assign and unassign tasks to field technicians and track their routes, progress, and issues

#### Constraint management

Real-time monitoring and elimination of constraints such as unavailability of materials/permits

#### Performance management

Monitoring of performance of field technicians, forepeople, and supervisors

#### Centralized reporting

Centralized reporting and dashboards utilizing information across multiple systems such as planning software, ERPs, IoT

#### Task management

Drag and drop tasks to technicians using a centralized dispatch and monitor real-time performance (e.g., travel/work time)

#### Inventory management

Creation of reservations of materials and spare parts through mobiles and tablets

#### Knowledge management

Real-time sharing of knowledge articles such as previous testing records, engineering, and drawing

#### Mobility/GIS location mapping

Using agent maps, field service agents can view optimized routes for tasks assigned to them on a given day.

The ServiceNow platform, implemented with Deloitte's help, coordinates the work of employees across the physical plant and supply chains.

With ServiceNow, plant managers, turnaround managers, field service workers, and back office employees benefit from a “single source of truth”—unified data—that helps them streamline processes and coordinate their efforts.

## For example, ServiceNow helps keep plant turnarounds on time and on budget by providing:



A high-level view of the turnaround, which includes giving employees the ability to drill down to individual tasks and workflows to keep managers and their crews on the same page



Real-time visibility into constraints such as unavailability of materials



Analytics for optimizing future performance and turnaround times; sometimes the best teacher is experience, and ServiceNow helps by quantifying what went well and what didn't on a given turnaround, providing managers data to assist in finding ways to improve the next one



Ability to escalate issues quickly (e.g. safety incident, lack of permit, unforeseen maintenance problems)

Integration between systems is a critical factor in digital transformation. In addition to ServiceNow's native capabilities giving organizations greater control over workflows, ServiceNow also integrates with applications already in place, such as Primavera Scheduling, SAP, Oracle, and more.



A contractor sent out a work crew to replace a transformer. However, the crew arrived at the job site ahead of the supervisor holding the required permit.

SO THEY WAITED.

The supervisor finally arrived. But the crew discovered that their supplier had delivered the wrong materials to the site.

SO THEY WAITED FOR THE RIGHT MATERIALS TO ARRIVE.

And, as it turned out, no one knew when the crane needed to hoist the transformers was supposed to arrive.

SO THE CREW WAITED SOME MORE.

ServiceNow helps companies avoid non-productive time with tasks routed automatically to the right person at the right time. It automatically delivers workflows outlined with checklists, routes work orders, tracks permitting, and more, giving everyone involved full visibility, accessible from any computing device.

# The enterprise value proposition

ServiceNow's integration with other tools in a company's technology portfolio can benefit more than supply chains and physical plants. The platform's built-in functionality and integrations help departments across the enterprise, including:

- FINANCIAL
- LEGAL
- CYBERSECURITY
- FACILITIES MANAGEMENT
- HUMAN RESOURCES

Among many other benefits, ServiceNow provides a single interface that interacts behind the scenes with the other systems employees use to get their work done.

These types of synergies can benefit the enterprise in perhaps unexpected ways. For example, ServiceNow helped one energy company cut audit-related email traffic by 60 percent while also reducing problems revealed in those audits by 50 percent.<sup>2</sup>

## Guide to getting started

A leading approach to modernizing supply chain and plant operations is a pragmatic one: Begin with an end goal in mind that keeps teams headed in the right direction. But don't try to do everything at once; an iterative approach makes change management easier, reduces disruption, and allows for course correction along the way.

It is also essential to communicate the value of the system up and down the line to get stakeholders on board. "Make sure that you're setting the right expectations, from the field service worker up to management," says Good.

For implementation, it's wise to engage with an experienced consultant such as Deloitte.



# The bottom line



Supply chains and plant workforces are often pushed to the limit by today's just-in-time landscape, making it hard to keep up using manual and ad hoc processes and communications. The modern supply chain requires a “platform of platforms” that coordinates people and systems to get the job done, on time and on budget.

**For more about how workflow automation can save time and free up resources for your organization, visit:**

<https://www2.deloitte.com/us/en/pages/about-deloitte/solutions/servicenow.html>

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<sup>1</sup> Roel Van Doren, “Welcome to Innovations,” Innovations in Process Control, Emerson Electric Co., <https://www.emerson.com/documents/automation/innovations-in-process-control-magazine-09-en-gb-1542472.pdf>, accessed March 26, 2020.

<sup>2</sup> “Nexen Energy speeds and strengthens its external audits with ServiceNow GRC,” ServiceNow, <https://www.servicenow.com/customers/nexen-energy.html>, accessed March 17, 2020.

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