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THE FORWARD DEPLOYED INVENTORY SYSTEM

Different Teams Different Priorities

Chapter 4 · Part I · The Problem No One Is Managing Well Enough

Supply chain and field service teams do not have to pull the same oar.
But they do have to row in the same direction.
The FDIS Maturity Model gives them a shared course.

FROM CHAPTER 4

Glenn Caudill

COMPLIMENTARY PREVIEW · NOT FOR RESALE

PART I · THE PROBLEM NO ONE IS MANAGING WELL ENOUGH

Chapter 4

Different Teams Different Priorities

"Football is one-third offense, one-third defense, and one-third special teams."
— George Allen

"Supply chain and field service do not have to pull the same oar. But they do have to row in the same direction. The FDIS Maturity Model gives them a shared course."
— Glenn Caudill

Friday Afternoon

At 4:38 on Friday afternoon, Derek completed his final review of the week.

As a regional field service manager, he kept close watch on open service calls, especially as the week came to an end. Every service commitment had been met except two. Both remained open because the required inventory item had not been available.

Derek had stayed on top of them. The customers had been informed. Premium shipments were scheduled to arrive at 8:00 Monday morning, and field service personnel had been assigned to complete the work as soon as the inventory arrived.

The two calls were not the result anyone wanted, but the recovery plans were credible and understood. The rest of the region was in good order. Derek had worked hard to put it there.

He closed the report.

He would meet his family for dinner and then go to Derek Jr.'s football game. The next morning, he had a tee time with Thomas, the company's director of supply chain. They had worked together for years and disagreed about inventory almost every time they spoke, but golf gave them a place to argue about work without anyone preparing a presentation or copying an executive on the conversation.

Derek reached for his jacket.

His phone rang.

It was Martha, the customer contact for one of the two calls scheduled for Monday. Martha was direct, reasonable, and careful about escalating a problem. If Martha called late on a Friday, she had already tried every other option.

"I am sorry to do this to you," she said. "My boss is demanding that we resolve it tonight."

Derek looked at the closed report on his screen.

"Martha, we have the inventory item arriving at eight Monday morning. Your team agreed to the plan."

“I know. I agreed to it too. My boss didn’t.”

She did not sound angry. She sounded trapped.

Derek reopened the service call and dialed Thomas.

“We show the inventory item in stock,” Thomas said after pulling up the record.

“We have been through this,” Derek said. “The system shows it. My field service personnel do not have an inventory item they can use.”

“I am looking at the record right now.”

“And my dispatcher has already checked the location. No one can confirm the inventory item is there, and no one can make it available to us.”

The conversation paused at the point where many of their conversations paused. Thomas had a record. Derek had a service call. Each was describing the same inventory item, but the two descriptions did not lead to the same conclusion.

Thomas began looking outside the region. After several minutes he found another inventory item and arranged a first-flight-out shipment.

“It will be expensive,” Thomas said. “The premium transportation will hit your regional budget.”

Of course it would.

Derek’s dispatcher found field service personnel willing to complete the call that evening, at double time, which would also hit his budget. The customer would be taken care of. That was what mattered. Derek would give Thomas hell about the cost during their round in the morning.

Dinner was no longer possible, but he could still make the football game. He sent his wife a message telling her to go ahead without him.

Then his phone rang again.

It concerned the other service call waiting for inventory. This customer was the company’s largest account.

Derek reviewed the situation with his dispatcher. They checked the inventory records again. They called the locations that might have the required inventory item. They examined the remaining transportation options. The shipping cutoffs had passed, and no usable inventory item could be confirmed within reach of the customer.

There was no credible way to complete the work that night.

Derek called the customer himself. He explained what they had checked, why the service could not be completed, and what would happen Monday morning. The customer was disappointed but eventually accepted the plan.

“Thank you for calling me directly,” the customer said.

Derek ended the call and looked at the time. He was late, but not hopelessly late.

He sent his wife another message.

On my way.

He picked up his jacket and headed toward the door.

The phone rang before he reached it.

The screen showed the name Derek never wanted to see late on a Friday: Dennis Day, the company's senior vice president of field service.

Dennis did not spend time on introductions.

"We have a serious problem," he said. "If we do not resolve this tonight, we could lose our largest customer."

"I just spoke with them," Derek said. "They understand the Monday plan."

"Well, someone above the person you spoke with does not understand it. I also talked to supply chain. They said we have the inventory item in stock."

Derek stopped walking.

"The record says we have it," he said. "We have checked every location. We do not have an inventory item that we can get to the customer tonight."

"I do not want to hear that the system is wrong," Dennis said. "I need a plan."

"Dennis, there is no confirmed inventory item within—"

"I need a call back in one hour with the plan for how you are going to resolve this tonight."

The call ended.

Derek remained standing near the door with his jacket in his hand.

An hour did not change the shipping cutoff. It did not move the inventory item. It did not make an unconfirmed record reliable. It only transferred the entire problem to Derek and placed a deadline against his name.

If the call remained open, his service performance would suffer. If he found another emergency option, the premium transportation and overtime would affect his regional cost. The inventory record that could not produce the item would still show that the item had been in stock.

Every available outcome belonged to Derek's organization.

His phone rang again.

This time it was his wife.

Saturday Morning

Thomas arrived at the club at 6:40 for a 7:20 tee time.

His phone showed a meeting invitation at 6:52. Nine o'clock. Saturday.

The organizer was Kathy Waldruff, the company's senior vice president of supply chain. Thomas was two levels below her. In six years he had been in the same room with her perhaps a dozen times, and never on a weekend.

The subject line read:

Largest account. Inventory availability.

He sent Derek a message from the parking lot.

Have to cancel. Something came up.

The reply came back before he was out of the car.

Probably for the best. Long night.

Thomas drove home and opened his laptop. He had two hours to prepare an answer and already knew he did not have one.

Eighteen months earlier, the account had come close to leaving. The chief executive had gone to the customer personally and committed to availability. The chief financial officer had released four million dollars for additional service inventory. Finished goods production had been delayed a full month so components could be built as service inventory instead.

Thomas had led the placement. He selected the items, sized the quantities, and distributed them across the forward locations covering that customer.

He could produce all of it. What was purchased. What shipped. Where every inventory item was recorded. He could show four million dollars converted into inventory and positioned in the field, exactly as the company had asked.

He could not show that any of it was still there.

At nine o'clock, Kathy joined the call with two people Thomas had never met.

She was not angry. That was somehow worse.

"I speak with the chief executive Monday morning," she said. "He made a personal commitment to this customer eighteen months ago. I have to explain why we could not complete a service call Friday night. Help me understand the inventory position."

Thomas walked her through it. The inventory item was recorded at a forward location within range of the customer. The record showed a quantity. Field service had checked the location and could not confirm it.

"Was it there?" Kathy asked.

"I cannot answer that."

"You have the record in front of you."

“I have the record,” Thomas said. “The record shows the last transaction anyone reported. It does not tell me what is at that location this morning.”

The call went quiet.

“We spent four million dollars,” Kathy said. “We delayed production. And we cannot determine whether one inventory item was available.”

“No.”

“Then what did we buy?”

Thomas did not have an answer for that either.

The call ran ninety minutes. Most of it was spent establishing what the company could not establish.

In three weeks Thomas had a write-off review covering forward inventory that had shipped and never been accounted for. Finance had given him an inventory reduction target for the year. A different group had given him a premium freight reduction target. Neither considered the other’s number its problem.

And on Friday night he had been the one who found an inventory item four states away and paid to fly it in. The cost had gone to Derek’s budget. Derek would spend Saturday believing supply chain had done that to him.

The call ended a few minutes before eleven.

Outside it was clear and still, the kind of morning that would have been good for golf.

Thomas had spent eighteen months and four million dollars making certain the inventory was there.

He still could not say whether it was.

When an Inventory Problem Becomes Personal

By the time Derek’s wife called, two inventory exceptions had reached nearly every level of the organization. Customer contacts had escalated to their leaders. Derek’s regional problem had reached the senior vice president of field service. Supply chain records had been used to challenge what field service personnel were reporting from the field. By Saturday morning the same two exceptions had reached the senior vice president of supply chain, and through her, a commitment the chief executive had made in person.

The effects did not remain at work. Derek’s family was waiting for him at a football game he had expected to attend. Thomas spent his Saturday preparing an answer he did not have.

No one involved had set out to create the conflict. Martha was protecting her customer relationship. Thomas had searched for another inventory item and arranged an emergency shipment. Dennis was responding to the possible loss of an important customer. Derek was trying to meet the service commitments assigned to his region. Kathy Waldruff had to explain four million dollars to a chief executive who had given his word.

Each person was responding to a legitimate responsibility.

TWO INVENTORY EXCEPTIONS, ONE WEEKEND

TIME	WHAT HAPPENED	HOW HIGH IT WENT
Fri 4:38	Derek closes the week. Two calls open, Monday plan set.	Regional manager
Fri 5:10	Martha calls. Her leadership wants the work done tonight.	Customer contact
Fri 5:25	The record shows stock. The location cannot confirm it.	Director, supply chain
Fri 5:50	Premium freight and double time. Cost lands on Derek's budget.	Regional manager
Fri 6:40	Second call, largest account. Cutoffs passed, nothing confirmed.	Regional manager
Fri 7:15	Dennis: one hour, or we could lose the account.	Senior vice president, field service
Sat 6:52	Kathy Waldruff schedules a nine o'clock call. Tee time cancelled.	Senior vice president, supply chain
Sat 9:00	Four million dollars, delayed production, a promise in person.	Chief executive

Eight escalations, four levels, and no one who could say whether the item was there.

Figure 4.2 Two inventory exceptions, one weekend. Neither escalation was unreasonable at any step, and no one at any level could answer whether the inventory item was there.

The difficulty was that those responsibilities did not lead everyone to the same understanding of the problem. Supply chain had a record showing that an inventory item was in stock. Field service had a customer waiting for an inventory item that could not be confirmed, accessed, or delivered. The record described inventory ownership. Derek's service call exposed inventory availability.

Both facts mattered. Only one of them could restore service.

This division reaches beyond a disagreement about a single inventory item. Supply chain and field service encounter the same inventory through different responsibilities. Supply chain sees inventory across a network and over time: quantities, locations, replenishment activity, transportation cost, investment, and the financial exposure created when inventory remains unused. Field service encounters inventory at the moment of need: a customer waiting, field service personnel prepared to perform the work, and an inventory item that is either available or unavailable for the service event.

Neither view is unreasonable. Both are necessary.

Organizations build these capabilities separately because each requires different expertise. They recruit people with different experience, build specialized systems, establish operating processes, and create measures appropriate to each form of work. The separation exists because the company needs both.

The difficulty is that the two teams do not experience the consequences of an inventory decision in the same way. An inventory item that remains unused may represent unnecessary investment to supply chain and protection against an uncommon but costly service failure to field service. A premium shipment may appear as avoidable expense to one organization and the only remaining way to protect a customer commitment to the other.

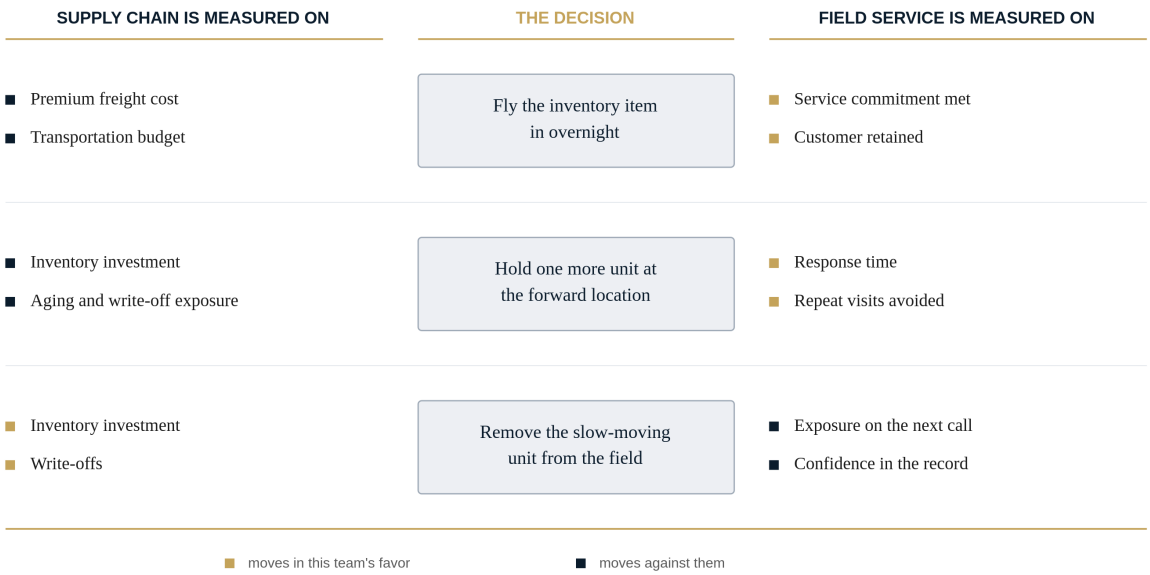


Figure 4.3 One decision, two scorecards. The same action moves the two sets of measures in opposite directions, which is how an operating disagreement becomes a personal one.

Measures intensify the difference. Supply chain may be evaluated on inventory investment, aging, write-offs, and transportation cost. Field service may be evaluated on response time, completion, repeat visits, and customer retention. When compensation depends on those measures, a decision that protects one team's result can appear to damage the other team's ability to succeed, and an operational disagreement begins to feel like interference.

The resulting wounds can become deep. Supply chain may believe that field service disregards inventory controls. Field service may believe that supply chain protects its measures at the customer's expense. Each new failure is then interpreted through the history of the failures that came before it.

This tension can exist among people who respect and like one another. Good relationships make difficult conversations easier, but they cannot make an inaccurate inventory record reliable or an unavailable inventory item accessible. Most employees do not want the conflict. They want to perform their work well, serve the customer, and be evaluated fairly. Frustration develops when people feel accountable for consequences they cannot control, or when their expertise appears to receive less credibility than another department's record.

The two organizations have different priorities for good reasons. The problem begins when the company gives them responsibility for the same outcome without a shared framework for understanding and improving the capability connecting them.

The organization does not need the two teams to think alike. It needs them to apply their different expertise to the same forward deployed inventory problem.

That requires more than goodwill.

It requires a system that brings the problem together.

A Shared System for Forward Deployed Inventory

Forward deployed inventory sits directly between supply chain and field service.

Supply chain may purchase it, position it, replenish it, and carry it financially. Field service personnel may receive it, store it, move it, consume it, and return it. The customer depends on it, even though the customer may never see the systems and organizations responsible for managing it.

Responsibility crosses several boundaries before the inventory item reaches the service event.

Most companies have systems supporting parts of this work. An enterprise system maintains financial and transactional records. A warehouse system controls inventory inside structured facilities. A field service system manages service requests, work activity, personnel, and customer commitments.

Each system performs an important role. The problem arises when no system is responsible for connecting forward inventory activity from end to end.

One system may show that an inventory item left a warehouse. Another may show that the item is assigned to a field location. Another may eventually show that field service personnel consumed it. None of those records, by itself, confirms that the inventory item is physically present, in usable condition, accessible, and close enough to support the service event.

The item may be recorded.

The service organization may still be unable to use it.

That was the gap at the center of Derek’s Friday evening and Thomas’s Saturday morning. Supply chain had a record showing an inventory item in stock. Field service could not confirm or deliver an inventory item to the customer. Four million dollars had been spent eighteen months earlier to prevent exactly this outcome. The two organizations were using different meanings of availability, and neither could answer the question the chief executive would ask on Monday.

A Forward Deployed Inventory System gives that problem an operating home.

An FDIS does not replace supply chain, field service, or the systems supporting them. It connects the inventory and service conditions those organizations need to understand together. It establishes responsibility for managing inventory after it leaves the controlled warehouse and before, during, and after the service event, and it connects what the enterprise record says with what is physically happening in the field.

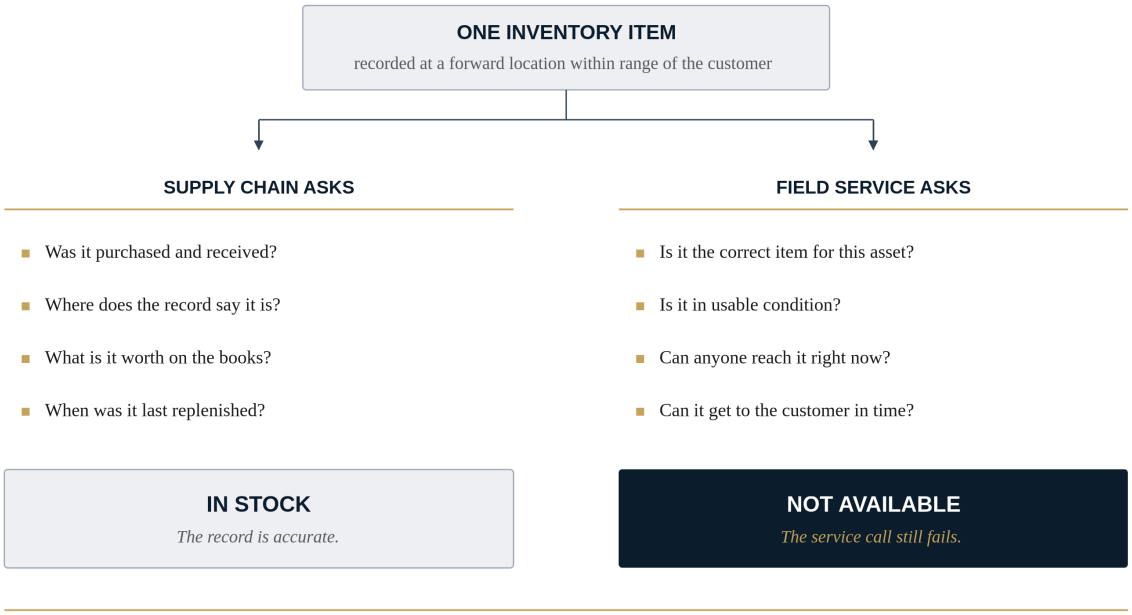


Figure 4.1 The same inventory item, asked two different questions. Both answers are correct, and only one of them can restore service.

For supply chain, that means better evidence about where inventory is, how it moves, when it is consumed, what requires replenishment, and which inventory items need to return through the network. For field service, it means a more dependable view of whether the required inventory item can actually support the work. The question is larger than whether the system shows a positive quantity. The inventory item has to be correct, usable, accessible, and reachable within the service requirement.

This distinction creates common ground, because both teams can work from the same operating condition. If an inventory item cannot be located, the problem becomes visible. If it exists behind an access restriction, the system can distinguish access from shortage. If it has been consumed but remains in the record, the transaction gap can be identified. If replenishment did not occur, the organization can see where the expected process failed.

The discussion can move beyond whether the inventory item was “in stock.”

The company can determine whether it was available for the service event and why.

Each team also improves the other’s work through its own. A field transaction captured when an inventory item is consumed gives supply chain better replenishment information. A reliable replenishment process gives field service greater confidence that an inventory item will be present when the system says it is. A completed return makes an inventory item available for repair, reuse, or financial recovery.

An FDIS cannot make every inventory item available everywhere. It cannot eliminate uncertainty, prevent every service failure, or create an inventory item that does not exist. It gives the organization a more accurate understanding of the condition it is managing and a better way to respond.

In Derek’s situation, a capable FDIS might have identified an accessible inventory item earlier. It might have shown that the recorded inventory item could not be confirmed or released. It might have established

that Monday morning was the earliest credible recovery before the problem reached an executive escalation. In Thomas's situation, it would have answered Kathy Waldruff's question.

The answer would not necessarily have been the answer everyone wanted.

It would have been an answer the organization could trust.

That difference matters. When the system shows the complete operating condition, supply chain does not have to defend a record that field service cannot use. Field service does not have to rely on telephone calls and personal knowledge to prove that an inventory item is unavailable. Leadership does not have to choose between two departmental explanations.

The FDIS makes the forward inventory problem visible as one operating problem.

Visibility alone, however, does not mean that every organization can build the full capability at once. Companies begin with different systems, data, processes, and levels of field discipline. They need a practical way to begin where they are and improve from there.

That is the role of the FDIS Maturity Model.

The Maturity Model Gives the Teams a Shared Path

An FDIS describes the operating capability the organization needs. The FDIS Maturity Model describes how that capability develops.

The model recognizes that organizations begin from different conditions. One company may have limited visibility into its forward inventory. Another may have dependable records but weak connections between inventory and service. A third may have strong operating discipline and be ready to use more advanced information.

The appropriate path is to begin with an honest assessment of the current capability.

The FDIS Maturity Model consists of four levels: Foundation, Optimization, Demand Management, and Predictive Placement. Chapter 8 explains the levels, the capabilities within them, and the responsibilities supply chain and field service have to each other as the organization advances. For this chapter, the important point is that both teams move through the same model.

The maturity model does not measure whether supply chain is better than field service or field service is better than supply chain. It evaluates the organization's ability to manage forward deployed inventory.

That distinction protects the model from becoming another source of blame. If an assessment shows that inventory records cannot be trusted, the result does not belong exclusively to the team maintaining the record. Reliability may depend on receiving, movement, consumption, replenishment, discrepancy handling, and returns, and those activities cross organizational boundaries. If the assessment shows that inventory is controlled but does not support service effectively, the issue is also larger than one team.

The model places those conditions inside one maturity assessment.

That gives the teams a common starting point. They can agree on what the organization can reliably do today, identify the capability that should improve next, and evaluate whether the change produced a better result.

The work required from each team will differ. Supply chain can apply its expertise in inventory control, material movement, replenishment, and financial stewardship. Field service can apply its expertise in service execution, customer requirements, accessibility, and the conditions encountered by field service personnel. The model does not ask either team to surrender those priorities. It gives their work a shared direction.

That direction changes the conversation.

When the teams operate without a common framework, each service failure becomes a debate about the event. Was the inventory item really present? Did field service personnel follow the process? Did supply chain replenish the location? Was the service commitment reasonable? Which budget should carry the emergency expense?

Those questions may need answers, but resolving one event does not improve the capability that produced it.

The maturity model asks a larger question: what must the FDIS be able to do more reliably before the next event occurs?

The answer becomes an improvement objective rather than a departmental defense. An organization may need more dependable inventory information. It may need stronger control over movement and replenishment. It may need a better connection between service activity and inventory requirements. The maturity model places that work in sequence so the company can strengthen the current capability before depending on a more advanced one.

This gives supply chain and field service one purpose they can work toward without performing the same tasks. They can share a maturity target, identify the contribution required from each area of expertise, and measure whether the resulting capability improved both inventory management and service performance.

The shared results matter because each team needs evidence that its concerns have been considered. Supply chain needs to see that improved service does not depend on uncontrolled growth in inventory, unexplained movement, or permanent emergency expense. Field service needs to see that improved inventory control does not leave field service personnel without the inventory required to meet customer commitments.

A stronger FDIS should create value visible from both perspectives. Inventory records become more dependable. Replenishment becomes more consistent. Emergency searches and premium shipments decrease. Field service personnel spend less time compensating for inventory uncertainty. Supply chain gains better evidence about what the field actually requires.

The maturity model gives the teams a shared path without requiring them to become the same team.

Sitting on the Same Side of the Table

After a service failure, supply chain and field service will eventually review what happened.

They can sit across the table from one another. Field service can bring the customer escalation, missed commitment, overtime, and premium transportation. Supply chain can bring the inventory record, replenishment history, location information, and financial exposure.

Each team can explain why its actions were reasonable.

Each can leave believing that the other still does not understand.

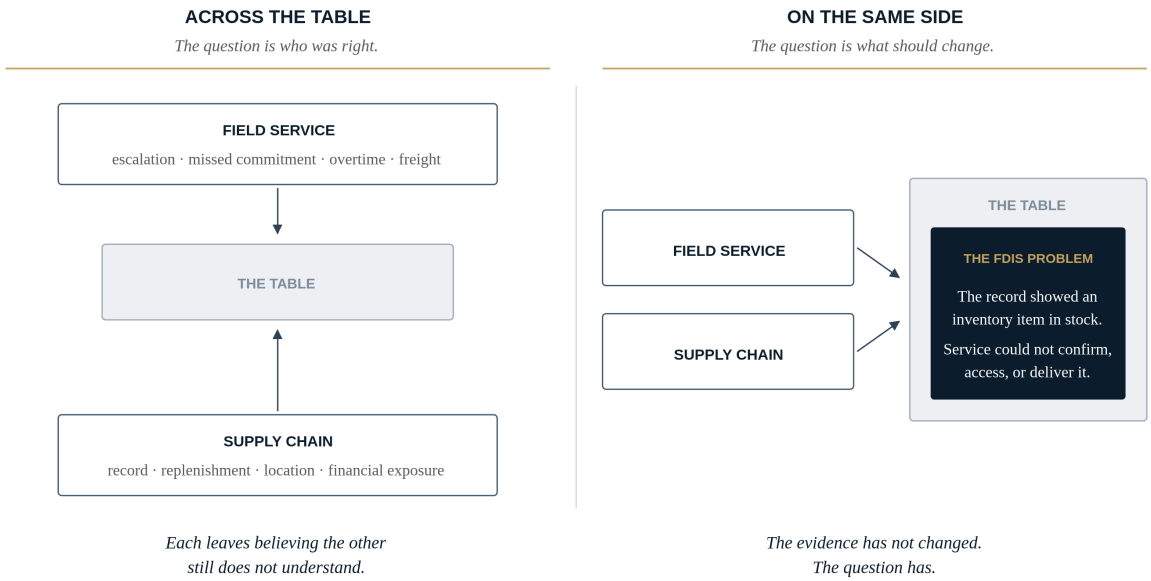


Figure 4.4 The same evidence, arranged two ways. Across the table it is used to decide who was right. On the same side it is used to decide what the organization should be able to do next time.

Or the teams can sit on the same side of the table and place the FDIS problem in front of them.

The record showed an inventory item in stock. Field service could not confirm, access, or deliver it. That difference is the problem. Deciding which team described the event more convincingly does not make the inventory item available for the next customer.

A shared FDIS allows the organization to see the condition more completely. The FDIS Maturity Model allows the teams to determine what capability should improve next.

The questions change. What allowed the inventory record and the physical condition to separate? What prevented the inventory item from supporting the service event? What information was missing? What should the organization be able to do differently the next time?

These questions still require accountability. Sitting on the same side of the table does not excuse missed transactions, poor planning, weak processes, or unreasonable commitments. It directs accountability toward preventing the failure from recurring.

That work is difficult when the wounds are deep. Field service may remember every customer conversation in which an inventory record proved unreliable. Supply chain may remember every missing

transaction, unexplained request, and inventory item it could not account for. A new system and maturity model do not erase that history.

They provide a way to create a different history. The next inventory record can prove more dependable. The next replenishment can occur as expected. The next movement in the field can be captured. The next discrepancy can lead to an explanation both teams can use.

Trust returns through accumulated evidence, just as mistrust developed through accumulated failures. Teams with a difficult history can begin by assessing the FDIS rather than assessing one another, select a capability to improve, and allow the result to provide the proof.

Nothing about an FDIS requires supply chain to stop protecting inventory or field service to stop protecting the customer. Those responsibilities remain essential. The change is that both teams begin managing forward deployed inventory as one organizational capability.

The customer experiences one company. The inventory investment belongs to one company. The service commitment belongs to one company. The costs of failure eventually belong to that company as well, regardless of which budget records them first.

Supply chain and field service can retain different priorities. They can continue contributing different expertise. The FDIS gives them one problem to manage, and the FDIS Maturity Model gives them a shared path for improving it.

That is how the teams begin sitting on the same side of the table.

ABOUT THIS SAMPLE

The Forward Deployed Inventory System

A Maturity Model for Seeing, Trusting, and Improving Field Inventory

This complimentary chapter is offered so leaders in field service, spare parts, aftermarket operations, and supply chain can examine the operating case for Forward Deployed Inventory Systems before committing to the full book. Chapter 4 closes Part I by showing why supply chain and field service can both act reasonably and still fail the same customer on the same night.

The full book develops the complete maturity path: Foundation, Optimization, Demand Management, and Predictive Placement. It shows how organizations can establish control, connect inventory to service, respond to local demand, and progressively improve placement decisions as their information and capabilities mature.

If this chapter describes a problem your organization already experiences — an inventory record no one in the field can rely on, emergency freight that no budget wants to own, or two capable teams arriving at opposite conclusions about the same item — the rest of the book provides a structured path for addressing it.

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