SAMPLE CHAPTER · FREE DOWNLOAD

THE FORWARD DEPLOYED INVENTORY SYSTEM

The FDIS Maturity Model

Chapter 8 · Part II · The Shift from FDI to FDIS

Maturity is what happens while an organization is learning what it does not yet know how to do.

FROM CHAPTER 8

Glenn Caudill

COMPLIMENTARY PREVIEW · NOT FOR RESALE

PART II · THE SHIFT FROM FDI TO FDIS

Chapter 8

The FDIS Maturity Model

"The unexamined life is not worth living."
— Socrates, as recorded by Plato, *Apology*, 38a

"Maturity is what happens while an organization is learning what it does not yet know how to do."
— Glenn Caudill

Monday Evening

At 6:30 Monday evening, the company's senior leadership team gathered in the chief executive's office.

Kathy Waldruff, senior vice president of supply chain, sat across from Dennis Day, senior vice president of field service. The chief operating officer and chief financial officer sat between them. The chief information officer and senior vice president of sales joined by phone.

The disagreement had already begun.

"The inventory was positioned," Kathy said. "The record showed the required item at the forward location. If the field transactions had been completed, we would know what happened to it."

Dennis shook his head. "The record said it was there. My team could not find it, access it, or get it to the customer. For the service call, it was not available."

"You cannot conclude that the item did not exist."

"I can conclude that we could not use it."

The chief financial officer closed the folder in front of him.

"Eighteen months ago, we approved four million dollars in additional inventory for this account. We disrupted production to build it, and we have spent millions more on systems intended to give us visibility and control. Friday night, we still paid for premium transportation, overtime, service credits, and customer discounts."

He looked from Kathy to Dennis. "What benefit did we receive from those investments?"

Neither executive answered.

The CEO turned toward the phone. "Where do we stand with the customer?"

"We stabilized the account," the senior vice president of sales said. "The discounts helped, but the customer expects more than compensation. They want a written plan within thirty days showing how we will prevent this from happening again."

“So we bought thirty days,” the CEO said.

“Yes.”

“Then tell me why our systems couldn’t answer whether the item was available.”

“They answered the questions they were designed to answer,” the CIO said. “The enterprise system showed the inventory record. The warehouse systems showed movement through controlled facilities. The field service system showed the work order and customer commitment.”

“But none showed whether the item could support the service event,” the COO said.

“Not completely. Our systems were built around warehouses, transactions, and work orders. Each field location has different access conditions, hours, security, ownership, replenishment methods, and service coverage. We do not represent those attributes consistently today.”

“Then this is not simply a missing transaction,” the CFO said.

“No. The transaction may be part of it, but the larger issue is that our systems do not fully cover the operating conditions of inventory in the field. We may need to extend them to manage those conditions.”

The CEO looked around the room. “We keep describing the incident according to our departments. Supply chain says the item was in stock. Field service says it was unavailable. Finance sees an investment that did not produce the expected return. Sales sees a customer preparing to leave.”

He paused. “I want a new way to think about this inventory. One company view.”

The COO leaned forward. “We may need outside help. There is a maturity model focused specifically on forward deployed inventory—the FDIS Maturity Model.”

The CIO recognized the term. “It treats forward deployed inventory as a distinct operating capability between supply chain and field service. It can also help define the system extensions needed to support the special characteristics of field locations.”

“What would an assessment tell us?” Kathy asked.

“First, whether we have the basic visibility and control required to trust the inventory position,” the COO said. “Then whether our replenishment, network planning, demand management, and placement decisions are mature enough to support the service commitment.”

“Would it measure availability from the service perspective?” Dennis asked.

“It should measure both. We have to know where the inventory is and whether it can actually reach the customer within the required time.”

The CFO opened his folder again. “I want the assessment tied to business results—inventory investment, premium freight, service performance, and customer risk.”

“Agreed,” the CEO said. He looked at Kathy and Dennis. “This will not become an exercise in proving which organization was right. The customer experienced one failure, and the company owns it.”

He turned to the COO. “Find the appropriate outside support. Kathy and Dennis will jointly sponsor the assessment. Finance will validate the costs and benefits. The CIO will define the process, data, integration, and system implications. Sales will make sure the result addresses the customer’s expectations. I want an internal recommendation in twenty-one days and a customer-ready plan before day thirty.”

Kathy gathered her notes. “I will bring Thomas into the assessment. He led the original inventory placement.”

Dennis nodded. “And I will bring Derek. He managed the service failure.”

“Good,” the CEO said. “Start with the people who saw the difference between what our systems reported and what the customer experienced.”

The meeting ended with the inventory problem still unresolved.

But the question had changed.

The company was no longer asking which team owned the failure.

It was asking what capability the company needed to build.

The Incident Reveals a Capability Gap

The discussion began with a failed service call, but the failure exposed something larger.

The company had purchased the inventory. Supply chain had positioned it near the customer. The enterprise record showed the required item at a forward location. Field service had people ready to complete the work. Yet when the customer needed the item, the company could not confirm that it was present, accessible, usable, or able to reach the customer within the service requirement.

Each part of the organization held some of the information. No one had a complete view of the operating condition.

This was the capability gap.

The company did not lack systems. It had invested millions in enterprise, warehouse, inventory, and field service technology, and each performed important work within its scope.

The difficulty was that the company’s operating capabilities had not developed around the distinct conditions of forward deployed inventory.

Inside a warehouse, the assumptions are relatively stable: established hours, controlled access, trained personnel, defined receiving and shipping processes, and clear responsibility for the inventory. When a record shows an item in a warehouse location, the organization can usually expect that someone can enter the facility, find the item, and release it through a known process.

Those assumptions weaken as inventory moves into the field.

In the field, inventory may sit in a technician’s vehicle, a customer closet, an unattended depot, a shared locker, or a third-party facility. Some locations are open at any hour; others require a badge, a key, a local

contact, or customer approval. An item may be physically present but inaccessible. It may be accessible but assigned to someone else. It may have been consumed without being recorded, returned without being received, moved, damaged, or placed somewhere that no longer supports the required response time.

A traditional inventory record may show the item, quantity, and location without representing any of those conditions.

This is why the disagreement between supply chain and field service was so hard to resolve. Supply chain had evidence that the item had been purchased, shipped, and recorded at the forward location. Field service had evidence that it could not support the service event. Both descriptions could be accurate.

Neither description was complete enough for the company to act with confidence.

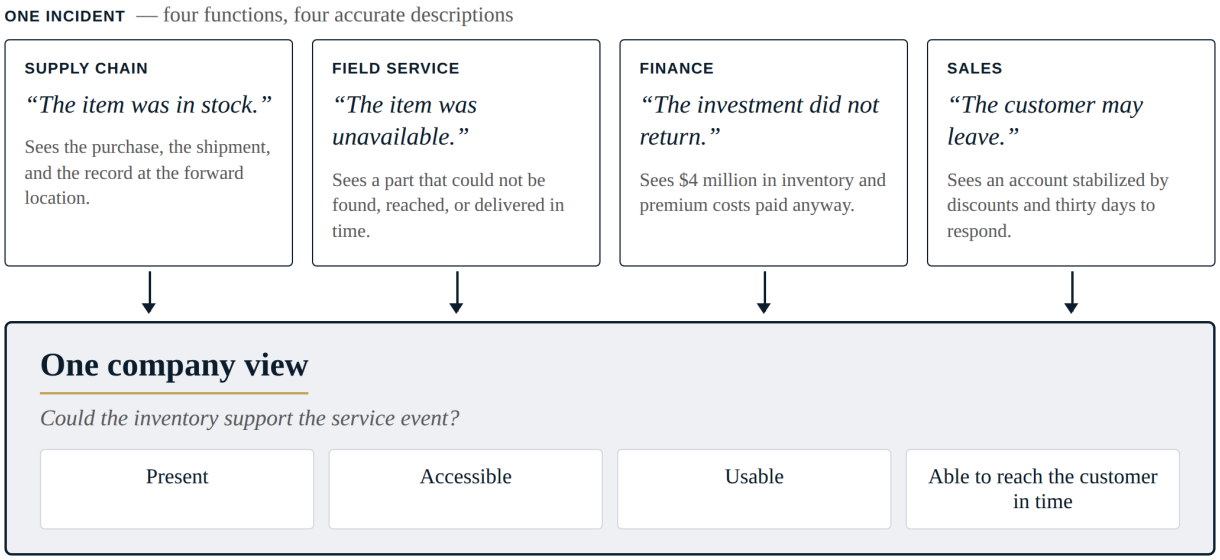


Figure 8.1 *One failure, four accurate descriptions. Each function saw part of the operating condition; none saw enough to act with confidence.*

Managing forward deployed inventory therefore requires more than maintaining a positive inventory balance. The organization must connect the record with the physical item, its condition, its accessibility, the person responsible for it, the service area it can support, and the process that replenishes it after use. When the record and physical reality separate, the organization must be able to detect the discrepancy, investigate its cause, and restore control.

These are not unusual exceptions around an otherwise ordinary inventory process. They are normal operating conditions for inventory placed outside controlled facilities.

When those conditions are not managed as part of a defined capability, employees compensate. A dispatcher calls a location before sending a technician. A technician calls another technician to confirm that an item is still in a vehicle. A regional manager keeps a separate spreadsheet of locations that cannot be trusted. Supply chain adds inventory because recorded quantities do not produce the expected service level. Field service requests more stock because experience has taught it that some inventory shown in the system will not be available when needed.

These workarounds keep customers operating, but they also hide the capability gap. Senior leaders see the inventory investment and the systems supporting it without seeing how much human intervention it takes to connect the record to the service event.

The right response is not to begin by selecting a technology or defending the systems already in place. It is to evaluate the company's current capabilities.

That evaluation must cover the complete operating model—ownership, processes, field execution, information quality, reconciliation, replenishment, location management, security, access, and supporting systems—and establish what the organization does reliably today, where it depends on workarounds, and which gaps keep the inventory investment from producing the intended service result.

The failed service call showed that the company had inventory, systems, and capable people. What it lacked was a reliable way to manage them as one forward deployed inventory capability.

Before the leadership team could build its thirty-day plan, it needed a common method for measuring that capability and identifying its gaps.

What the FDIS Maturity Model Is For

Before an organization decides how far it wants to advance, it needs to understand two things: whether it is prepared to undertake the work, and how well it currently performs the capabilities required to manage forward deployed inventory.

The FDIS Maturity Model addresses both.

The assessment begins with organizational readiness, which is separate from the four maturity levels. It evaluates whether the company has the alignment, awareness, visibility, and management commitment needed to improve FDI performance. A company may recognize that it has an inventory problem without being prepared to address it across organizational boundaries.

The readiness scorecard examines five areas: team alignment, readiness for change, FDIS awareness, inventory visibility, and root-cause awareness. Together, they indicate whether supply chain, field service, finance, sales, and technology leaders share a common understanding of the problem and are prepared to act on it.

Readiness matters because forward deployed inventory cannot be improved by one function working alone. Supply chain may own the inventory investment and set the policies governing its deployment and replenishment. Field service personnel act as caretakers of the inventory in their possession, responsible for handling it properly and accurately recording receipts, movements, consumption, and returns. Finance evaluates the investment and its return. Sales and service leaders shape the customer commitments the inventory supports. Technology enables many of the required capabilities, but it does not establish the operating discipline needed to use them.

Once readiness is understood, the company evaluates its capabilities at each of the four maturity levels.

Foundation examines the basic controls needed to know where inventory is, who can access it, how movements are recorded, and how discrepancies are reconciled. Enhanced Optimization evaluates whether reliable information is used to analyze performance, find root causes, optimize the network, and

test alternatives. Demand Management assesses how well the organization recognizes and responds to changing demand. Predictive Precision evaluates the ability to anticipate future requirements and continuously refine stocking decisions.

Each capability is rated on a five-point scale, recording both its current state and its desired target. The ratings describe observable practices rather than general impressions, which makes the assessment more than an opinion about whether the company is performing well or poorly.

The total score is a useful summary, but the capability profile matters more. Two organizations can receive the same total score with very different strengths, risks, and priorities. One may have strong inventory visibility but weak reconciliation. Another may have sound basic controls but little ability to recognize changing demand. The individual gaps show where action is required.

The target does not need to be a five in every area. It should reflect the company's service commitments, operating risks, customer expectations, and economics. Some capabilities need immediate advancement; others are already sufficient for the role they play.

The gaps between current and target states become the basis for an action plan identifying the capabilities to improve, the sequence of work, the accountable owners, and the measures that will demonstrate progress. The plan also supports an estimate of expected benefits, including better service performance, fewer emergency shipments, reduced inventory exposure, higher technician productivity, and lower operational risk.

Those benefits can then be compared with the required investment to create a business case. The investment may include process changes, clearer accountability, better data, training, policy changes, or extensions to existing systems. The maturity model does not begin by prescribing technology. It begins by determining which capabilities the organization needs and how large the gaps are.

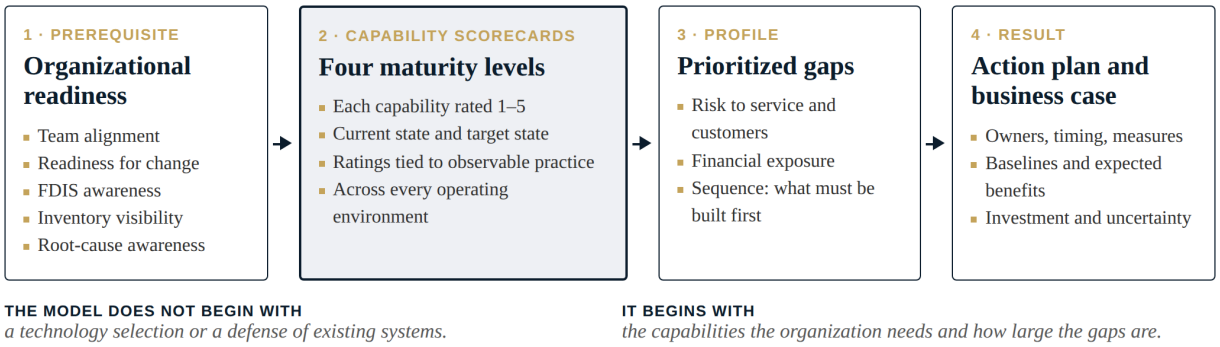


Figure 8.2 *How the assessment works. Readiness comes first; capability gaps become a prioritized action plan and a business case.*

For the leadership team, this changes the conversation. Instead of debating which function caused the latest failure, the organization can determine whether it can manage forward deployed inventory as an integrated system—and present the customer with a measured current state, a defined target, a prioritized improvement plan, and a credible explanation of the benefits the plan is expected to deliver.

The Four Levels Form a Cumulative Path

Readiness is not a fifth maturity level. It establishes whether the company is prepared to begin. The four levels—Foundation, Enhanced Optimization, Demand Management, and Predictive Precision—are cumulative. Each introduces capabilities that depend on the disciplines established before it. An organization cannot optimize inventory reliably if it cannot consistently track it. It cannot manage changing demand without credible usage information. It cannot predict future requirements if its install-base, inventory, and consumption data are incomplete or unreliable.

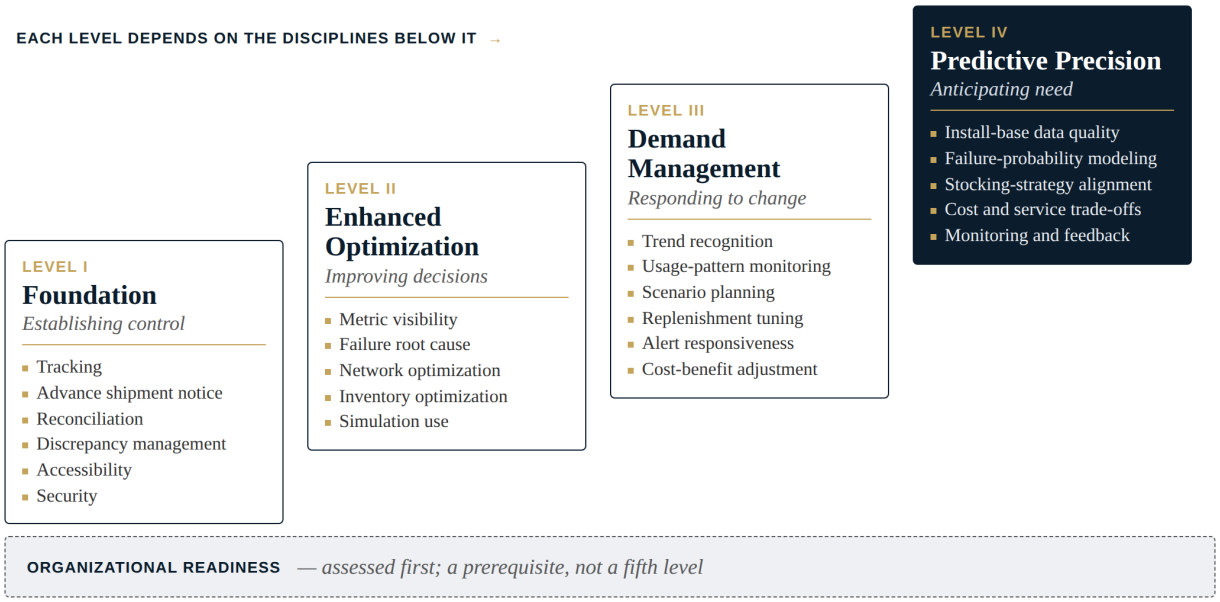


Figure 8.3 *The FDIS Maturity Model. Four cumulative levels, each dependent on the disciplines established below it.*

Level I: Foundation

Foundation establishes control over forward deployed inventory. The organization develops dependable methods for tracking inventory, communicating shipments, reconciling balances, investigating discrepancies, controlling access, and protecting inventory at field locations.

The objective is a measurable level of confidence in the basic inventory record. Leaders and operating teams should be able to determine what inventory exists, where it is, who can access it, and whether recorded balances reflect physical reality. That confidence cannot be assumed. The organization must measure inventory-record accuracy, understand the sources and extent of error, and make decisions with a clear view of the uncertainty that remains.

Level II: Enhanced Optimization

Enhanced Optimization uses the control established at Foundation to improve decisions: better performance visibility, root causes of service failures, network structure, inventory levels, and simulation of alternatives.

The organization moves beyond knowing where inventory is to asking whether it is positioned appropriately, whether policies produce the desired results, and where changes could improve service or reduce cost.

Level III: Demand Management

Demand Management strengthens the organization's ability to recognize and respond to changing requirements. It includes identifying trends, monitoring usage patterns, evaluating scenarios, tuning replenishment, responding to alerts, and weighing the cost and service consequences of inventory adjustments.

The company becomes less dependent on fixed schedules and static stocking assumptions. When the operating environment shifts, the plan must shift with it. Decisions increasingly reflect actual field consumption, customer conditions, regional differences, and emerging changes in demand. The objective is to recognize when the assumptions behind the current plan no longer match operating reality and to adjust with discipline before service or inventory performance deteriorates.

Level IV: Predictive Precision

Predictive Precision uses install-base information, failure probabilities, service requirements, and operating feedback to anticipate where inventory will be needed. Stocking strategies align more closely with expected demand, asset risk, and the economic consequences of a service failure.

At this level, prediction is connected to execution. Results are monitored, exceptions identified, and models and policies refined as conditions change. The objective is to place inventory where likelihood, consequence, and service value justify the investment, using feedback to confirm whether risk was reduced and to make placement increasingly precise.

The Path to Maturity

Organizations rarely mature along a straight or uniform path. Progress is usually uneven across capabilities, regions, and operating environments. A company may track inventory well but manage discrepancies poorly, or use sophisticated analysis in one region while relying on manual processes in another. Because the scorecards assess each capability separately against a deliberate target, the improvement path reflects the organization's actual gaps rather than assuming every capability advances at the same pace.

The four levels therefore provide more than a label; they establish a practical sequence for improvement. Foundation creates control. Enhanced Optimization turns reliable information into better decisions. Demand Management allows the organization to respond to changing requirements. Predictive Precision enables it to anticipate those requirements and refine decisions continuously.

That progression gives leadership a common view of what must be built, why the sequence matters, and how each stage prepares the organization for the next.

Level I: Foundation—Establishing Control

The Foundation scorecard evaluates whether the organization maintains dependable control of inventory after it leaves a traditional warehouse. This is one of the defining challenges of forward deployed inventory, which may be stored in technician vehicles, customer sites, shared facilities, lockers, third-party locations, or other places that do not operate like conventional distribution centers.

The assessment examines six capabilities: tracking, advance shipment notification, reconciliation, discrepancy management, accessibility, and security.

Tracking determines how consistently inventory movements and locations are recorded. Advance shipment notification, or ASN, evaluates whether the people receiving or using the inventory know what is coming and can confirm its arrival. Reconciliation addresses how physical inventory is compared with recorded balances. Discrepancy management evaluates how differences are investigated and resolved. Accessibility considers whether the right inventory can be located and reached by the people who need it. Security addresses how the company protects inventory and controls access across a distributed network of locations.

These capabilities are related, but they do not always mature at the same rate. A company may track shipments to technicians but lack a reliable process for confirming receipt. It may perform periodic counts but leave discrepancies unresolved. It may know that inventory is at a customer site without knowing who can access it or whether it remains usable. The scorecard makes these differences visible, comparing how each capability operates today with the control the company's service commitments require.

The objective is not simply a more accurate inventory report. It is confidence that forward deployed inventory can be located, accessed, protected, reconciled, and managed consistently. Those controls create the dependable information every later level requires. Part III examines how these capabilities are developed and sustained.

Level II: Enhanced Optimization—Improving Decisions

Once the organization has reasonable control of forward deployed inventory, it can begin using that information to improve performance. Enhanced Optimization evaluates whether the company can move beyond visibility and make better decisions about where inventory should be placed, how much should be held, and how the network should operate.

The scorecard examines five capabilities: metric visibility, failure-root-cause analysis, network optimization, inventory optimization, and simulation use.

Metric visibility measures whether decision-makers can see and investigate network performance—not just what happened, but the conditions behind the results and where intervention is required.

Failure-root-cause analysis determines whether a missed service commitment originated in the market-level plan or in the operation of the field network. The market may not have been assigned the right part or enough of it, or the replenishment policy may have been inadequate. Alternatively, the part may have existed within the market but been too far from the point of need, inaccessible, consumed without being recorded, or physically absent despite appearing in the record. Separating market-planning errors from errors in distribution, utilization, and replenishment matters because each requires a different corrective action.

Inventory optimization determines which parts and quantities the market should hold. It does not create a fixed inventory plan for every forward location. Network optimization evaluates the configuration and current state of the locations within the market, including their geographic coverage, accessibility, capacity, and operating condition. FDIS then uses that current state to distribute the market's inventory

broadly across the geography. At the Predictive Precision level, placement becomes more selective, positioning inventory where the combination of risk and value creates the greatest benefit. Market-level planning and field distribution work together, but they remain distinct decisions.

Simulation lets the organization compare alternatives—consolidating locations, changing service areas, adjusting stock levels, or modifying replenishment—before changing the network.

The scorecard distinguishes occasional analysis from a repeatable decision-making capability. It also reveals where optimization is limited by gaps at Foundation, since reliable analysis still depends on reliable inventory, movement, and consumption information.

Enhanced Optimization does not assume that every inventory reduction is beneficial. Its purpose is to improve the balance among inventory investment, service performance, operating cost, and risk.

Level III: Demand Management—Responding to Change

Forward deployed inventory cannot be managed through static stocking policies alone. Equipment populations change. Customer activity changes. Failure patterns change. Seasonal and regional conditions create different requirements. Demand Management evaluates whether the organization can recognize those changes and adjust its decisions accordingly.

The scorecard examines six capabilities: trend recognition, usage-pattern monitoring, scenario planning, replenishment tuning, alert responsiveness, and cost-benefit adjustment.

Trend recognition evaluates whether the organization identifies meaningful movement in demand rather than relying on historical averages. Usage-pattern monitoring examines whether consumption is reviewed regularly and segmented to reveal differences among customers, regions, equipment, and operating conditions.

Scenario planning considers the organization’s ability to evaluate possible changes and prepare responses—a shift in customer demand, the introduction or retirement of equipment, a change in failure rates, a new service commitment, or a disruption in the supply network.

Replenishment tuning determines how effectively inventory policies are adjusted as conditions change. Alert responsiveness measures whether exceptions are recognized early enough to act before they become service failures or excess-inventory problems.

Cost-benefit adjustment keeps the response economically sound. More inventory may reduce service risk but add holding cost and exposure. More frequent replenishment may improve availability while increasing transportation expense. Demand Management brings those considerations into the decision rather than treating cost and service as separate conversations.

The assessment focuses on repeatable organizational capabilities. A planner who spots a problem and intervenes manually may prevent an individual failure, but that does not demonstrate a mature demand-management process. The organization must recognize patterns, evaluate alternatives, make adjustments, and monitor results consistently.

The ratings show where that management cycle is strong and where it breaks down. Later chapters examine how these capabilities work together to create a more responsive FDI network.

Level IV: Predictive Precision—Anticipating Need

Predictive Precision evaluates whether the organization can anticipate inventory requirements before demand becomes an urgent service need. It is the model's most advanced level, but it still depends on the disciplines established below it.

The scorecard examines five capabilities: install-base data quality, failure-probability modeling, stocking-strategy alignment, cost-and-service trade-off analysis, and real-time monitoring and feedback.

Install-base data quality establishes what equipment is operating, where, in what configuration, and which parts support it. Without it, predictions may be mathematically sophisticated but operationally unreliable.

Failure-probability modeling uses equipment history, age, usage, environmental conditions, repair activity, criticality, and other relevant factors to determine how risk is changing across the installed base. The purpose is not to predict every individual failure. It is to identify when the combination of failure probability, operational consequence, and value at risk exceeds the organization's defined risk tolerance. Crossing that threshold may justify overriding normal market inventory policies and positioning additional inventory closer to the specific exposure. The decision rests on whether the value protected by the placement justifies its inventory and logistics cost.

Stocking-strategy alignment translates those differences into inventory policies, positioning parts according to expected need, service requirements, lead times, and the consequences of failure rather than through a single policy applied to every location.

Cost-and-service trade-off analysis evaluates whether those policies produce an appropriate economic result, weighing inventory, transportation, downtime, service penalties, customer impact, and other consequences when choosing among alternatives.

Real-time monitoring and feedback complete the capability. Actual usage, stockouts, emergency shipments, service misses, and model performance are monitored, and the results are used to adjust assumptions, policies, thresholds, and models.

Prediction by itself does not represent maturity.

Predictive Precision exists when insight is connected to stocking decisions and those decisions are continuously evaluated against actual results and current risk.

The target for each capability should reflect the value and risk associated with the business. A company may require highly advanced predictive capabilities for critical equipment or demanding service commitments while choosing a more moderate target elsewhere.

Later chapters describe how to develop these capabilities without losing sight of their purpose: placing the right inventory near the point of need while maintaining an economically responsible service network.

Technology Must Extend into the Forward Environment

The FDIS Maturity Model evaluates operating capabilities. Technology supports those capabilities, but the presence of a system does not prove that the capability exists.

Most companies already have systems covering important parts of the inventory and service process. ERP maintains the financial and transactional record. A warehouse management system controls inventory inside structured facilities. A field service system manages technicians, work orders, installed equipment, and customer commitments. Planning applications recommend inventory levels or flag changes in demand. Those systems remain essential. The question is whether, together, they represent what happens after inventory enters the forward environment.

A shipment may be recorded correctly when it leaves a distribution center without confirming that it arrived at the intended field location. A system may show inventory assigned to a technician without knowing whether it is physically present, usable, and available for another technician. A part may appear at a customer site without any indication that access is restricted after business hours. The transaction can be complete while the operating condition remains unknown.

Forward locations require information that may not exist in systems designed around warehouses or work orders: location type, physical address, service area, responsible party, access method, operating hours, security requirements, replenishment path, inventory condition, communication capability, and nearby alternatives. These attributes help determine whether recorded inventory is truly available to support service.

The required technology may involve extending an existing application, connecting several applications, adding field workflows, or introducing an FDIS capability that operates across current systems. The right design depends on the company's existing technology, the complexity of its network, and the gaps identified in the assessment.

The maturity model does not begin by prescribing what to purchase. It identifies the capability needed and the result it must produce, so technology investment can be evaluated against a defined requirement.

This also reframes previous system investments. The question is not whether those systems were necessary or valuable elsewhere, but whether their present scope extends far enough into the forward environment to support the company's service and inventory objectives.

Where the systems stop, the FDIS capability must continue.

The Assessment Must Reflect the Operating Environment

A maturity model must do more than assign the organization a level. It must measure the current state of specific capabilities, establish an appropriate target, and show the gaps between the two. The resulting profile is more useful than a single label. One company may track inventory reliably but reconcile poorly. Another may plan well but have limited control over field execution. A third may operate effectively in one region while depending on manual records and personal knowledge in another.

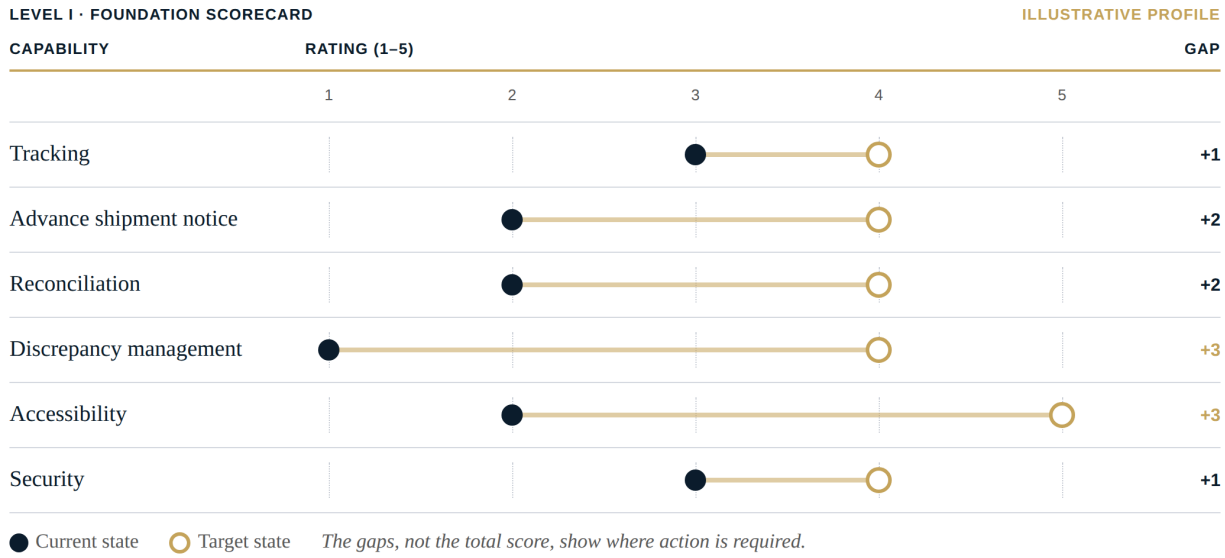


Figure 8.4 *An illustrative Foundation profile. The gaps between current and target states, not the total score, show where action is required.*

Those differences matter especially because forward deployed inventory does not operate in one standard environment.

A forward location may be a staffed depot, a technician's vehicle, a secured cage in a factory, a hospital cabinet, or a remote site visited only when service is required. Some have reliable connectivity and trained personnel. Others depend on a customer representative, a physical key, a security desk, or a technician many miles away.

The same maturity objective can therefore require very different methods and levels of effort.

Securing inventory in a staffed depot may involve controlled entrances, assigned personnel, scanning, and established receiving procedures. Securing it in a technician's vehicle may require different storage equipment, access controls, mobile transactions, and individual accountability. Inventory held at a customer location may require agreements that define custody, access, counting, and responsibility for loss.

So does the effort required to remove unnecessary inventory. Excess stock in a company-operated depot may be consolidated through an established return process. The same stock scattered across technician vehicles or customer locations may require individual identification, coordination, packaging, transportation, inspection, and reconciliation. Eliminating an unnecessary stocking location can be simple when the company controls the site and far more difficult when customer commitments, third-party agreements, regulatory requirements, or service risks are involved.

These differences do not make the maturity standards meaningless. They make the operating context essential to interpreting them.

The assessment should therefore consider location type, dispersion, item value, service criticality, access, staffing, connectivity, ownership and custody, transportation, regulation, and the consequences of a service failure—and determine whether the required capability exists across the environments where the company depends on it.

A company should not receive a high rating because a capability works in its easiest locations while failing in those carrying the greatest risk. At the same time, the model should not require every location to use the same process or technology. The expected outcome should be consistent even when the methods differ.

Target states may also vary by business segment or operating environment. A high-value item supporting critical equipment may require stronger security, visibility, and predictive capabilities than a low-cost item with several nearby alternatives. A market with long replenishment lead times may justify capabilities that add little value in a dense service area near a distribution center.

The assessment should still produce one overall maturity level for the organization. That level reflects how consistently the required capabilities are demonstrated across the enterprise, not the performance of its most advanced region or a simple average of unlike operations. Differences by region, customer group, product line, service commitment, location type, or inventory category remain important, but they appear in the maturity profile as gaps and improvement priorities rather than as separate maturity levels. This gives leadership one clear starting point while allowing the action plan to address meaningful operating differences.

The purpose is an honest picture of what the organization can do, where it can do it, and what it will take to close the important gaps.

The Gaps Become an Action Plan and Business Case

An assessment creates value only when the gaps it identifies lead to action.

The organization first determines which gaps create the greatest service, financial, or operational risk. Some require immediate containment because they threaten customer commitments or expose high-value inventory. Others are longer-term opportunities to improve productivity, reduce inventory, or strengthen decisions.

Sequence matters. A company may want better optimization, but unreliable field balances may make tracking and reconciliation the first priority. It may want predictive models, but incomplete install-base data may limit their value. The maturity model helps leaders distinguish the desired result from the capability that must be built first.

Each priority gap should produce a defined action that identifies the capability to be improved, the locations and operating environments affected, the accountable owner, the people and functions involved, the required resources, the dependencies, the expected timing, and the measure that will demonstrate progress.

Actions may involve process changes, clearer ownership, revised policies, training, data improvement, physical controls, new measures, or system extensions. Different environments may need different methods to reach the same capability, and the plan must allow for that.

The plan should also estimate the benefits of closing each gap: improved accuracy, reduced loss, recovery of excess or repairable inventory, lower carrying cost, fewer emergency shipments and repeat visits, better technician productivity and service levels, reduced customer downtime, protected revenue, or new service opportunities.

Benefit estimates should rest on an understood starting point. If the organization does not know its current inventory error rate, emergency-freight expense, repeat-visit frequency, field losses, or service failures caused by unavailable parts, establishing those baselines may be one of the first actions in the plan.

The business case compares those benefits with the cost of building and sustaining the capability—technology, integration, storage, transportation, training, process redesign, data maintenance, controls, and management effort—and recognizes dependencies and uncertainty rather than presenting every projected benefit as guaranteed.

For a company that owes its customer an improvement plan within thirty days, the assessment provides a credible structure for that response. The company can describe the capabilities it evaluated, the most important gaps it found, the immediate controls being put in place, the longer-term improvements planned, the responsible owners, and the measures that will show whether the plan is working.

The company may not close every gap in thirty days. It can, however, show that it understands the failure, has identified the capabilities that allowed it to occur, and has a disciplined plan for reducing the chance that it happens again.

That is a stronger commitment than another promise to try harder.

How the Rest of the Book Develops the Model

This chapter introduces the complete FDIS Maturity Model. The rest of the book develops each level in greater detail.

Part III contains five chapters devoted to Foundation. They examine how an organization establishes trustworthy visibility, control, reconciliation, accountability, access, and security across forward inventory locations.

Part IV develops Enhanced Optimization. It explains how reliable operating information can be used to measure performance, identify root causes, evaluate the FDI network, optimize inventory, and test alternatives before changes are made.

Part V addresses Demand Management. It examines how the organization recognizes meaningful changes in demand, monitors usage, evaluates scenarios, adjusts replenishment, responds to exceptions, and weighs the cost and service consequences of those adjustments.

Part VI develops Predictive Precision. It explains how install-base information, failure probabilities, service requirements, stocking strategies, economic trade-offs, and operating feedback combine to anticipate future inventory needs.

Each part moves from the capabilities measured by the scorecard to the operating methods required to build them: measurements, responsibilities, processes, data, technology, economics, and the practical decisions involved in advancing from one level to the next.

The destination will not be identical for every company, market, or operating environment. The sequence still matters. Reliable advanced capabilities are built on the controls and information established below them.

The journey therefore begins with the first requirement of Foundation: learning whether the information used to manage forward deployed inventory can be trusted.

Chapter 9 begins there.

You cannot optimize what you cannot see.

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 8 introduces the FDIS Maturity Model and shows how an organization can measure its readiness and capabilities, find the gaps that matter, and turn them into an action plan and business case.

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

If this chapter describes a problem your organization already experiences — records that cannot be trusted, functions that disagree about what happened, expensive emergency delivery, excess inventory, or a customer asking for a plan — the rest of the book provides a structured path for addressing it.

© Glenn Caudill. Sample chapter provided for evaluation. All rights reserved.