

The New Reality Of Supply Chain Volatility

Demand uncertainty is no longer an occasional challenge for manufacturers - it is the permanent operating environment.

Geopolitical disruptions, shifting consumer behaviour, post-pandemic supply shocks, and accelerating market cycles have made volatility the norm rather than the exception. The question is no longer whether forecasts will be wrong; it is how wrong they will be, and how quickly you can respond.

The financial and operational consequences of inaccurate forecasting are significant and compounding. **Overestimated demand** locks working capital in excess inventory, drives up warehousing costs, and leads to costly write-downs. **Underestimated demand** causes stockouts, missed sales, emergency expediting, and damaged customer relationships. Both failure modes are expensive—and both stem from the same root cause: planning systems that cannot keep pace with a volatile world.

The Cost Of Getting Forecasts Wrong

Excess Inventory

Capital tied up in slow-moving stock, rising holding costs, and increasing risk of obsolescence as market conditions shift

Stockouts & Expediting

Lost revenue, emergency freight charges, overtime production costs, and erosion of customer confidence and loyalty

Operational Disruption

Unplanned production changeovers, supplier relationship strain, and planning teams consumed by constant firefighting

Resilient manufacturers don't eliminate volatility—they build the forecasting capability to absorb it. That means moving beyond gut feel and spreadsheets to integrated, data-driven planning that continuously reflects real market signals.

Microsoft Dynamics 365 Business Central provides the platform to make that shift - turning forecast accuracy from a persistent weakness into a genuine competitive advantage.

Why Traditional Forecasting Approaches Fail

Most manufacturers know their forecasting process is broken. They feel it every planning cycle: hours spent reconciling spreadsheets, chasing data from disconnected systems, and making decisions based on information that was already outdated when the meeting started.

The problem isn't a lack of effort; it's a fundamental structural failure in how forecasting data is gathered, managed, and acted upon.

The Structural Weaknesses of Legacy Forecasting

Spreadsheet Dependency

Spreadsheets are flexible but fragile. They break under version control problems, contain hidden errors, and require constant manual maintenance. When demand signals change, updating a spreadsheet-based forecast is slow, error-prone, and rarely reflects the full operational picture.

Siloed Data Across Departments

Sales forecasts live in CRM. Inventory data sits in a warehouse system. Production schedules are managed in yet another tool. Without integration, no single person has the complete picture—and forecasts built on partial data will always be partially wrong.

Slow Reactions to Market Changes

By the time a demand signal travels from the sales team to the planner, through reconciliation, and into an updated forecast, the market has already moved. Traditional processes create latency that turns manageable variances into operational crises.

The Case for an Integrated, Real-Time Planning Platform

Fixing forecasting accuracy isn't about working harder in spreadsheets—it's about replacing the architecture that makes accurate forecasting impossible. An integrated planning platform changes the fundamental conditions under which forecasts are built and maintained:

Single Data Environment

When sales, inventory, production, and procurement data all live in one system, forecasts are built on complete, consistent information—not assembled from incompatible exports.

Real-Time Signal Processing

Demand signals update automatically as sales orders are entered, inventory moves, and production is completed. Planners work with current reality, not last week's snapshot.

Closed-Loop Feedback

Integrated systems make it possible to compare forecast vs. actual performance automatically, creating the feedback loop that drives continuous improvement in accuracy.

Scalable Complexity

As SKU counts, customer segments, and supply channels grow, an integrated platform scales without requiring proportionally more planning headcount or manual effort.

The Real Cost of Spreadsheet-Based Forecasting

Beyond the accuracy problems, spreadsheet-based forecasting carries hidden costs: planner time consumed by data gathering rather than analysis, forecast knowledge locked in individual files rather than shared systems, and the inability to model "what if" scenarios quickly when conditions change.

The true cost of legacy forecasting approaches far exceeds the visible inaccuracy metrics.

Creating a Single Source of Truth For Manufacturing Information

Forecast accuracy depends entirely on the quality and completeness of forecast inputs. When sales data, inventory positions, production schedules, and financial commitments live in separate systems, every forecast is built on a partial picture.

Business Central eliminates this fragmentation by unifying all operational and financial data in a single cloud-based platform—creating the single source of truth that accurate forecasting requires.

Unifying the Data That Drives Forecasts



Sales Data

Customer orders, open quotes, sales history by item, customer, and channel—all live and current. Demand signals are captured the moment a sales order is entered, not when someone exports a report.



Inventory Positions

Real-time stock levels across all locations, including raw materials, work in progress, and finished goods. Forecasts reflect actual available inventory, not stale counts from a month-end snapshot.



Production Capacity

Open production orders, work centre loading, and scheduled completion dates feed directly into planning. Forecasts are constrained by real capacity, not theoretical maximums.



Financial Data

Purchase commitments, cost structures, and margin data integrate with operational planning—ensuring forecasts are evaluated not just for volume accuracy but for financial impact.

Improving Visibility and Trust in Forecast Inputs

The most underappreciated problem in forecasting is trust. When planners don't trust the data, they add manual overrides, maintain shadow spreadsheets, and apply arbitrary safety buffers—all of which degrade forecast quality further. Business Central builds trust through transparency:

Consistent Definitions

Every team works from the same item codes, customer records, and location hierarchies—eliminating the definitional conflicts that corrupt consolidated forecasts

Audit Trails

Every transaction is logged with user, time, and context. When a forecast input looks wrong, you can trace it to its source and understand why

Live Updates

Forecast inputs update in real-time as transactions occur—no batch processing delays, no overnight refreshes, no stale data masquerading as current

When every function—sales, production, procurement, and finance—works from the same trusted data, collaboration improves and forecast quality follows. The single source of truth is not just a technical achievement; it's the cultural foundation of better planning.

Demand Forecasting That Reflects Real Market Signals

Accurate demand forecasting requires more than extrapolating last year's sales. Markets evolve, seasonality patterns shift, customer behaviour changes, and promotional activity creates spikes that historical averages cannot predict.

Business Central provides the tools to build forecasts that reflect the full range of real market signals—not just what happened in the past.

Building Forecasts from Multiple Signals

Historical Trends

Business Central's demand forecasting analyses sales history across configurable time horizons, identifying underlying trends that inform baseline projections. Smooth out anomalies or weight recent periods more heavily based on how stable your demand patterns are.

Seasonality Patterns

Seasonal demand variations are captured and applied automatically. Forecasts adjust for known peaks and troughs without requiring manual calendar-based overrides each planning cycle.

Live Sales Data

Open sales orders, customer blanket agreements, and confirmed pipeline feeds update the forecast in real-time. When a large order is confirmed, its demand impact is immediately visible in planning—before the goods are ever picked.

Flexible, Adjustable Demand Forecasts

No statistical model captures everything. Business Central's demand forecast functionality is designed to be adjusted, not just accepted.

Planners can override statistical projections with commercial intelligence—new customer wins, known promotions, planned product launches, or anticipated market changes—while the system maintains the statistical baseline for comparison.

Forecasts can be created and managed at multiple levels of granularity: by item, by location, by customer segment, or by sales channel.

This flexibility allows forecasting processes to match the complexity of the business without requiring a one-size-fits-all approach that distorts accuracy at the detail level.

The best demand forecast is one that combines statistical rigour with human commercial judgement—and Business Central provides the platform to bring both together in a single, consistent planning process.



Turning Forecasts Into Smarter Inventory And Production Plans

A demand forecast is only valuable if it drives action. Too many manufacturers produce forecasts that sit in spreadsheets while planners rely on experience and instinct to make production and inventory decisions. Business Central closes the loop between forecast and execution—automatically translating demand projections into inventory policies, purchase requirements, and production schedules.

Aligning Forecasts With Inventory Policies and MRP

Business Central's Material Requirements Planning (MRP) and Master Production Scheduling (MPS) engines use demand forecasts directly as planning inputs. Rather than treating the forecast as a separate exercise, it becomes the engine that drives replenishment and production decisions:

Demand-Driven Replenishment

MRP calculates net requirements by comparing forecast demand against available inventory, open purchase orders, and scheduled production. Safety stock levels, reorder points, and lead times are all considered—generating precise, timely replenishment suggestions rather than rule-of-thumb orders.

Production Scheduling Alignment

MPS translates the demand forecast into a master production plan that respects capacity constraints. Rather than scheduling to theoretical maximums, plans reflect real work centre availability, ensuring that promised delivery dates are achievable before commitments are made.

Safety Stock Optimisation

When forecasts are reliable, safety stock can be right-sized to match actual demand variability rather than padded for forecast uncertainty. Better forecasts directly reduce the inventory buffer required to maintain service levels.

Purchase Order Timing

With forward demand visibility from the forecast, purchase orders can be placed at the optimal time—early enough to respect supplier lead times, but not so early that materials arrive long before they're needed, consuming warehouse space and working capital.

Reducing Excess Stock While Maintaining Service Levels

The tension between inventory efficiency and service level performance is one of the defining challenges of supply chain management. Business Central resolves this tension by making the trade-off explicit and manageable:

Reduce Slow-Moving Stock

Forecast-driven planning identifies items where demand has declined before excess inventory accumulates, enabling timely promotional or clearance action

Protect Critical Items

Items with long lead times or high demand variability can carry higher safety stock, while predictable, fast-moving items carry less—allocating buffer where it's actually needed

Model Policy Changes

Planners can simulate the service level and inventory impact of changing reorder points or safety stock targets before committing—making inventory policy a managed decision, not a guess

Example: Forecast-Driven MRP In Practice

A manufacturer enters a demand forecast showing a 30% seasonal uplift across three product families in Q4.

Business Central's MRP immediately calculates the additional raw material requirements, compares them against current stock and open purchase orders, and generates suggested purchase orders timed to arrive before production needs to begin—accounting for supplier lead times.

The planner reviews exception-flagged items, approves the plan, and purchase orders are created. No spreadsheet, no manual calculation, no missed lead time window.



Closed-Loop Planning and Forecast Accuracy Improvement

Forecasting is not a one-time activity—it is a discipline that improves through repetition and feedback.

The manufacturers who achieve consistently high forecast accuracy are those who measure performance rigorously, understand where and why forecasts deviate from actuals, and use those insights to systematically improve their process.

Business Central provides the data infrastructure to make this closed-loop improvement cycle operational.

Measuring Forecast vs. Actual Performance

Business Central captures both forecast quantities and actual demand as sales orders are fulfilled and production is completed. This creates the foundation for meaningful forecast accuracy measurement:

Item-Level Accuracy Tracking

Compare forecasted vs. actual demand at the individual SKU level to identify which items are consistently over- or under-forecast—and investigate the root cause for each pattern.

Time-Period Analysis

Understand whether forecast accuracy varies by week, month, or quarter. Identify whether specific periods—month-end, peak season, or post-promotion—introduce systematic bias that can be corrected.

Segment-Level Visibility

Aggregate accuracy by product family, customer segment, or sales channel. A high overall MAPE may mask excellent accuracy in core lines and poor accuracy in new or volatile categories—each requiring different responses.

Power BI Integration

For deeper accuracy analysis and trend visualisation, Business Central integrates with Power BI—enabling custom dashboards that track accuracy KPIs over time and surface improvement opportunities that aren't visible in standard reports.

Using Insights to Continuously Refine Future Forecasts

Measurement without action is just record-keeping. The value of forecast accuracy analysis is the insight it provides for improving future forecasts:

Bias Correction

Systematic over- or under-forecasting can be identified and corrected by adjusting the statistical parameters that drive baseline projections. When the model consistently underestimates demand for a product category, the inputs can be recalibrated.

Planning Parameter Refinement

Safety stock levels, reorder points, and lead time assumptions are all calibrated based on demand variability. Better accuracy data enables more precise parameter setting—reducing the inventory cushion required for uncertain items.

Process Improvement

Accuracy analysis often reveals process failures—forecasts that weren't updated when a promotion was confirmed, or demand signals that weren't shared from the sales team to planning. Identifying these gaps drives process improvements that prevent recurrence.

Collaborative Forecasting

When accuracy analysis shows that commercial adjustments consistently improve the statistical baseline, it strengthens the case for structured sales and operations collaboration—formalising the process that turns market intelligence into better forecasts.

Forecast Accuracy Is A Capability, Not A Number.

It improves when organisations treat every forecast deviation as a learning opportunity—and when the systems they use make it easy to capture, measure, and act on that learning consistently.

Responding Faster to Disruption and Change

Even the best forecast will eventually be wrong. Supplier disruptions, unexpected demand spikes, quality failures, and geopolitical events can invalidate planning assumptions overnight.

The question is not whether your forecasts will be disrupted—it is how quickly you can identify the impact and replan with confidence. Business Central is designed to enable fast, exception-based responses when conditions change.

Scenario Planning and Rapid Re-Forecasting

'What-If' Scenario Modelling

Business Central's planning worksheets allow planners to model alternative demand scenarios before committing to a course of action. What is the inventory and production impact if a major customer doubles their order? What if a key supplier delays by four weeks? Scenarios can be built, evaluated, and discarded without affecting live data.

Rapid Forecast Adjustment

When market conditions change materially, demand forecasts can be updated quickly and the full downstream impact—on purchasing, production, and inventory—recalculated immediately via MRP. Re-planning that once took days of manual work can happen in hours.

Exception-Based Planning

Rather than reviewing every planned order each cycle, Business Central surfaces exceptions—items where demand has diverged significantly from forecast, where supply is at risk, or where capacity constraints are emerging. Planners focus attention where it's needed, not where it's merely routine.

How Business Central Enables Faster, Exception-Based Decision-Making

Automated Alerts

- **Demand deviation alerts:** Notify planners when actual orders significantly exceed or fall short of forecast, triggering review before the gap compounds
- **Supply risk flags:** Surface purchase orders at risk of late delivery based on supplier history and current lead time data
- **Capacity conflict warnings:** Identify production schedule conflicts before they affect confirmed delivery dates

Decision Support

When an exception is surfaced, Business Central provides the context needed to make a fast, informed decision: current inventory position, alternative supply options, production capacity, and the customer orders at risk. Decision-makers act on complete information, not gut instinct.

This combination of automated detection and integrated context is what transforms response speed. The time saved isn't in the analysis—it's in the data gathering that used to precede it.

01

An unexpected demand spike is detected as sales orders arrive above forecast threshold—an alert is automatically generated to the planning team

02

The planner reviews inventory coverage, open production orders, and material availability in a single screen—no manual data gathering required

03

A revised production and purchase plan is modelled, approved, and released within hours—before service levels are impacted

From Forecasting to Competitive Advantage

Forecast accuracy is not just an operational metric—it is a strategic capability.

Manufacturers who forecast well carry less inventory, commit production resources more confidently, serve customers more reliably, and respond to disruption faster than competitors still fighting their data.

In volatile markets, that difference is not incremental; it is the margin between resilience and fragility.

Best Practices for Manufacturers Using Business Central

Start with Data Quality

Accurate forecasting begins with clean, consistent item masters, customer records, and historical sales data. Invest in data hygiene as the foundation before layering forecasting complexity on top.

Formalise the S&OP Process

Use Business Central's integrated data as the basis for a structured Sales and Operations Planning cadence. Regular cross-functional review of forecast vs. actuals drives alignment and accountability across sales, operations, and finance.

Segment Your Forecasting Approach

Not all SKUs deserve the same forecasting effort. Apply statistical methods to high-volume, stable items; apply commercial judgement to strategic or volatile items; and simplify planning for long-tail items. Match method to variability.

Measure and Publish Accuracy Metrics

Make forecast accuracy a visible KPI—reviewed at the same frequency and seriousness as delivery performance or inventory turns. What gets measured gets improved.

Continuously Refine Planning Parameters

Safety stock levels, reorder points, and lead time assumptions should be reviewed regularly as demand patterns evolve. Business Central makes this review straightforward when accuracy data is already captured in the system.

Turning Volatility into Resilience, Agility, and Growth

1

Resilience

Accurate forecasts reduce the operational shocks caused by demand surprises—building a stable foundation that absorbs volatility rather than amplifying it

2

Agility

When the planning system is trusted, teams can respond to change rapidly—adjusting forecasts, replanning production, and repositioning inventory with confidence rather than caution

3

Growth

Manufacturers who plan well can commit to customer demand more confidently, enter new markets with less inventory risk, and free working capital to invest in growth rather than buffer against uncertainty

"Supply chain volatility isn't going away—but with the right platform, accurate forecasting turns uncertainty from a threat into a manageable variable."

Microsoft Dynamics 365 Business Central provides manufacturers with the integrated data, forecasting tools, and planning intelligence to compete in a volatile world.

The manufacturers who thrive won't be those who predict the future perfectly—that's impossible. They'll be the ones who build the forecasting capability to plan confidently, respond rapidly, and improve continuously.

The playbook is clear. The platform is proven. The competitive advantage belongs to manufacturers who act on it.

For more info on Microsoft Business Central and wider manufacturing solutions:

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