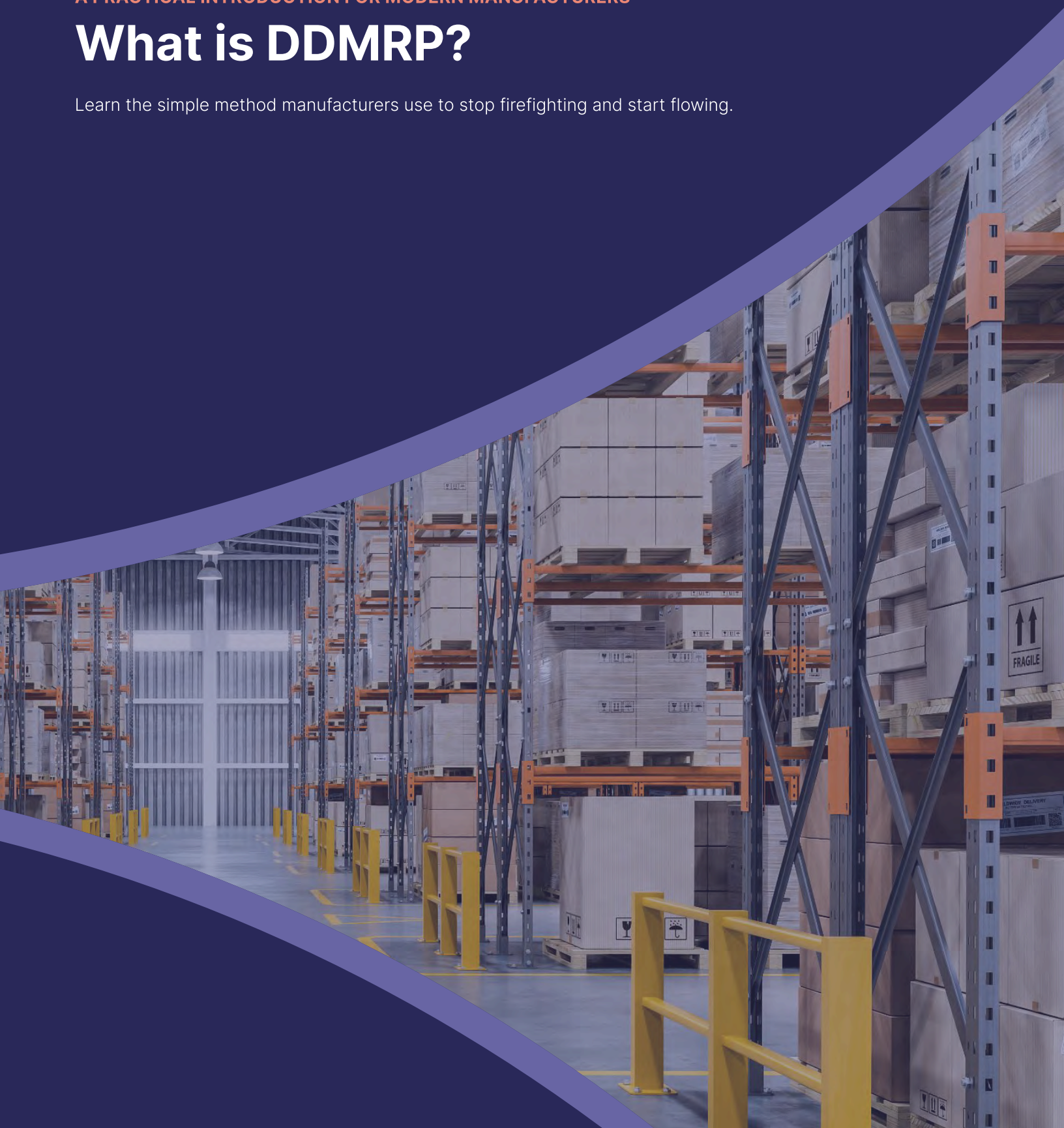
INTUIFLOW

A PRACTICAL INTRODUCTION FOR MODERN MANUFACTURERS

What is DDMRP?

Learn the simple method manufacturers use to stop firefighting and start flowing.



INTRODUCTION

Why Legacy Planning Feels Broken

Supply chains today are stretched thin. Products change faster, customers tolerate less, and disruptions never stop. At the same time, supply chains have stretched across the globe, multiplying risks and lead times.

Yet most manufacturers still rely on MRP rules written in the 1960s.

As a result, planners struggle with spreadsheets, inventory oscillates between “too much” and “too little,” and there’s constant rescheduling to cover yesterday’s gaps.

This feels normal, but it shouldn’t. It’s a sign that the planning method itself is out of step with today’s world.

What is DDMRP?

Demand Driven Material Requirements Planning (DDMRP) is a planning method built for today’s volatility. Instead of trying to predict the future more accurately, it restructures how supply and demand connect—so flow is protected, not disrupted.

At its core, DDMRP follows four principles:

Position

inventory at the right points in the supply chain.

Protect

it with smart buffers that flex as conditions change.

Pull

replenishment from qualified demand signals, not long-range guesses.

Adapt

continuously so the system evolves with reality.

Think of buffers as shock absorbers. In conventional MRP, every fluctuation ripples through the chain, creating nervousness and firefighting. With DDMRP, buffers absorb variability, so supply chains run with more stability and less noise.

DDMRP isn’t a rip-and-replace. It’s an evolution of MRP and DRP, fused with principles from Lean (flow, pull), Theory of Constraints (strategic control points), and Six Sigma (variability reduction). That’s what makes it both familiar and transformative: you build on what you already know, but in a way that fits today’s volatile environment.

LEGACY MRP VS. DEMAND DRIVEN MRP

Why Traditional MRP Breaks in a VUCA World

MRP was a breakthrough when it was codified in the 1960s.

For the first time, manufacturers could use computers to explode bills of material, plan dependent demand, and schedule supply in detail. But it was built for a world that was slower, simpler, and far less volatile than the one we face today.

That's why planners so often find themselves patching MRP outputs with spreadsheets. The method itself amplifies nervousness: every change ripples through, creating constant swings between "too much" and "too little."

DDMRP takes a different path. Instead of trying to predict the future more accurately, it restructures the way supply and demand connect—so variability is absorbed, not magnified.

Here's how the two approaches compare:

Legacy MRP

- ✗ Forecast-driven: pushes orders from projected needs
- ✗ Nets inventory to zero
- ✗ Long, coupled planning horizons → nervousness and rescheduling
- ✗ Prioritizes by due dates (which constantly shift)
- ✗ Safety stock bolted on, often ineffective
- ✗ Users rely on spreadsheets to "fix" system outputs

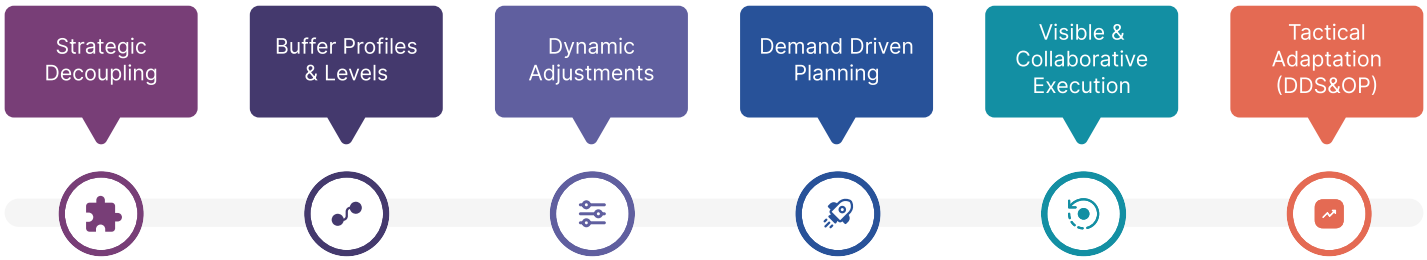
Demand Driven MRP (DDMRP)

- ✓ Demand-driven: pulls orders from actual qualified demand signals
- ✓ Uses strategic buffers that never net to zero, protecting flow
- ✓ Short, decoupled horizons → stable, predictable priorities
- ✓ Prioritizes by buffer status (simple, intuitive signals)
- ✓ Buffers are structural firewalls against variability
- ✓ Designed to be transparent, adaptive, and sustainable

The contrast is simple: MRP pushes complexity downstream. DDMRP absorbs variability and keeps flow under control.

The Six Core Components of DDMRP

DDMRP isn't theory. It's a structured, step-by-step method that enhances conventional MRP and fixes the gaps spreadsheets have been covering for years. The six components work in a loop: the first three configure the model, the next two drive daily operations, and the last one keeps everything adaptive.



01

Strategic Decoupling

Conventional MRP ties every step together, so any change ripples through the whole plan. Decoupling points act like firewalls: they break those chains, shorten horizons, and stop nervousness from spreading. Where you place them determines both customer lead time and inventory investment.

02

Buffer Profiles & Levels

Safety stock is a blunt instrument grafted onto MRP. Buffers in DDMRP are different: they're sized with a color-coded, three-zone model (red, yellow, green) and tailored to groups of items with similar behaviors. Instead of trying to "net to zero," buffers are designed to keep flow steady.

03

Dynamic Buffer Adjustments

Static parameters are one reason spreadsheets creep in. DDMRP makes buffers flexible: they automatically expand or contract with shifts in demand, lead time, or known events like seasonality. This keeps the model relevant without constant manual firefighting.

04

Demand-Driven Planning

Where MRP pushes orders from long-range forecasts, DDMRP pulls from real signals. The net flow equation (on-hand + open supply – qualified demand) is applied daily, ensuring orders reflect current reality. Dependent demand only explodes down to the next buffered point, so planning horizons stay short and stable.

05

Visible & Collaborative Execution

MRP prioritizes by due date, which constantly shifts. DDMRP prioritizes by buffer health. Planners and operators see clear, intuitive alerts: which items are safe, which are at risk, and where synchronization is needed. Teams focus on flow, not chasing moving dates.

06

Tactical Adaptation (DDS&OP)

Finally, the model evolves. DDS&OP replaces the rigid master production schedule with an adaptive review cycle. Past performance and future plans feed back into the master settings of decoupling points and buffers. This keeps the system aligned to strategy and resilient to change.

MRP pushes complexity downstream. DDMRP absorbs variability, shortens horizons, and keeps flow under control. You don’t need to learn equations; you need to know the system will only trigger orders when flow is at risk.

How DDMRP Fits to Your Daily Work

DDMRP isn't a side project. It transforms the activities supply chain teams already do every day. By embedding demand-driven practices into familiar functions, the whole organization starts operating in flow.

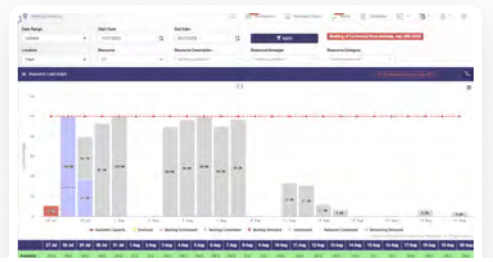
These aren't new jobs to add or extra processes to layer on. They're the same functions, made stronger by demand-driven practices. And together, they move the organization from reactive planning to controlled flow.

Materials Planning

Instead of chasing shortages with emergency orders, planners manage stable buffers that absorb variability. Inventory stays in the optimal range—not too much, not too little.

Demand Planning

Forecasts still inform capacity and strategy, but replenishment is paced to qualified demand signals. Forecasting stops being a single point of failure and becomes a valuable input.



Scheduling & Execution

On the shop floor, priorities stop shifting with every reschedule. Work is sequenced by buffer status and finite capacity, which means fewer expedites and more reliable deliveries.

Sales & Operations Planning (S&OP)

DDS&OP ties strategy directly to the model's master settings. Cycles become shorter, more adaptive, and grounded in what's actually happening in operations.

What You Can Expect

Organizations that adopt DDMRP consistently see measurable improvements across both service and efficiency:

Service levels rising to 97–100%

customers get what they need, when they need it.

Inventory reductions of 30-45%

working capital is freed up without putting service at risk.

Lead times shortened by up to 80%

shorter horizons mean faster response to real demand.

Far fewer expedites and fire drills

flow is protected, so teams spend less time firefighting.

In traditional planning, it often feels like you must choose between lowering inventory and keeping service high. DDMRP breaks that trade-off. With variability absorbed and flow stabilized, companies achieve both at once.

Why DIY DDMRP Often Stalls

Even strong methods can falter without the right support. Many companies struggle because:

- Buffers are set once and left static.
- Spreadsheets are used to scale what they weren't built for.
- Adaptation cycles are skipped, so models drift out of sync.

The method works. The challenge is sustaining it in the face of daily complexity. That's why we built **Intuiflow.**

Where Intuiflow Fits

DDMRP gives you the blueprint. Intuiflow makes it practical. We designed Intuiflow to remove the barriers that keep most companies from sustaining demand-driven planning:

Proof before you buy

We simulate impact on your actual data, so you can see the ROI before you commit.

Fast adoption

Go live in weeks, not quarters, and see measurable results in 60–90 days.

Autopilot tuning

Our explainable ML engine continuously adjusts buffers, item by item, so performance stays aligned to your service targets. No more static parameters or spreadsheet workarounds.

ERP-compatible

Intuiflow layers onto SAP, Microsoft Dynamics, and other ERP systems—no rip-and-replace required.

With Intuiflow, companies don't just "try DDMRP." They embed it, sustain it, and scale it across the business—without slipping back into firefighting.

For decades, manufacturers have relied on planning methods that no longer match the world they operate in. The result has been brittle forecasts, endless spreadsheets, and supply chains caught between shortages and excess.

DDMRP offers a way out: a structural method that absorbs variability, stabilizes flow, and connects planning directly to execution. It transforms the work supply chain teams already do—from materials planning to S&OP—into practices that are reliable, intuitive, and demand driven.

And with **Intuiflow,** this shift is fast, low-risk, and sustainable. You can see the impact on your own data before you commit, go live in weeks, and let Autopilot keep performance tuned as conditions change.

Planning doesn't have to mean firefighting. **With Intuiflow, you can prove flow is possible—and make it your new normal.**

Book a Demo