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SUPPLY CHAIN MANAGEMENT

Demand
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Education
and
Consulting



WA solutions

John MELBYE, DDPP, DDOP, DDLP, CSCP

Endorsed Instructor for Demand Driven workshops.

Demand Driven Planner, Leader, Operations classes, Simulation Workshops
Over 300 have attended classes or workshops

President and Managing Director of ASCM Twin Cities (TwinCities.ASCM.org)

950 plus member organization with 3 staff members
Covers Minnesota and the surrounding region

Director of WA Solutions USA (WASolutions-USA.com)

Software as a Service Provider (SaaS), Demand Driven Implementations
Obsessed with Adding Value for our customers

Speaker / Presenter

2023 ISM World and 2023 ASCM Connect very popular engagements
Supply Chain & Business Management topics. Story telling and Analogies.

Podcast and YouTube Channels, #smilecreator

All Connections to John – linktr.ee/johnmelbye



Three Foundational Flaws



Causes of Chaos

1 The Precision Dilemma

2 The Process Loophole

3 The Inventory Conundrum



Precision Dilemma

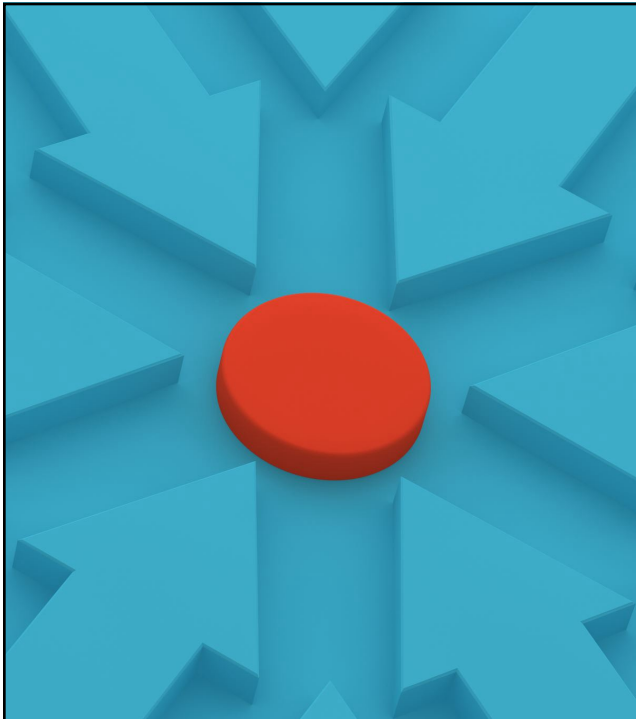
Tying a forecast (weekly or monthly) to daily activity today.

- We know the target is wrong.
 - But we don't know what to do unless we assume the target is right.
-
- Imagine a game of darts, where you throw the dart at the target.
 - But you know by the time the dart gets there, the target will have moved.



Process Loophole

- “How much and when” are left to Planners and Buyers - individually.
- No standardized process. New employees, vacations, etc...
- The temptation to play “Monday morning quarterback” is great.
- But decisions are made with what we know at the time of decision making.







Inventory Conundrum

- Traditional planning tools are **not designed** to manage inventory levels.
- **Common sense:** Keep inventory between too little and too much.
- **Traditional planning tools:** Keep inventory low, and only order when needed.
- **Common sense:** Maintain the right amount of all parts.
- **Traditional planning:** Focus only on some parts, can't watch them all.




Challenge Summary

- Today's actions are Precise based on a Prediction.
- Today's actions and choices for buyers/planners
- Today's actions regarding inventory status

Current Metric Focus

- Customer Service (on time delivery focus)
- Days of Inventory (total Inventory Balance in \$)
- Lead Time Reduction



Current Areas of Focus

- Better Forecast (more accurate numbers)
- Predictive Analytics and Machine Learning
- Cost Reductions



Flaws in our Thinking

1. If we can predict the future more accurately, today's problems will be solved.
2. If we know exactly what will happen, we will know (today) what to do about it.



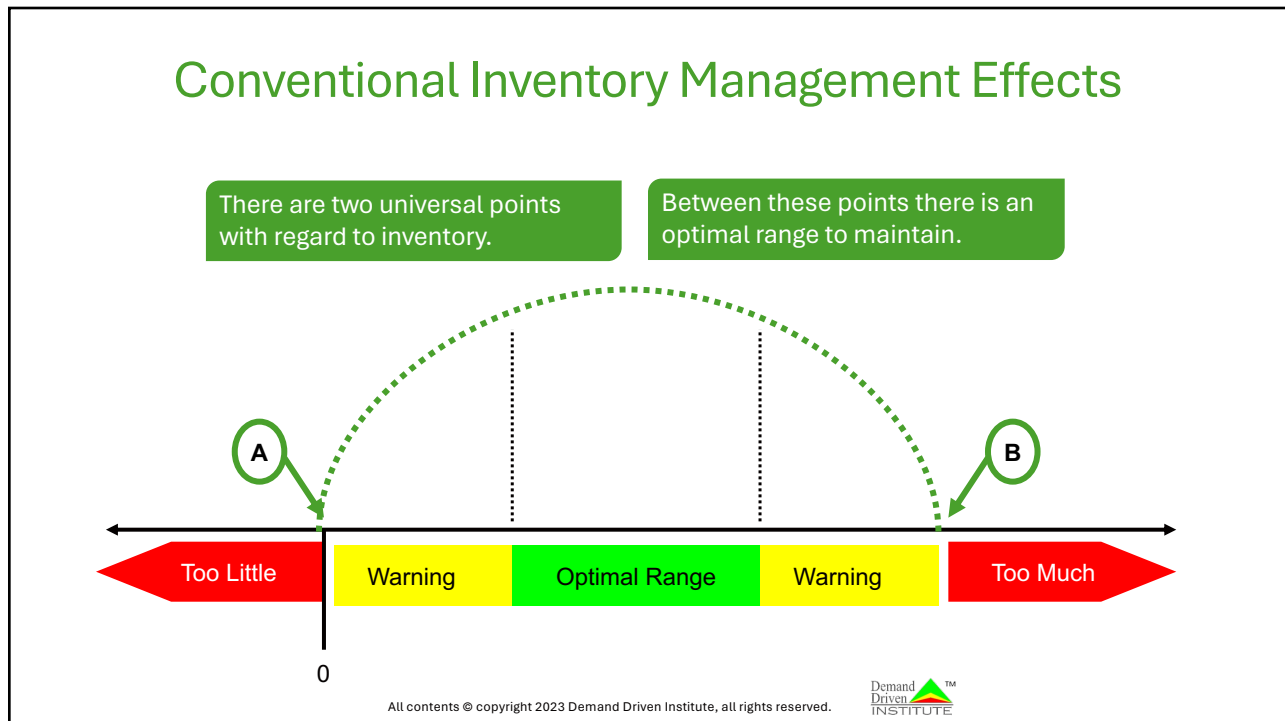
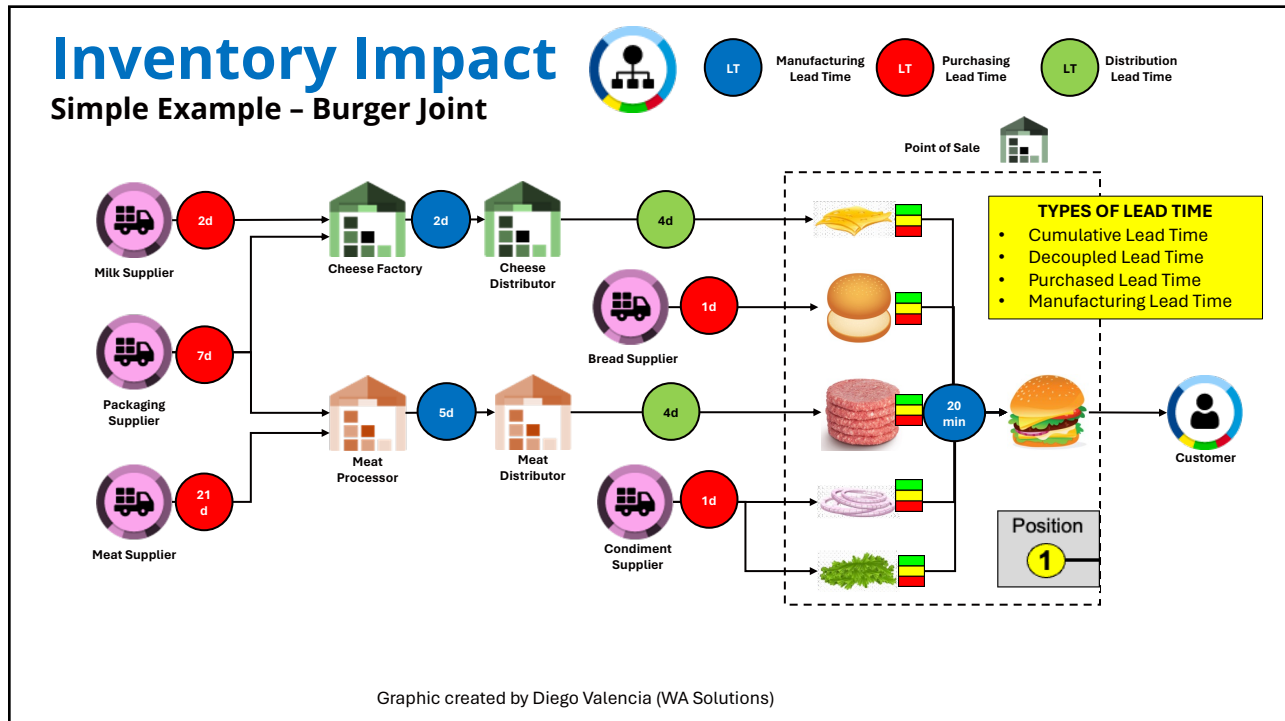
Another Conundrum

Many of our efforts to “fix” the situation are targeted at a future timeframe.

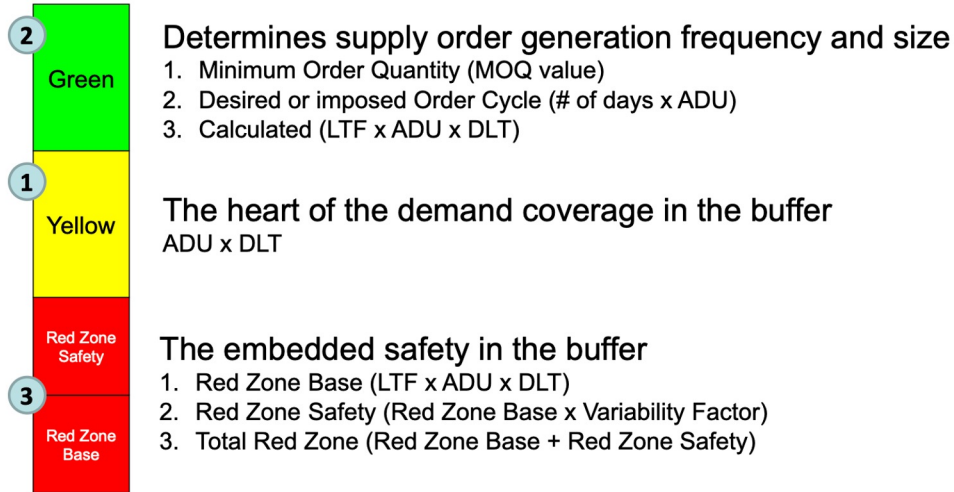
But...

Most of the problems we are facing are in the Execution timeframe (today).





Calculating Buffers at a Glance



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The Net Flow Equation

Questions every planner cares about each day.



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What is coming to me?

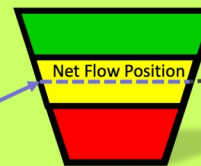
What do I have?

What demand do I need to fulfill immediately?

What future demand is relevant?

Buffer Status and Supply Order Generation occurs through a DAILY application of the "Net Flow Equation".

On-Hand + Open Supply - Qualified Sales Order Demand



Supply order issued for up to the top of the buffer

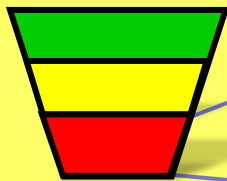


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Pull – Visible and Collaborative Execution

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Easy to Interpret Signals on Open Supply Priorities

Order #	On-Hand Buffer Status
PO 819-87	27% (RED)
WO 832-41	42% (RED)
WO 211-72	88% (YELLOW)

Critical Difference:

MRP = Priority by due date
DDMRP = Priority by buffer status

Order #	Order Type	Due Date	Customer
MO 12367	MTS	May - 12	Internal
MO 12379	MTO	May - 12	Super Tech
MO 12465	MTS	May - 12	Internal
MO 12401	MTS	May - 14	Internal
MO 12411	MTS	May - 16	Internal

VS.

Order #	On-Hand Status	Order Type	Due Date	Customer
MO 12379		MTO	May - 12	Super Tech
MO 12401	12% RED	MTS	May - 14	Internal
MO 12465	27% RED	MTS	May - 12	Internal
MO 12367	53% YELLOW	MTS	May - 12	Internal
MO 12411	61% YELLOW	MTS	May - 16	Internal

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Things to remember:

- The DDMRP Buffer is used to make decisions. It is not an amount of inventory.
- The Decoupled Lead Time concept exists, but traditional planning is unaware.
- The chaos resulting from changes to end items is underestimated.
- Due Date and its relevance are questionable and constantly changing.
- DDMRP allows a Target Inventory calculation by individual part number.
- Put your experience to use creating the buffer, not running the chaos wheel.

Things to remember:

- What you are trying to do is not wrong.
- DDMRP provides the means for accomplishing those tasks.
- Focus on Visibility, but let's define visibility.
 - Are my actions having their intended results?
 - What are hidden trends that require buffer adaptation?
 - Variation from expectations provides clues for focus.

Next Steps – What can we do?

- Recognize (Confirm) that your tools, processes, or thinking may be flawed
 - Consider Unlearning and Rethinking, without starting over
- Remember, Inventory is a leverage point
 - But more inventory total is not directly connected to better customer service
- Slow approach
 - Simulation and Activity-based learning
- Fast approach
 - Embrace new methods and innovative thought processes
- Don't start at the solution. Work forward from the problem to the solution.

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Learning Center

Blog (SupplyChainIllustrated.com)

Search for #smilecreator (on LinkedIn)

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Questions???

